

ALL INDIA COORDINATED RESEARCH PROJECT (SUGARCANE)

PRINCIPAL INVESTIGATOR'S REPORT VARIETAL IMPROVEMENT PROGRAMME 2019-20



**ICAR - Sugarcane Breeding Institute
Coimbatore - 641 007**



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SUGARCANE**

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**PRINCIPAL INVESTIGATOR'S REPORT
2019-20**

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VARIETAL IMPROVEMENT PROGRAMME

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Coimbatore
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CONTENTS

	Executive summary	i
	ATR on the recommendations of the previous meeting	v
1	Weather condition and pest and diseases incidence	1
	Zonal Varietal Trials	
2	Peninsular Zone	15
2.1	Advanced Varietal Trial - II plant	16
2.2	Advanced Varietal Trial - Ratoon	54
2.3	Pooled Data	83
2.4	Advanced Varietal Trial - I plant	101
2.5	Initial Varietal Trial	138
3	East Coast Zone	176
3.1	Advanced Varietal Trial – Early – II plant	177
3.2	Advanced Varietal Trial – Early – Ratoon	188
3.3	Pooled Data	197
3.4	Advanced Varietal Trial – Early – I plant	204
3.5	Initial Varietal Trial – Early	215
3.6	Advanced Varietal Trial – Midlate – I plant	226
3.7	Initial Varietal Trial – Midlate	240
4	North West Zone	254
4.1	Advanced Varietal Trial – Early – II plant	255
4.2	Advanced Varietal Trial – Early – Ratoon	276
4.3	Pooled Data	292
4.4	Advanced Varietal Trial – Early – I plant	299
4.5	Initial Varietal Trial – Early	320
4.6	Advanced Varietal Trial – Midlate – II plant	341
4.7	Advanced Varietal Trial – Midlate – Ratoon	355
4.8	Pooled Data	366
4.9	Advanced Varietal Trial – Midlate – I plant	372
4.10	Initial Varietal Trial – Midlate	387
5	North Central Zone	401
5.1	Advanced Varietal Trial – Early – II plant	402
5.2	Advanced Varietal Trial – Early – Ratoon	413
5.3	Pooled Data	422
5.4	Advanced Varietal Trial – Early -I plant	430
5.5	Initial Varietal Trial – Early	441
5.6	Advanced Varietal Trial – Midlate – II plant	455
5.7	Advanced Varietal Trial – Midlate – Ratoon	466
5.8	Pooled Data	475
5.9	Advanced Varietal Trial – Midlate – I plant	483
5.10	Initial Varietal Trial – Midlate	497
6	Fluff Supply Programme	511

All India Coordinated Research Project (Sugarcane) – Year 2019-20

Principal Investigator's (Crop Improvement) report

EXECUTIVE SUMMARY

Crop Improvement programme of All India Co-ordinated Research Project on Sugarcane (AICRP-S) is solely responsible for the development of sugarcane varieties which currently occupy more than 98 % of the area under sugarcane cultivation in the country. With the introduction of new varieties, the country has achieved domestic demand of 33 M tonnes targeted for the year 2030 well ahead during the sugar year 2018-19. During the year 2019-20, the varieties developed/evaluated through National Varietal Development Programme of AICRP(S) viz., Co 12009 (PZ), Co 13035 (NWZ), CoC 13339 (ECZ) and CoS 12232 (NWZ) were released for cultivation. National Varietal Development Programme has two major activities viz., fluff supply programme and zonal varietal trials (ZVT). Twenty four sugarcane breeding centres located in five different agro-climatic zones are participating and making desired crosses under fluff supply programme operated in National Hybridization Garden functioning at ICAR-Sugarcane Breeding Institute, Coimbatore to initiate the location specific varietal development programme. The crossed seeds (fluff) are collected, processed and sent to participating centres for raising seedlings and identifying location specific varieties. Superior clones developed in the advanced clonal trials of the breeding centres of each zones are pooled and these common entries are evaluated in ZVT conducted by 37 sugarcane research stations located in all five different agro-climatic zones. Pooling of superior clones identified by the different centres provides the opportunity to a centre to exchange and evaluate the elite clones developed by other participating centres of the zone. All the entries accepted in the AICRP(S) workshop are pooled zone-wise and are evaluated for one year in Initial Varietal Trial (IVT) and selected clones are forwarded to Advanced Varietal Trials (AVT) for evaluation in two plant and one ratoon crops in two years in ZVT. Based on the data compiled across the zone, performance of the entries on cane yield, juice quality and reaction to pest and diseases across the centres in each zone are evaluated and qualifying entries are identified and proposed for identification in AICRP(S) workshop. The identified entries are proposed to Central Subcommittee for crop Standards, Notification and Release of Varieties for Agricultural Crops for varietal release and notification. The major activities under the crop improvement programmes of AICRP(S) during 2019-20 are summarized below.

Weather, pests and diseases situation:

Normal rainfall was experienced in many centers during the year 2019-20. The highest rainfall was reported by the Thiruvalla (2634.9 mm) followed by Navsari (2170 mm) and Kolhapur (2113.5 mm). Less than 500 mm annual rainfall was reported by

Pugalur (410.6 mm). The highest monthly maximum temperature of 42.8⁰C at Kota in the month of May, 2019 and the lowest monthly minimum temperature of 5.5⁰C during January, 2020 at Faridkot were reported. No major disease or pest was reported during this period by the centres. However, minor incidence of pests like early shoot borer, internode borer, top borer, leaf hoppers, root grub, white grub, mealy bugs, fall army worm, scale insect, woolly aphid, whitefly, and pyrilla and diseases like grassy shoot, pokkah boeng, mosaic, rust, brown spot, smut, yellow leaf disease, wilt, top rot and leaf spot were reported from the centres of Peninsular Zone. Severe incidence of termites and wilt disease was reported by Vuyyuru. Pusa centre in the North Central Zone reported incidence of root borer, shoot borer, top borer, stalk borer, plassey borer, pyrilla, black bug, mealy bug, stem borer, smut, pokkah boeng, wilt, red rot and yellow mosaic.

AICRP(S) centres participating in fluff supply and ZVT programmes

Zone	No. of centres	Participating centres	
		Fluff receiving and ZVT centres	ZVT – centres alone
Peninsular Zone	18	Rudrur, Perumalapalle, Navasari, Mandya, Sankeshwar, Padegaon, Pune, Powarkheda, Thiruvalla	Sameerwadi, Tharsa, Pravaranagar, Kolhapur, Basmathnagar, Pugalur, Coimbatore, Raipur, Belagavi
East Coast Zone	5	Anakapalle, Vuyyuru, Cuddalore, Nayagarh	Nellikuppam
North West Zone	10	Faridkot, Lucknow, Shahjahanpur, Pantnagar, Uchani, Kapurthala	Muzaffarnagar, Karnal, Kota, Sriganaganagar
North Central Zone	4	Motipur, Pusa, Seorahi, Bethuadhari	
North Eastern Zone	1	Buralikson	
Total	38	24	14

Trials conducted and the number of entries evaluated:

A total of 26 Zonal Varietal Trials (12 in early, 10 in midlate and 4 trials combining early and midlate maturity groups) were conducted during the year 2019-20. There were 7 IVT and 19 AVT trials. A total of 47 entries in early group, 52 entries in midlate group and 47 entries combining both the maturity groups were evaluated. Among the entries evaluated, 19 entries each in early and midlate and 6 entries in the combined trial of early and midlate groups were found to be promising. Details of the trials conducted, number of entries evaluated and promising clones identified are given below.

Zone / Trials	No. of clones + standards		Promising clones	
	Early	Midlate	Early	Midlate
Peninsular Zone				
AVT II Plant	17+3		MS 13081, Co 13013	
AVT Ratoon	17+3		MS 13081, Co 13013	
Pooled analysis	17+3		MS 13081, Co 13013	
AVT I Plant	15+3		Co 14002, CoTI 14111, MS 14082	
IVT	15+3		Co 11015	
Total entries	47		6	
East Coast Zone				
AVT II Plant	3+3	-	CoV 15356	-
AVT Ratoon	3+3	-	CoV 15356, CoC 15338	-
Pooled analysis	3+3	-	-	-
AVT I Plant	4+3	5+3	CoC 16337, CoV 16356	CoC 15339, CoOr 15346, CoV 16357
IVT	4+3	5+3	CoA 17321	-
Total entries	11	10	5	3
North West Zone				
AVT II Plant	4+3	7+3	Co 14034, CoPb 14211	CoPb 14185, CoS 14233, CoH 14261
AVT Ratoon	4+3	7+3	CoLk 14201	CoPb 14185, CoLk 14204
Pooled Analysis	4+3	7+3	-	-
AVT I Plant	6+3	7+3	Co 15023, Co 15027, CoLk 15201	CoLk 15206, CoS 15232, Co 15026
IVT	9+3	7+3	CoPb 16211	CoS 16233, Co 16030, CoS 16232
Total entries	19	21	7	10
North Central & North East Zone				
AVT II Plant	4+3	5+3	CoLk 14206	CoSe 14455
AVT Ratoon	4+3	5+3	CoP 14437	CoSe 14455
Pooled Analysis	4+3	5+3	-	-
AVT I Plant	5+3	7+3	CoLk 15466, CoSe 15452	CoP 15439, CoP 15440
IVT	8+3	9+3	CoP 16437, CoLk 16468, CoSe 16451	CoP 16439, CoP 16440, CoLk 16470
Total Entries	17	21	7	6
Grand total (Entries)	47		6	
	47	52	19	19

* common entries in II Plant, ratoon and pooled analysis.

Qualifying entries identified in different trials:

Zone	Trial	Entries
Peninsular Zone	Advanced Varietal Trial	Co 13013, MS 13081

The entries which recorded 10 % improvement for cane yield and numerically superior/on par for juice sucrose % compared to the best standards or entries which recorded 5 % improvement for juice sucrose % and numerically superior/on par for cane yield were selected as qualifying entries and were considered for identification. In Peninsular zone MS 13081 and Co 13013 were identified as the qualifying entries based on the mean performance in two plant and one ratoon crops.

Fluff supply programme:

Six hundred and seventeen parental clones were planted and maintained at National Hybridization Garden (NHG) - 2019 in healthy and pest and disease free condition. Out of 617 parents, 567 flowered and the per cent of clones flowered during 2019 was 91.90 which was much higher compared to 67.90 observed during 2018 flowering season. Among 24 participating centers, 23 centres attended the crossing programme during 2019. Fluff of general collections was sent to Bethuadahari center based on special request. Twenty four participating centers were facilitated to effect 562 bi-parental crosses, 18 poly crosses, 20 wide crosses and 245 general collections. Fluff weighing 29.29 kg from crosses made at NHG during 2019 flowering season along with germination particulars were supplied to the 24 centers.

Details of crosses made and fluff supplied from NHG during 2019-20

Zone	Bi-parental crosses		General collections		Polycrosses		Total fluff wt. (g)
	No	Fluff wt. (g)	No	Fluff wt. (g)	No.	Fluff wt (g)	
Peninsular Zone	206	4498.0	189*	3834.0	13*	1769.0	10101.0
East Coast Zone	99	2442.7	86*	1840.4	13*	819.0	5102.1
North West Zone	159	3411.8	237*	4517.1	5*	785.1	8714.0
North Central and North East Zone	98	2483	84	2415.3	5*	476.5	5375.0
Total	562	12835.5	245**	12606.8	13**	3849.8	29292.1

*including duplicates; ** excluding duplicates

Apart from this, 864.2 g of fluff from 42 bi-parental crosses effected at National Distant Hybridization Facility (NDHF), ICAR-SBI, Research Centre, Agali were also sent to nine centers which participated in the crossing programme at Agali. Altogether 30.15kg of fluff was supplied to the 24 participating centers of fluff supply programme

**Action Taken Report on the recommendation of the annual group meeting of
AICRP on Sugarcane held during October 14 & 16, 2019 at University of
Agricultural Sciences, Dharwad (Karnataka)**

S.No.	Recommendation	Centres	Action taken
1	Breeders must comply with the criteria set for proposing new entries for inclusion in ZVT. The entries which are significantly superior for cane yield and numerically better for sucrose % OR significantly superior for sucrose % and numerically better for cane yield only should be proposed	All centres	All the centres reported the compliance of the recommendation while proposing new entries for inclusion in ZVT
2	Some centres have proposed new clones without the red rot reaction hence decision on inclusion in ZVT becomes difficult. In future the entries without red rot reaction will not be considered for inclusion in ZVT	All centres	Proposing new entries with the red rot reaction was assured by the centres
3	Rudrur center proposed 6 new clones out of 10 clones evaluated in the station trial for inclusion in ZVT and all the clones were significantly superior to the best standard Co 86032, which was unusual. The performance of all the 6 entries will be verified in IVT and if any large differences are found in performance that will be reported to the Vice Chancellor of the University for presenting inflated data	Rudrur and Project Co-ordinator	Project Co-ordinator and Rudrur centre informed that the recommendation would be taken care of after assessing the performance of the entries in IVT
4	Data presented by some centres indicated very low CV even for highly complex and	All centres	Care would be taken in statistical analysis of data and presenting the CV in future as stated by the

	quantitative traits like cane yield, NMC etc., which is unlikely in the large field experiments. Hence care must be taken in statistical analysis of data and presenting the CV		centres
5	Huge difference in sucrose values for the standard CoA 92081 between Vuyyuru and Anakapalle centres was presented. Vuyyuru centre will get the healthy and pure seed materials of CoA 92081 from Anakapalle centre for planting as standard in the ZVT	Anakapalle and Vuyyuru	Seed material of CoA 92081 received from Anakapalle centre was planted as standard in ZVT at Vuyyuru during 2020-21.
6	High Pol% cane of >14% was reported by Pusa and Seorahi centre. Care must be taken in calculation of such derived traits to avoid submission of illogical data	All centres	All the centres informed that the common formula received from Principal Investigator (Crop Improvement) would be used uniformly for calculation of pol % cane
7	Different centres are following different formulae for calculation of derived traits like CCS %, Extraction %, Pol % cane etc. Principal Investigator (Crop Improvement) will send the common formula along with the technical programme for strict compliance	All centres and PI-Crop Improvement	Principal Investigator (Crop Improvement) had sent the common formulae for estimating all the derived traits along with the technical programme for the year 2019-20
8	Shortage of seed materials for planting IVT was reported by Buralikson centre. The centre will depute a staff to Pusa to lift the seed materials for multiplication / planting of trials	Buralikson and Pusa	Buralikson: The scientist of Plant Breeding booked his railway reservation on 16.03.2020 and return ticket on 20.03.2020 to collect the materials from Pusa. However, the tickets have to be cancelled on 16.03.2020 due to occurrence of Covid 19 emergency. Therefore this year we are unable to collect the material for IVT trials Pusa: Due to COVID-19

			pandemic , exchange of planting material could not be done among other centres and Pusa and vice versa except Bethuadehri
9	Karnal centre will supply Co 0238 to all the centres of North Central and North East Zones for multiplication during the year 2020-21 and for including as standard in ZVT during the year 2021-22	Karnal and NC&NEZ centres	Karnal: Seed was available at Karnal centre, due to lockdown during planting season neither any centre came forward for lifting the seed nor the material could be supplied Pusa, Buralikson: Did not receive the materials
10	Evaluation of ISH/IGH/ commercial clones under “Evaluation and identification of climate resilient ISH and IGH genetic stocks” is deferred to the year 2021-22 as many centres reported shortage of seed materials. The centres should communicate the status of availability of seed materials of the test entries on or before 31.10.19 to the PICI. The centres can lift the seed materials either from ICAR-SBI, Coimbatore or from the neighboring centre with excess seed materials during Jan-Feb, 2020 with prior intimation	Anakapalle, Pusa, Lucknow, Pantnagar, Motipur, Sankeshwar, Pune, Karnal and Coimbatore	Lucknow and Patnagar centres communicated the information before 31.10.20 Insufficient seed materials was reported by Pusa, Karnal, Pantnagar Pune: Action will be taken
11	Seed material of the latest standard CoLk 11203 was not available with many of the centres in NWZ. Hence the IVT (Early) and AVT (Early) will be conducted with the standards CoJ 64, Co 0238 and Co 05009 during the year	All centres of NWZ	As per the recommendation, IVT (Early) and AVT (Early) were conducted with the standards CoJ 64, Co 0238 and Co 05009 during the year 2020-21

	2020-21		
12	Seed material of the latest standard CoLk 11206 was not available with many of the centres in NWZ. Hence the IVT (Midlate) and AVT (Midlate) will be conducted with the standards CoS 767, CoPant 97222 and Co 05011 during the year 2020-21	All centres of NWZ	As per the recommendation, IVT (Midlate) and AVT (Midlate) were conducted with the standards CoS 767, CoPant 97222 and Co 05011 during the year 2020-21
13	The entry CoLk 15202 will not be included in the IVT (Early) during the year 2020-21	All centres of NWZ	CoLk 15202 was not included as an entry in the IVT (Early) during the year 2020-21
14	Discrepancy in the identity of CoLk 14203 and CoLk 14204 at NWZ centres was reported by Lucknow centre. Detailed botanical descriptor will be prepared by Lucknow centre and the copy will be sent to all the centres of NWZ and PICI for proper identification	All centres of NWZ, Lucknow and PI-Crop Improvement	<p>Lucknow: Letter along with detailed botanical descriptors of CoLk 14203 and CoLk 14204 had been sent to all the centres of NWZ and PI Crop Improvement in Jan.2020 for their kind perusal and necessary action.</p> <p>Shahjahanpur and Muzaffarpur: The data for clones were reported as per material received from SBIRC Karnal. As per botanical description received from ICAR-IISR Lucknow there is need of inter change of CoLk 14203 as CoLk 14204 and vice versa</p> <p>Pantnagar, Karnal: No botanical descriptor was received</p> <p>Faridkot: Noted and taking care on this issue</p> <p>Kapurthala: Descriptors received from Lucknow and attempted to resolve the discrepancies</p> <p>Uchani: DUS descriptors of two entries Colk 14203 and</p>

			CoLk 14204 were supplied for identification. According to Botanical descriptors, entry CoLk 14204 was planted in place of CoLk 14203. The same has been mentioned in the AICRP data submitted to PI
15	Kapurthala centre will send the seed materials of CoJ 88 to Lucknow for inclusion as standard in drought evaluation trials	Kapurthala and Lucknow	Lucknow centre received the seed material of CoJ 88
16	Genetically pure seed materials of CoLk 14201 will be sent by Shahjahanpur centre with the botanical descriptors to Karnal, Kota, Sriganaganagar and Pantnagar centres for directly planting in AVT I Plant (Early) during the year 2020-21	Shahjahanpur, Karnal, Kota, Sriganaganagar and Pantnagar	Shahjahanpur CoLk 14201 was supplied to all centres and the entry was directly planted in AVT I Plant (Early) during the year 2020-21
17	CoS 08279 is included as new entry for evaluation under the project “Evaluation and identification of climate resilient ISH and IGH genetic stocks”. Shahjahanpur will send the seed materials to Sankeshwar, Anakapalle and Lucknow for multiplication during the year 2020-21	Shahjahanpur, Sankeshwar, Anakapalle and Lucknow	Shahjahanpur: Supplied CoS 08279 to Anakapalle and Lucknow. Seed material to Sankeshwar Centre will be supplied soon.
18	Only one entry viz., CoV 18358 is available for conducting IVT (Early). Hence the entry will be evaluated in AVT (Early) I Plant along with other entries during the year 2020-21	All centres of ECZ	CoV 18358 is mid-late entry and under multiplication during 2020-21 and will be evaluated in IVT (Midlate) I Plant along with other entries during the year 2021-22
19	Shortage of seed material for the entries Co 17009 and CoT	All centres of PZ	Co 17009 and CoT 16366 were multiplied in the PZ

	16366 were reported by the centres of PZ. These entries will be multiplied during the year 2020-21 at all the centres of PZ and included in IVT during the year 2021-22		centres for inclusion in IVT during the year 2021-22
20	Establishment of the entries CoT 18366, CoT 18337, CoT 18338 and CoT 18339 was poor in seed multiplication centre Padegaon. The seed materials will be sent by Perumalapalle centre to Padegaon for multiplication again during the year 2020-21	Perumalapalle and Padegaon	Padegaon: The entries viz. CoT 18366, CoT 18367, CoT 18368, CoT 18369 are multiplied during the year 2020-21. However, the growth of CoT 18366 & CoT 18368 is poor with less plant population. The seed of these entries is insufficient for distributing to other centers.
21	Shri Nijalingappa Sugar Institute (SNSI), Belagavi is included as voluntary centre in PZ. Padegaon centre will supply the seed materials to Belagavi centre for initial multiplication for conducting trials in the subsequent years	Belagavi and Padegaon	Padegaon centre supplied the seed material of new entries to Belagavi center for initial multiplication.
22	The seed multiplication centre Padegaon should supply the seed materials of the test entries to the AICRP(S) participating centres on free of cost	Padegaon	The seed material of new entries is supplied free of cost to the AICRP(S) participating centers.
23	Any prerelease clone with the AICRP(S) slot number can be tested in sugar factory areas with the proper MoU and after obtaining MTA for conducting adaptability trials	All centres	Compliance of the recommendation was conveyed by the centres
24	Kolhapur centre will conduct “Evaluation and identification of climate resilient ISH and IGH genetic stocks” for testing	Kolhapur and Coimbatore	The entries for the project were collected from ARS, Sankeshwar and are being multiplied at Kolhapur centre during 2020-21.

	the entries under waterlogged conditions. The centre will lift the seed materials from ICAR-SBI, Coimbatore		
25	In Peninsular Zone, based on the performance of the test entries for yield and quality parameters in IVT, eleven entries viz., Co 14005, Co 15005, Co 15006, Co 15007, Co 15009, Co 15010, Co 15017, Co 15021, CoSnk 15102, CoN 15071 and PI 15131 were selected. Along with these 11 entries, Co 11015 will be also included and AVT will be conducted with 12 entries and three standards during the year 2020-21	All centres of PZ	All centres reported planting of AVT I (Plant) as per the technical programme

1. Weather conditions and pest and diseases incidence during 2019-2020 at different Zones

1.1 Peninsular Zone

Data received from the centers of Peninsular zone on weather parameters and pest and diseases incidences are presented in Tables 1.1.1 to 1.1.13. The highest (41.6°C) and the lowest (24.5°C) monthly mean maximum temperature were recorded during May 2019 at Perumalapalle. The lowest monthly mean minimum temperature of 10.5°C was recorded at Pune during January 2019 and the highest mean minimum temperature of 30.9°C was observed at Rudrur during May 2019. The rainfall in the zone ranged from 410.6 mm at Pugalur to 2634.9 mm at Thiruvalla. Diseases like leaf spot, rust and yellow leaf disease (YLD) and insect pests like early shoot borer (ESB), top shoot borer (TSB), leaf hoppers, woolly aphid, root grub, pyrilla and internode borer (INB) were observed at Mandya center. Diseases like grassy shoot, pokkah boeng, mosaic, rust, brown spot, smut and YLD and insect pests like ESB, INB, mealy bugs, fall army worm, scale insect and sugarcane wooly aphid were observed in the trials at Pune centre. During the year, pests like ESB, INB, mealy bugs and white grubs and diseases viz. YLD, smut, grassy shoot disease and Pokka boeng were observed in the trials at CSRS Padegaon. Sankeshwar centre reported incidence of root grub, ESB, whitefly, sugarcane wooly aphid, smut and rust. Pests like wooly aphid, scale insect, white fly, mite, pyrilla, ESB, INB and TSB and diseases like red rot, wilt , smut, YLD, top rot, grassy shoot disease were reported by the Perumalapalle centre.

1.2 East Coast Zone

Data received from the centers of East Coast Zone on weather parameters are presented in Tables 1.2.1 to 1.2.4. The highest maximum monthly mean temperature (40.3°C) was recorded at Vuyyuru during May 2019. Similarly the lowest monthly maximum temperature of 28.4°C during December 2019 was recorded at Nayagarh. The lowest monthly mean minimum temperature of 16.7°C was recorded at Vuyyuru during January 2019 and the highest mean minimum temperature of 28.0°C was recorded at Nayagarh during June 2019. The rainfall in the zone ranged from 667.3 mm at Vuyyuru to 1195.45 mm at Nellikuppam. Severe incidence of termites and wilt disease were reported by the Vuyyuru centre.

1.3 North West Zone

Data received from the centers of North West Zone on weather parameters are presented in Tables 1.3.1 to 1.3.6. The highest maximum monthly mean temperature (42.8°C) was recorded at Kota centre during May 2019 while the lowest maximum temperature 15.6°C was recorded at Faridkot during December 2019. The lowest mean minimum temperature (5.5°C) during January 2020 was recorded at Faridkot while the highest mean minimum temperature (29.1°C) during June 2019 was recorded at Kota. The rainfall in the zone ranged from 503.0 mm at Faridkot to 1501.1 mm at Pantnagar.

1.4 North Central and North Eastern Zones

The highest maximum monthly mean temperature (39.0°C) and the lowest monthly mean maximum temperature (19.6°C) were recorded at Pusa center during May 2019 and January 2020 respectively. The lowest mean minimum temperature recorded was 9.4°C during January 2020 and the highest monthly mean minimum temperature was 26.8° C during August 2019 at Pusa. The rainfall in the Pusa Centre was 1069.5 mm. Pests and diseases noticed in the trials at Pusa were root borer , shoot borer, top borer, stalk borer, plassey borer, pyrilla, black bug, mealy bug, stem borer, smut, pokkah boeng, wilt, red rot and mosaic.

1.1. PENINSULAR ZONE

1.1.1 Coimbatore

Month	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	Rainy days	Wind speed (km/h)	Evaporation (mm/day)
	Max.	Min.	AM	PM				
April, 2019	35.89	23.36	83.51	39.33	24.10	3	1.47	6.19
May, 2019	32.26	24.29	84.35	49.32	85.80	6	1.79	5.37
June, 2019	29.38	23.53	81.00	53.93	23.40	4	4.39	5.58
July, 2019	31.89	23.10	82.52	56.23	15.80	3	4.34	5.05
August, 2019	30.05	22.48	86.84	66.45	277.30	9	3.27	4.10
September, 2019	30.10	22.60	87.93	65.93	63.00	7	2.83	3.45
October, 2019	31.48	22.27	88.23	63.39	261.80	13	1.16	3.18
November, 2019	30.17	21.73	89.57	61.73	50.40	1	1.11	2.89
December, 2019	28.08	20.94	87.97	64.87	30.80	3	1.13	2.52
January, 2020	31.37	20.24	86.94	53.68	0.00	0.00	1.07	3.27
February, 2020	33.27	20.58	84.20	45.72	0.00	0.00	1.70	4.88
March, 2020	35.03	23.27	85.65	47.35	76.8	2	1.27	5.09
Average/ Total	31.58	22.36	85.72	55.66	909.2	51	2.13	4.30

1.1.2 Basmathnagar

Month/year	Temperature (°C)		Rain fall (mm)	Rainy days
	Max.	Min.		
January, 2019			NR	NR
February, 2019			NR	NR
March, 2019			NR	NR
April, 2019			NR	NR
May, 2019			NR	NR
June, 2019			60	5
July, 2019			97	5
August, 2019			291	11
September, 2019			227	9
October, 2019			220	8
November, 2019			5	1
December, 2019			NR	NR
Total			900	39

NR-Not reported

1.1.3 Kolhapur

Month	Temperature (°C)		Relative humidity (%)		Sunshine hours	Rainfall (mm)	Rainy days	Wind speed (km/h)	Evaporation (mm)
	Max.	Min.	AM	PM					
January, 2019	30.2	13.1	86	34	4.5	0	0	1.7	4.5
February, 2019	33.2	15.1	78	25	5.3	0	0	1.1	5.3
March, 2019	36.8	17.9	69	20	4.5	3.4	1	3.2	6.3
April, 2019	38.7	21.0	70	23	5.3	1.6	0	5.1	7.4
May, 2019	37.7	21.6	74	33	4.5	0	0	4.7	8.3
June, 2019	32.5	21.8	88	62	5.3	280.0	14	3.4	3.8
July, 2019	28.0	20.8	94	83	4.5	590.9	25	1.2	1.6
August, 2019	27.4	20.3	96	81	5.3	669.9	16	3.0	1.9
September, 2019	28.4	19.9	96	76	4.5	291.6	16	1.5	1.2
October, 2019	30.1	19.8	94	64	5.3	271.6	11	1.7	1.6
November, 2019	31.0	17.8	88	47	4.5	0	0	1.5	2.9
December, 2019	30.3	17.1	86	45	5.3	4.5	1	2.4	2.8
January, 2020	30.8	14.2	89	38	4.5	0	0	1.9	4.5
February, 2020	32.7	15.2	81	32	5.3	0	0	2.8	5.3
Average/ Total	31.99	18.2	84.93	47.36	4.9	2113.5	84	2.51	4.1

1.1.4 Mandya

Month	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	Rainy days	Sunshine hours	Pest / disease occurrence during the month
	Max.	Min.	AM	PM				
April, 2019	34.9	22.2	85	58	30.4	2	7.5	ESB, TSB, YLD
May, 2019	35.5	23.5	79	53	134.3	7	7.1	ESB, Leaf hoppers, YLD
June, 2019	35.9	22.8	88	55	40.4	3	4.1	ESB, YLD, Root grub, Leaf spot
July, 2019	33.1	21.5	86	63	14.2	2	4.5	ESB, Woolly Aphid, YLD
August, 2019	28.8	18.7	92	84	120.4	13	3.1	ESB, Woolly Aphid, YLD
September, 2019	30.9	19.0	90	74	129.5	6	4.5	ESB, TSB, Woolly Aphid, YLD
October, 2019	31.4	18.8	92	77	331.2	15	7.1	TSB, Pyrilla, YLD, Rust, Woolly aphid
November, 2019	31.1	18.0	90	76	17.2	1	6.8	INB, Woolly aphid, YLD
December, 2019	28.0	17.2	91	76	2.0	0	7.0	INB, YLD

January, 2020	30.1	18.3	90	55	9.1	1	7.5	ESB, YLD
February, 2020	31.4	17.6	83	55	0.0	0	7.4	ESB, INB, YLD
March, 2020	33.3	20.2	90	34	0.0	0	8.0	ESB, TSB, YLD
Average / Total	32.03	19.82	88	63.33	828.7	50	6.22	

1.1.5 Navsari

Month	Temperature (°c)		Relative humidity		Rainfall (mm)	Rainy days
	Max.	Min.	AM	PM		
March, 2019	34.5	15.4	87.3	44.5	0.0	0
April, 2019	36.6	21.5	85.8	51.0	0.0	0
May, 2019	34.7	24.3	85.0	61.9	0.0	0
June, 2019	33.5	25.4	91.5	77.0	262.0	7
July, 2019	31.4	24.2	94.4	87.1	491.0	15
August, 2019	29.9	23.5	96.0	87.4	535.0	17
September, 2019	30.9	22.9	95.9	87.9	750.0	20
October, 2019	33.4	21.5	87.8	68.3	95.0	4
November, 2019	33.2	19.1	91.0	63.8	37.0	3
December, 2019	31.0	15.8	85.0	62.1	0.0	0
January, 2020	29.0	11.6	87.0	55.0	0.0	0
February, 2020	32.9	15.4	83.0	40.0	0.0	0
Average / Total	32.58	20.05	89.14	65.5	2170	66

1.1.6 Padegaon

Month /Year	Temperature (°c)		Relative humidity		Sunshine hours	Rainfall (mm)	Rainy Days
	Max.	Min.	AM	PM			
April, 2019	40.1	23.6	97	80	8.2	1	0
May, 2019	40.6	24.4	93	79	9.1	0	0
June, 2019	36.4	23.8	95	85	5.6	103.3	4
July, 2019	30.0	23.5	98	89	3.2	132.2	14
August, 2019	28.8	22.7	98	91	3.9	89.6	10
September, 2019	28.6	22.7	98	91	3.6	234.6	5
October, 2019	29.2	21.3	97	93	5.6	399.3	11
November, 2019	29.7	19.4	98	85	7.1	65.3	6
December, 2019	27.3	19.2	98	88	5.1	0.7	0
January, 2020	27.9	13.2	98	86	7.3	0	0
February, 2020	28.2	14.0	98	84	7.7	0	0
March, 2020	30.3	15.3	98	79	7.9	44.3	2
Average /Total	31.43	20.26	97.17	85.83	6.19	1070.3	52

1.1.7 Perumalapalle

Month	Temperature °C		Relative humidity (%)		Decennial rainfall (mm)	Actual rainfall (mm)	Rainy days
	Max.	Min.	AM	PM			
January, 2019	24.5	16.4	96.5	67.0	0.0	2.4	0
February, 2019	29.8	19.7	94.5	63.0	9.24	0.0	0
March, 2019	38.4	25.6	74.5	53.0	8.64	0.0	0
April, 2019	38.6	25.2	73.0	52.0	15.2	15.4	1
May, 2019	41.6	23.2	66.5	47.0	80.9	46.8	3
June, 2019	41.2	26.4	82.5	61.5	77.0	36.3	2
July, 2019	34.8	27.6	89.5	66.0	98.5	96.2	6
August, 2019	34.4	29.6	93.5	69.0	124.5	199.4	7
September, 2019	32.4	24.9	89.5	67.0	113.4	320.8	13
October, 2019	34.2	27.2	89.0	60.0	94.5	185.6	11
November, 2019	29.2	21.0	86.5	56.5	160.6	69.0	5
December, 2019	29.8	19.6	95.4	68.0	76.0	130.4	4
Total / Average	34.0	23.86	85.9	60.8	858.5	1102.3	52

1.1.8 Pugalur

Month	Temperature (°C)		Relative humidity		Rainfall (mm)	No. of rainy days
	Max.	Min.	AM	PM		
January, 2019	34.87	19.45	91.71	48.10	5.6	1
February, 2019	36.50	22.07	80.57	42.46	0	0
March, 2019	38.16	23.48	72.55	35.90	0	0
April, 2019	38.23	25.30	69.87	36.77	64.0	3
May, 2019	37.45	24.35	68.94	43.55	5.0	1
June, 2019	36.57	25.40	79.87	45.63	0	0
July, 2019	35.84	24.94	85.23	51.26	2.2	1
August, 2019	34.42	22.55	88.94	53.81	31.6	3
September, 2019	35.40	21.73	87.50	52.00	120.8	9
October, 2019	33.84	22.42	87.74	59.32	106.4	8
November, 2019	34.23	20.53	91.63	50.63	31.0	5
December, 2019	32.77	19.23	91.74	50.84	44.0	3
Total / Average	35.69	22.62	83.02	47.52	410.6	34

1.1.9 Pune

Month	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	Rainy Days	Wind Speed (Km per hour)	Open Pan Evaporation (mm/day)
	Max.	Min.	AM	PM				
January, 2019	29.9	10.5	90.5	28.3	0	00	1.8	3.6
February, 2019	32.9	13.2	83.4	21.5	0	00	3.0	5.4
March, 2019	36.7	16.6	68.0	17.0	0	00	3.7	7.6
April, 2019	38.9	21.1	55.9	17.9	1.7	00	5.1	9.9
May, 2019	39.0	23.0	63.8	22.2	0	00	7.4	10.2
June, 2019	33.6	24.0	77.9	56.1	202.4	08	6.8	6.2
July, 2019	28.2	22.6	87.4	75.1	504.7	23	6.3	3.1
August, 2019	28.4	21.7	87.4	73.8	79.6	10	5.8	3.2
September, 2019	28.4	21.4	90.8	73.5	285.0	12	3.7	2.7
October, 2019	30.0	20.6	92.1	64.9	291.4	16	2.2	3.1
November, 2019	30.4	16.9	93.0	48.3	38.6	02	1.8	3.2
December, 2019	29.1	16.6	91.1	48.4	0.9	00	2.6	2.7
January, 2020	29.4	13.2	94.1	42.5	0	00	2.4	3.0
February, 2020	31.6	14.7	85.5	32.7	0	00	2.5	4.5
March, 2020	33.9	16.6	78.2	28.5	12.7	02	3.7	5.8
Total / Average	32.03	18.80	82.6	43.4	1417.0	73	3.92	4.95

1.1.10 Rudrur

Month	Temperature (°C)		Relative Humidity (%)		Rainfall (mm)		No of rainy days
	Max.	Min.	AM	PM	Normal	Actual	
January, 2019	29.83	16.13	95.65	86.65	1.94	0	0
February, 2019	32.35	20.73	92.00	78.00	4.36	0	0
March, 2019	34.56	21.36	91.21	76.23	2.31	0	0
April, 2019	39.41	28.35	93.75	54.00	21.59	0	0
May, 2019	41.55	30.90	90.35	65.55	14.80	8.60	2
June, 2019	37.60	27.80	95.57	86.70	106.16	86.80	4
July, 2019	33.37	25.45	95.16	85.65	112.91	150.00	11
August, 2019	30.87	25.03	94.70	83.60	213.58	126.00	11
September, 2019	30.80	24.60	95.20	88.70	187.00	301.00	20
October, 2019	30.77	22.97	95.74	89.26	5.64	123.00	6
November, 2019	30.53	20.73	95.83	90.97	4.47	0	0
December, 2019	29.01	17.90	94.42	83.97	0.86	0	0
January, 2020	30.77	16.77	93.94	85.81	1.97	16.00	1
February, 2020	31.25	17.65	91.56	84.21	3.26	0	0
Total / Average	33.05	22.60	93.93	81.38	715.18	811.40	55

1.1.11 Sankeshwar

Month	Rainy Days	Rainfall (mm)	Occurrence of pest and diseases (in the region)
January, 2019	0	0	-
February, 2019	0	0	Root grub 10 %, ESB 20%
March, 2019	1	63.2	Root grub 7%, ESB 20%, Smut 4-5%
April, 2019	2	27.6	ESB-20%, Smut 5-6%, Root grub 15 %
May, 2019	0	0	ESB 20%, Smut 6-7%, Root grub 16%
June, 2019	10	163.4	Rust 1-2 %, Root grub 20%
July, 2019	21	239.4	Rust 2-3 %, Root grub 10 %
August, 2019	18	468.8	SWA 1-3 grade, Rust 1-2 %, Root grub 0-5 %
September, 2019	11	122.2	SWA 2-3 grade, Root grub 0-5%, White fly 5-10 %
October, 2019	15	267.4	SWA 2-4 grade, White fly 5-10 %
November, 2019	1	2.0	SWA 2-4 grade
December, 2019	1	3.2	SWA 3-4 grade
Total / Average	80	1357.2	

1.1.12 Tharsa

Month	Rainfall (mm)	Number of rainy days
June 2019	15.2	2
July 2019	373.4	13
August 2019	293.4	16
September 2019	442.8	24
October 2019	34.4	5
November 2019	0	0
December 2019	12.6	2
January 2020	66.3	5
February 2020	11.8	3
March	0	0
April	0	0
May	0	0
Total / Average	1249.9	70

1.1.13 Thiruvalla

Month / year	Temperature (°C)		Rain fall (mm)	Rainy days
	Max.	Min.		
January, 2019	33.7	25.9	0	0
February, 2019	34.9	24.7	0	0
March, 2019	35.6	25.9	58.4	3
April, 2019	33.3	25.1	2.5	2
May, 2019	33.8	24.4	11.4	3

June, 2019	31.5	23.3	470.8	19
July, 2019	31.1	23.6	324.3	19
August, 2019	30.2	23.5	587.8	22
September, 2019	30.5	23.1	282	21
October, 2019	32.7	22.3	693.5	23
November, 2019	32.1	21.5	102.7	14
December, 2019	34.0	21.7	101.5	2
Total / Average	32.78	23.8	2634.9	128

1.2 EAST COAST ZONE

1.2.1 Anakapalle

Month / year	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	Number of rainy days	Evaporati on (mm)
	Max.	Min.	AM	PM			
March, 2019	34.9	22.9	92	48	7.2	1	5.2
April, 2019	36.6	24.2	82	47	43.1	1	7.1
May, 2019	37.5	27.6	79	55	9.4	1	6.9
June, 2019	37.1	27.8	79	55	91.3	5	6.1
July, 2019	33.6	26.1	84	65	55.3	5	4.1
August, 2019	33.6	25.8	87	64	129.3	10	3.7
September, 2019	31.7	25.0	93	77	376.1	19	2.5
October, 2019	31.8	24.3	95	74	312.6	14	2.7
November, 2019	31.8	21.4	90	52	3.3	1	3.2
December, 2019	29.7	19.0	91	52	0.2	0	2.9
January, 2020	30.3	18.5	95	54	0.8	0	3.2
February, 2020	31.6	18.6	91	52	17.6	3	4.2
Total / Average	33.4	23.4	88.2	57.9	1046.2	60	4.3

1.2.2 Nayagarh

Month	Temperature (°C)		Average relative humidity (%)	Rainfall (mm)	Number of rainy days
	Max.	Min.			
April, 2019	38.84	27.00	59.82	128.8	8
May, 2019	38.26	27.00	68.62	123.0	2
June, 2019	37.12	28.00	64.25	107.8	7
July, 2019	32.84	26.87	73.34	307.8	17
August, 2019	33.03	26.54	77.50	615.2	20
September, 2019	30.45	25.40	80.24	457.2	20
October, 2019	31.22	24.78	74.62	236.8	11
November, 2019	31.14	23.06	60.35	0	0
December, 2019	28.43	19.24	61.25	0	0
January, 2020	28.88	18.94	64.55	15.2	2
February, 2020	29.68	20.32	63.40	53.6	5
March, 2020	34.75	24.26	58.82	29.2	3
Total / Average	32.89	23.28	67.23	2074	95

1.2.3 Nellikuppam

Month/ Year	Temperature (°C)		Relative humidity (%)	Rainfall (mm)	No. of rainy days
	Max.	Min.	AM		
April, 2019	37.28	25.08	75.35	Nil	Nil
May, 2019	39.09	26.96	72.94	5	1
June, 2019	39.07	27.06	66.01	17.3	6
July, 2019	36.34	25.45	71.30	150.8	14
August, 2019	35.02	25.50	72.81	188.7	11
September, 2019	35.04	24.59	81.26	185.8	11
October, 2019	33.10	24.41	87.16	218.6	13
November, 2019	35.91	26.59	98.77	299.2	11
December, 2019	28.82	22.42	82.71	107.2	7
January, 2020	31.40	21.18	82.31	23.0	3
February, 2020	32.36	21.14	78.62	Nil	Nil
March, 2020	33.98	22.51	80.16	Nil	Nil
Total /Average	34.78	24.41	79.12	1195.6	77

1.2.4 Vuyyuru

Month and year	Temperature (°C)		Average relative humidity (%)	Rainfall (mm)	Sunshine hours
	Max.	Min.			
January, 2019	29.8	16.7	45	0	7.5
February, 2019	32.1	17.2	43	0	8.2
March, 2019	35.1	20.1	43	0	7.9
April, 2019	36.8	22.4	44	0	7.9
May, 2019	40.3	25.6	45	0	8.6
June, 2019	37.8	24.5	48	38.0	6.1
July, 2019	34.1	22.4	59	211.1	6.2
August, 2019	33.6	21.1	60	146.5	6.1
September, 2019	33.7	23.3	63	228.3	5.7
October, 2019	32.7	22.8	64	43.4	6.8
November, 2019	31.0	19.7	61	0	6.2
December, 2019	29.6	17.1	55	0	7.1
Total / Average	33.9	21.1	52.5	667.3	7.0

1.3 NORTH WEST ZONE

1.3.1 Faridkot

Months	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	No. of rainy days
	Max.	Min.	Max.	Min.		
April, 2019	35.8	19.4	68.0	27.0	24.6	2
May, 2019	38.2	22.3	56.0	28.0	55.2	3
June, 2019	40.5	26.6	58.0	32.0	31.6	3
July, 2019	34.5	27.5	79.0	62.0	134.4	5
August, 2019	34.6	26.9	84.0	63.0	57.0	7
September, 2019	34.1	25.8	85.0	53.0	53.4	2
October, 2019	31.4	17.9	86.0	44.0	7.7	2
November, 2019	25.2	12.1	90.0	47.0	26.8	4
December, 2019	15.6	5.9	94.0	65.0	15.3	2
January, 2020	15.8	5.5	94.0	66.0	38.6	3
February, 2020	21.6	7.7	88.0	45.0	0.0	0
March, 2020	24.6	12.8	90.0	53.0	58.4	5
Total / Average	29.33	17.53	81.0	48.75	503	38

1.3.2 Kota

Months/Year	Temperature		Rainfall (mm)	No. of rainy days	RH (%)
	Max.	Min.			
March, 2019	31.52	13.42	0.2	0	76.16
April, 2019	39.80	19.10	36.0	2	54.00
May, 2019	42.84	23.35	5.0	1	33.87
June, 2019	42.07	29.17	60.3	1	54.60
July, 2019	33.66	24.90	506.6	12	80.48
August, 2019	31.61	24.03	632.5	13	84.65
September, 2019	31.63	23.80	172.7	11	89.33
October, 2019	32.15	20.55	52.0	2	85.29
November, 2019	31.15	17.37	0	0	78.67
December, 2019	24.90	11.63	0	0	84.65
January, 2020	22.89	8.23	0	4	84.74
February, 2020	25.59	12.52	0	0	84.83
Total / Average	32.48	19.01	1465.3	46	74.27

1.3.3 Lucknow

Months	Temperature (°C)		Relative humidity (%)		Rainfall all (mm)	No. of rainy days	Shine hours	Evaporation (mm)	Wind Speed (km/hr)
	Max.	Mini.	am	pm					
April, 2019	37.2	20.5	66.7	27.6	2.2	0	9.1	6.4	3.6
May, 2019	41.1	24.0	47.6	21.1	0.8	0	9.5	9.6	5.2
June, 2019	39.4	26.0	67.7	41.0	62	2	7.7	7.0	4.0
July, 2019	34.2	24.6	88.6	71.0	417.6	14	5.1	4.5	2.8
August, 2019	33.9	24.4	91.6	74.7	275.9	13	6.5	3.7	2.3
September, 2019	31.9	22.7	94.3	79.9	341.2	11	4.2	2.4	1.6
October, 2019	31.3	15.8	95.2	57.4	5.0	1	5.9	2.2	1.1
November, 2019	28.7	13.8	93.1	45.8	0.0	0	5.3	2.0	1.8
December, 2019	20.7	7.9	94.6	59.2	21.6	2	4.0	1.2	2.0
January, 2020	19.6	8.2	95.7	65.5	84.6	4	4.7	1.1	2.5
February, 2020	24.5	8.8	92.0	45.9	9.2	2	7.8	2.4	2.8
March, 2020	28.8	15.2	87.0	46.8	47.8	4	8.2	3.7	3.9
Total / Average	30.94	17.66	84.5	52.9	1267.9	53	6.5	3.8	2.8

1.3.4 Muzaffarnagar

Months	Temperature C°		Relative humidity %		Total rainfall (mm)	No. of rainy days
	Max.	Min.	AM	APM		
April, 2019	34.9	19.8	61	34	17.0	4
May, 2019	38.0	23.1	47	25	8.6	8
June, 2019	38.1	26.0	59	33	3.0	2
July, 2019	32.9	25.4	81	63	306.0	13
August, 2019	32.9	25.4	87	73	402.8	14
September, 2019	33.1	24.2	86	63	31.2	7
October, 2019	30.7	18.2	84	47	0.6	1
November, 2019	26.7	13.2	83	54	33.2	4
December, 2019	17.4	6.7	90	72	33.6	2
January, 2020	17.6	6.5	95	67	59.8	9
February, 2020	22.4	7.8	87	50	24.0	2
March, 2020	26.4	12.4	80	49	116.0	10
Total / Average	29.3	17.4	78.3	52.5	1037.8	76

1.3.5 Pantnagar

Months	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	No. of Rainy days	No. of sun shine hours
	Maximum	Minimum	AM	PM			
April, 2019	35.3	18.2	71	35	14.4	03	8.9
May, 2019	36.4	20.9	56	20	0.0	0	9.4
June, 2019	37.0	22.0	70	44	257.0	06	7.2
July, 2019	32.3	25.9	85	69	239.5	17	5.0
August, 2019	32.0	25.5	88	69	332.3	15	3.8
September, 2019	31.6	24.3	89	67	290.6	08	3.1
October, 2019	30.9	18.6	89	51	0	0	1.9
November, 2019	28.0	13.4	90	48	29.2	01	2.8
December, 2019	24.0	8.5	95	66	79.8	02	4.1
January, 2020	17.6	8.1	94	72	118.2	07	3.5
February, 2020	22.1	8.1	95	56	23.2	02	6.6
March, 2020	26.9	17.9	88	47	46.1	04	8.1
April, 2020	33.6	17.2	68	33	70.8	01	8.3
Total / Average	29.82	17.58	82.92	52.08	1501.1	66	5.59

1.3.6 Shahjahanpur

Month/ year	Temperature (°C)		Relative humidity (%)		Rain fall (mm)	No. of rainy days
	Maxi.	Mini.	AM	PM		
April, 2019	36.4	21.4	63	31	6.4	2
May, 2019	39.9	24.7	46	22	2.6	2
June, 2019	38.7	27.0	66	42	53.0	3
July, 2019	33.5	26.3	87	76	484.6	14
August, 2019	33.5	26.4	89	73	141.0	11
September, 2019	32.3	25.5	92	76	167.2	8
October, 2019	31.3	19.9	87	59	NIL	-
November, 2019	28.4	14.9	86	65	12.0	1
December, 2019	18.8	8.9	90	69	82.2	2
January, 2020	18.9	9.0	93	70	28.0	6
February, 2020	23.8	9.9	84	51	12.0	2
March, 2020	28.4	15.5	83	53	59.0	8
Total /Average	30.33	19.12	80.5	57.25	1048	59

1.4. NORTH CENTRAL AND NORTH EAST ZONE

1.4.1 Pusa

Month	Temperature (c)		R.H %		Rainfall (mm)	No. of rainy days	Pest occurrence	Disease occurrence
	Max	Min	AM	PM				
April, 2019	34.7	21.4	76	51	7.6	04	Root borer 8.3 %, shoot borer 15.6 % & top borer 8.9 % .	Smut in traces.
May, 2019	39.0	24.7	77	50	14.4	02	Root borer 6.9%, Shoot borer 12.7 % and top borer 13.7% .	Smut in traces - 15%
June, 2019	37.5	26.5	80	59	30.4	03	Root borer 4.3%, Shoot borer 7.4 % and top borer 17.2% .	smut in 2.0 to 15.0%
July, 2019	33.2	26.1	88	73	354.0	15	Root borer 2.5%, Shoot borer 3.2 % and top borer 13.5% And stalk borer in trace	Pokkah Boeng trace to 10%.
August, 2019	34.3	26.8	89	75	171.7	09	Top borer 9.6% , stalk borer and plassey borer in traces.	Pokkah Boeng upto 18% .
September, 2019	31.4	25.2	91	80	403.0	14	Top borer 6.3% , stalk borer 1.4% and plassey borer 1.50%.	Pokkah Boeng(16%) , Wilt& Red rot –trace to 2%&YLD in traces. .
October, 2019	29.3	22.1	92	82	6.6	01	Stalk borer 2.9% and plassey borer 1.63% and other pest like pyrilla, black bug mealy bug etc in trace.	Pokkah Boeng (5-7%), Wilt , Red rot (2-5%)&YLD in traces.
November, 2019	28.4	16.6	93	68	0.0	00	Top borer 1.3 % ,Stem borer &	Pokkah Boeng,(2%)

							Plassey borer and other borer in traces.	Wilt & Red rot (5-15%), YLD in traces & Mosaic (5%) .
December, 2019	28.4	16.6	93	68	22.0	02	Top borer in traces , Stem borer & Plassey borer and other borer in traces.	Red rot & wilt (5-20%), Yld (2-5%) & Mosaic (5%)
January, 2020	19.6	9.4	92	75	06.2	02	Stem borer & Plassey borer and other borer in traces.	-
February, 2020	24.6	10.9	92	64	24.0	01	Stem borer & Plassey borer and other borer in traces.	-
March, 2020	29.0	16.2	86	57	29.6	04	Stem borer & Plassey borer and other borer in traces.	-
Total	30.7	20.2	87.42	66.8	1069	57	-	

2. Peninsular Zone

Peninsular zone comprises of the states of Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu and Telangana.

State	Centres
Andhra Pradesh	Perumalapalle
Chhattisgarh	Kawardha
Gujarat	Navsari
Karnataka	Mandya, Sankeshwar, Sameerwadi
Kerala	Thiruvalla
Madhya Pradesh	Powarkheda
Maharashtra	Akola, Basmathnagar, Kolhapur, Padegaon, Pune, Pravaranagar
Tamil Nadu	Coimbatore, Pugalur, Sirugamani
Telangana	Rudrur

List of trials conducted during 2019-20

Sl.No.	Location	AVT II Plant	AVT Ratoon	AVT I Plant	IVT
1	Akola	C	C	NC	NC
2	Basmathnagar	C	NC	C	C
3	Coimbatore	C	C	C	C
4	Kawardha	NC	NC	NC	C
5	Kolhapur	C	C	C	C
6	Mandya	C	C	C	C
7	Navsari	C	C	C	C
8	Padegaon	C	C	C	C
9	Powarkheda	C*	C*	NC	C
10	Pravaranagar	C	C	C	C
11	Pune	C	C	C	C
12	Pugalur	NC	NC	C	C
13	Perumalapalle	C	C	C	C
14	Rudrur	C	C#	C	C
15	Sankeshwar	C	C	C	C
16	Sameerwadi	C	C	C	C
17	Sirugamani	NC	NC	NC	NC
18	Thiruvalla	C	C	C	C

C –Conducted NC-Not conducted C#: Vitiating due to drought C* Trial Failed

2.1. Advanced Varietal Trial II Plant (2019-20)

Centers where trial was conducted (14)	Coimbatore, Akola ^ψ , Basmathnagar Kolhapur ^ψ , Mandya, Navsari, Padegaon, Perumallapalle, Pravaranagar, Pune, Rudrur, Sameervadi, Sankeshwar, Thiruvalla
Entries (17)	Co 13002, Co 13003, Co 13004, Co 13006, Co 13008, Co 13009, Co 13013, Co 13014, Co 13018, Co 13020, CoN 13072, CoN 13073, CoSnk 13101, CoSnk 13103, CoSnk 13106, MS 13081 and PI 13132
Standards (3)	Co 86032, CoC 671 and CoSnk 05103
Design	RBD
Replications	Three
Plot size	6 m x 8 rows x 1.2 m (Gross) 5 m x 6 rows x 1.2 m (Net)
Seed rate	12 buds per meter
Planting time	December- January
Crop duration	12 months

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average.

Results of the previous year

Results of the previous year

Seventeen entries along with three standards (Co 86032, CoC 671 & CoSnk 05103) were evaluated at 14 centers during 2018-19. The trial was not conducted at Kawardha, Powerkheda, Pugalur and Sirugamani. The entry MS 13081 (17.71 t/ha) was the best in the zone, followed by Co 13013 (16.54 t/ha) and were numerically superior to the best standard Co 86032 (15.38 t/ha). None of the entries had recorded > 10 % improvement over the best standard across the locations in the zone for CCS yield, however the entry MS 13081 recorded 9.74 % improvement and Co 13013 recorded 7.08 % improvement over the best standard across the locations, however they recorded >10 % improvement over the best standards at six locations each. For cane yield Co 13013 (121.65 t/ha) and MS 13018 (121.33) were the best test entries in this zone and ranked first and second respectively and Co 86032 was the best standard (110.77 t/ha). None of the entries recorded > 10 % improvement for cane yield over the best standard, across all the locations in this zone. However Co 13013 and MS 13081 recorded 9.82 % and 9.51 % improvement respectively over the best standards in the zone and also they recorded >10% improvement over the best standard at five and seven locations respectively. None of the entries recorded higher CCS % and Sucrose % in the zone over the best standard CoC 671 (14.69 %). The entry Co 13013 and MS 13081 were the best entries in the zone for CCS yield and cane yield but they were inferior to best standard CoC 671 for CCS % and sucrose. Based on the cane yield and juice quality parameters none of the entries was identified as qualifying entry.

Results of the current year: Seventeen entries along with three standards (Co 86032, CoC 671 & CoSnk 05103) were evaluated at 14 centers during 2019-20. Kawardha, Pugalur and Sirugamani centers did not conduct the trial and the trial failed at Powerkheda center. The entry MS 13081 (18.13 t/ha) was the best test entry for CCS yield in the zone followed by Co 13013 (17.55 t/ha) and ranked first and second in the zone, and they were better than the best standard CoC 671 (16.37 t/ha). The entry MS 13081 recorded > 10% improvement over the best standard (10.8%) in the zone and in two locations of the zone for CCS yield. However the entry Co 13013 recorded >10% improvement over the best standard at five locations followed by 13008, Co 13014 and Co 13020 at four locations each for CCS yield. For cane yield Co 13013 (133.57 t/ha) was the best test entry in this zone and ranked first followed by the entries MS 13081 (128.24 t/ha) and Co 13014 (124.28 t/ha) and the best standard for cane yield was Co 86032 (117.32 t/ha). The entry Co 13013 recorded 13.85% improvement over the best standard across the zone and the entries Co 13008, CoN 13073 recorded >10 % improvement over the best standard at four locations. None of the entries recorded higher CCS % in the zone over the best standard CoC 671 (14.68 %). The entry Co 13003 (14.34 %) ranked second followed by MS 13081 (14.10 %). However the entries Co 13002, MS 13081, Co 13008, Co 13014, CoSnk 13106 and PI 13132 recorded > 5 % improvement over the best standard at one of the location each in the zone. Similarly none of the entries recorded higher sucrose % in the zone over the best standard CoC 671 (20.68 %), however the entry Co 13003 (20.25 %) ranked second followed by MS 13081 (19.94 %). The entry Co 13013 and MS 13081 were the best entries in the zone for CCS yield and cane yield but they were inferior to best standard CoC 671 for CCS % and sucrose. Combining cane yield and sucrose content, none of the entries was identified as qualifying entry. The data are presented in the tables 2.1.1 to 2.1.34.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.1 CCS t/ha at harvest

Sl. No.	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Ruduru	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank ^ψ
1	Co 13002	18.07*	4.70	8.99	4.30	11.63	16.49	13.50	13.06	19.99	14.33	12.56	17.68	12.31	12.67	14.27	
2	Co 13003	19.20*	4.88	10.64	6.85	12.65	16.45	15.04	15.64	18.73	18.32	19.29*	18.26	19.76	11.09	16.26	
3	Co 13004	14.78	4.31	11.68	6.11	10.95	17.96*	16.80	16.82	17.24	17.98	18.93	14.27	18.18	11.95	15.63	
4	CoN 13072	12.03	12.58*	11.05	8.12	11.93	19.38*	16.01	21.94*	16.53	16.20	18.95	15.65	17.79	10.10	15.63	
5	CoSnk 13101	10.64	7.04	11.43	4.88	9.71	14.15	17.15	12.29	17.61	14.79	15.20	14.75	18.79	14.17*	14.22	
6	MS 13081	14.89	5.09	15.58	6.63	13.33	14.71	20.58*	24.82*	20.33	18.90	17.57	24.20	22.20	10.46	18.13	1
7	Co 13006	13.25	4.06	12.82	13.21*	12.91	17.57*	17.21	14.19	18.37	12.94	16.83	22.26	20.09	11.92	15.86	
8	Co 13008	18.09*	2.02	16.78	11.75*	11.35	17.08	17.62	14.88	19.71	22.13*	13.07	21.55	17.83	12.73	16.90	3
9	Co 13009	16.76	3.02	13.08	7.00	11.49	16.33	16.53	15.74	20.01	19.24	13.59	23.55	13.72	14.09*	16.18	
10	Co 13013	18.09	4.97	12.70	8.93*	14.45	18.62*	19.82*	19.73*	20.21	16.61	17.26	24.52	19.45	10.53	17.67	2
11	Co 13014	18.57*	9.09	12.98	15.24*	13.05	17.17	18.30	18.32	21.26	14.78	15.98	21.44	18.28	11.07	16.77	4
12	Co 13018	17.15	4.49	11.60	4.79	12.66	16.08	15.87	16.81	20.02	16.89	17.59	22.45	12.49	10.53	15.84	
13	Co 13020	18.24*	4.30	13.98	4.70	13.04	17.53*	19.70*	17.36	20.51	16.50	12.69	23.06	17.99	8.74	16.61	5
14	CoN 13073	9.86	13.48*	12.40	3.25	13.69	16.07	15.50	15.78	16.69	17.26	15.14	19.78	15.94	12.31	15.03	
15	CoSnk 13103	15.54	3.69	12.55	9.36	10.49	15.25	15.33	12.10	17.22	13.67	17.87	17.85	20.43	10.72	14.92	
16	CoSnk 13106	12.29	4.60	10.42	4.04	14.09	15.03	17.91	14.52	16.69	17.90	11.77	21.52	19.65	14.55*	15.53	
17	PI 13132	16.50	2.83	15.54	2.67	12.23	15.00	11.53	17.18	16.87	14.24	18.21	24.27	17.39	11.40	15.86	
	Standards																
1	Co 86032	13.76	3.95	15.01	4.03	14.94	14.15	14.90	14.56	21.85	17.02	14.04	22.11	16.69	11.65	15.89	
2	CoC 671	13.21	5.34	11.85	5.67	15.44	15.01	16.32	14.54	19.35	17.71	17.98	19.40	23.82	11.78	16.37	6
3	CoSnk 05103	12.97	8.52	13.22	6.07	12.81	15.03	16.36	15.26	18.31	14.22	10.48	15.73	20.26	9.46	14.51	
	Mean	15.20	5.65	12.71	6.88	12.64	16.25	16.60	16.28	18.87	16.58	15.75	20.22	18.15	11.60	15.90	
	SE (m)	1.43	0.91	1.05	0.95	0.64	0.80	1.12	1.39	0.63	1.04	0.35	1.23	1.33	0.80		
	CD	4.12	2.59	3.00	2.73	1.84	2.30	3.23	3.99	1.83	3.02	1.01	3.54	3.94	2.29		
	CV	16.34	27.77	14.25	23.96	8.80	8.57	11.67	14.76	5.87	10.93	3.87	10.54	10.36	12.01		
Top three qualifying entries at each centre																	
		Co 13003		Co 13008			CoN 13072	MS 13081	MS 13081		Co 13008		Co 13013		CoSnk 13106		
		Co 13014					Co 13013	Co 13013	Co 13013						CoSnk 13101		
		Co 13020					Co 13004	Co 13020	Co 13020						Co 13009		

* Significant over the best standard at 5 %; ^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Qualifying entries: Co 13013 (5), Co 13008 (4), Co 13014 (4), Co 13020 (4), Co 13004 (2), CoN 13072 (2), MS 13081 (2), Co 13009 (2), Co 13018 (2), PI 13132 (2), Co 13002 (1), Co 13003(1), Co 13006 (1), CoSnk 13101, (1), CoN 13073 (1), CoSnk 13103 (1), CoSnk 13106 (1).

Performance across the locations: MS 13081 (18.13 t/ha) was the best test entry for CCS yield in this zone followed by Co 13013 (17.67 t/ha) and the best standard was CoC 671 (16.37 t/ha). The entry MS 13081 had recorded > 10% improvement over the CoC 671 (10.8%) across the locations and in two individual locations in this zone. However the entry Co 13013 recorded >10% improvement over the best standard at five locations followed by 13008, Co 13014, Co 13020 at four locations and CoN13072, MS 13081, Co 13009, Co 13081 and PI 13132 in two locations. Other entries viz., 13002, Co 13003, Co 13006, CoN 13073, CoSnk 13101, CoSnk 13103 and CoSnk 13106 recorded >10% improvement over the best standard in one of the locations of the zone.

Table 2.1.2 Cane yield t/ha at harvest

Sl. No	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Ruduru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ	Rank
1	Co 13002	129.48*	30.80	79.41	34.52	82.01	121.66*	94.39	112.59	141.25	96.28	105.45	116.44	83.24	88.86	104.26	
2	Co 13003	126.00	31.84	85.48	58.70	86.04	120.61*	95.35	116.09	129.31	124.45	134.43	122.45	130.79	77.80	112.40	
3	Co 13004	111.13	31.60	94.74	51.54	74.93	123.22*	105.52	128.45	131.14	119.76	132.21	108.10	118.16	95.76	111.93	
4	CoN 13072	99.37	85.28*	105.46	67.34*	83.33	135.71*	123.34	174.46*	124.93	121.18	149.80*	109.61	119.85	73.86	118.41	
5	CoSnk 13101	76.11	44.91	89.53	38.24	73.61	104.40	123.30	87.46	116.78	104.86	122.28	97.69	127.56	101.89*	102.12	
6	MS 13081	108.82	43.60	114.51	53.58	95.97	111.77	134.78	179.88*	138.66	129.32*	137.95*	161.11	149.77	76.29	128.24	2
7	Co 13006	100.75	26.65	99.14	90.16*	90.28	128.61*	115.48	140.07	125.87	96.44	127.47	158.22	132.71	86.89	116.83	
8	Co 13008	130.17*	31.79	128.07	81.40*	78.61	126.21*	130.95	115.99	135.61	154.84	95.71	155.21	141.26	90.98	123.63	5
9	Co 13009	142.72*	29.94	102.94	57.23	85.90	111.76	114.80	140.06	141.45	143.17	101.37	166.44	131.29	106.97*	124.07	4
10	Co 13013	141.78*	32.53	113.03	77.21*	105.49	139.12*	138.67*	152.46*	145.77	124.09	144.11*	174.54	137.92	85.83	133.57	1
11	Co 13014	145.80*	62.72	108.02	112.21*	94.79	118.45*	117.08	146.14	146.53	114.72	126.56	146.76	153.54	72.95	124.28	3
12	Co 13018	119.83	28.31	104.92	39.56	85.49	121.12*	107.15	128.99	134.96	122.05	122.55	157.29	86.34	80.15	114.24	
13	Co 13020	131.75*	36.88	112.22	36.40	88.75	123.25*	128.60	136.61	131.17	123.62	107.06	153.01	133.11	73.64	120.23	6
14	CoN 13073	84.73	93.83*	108.93	32.14	95.83	125.62*	126.09	151.26	121.10	142.96	128.22	143.98	120.34	88.33	119.78	
15	CoSnk 13103	112.33	27.03	98.71	65.44*	74.31	103.91	122.67	90.19	121.52	97.47	126.71	122.80	146.75	81.36	108.23	
16	CoSnk 13106	95.56	32.12	89.66	31.65	97.08	120.09*	112.65	141.03	127.28	128.58	99.09	149.31	142.50	96.21	116.59	
17	PI 13132	128.11*	26.20	116.54	24.73	86.74	107.76	89.96	134.55	110.32	101.92	148.34	168.40	121.58	86.21	116.70	
	Standards																
1	Co 86032	100.79	43.23	121.30	33.34	107.08	98.60	113.98	113.63	153.40	125.78	111.75	155.79	120.30	85.38	117.32	
2	CoC 671	91.41	60.25	98.36	46.14	101.32	96.45	97.79	102.68	126.31	114.54	130.13	136.00	146.91	85.23	110.59	
3	CoSnk 05103	103.48	56.85	110.47	49.37	95.83	101.77	113.09	128.98	129.64	109.62	82.96	112.73	143.90	74.17	108.89	
	Mean	114.01	42.82	104.07	54.04	89.17	117.01	115.28	131.08	131.65	119.78	121.71	140.79	129.39	85.44	116.61	
	SE (m)	8.47	5.81	7.17	5.53	3.65	4.05	7.68	8.01	2.98	7.07	2.71	8.55	8.79	4.77		
	CD	24.35	16.63	20.52	15.83	10.46	11.60	22.18	23.01	8.53	20.44	7.77	24.58	26.03	13.57		
	CV	12.87	23.50	11.93	17.72	7.10	6.00	11.54	10.58	3.92	10.23	3.86	10.52	9.61	9.68		
Top three qualifying entries at each centre																	
		Co 13014					Co 13013	Co 13013	MS 13081		Co 13008	CoN 13072	Co 13013		Co 13009		
		Co 13009					CoN 13072	MS 13081	CoN 13072		Co 13009	PI 13132			CoSnk 13101		
		Co 13013					Co 13006	Co 13008	Co 13013		CoN 13073	Co 13013			CoSnk 13106		

* Significant over the best standard at 5 %; ^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average
Qualifying entries: Co 13013 (6), Co 13008 (4), CoN 13073 (4), CoN 13072 (3), Co 13009 (3), Co 13014 (3), Co 13020 (3), Co 13002 (2), Co 13003 (2), MS 13081 (2), Co 13018 (2), CoSnk 13106 (2), PI 13132 (2), Co 13004 (1), CoSnk 13101 (1), Co 13006 (1)
Performance across the locations: Co 13013 (133.57 t/ha) was the best test entry for cane yield followed by MS 13081 (128.24) in this zone and the best standard was Co 86032 (117.32 t/ha). The entry Co 13013 had recorded > 10 % improvement for cane yield (13.9%) over the best standard across all the locations in the zone and in 6 individual locations. Co 13008, CoN 13073 recorded >10 % improvement over the best standard at four locations, followed by CoN 13072, Co 13009, Co 13014 and Co 13020 in three locations, Co 13002, Co 13003, MS 13081, Co 13018, CoSnk 13106 and PI 13132 in two locations and Co 13004, CoSnk 13101 and Co 13006 in one of the locations of the zone recorded >10 % improvement over the best standard for cane yield.

Table 2.1.3 CCS % at harvest

Sl. No.	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravaraganagar	Pune	Ruduru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ	Rank
1	Co 13002	13.91	15.27	11.46	12.42	14.17	13.56	14.11	11.63	14.16	14.88	11.92	15.17	14.80	14.26	13.67	
2	Co 13003	15.16	15.36	12.42	11.64	14.70	13.65	14.90	13.39	14.49	14.69	14.35*	14.94	15.10	14.25	14.34	2
3	Co 13004	13.28	15.05	12.31	11.72	14.62	14.56	15.46	13.14	13.18	15.03	14.32*	13.22	15.34	12.45	13.91	
4	CoN 13072	12.14	15.00	10.44	12.09	14.34	14.27	14.27	12.53	13.27	13.41	12.65	14.28	14.89	13.65	13.35	
5	CoSnk 13101	13.94	15.61	12.85	12.67	13.19	13.55	14.57	14.14	15.08	14.13	12.43	15.08	14.74	13.91	13.97	4
6	MS 13081	13.57	16.36	13.61	12.38	13.87	13.19	15.59	13.78	14.67	14.60	12.74	15.01	14.82	13.78	14.10	3
7	Co 13006	13.19	14.97	12.82	14.65*	14.22	13.67	14.30	10.33	14.60	13.44	13.20	14.07	15.11	13.72	13.56	
8	Co 13008	13.87	14.84	13.09	14.39*	14.39	13.49	14.19	12.87	14.54	14.29	13.66	13.88	12.61	13.98	13.74	
9	Co 13009	11.75	14.24	12.67	12.28	13.37	14.60	14.47	11.21	13.90	13.42	13.41	14.15	10.45	13.17	13.05	
10	Co 13013	12.76	15.02	11.21	11.64	13.68	13.37	14.42	12.95	14.75	13.38	11.98	14.05	14.10	12.35	13.25	
11	Co 13014	12.72	14.57	12.05	13.35	13.77	14.50	14.59	12.53	14.31	12.88	12.63	14.61	11.94	15.13	13.47	
12	Co 13018	14.29	16.00	11.12	12.11	14.82	13.26	14.55	12.96	14.86	13.82	14.35*	14.26	14.50	13.06	13.82	6
13	Co 13020	13.83	15.79	12.53	12.73	14.68	14.22	15.07	12.80	15.17	13.31	11.86	15.10	13.54	11.83	13.66	
14	CoN 13073	11.59	14.44	11.33	10.14	14.28	12.79	12.51	10.41	13.81	12.05	11.81	13.70	13.25	13.97	12.63	
15	CoSnk 13103	13.78	15.31	12.72	14.19*	14.12	14.68	13.72	13.43	14.22	14.04	14.10*	14.58	13.94	13.19	13.88	5
16	CoSnk 13106	12.83	14.63	11.62	12.80	14.57	12.51	14.22	10.30	13.15	13.94	11.88	14.42	13.76	15.07	13.19	
17	PI 13132	12.84	15.91	13.33	10.74	14.10	13.95	13.77	12.77	15.27	13.99	12.28	14.40	14.24	13.23	13.68	
	Standards																
1	Co 86032	13.59	14.87	12.38	12.05	13.95	14.36	13.41	12.83	14.24	13.52	12.57	14.18	13.90	13.59	13.54	
2	CoC 671	14.50	15.79	12.06	12.38	15.23	15.54	15.59	14.19	15.26	15.48	13.82	14.39	16.28	13.86	14.68	1
3	CoSnk 05103	12.51	14.86	11.97	12.30	13.36	14.75	14.21	11.83	14.12	12.95	12.63	13.99	14.10	12.82	13.27	
	Mean	13.30	15.20	12.20	12.46	14.17	13.92	14.40	12.50	14.35	13.86	12.93	14.37	14.07	13.56	13.64	
	SE (m)	0.40	0.37	0.54	0.53	0.31	0.39	0.30	0.78	0.45	0.23	0.06	0.30	0.48	0.54		
	CD	1.15	1.07	1.53	1.50	0.90	1.11	0.86	2.23	1.30	0.66	0.18	0.86	1.43	1.54		
	CV	5.22	4.26	7.60	7.30	3.84	4.81	3.59	6.96	5.49	2.86	0.85	3.59	4.86	6.91		
Top three qualifying entries at each centre																	
				MS 13081									Co 13002		Co 13014		
				PI 13132											CoSnk 13106		
				Co 13008													

* Significant over the best standard at 5 %; ^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canners were less than the state average

Qualifying entries: Co 13002 (1), MS 13081 (1), Co 13008 (1), Co 13014 (1), CoSnk 13106 (1), PI 13132 (1)

Performance across the locations: None of the entries recorded higher CCS % in the zone over the best standard CoC 671 (14.68 %). The entry Co 13003 (14.34 %) ranked second followed by MS 13081 (14.10 %). However the entries Co 13002, MS 13081, Co 13008, Co 13014, CoSnk 13106 and PI 13132 recorded > 5 % improvement over the best standard at one of the locations in the zone.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.4 Sucrose% at harvest

Sl. No.	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ	Rank
1	Co 13002	19.72	21.28	16.55	17.25	19.92	19.21	20.06	16.69	20.72	20.44	16.87	21.65	21.18	20.22	19.44	
2	Co 13003	21.44	21.31	17.88	16.25	20.60	19.41	21.06	19.16	20.06	20.36	20.05*	21.27	21.55	20.22	20.25	2
3	Co 13004	18.85	20.73	17.56	16.33	20.46	20.49	21.76	18.45	17.06	20.73	20.04*	18.96	21.71	17.65	19.48	
4	CoN 13072	17.62	20.89	15.69	16.93	20.04	20.04	20.24	17.71	20.00	18.93	18.07	20.37	21.34	19.34	19.12	
5	CoSnk 13101	19.75	21.51	18.38	17.69	18.48	19.17	20.57	19.95	21.09	19.49	17.67	21.57*	21.05	19.71	19.74	4
6	MS 13081	19.17	22.53	19.09	17.31	19.39	18.96	21.88	19.09	21.24	20.14	18.09	21.42	21.27	19.50	19.94	3
7	Co 13006	18.74	20.95	18.40	20.86*	19.90	19.32	20.29	15.02	20.33	19.10	18.74	20.14	21.62	19.48	19.26	
8	Co 13008	19.73	20.58	18.60	20.56*	20.22	19.18	20.06	18.04	20.55	19.83	19.21	19.82	18.04	19.79	19.42	
9	Co 13009	18.28	19.76	18.03	17.16	18.69	20.46	20.48	15.96	20.36	18.79	19.06	20.19	15.28	18.62	18.56	
10	Co 13013	16.81	20.84	16.06	16.25	19.17	18.90	20.41	18.45	20.79	18.75	17.19	20.07	20.14	17.54	18.81	
11	Co 13014	18.13	20.13	17.16	18.68	19.27	20.34	20.43	17.62	20.97	18.12	18.06	20.99	17.24	21.01	19.11	
12	Co 13018	20.24	22.04	15.97	16.99	20.77	18.93	20.57	18.22	21.09	19.23	20.04*	20.34	20.74	18.53	19.56	6
13	Co 13020	19.76	21.81	17.99	17.43	20.60	20.04	21.21	18.30	21.15	18.52	17.17	21.50	19.16	16.75	19.35	
14	CoN 13073	16.79	20.12	16.16	14.11	20.08	18.07	18.00	15.07	21.03	17.05	16.90	19.65	18.95	19.79	18.13	
15	CoSnk 13103	19.56	21.15	18.43	20.08*	19.79	20.65	19.62	18.82	20.85	19.50	19.70*	20.61	19.98	18.68	19.68	5
16	CoSnk 13106	18.27	20.21	16.62	17.91	20.38	18.24	19.99	14.93	18.02	19.22	16.63	20.49	19.59	20.93	18.61	
17	PI 13132	18.24	21.97	19.08	14.89	19.69	19.90	19.57	18.05	21.46	19.51	17.44	20.49	20.20	18.75	19.37	
	Standards																
1	Co 86032	19.30	20.62	17.89	16.79	19.50	20.04	19.02	18.24	21.04	18.95	17.95	20.15	19.94	19.27	19.27	
2	CoC 671	20.47	21.81	17.40	17.31	21.33	21.79	21.92	19.94	21.29	21.41	19.41	20.62	22.98	19.63	20.68	1
3	CoSnk 05103	17.85	20.79	17.24	17.22	18.68	20.84	20.19	17.06	20.34	18.13	17.93	19.98	20.06	18.16	18.87	
	Mean	18.94	21.05	17.51	17.40	19.85	19.70	20.37	17.74	20.47	19.31	18.31	20.51	20.10	19.18	19.33	
	SE (m)	0.52	0.51	0.67	0.77	0.44	0.44	0.38	0.90	0.52	0.29	0.08	0.31	0.62	0.68		
	CD	1.48	1.45	1.91	2.19	1.26	1.27	1.09	2.57	1.49	0.83	0.24	0.89	1.82	1.94		
	CV	4.71	4.16	6.61	7.63	3.84	3.90	3.22	8.75	4.40	2.58	0.79	2.60	4.33	6.16		
Top three qualifying entries at each centre																	
				MS 13081									Co 13002		Co 13014		
				PI 13132											CoSnk 13106		

* Significant over the best standard at 5 %; ^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canners were less than the state average

Qualifying entries: Co 13002 (1), MS 13081 (1), Co 13014 (1), CoSnk 13106 (1), PI 13132 (1)

Performance across the locations: None of the entries recorded higher Sucrose % in the zone over the best standard CoC 671 (20.18 %). The entry Co 13003 (20.25 %) ranked second followed by MS 13081 (19.94 %). However the entries Co 13002, MS 13081, Co 13014, CoSnk 13106 and PI 13132 recorded > 5 % improvement over the best standard at one of the locations in the zone.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.5 Brix % at harvest

Sl. No	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	21.39	22.67	19.20	17.83	21.23	20.80	21.87	18.59	21.71	21.28	18.24	23.81	23.44	21.93	21.12
2	Co 13003	23.11	21.97	20.61	17.00	21.80	21.17	22.69	21.19	21.31	21.63	21.02	23.28	23.69	21.97	21.96
3	Co 13004	20.51	21.02	19.87	17.00	21.57	21.87	23.24	19.56	18.04	21.76	21.10	21.10	23.43	19.13	20.93
4	CoN 13072	20.10	21.77	19.63	17.83	21.07	21.28	21.96	19.06	20.88	20.95	19.91	22.38	23.69	20.93	20.99
5	CoSnk 13101	21.39	21.80	20.93	18.50	19.53	20.70	22.08	21.39	21.98	20.46	19.29	23.81	23.19	21.37	21.34
6	MS 13081	20.61	22.83	20.82	18.17	20.40	21.20	23.17	19.62	22.11	21.17	19.71	23.52	23.69	21.07	21.42
7	Co 13006	20.42	22.05	21.08	22.83	21.00	20.83	22.03	17.19	21.38	21.45	20.37	22.29	23.94	21.20	21.10
8	Co 13008	21.54	21.22	20.90	22.67	21.53	20.93	21.63	19.06	21.94	21.12	20.45	21.81	19.93	21.40	21.02
9	Co 13009	18.61	20.37	20.30	18.00	19.67	21.63	22.13	17.46	21.38	20.40	20.80	22.19	17.67	20.07	20.11
10	Co 13013	20.28	21.49	18.33	17.00	20.27	20.37	22.06	20.22	21.78	20.41	19.13	22.12	22.18	19.10	20.52
11	Co 13014	19.89	20.55	19.36	19.67	20.33	21.53	21.54	18.76	22.04	19.89	19.96	23.41	19.43	21.70	20.65
12	Co 13018	21.91	22.33	18.33	18.00	22.00	20.84	22.16	19.39	21.68	20.62	21.00	22.32	22.93	20.13	21.11
13	Co 13020	21.81	22.25	20.63	18.33	21.87	21.43	22.62	20.19	22.11	19.84	19.49	23.51	20.68	18.10	21.02
14	CoN 13073	19.09	20.95	18.28	14.67	21.40	19.47	20.18	17.09	22.18	18.93	18.72	21.87	20.93	21.40	19.96
15	CoSnk 13103	21.27	21.58	21.53	21.67	20.93	22.00	21.69	19.86	22.01	20.79	20.65	22.21	22.18	20.23	21.28
16	CoSnk 13106	20.01	20.63	18.93	18.83	21.47	21.00	21.25	16.99	19.08	20.18	17.52	22.32	21.43	21.63	20.15
17	PI 13132	19.85	22.42	21.74	15.33	20.67	21.87	21.34	19.46	22.71	21.03	19.00	22.38	21.93	20.33	21.03
	Standards															
1	Co 86032	21.00	21.25	20.79	17.50	20.53	20.93	20.65	19.89	21.98	20.65	19.80	21.98	22.18	20.90	20.94
2	CoC 671	21.99	22.25	20.18	18.17	22.53	23.07	23.31	21.22	22.01	22.65	20.63	22.88	24.69	21.27	22.20
3	CoSnk 05103	19.64	21.88	19.91	18.17	19.67	22.42	21.98	19.22	21.24	19.71	19.50	22.02	21.93	19.67	20.58
	Mean	20.72	21.66	20.07	18.36	20.97	21.27	21.98	19.27	21.48	20.75	19.81	22.56	22.15	20.68	20.98
	SE (m)	0.44	0.51	0.66	0.85	0.48	0.41	0.35	0.78	0.52	0.32	0.09	0.35	0.57	0.63	
	CD	1.27	1.46	1.88	2.43	1.36	1.17	1.02	2.23	1.49	0.92	0.25	1.01	1.68	1.78	
	CV	3.70	4.09	5.68	8.01	3.93	3.34	2.77	6.96	4.40	2.66	0.77	2.70	3.62	5.25	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.6 Purity % at harvest

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	92.18	96.00		96.73	93.97	92.61	91.66	89.69	91.62	96.08	92.50	90.91	90.36	92.19	92.16
2	Co 13003	92.76	97.00		95.63	94.67	91.70	92.84	90.56	92.98	94.14	95.37	91.37	90.96	92.05	92.67
3	Co 13004	91.90	98.67		96.02	95.02	93.74	93.67	94.32	94.43	95.25	94.98	89.82	92.58	92.22	93.45
4	CoN 13072	87.58	96.00		94.91	95.31	94.17	92.17	92.75	91.78	90.37	90.74	91.04	90.04	92.40	91.67
5	CoSnk 13101	92.35	98.67		95.61	94.80	92.62	93.13	93.31	94.30	95.21	91.60	90.53	90.77	92.28	92.81
6	MS 13081	92.97	98.67		95.28	95.23	89.44	94.40	97.26	91.26	95.13	91.81	90.99	89.82	92.57	92.81
7	Co 13006	91.76	95.00		91.38	94.95	92.76	92.07	86.93	92.88	89.24	92.00	90.35	90.32	91.89	91.38
8	Co 13008	91.55	97.00		90.73	94.10	91.68	92.75	94.50	93.84	93.93	93.91	90.82	90.52	92.50	92.74
9	Co 13009	90.13	97.00		95.32	95.21	94.59	92.55	91.40	91.84	92.09	91.63	90.99	86.45	92.79	91.79
10	Co 13013	90.33	97.00		95.57	94.78	92.69	92.44	91.27	94.13	91.89	89.86	90.67	90.84	91.82	91.88
11	Co 13014	91.11	98.00		94.99	94.99	94.45	94.84	93.91	92.88	91.13	90.48	89.62	88.66	96.73	92.62
12	Co 13018	92.38	98.67		94.43	94.60	90.84	92.83	93.92	92.66	93.22	95.43	91.09	90.44	92.04	92.68
13	Co 13020	90.61	98.00		95.27	94.38	93.51	93.76	90.27	93.52	93.34	88.11	91.37	92.68	92.53	92.19
14	CoN 13073	87.91	96.00		96.17	94.01	92.91	89.22	88.04	90.29	90.03	90.30	89.91	90.56	92.48	90.51
15	CoSnk 13103	91.89	98.00		92.59	94.72	93.86	90.49	94.82	93.93	93.79	95.42	92.74	90.10	92.33	93.10
16	CoSnk 13106	91.30	98.00		95.07	95.09	86.94	94.03	87.80	94.08	95.22	94.90	91.74	91.38	96.66	92.65
17	PI 13132	91.84	98.00		97.12	95.46	91.01	91.70	92.78	94.05	92.79	91.79	91.57	92.13	92.22	92.49
	Standards															
1	Co 86032	91.92	97.00		95.94	95.17	95.73	92.12	91.68	91.59	91.83	90.67	91.72	89.89	92.23	92.23
2	CoC 671	93.07	98.00		95.25	94.85	94.47	94.03	94.08	94.63	94.55	94.09	90.12	93.06	92.32	93.57
3	CoSnk 05103	90.87	95.00		94.85	95.19	92.95	91.82	88.85	90.66	91.98	91.95	90.67	91.49	92.30	91.70
	Mean	91.32	97.28		94.94	94.82	92.63	92.63	91.91	92.87	93.06	92.38	90.90	90.65	92.73	92.35
	SE (m)	0.72	0.55		0.69	0.41	1.65	0.77	0.72	1.00	0.83	0.19	0.60	1.15	1.45	
	CD	2.07	1.57		1.98	NS	NS	2.23	2.08	2.87	2.39	0.54	NS	3.40	NS	
	CV	1.37	0.98		1.26	0.75	3.08	1.44	10.03	1.87	1.54	0.35	1.14	1.79	2.70	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.7 Pol% Cane at harvest

Sl. No	Clone	Coimbatore	Akola	Basmatnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	14.93	16.41		14.03	14.48	14.72	15.72			15.55		16.02	16.63		15.44
2	Co 13003	16.02	15.13		12.79	15.79	14.71	15.86			14.90		15.74	15.89		15.56
3	Co 13004	14.07	15.66		12.28	15.70	15.59	16.40			15.48		14.03	16.37		15.38
4	CoN 13072	13.20	15.73		12.97	15.39	15.27	15.22			13.80		15.07	15.95		14.84
5	CoSnk 13101	14.92	16.03		13.37	14.11	14.66	15.67			14.59		15.96	16.05		15.14
6	MS 13081	15.11	16.75		13.60	14.76	14.43	17.17			15.59		15.85	16.94		15.69
7	Co 13006	14.47	16.19		15.78	15.24	14.64	15.29			14.27		14.90	15.98		14.97
8	Co 13008	15.51	15.85		15.62	15.51	14.61	15.17			15.12		14.66	13.96		14.93
9	Co 13009	14.08	15.42		13.02	14.32	15.57	15.23			14.25		14.94	11.97		14.34
10	Co 13013	14.12	16.16		12.33	14.70	14.37	15.71			14.12		14.85	15.56		14.78
11	Co 13014	13.07	14.96		14.90	14.74	15.60	15.71			13.61		15.53	13.53		14.54
12	Co 13018	15.40	16.35		13.84	16.21	14.37	15.96			14.56		15.05	15.79		15.33
13	Co 13020	15.36	16.69		14.22	16.17	15.36	16.19			14.13		15.91	14.92		15.43
14	CoN 13073	12.79	15.63		11.27	15.41	13.70	13.69			12.81		14.54	14.73		13.95
15	CoSnk 13103	14.89	16.44		14.38	15.33	15.74	14.97			14.62		15.25	15.39		15.17
16	CoSnk 13106	14.42	15.52		13.91	15.75	13.95	15.68			14.45		15.16	14.97		14.91
17	PI 13132	14.32	16.98		10.95	15.10	15.15	15.25			14.93		15.16	15.82		15.10
	Standards															
1	Co 86032	14.88	15.76		12.3	15.13	15.22	14.77			14.29		14.91	15.69		14.98
2	CoC 671	15.66	16.6		13.99	16.61	16.43	16.85			15.76		15.26	17.63		16.31
3	CoSnk 05103	13.47	15.66		12.12	14.19	15.88	15.02			13.2		14.79	14.92		14.50
	Mean	14.53	16.00		13.38	15.23	15.00	15.58			14.5		15.179	15.43		15.06
	SE (m)	0.41	0.38		0.6	0.39	0.35	0.29			0.21		0.23	0.52		
	CD	1.17	1.08		1.73	1.11	1	0.84			0.62		0.66	1.54		
	CV	4.86	4.1		7.82	4.41	4.02	3.23			2.55		2.6	4.78		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canters were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.8 Fibre % at harvest

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	14.28			8.63	13.10	13.38	11.62			13.93			11.47		12.96
2	Co 13003	15.28			11.27	13.33	14.22	14.69			16.78			16.21		15.09
3	Co 13004	15.37			14.80	13.25	13.94	14.67			15.28			14.58		14.52
4	CoN 13072	15.12			13.37	13.20	13.79	14.80			16.86			15.26		14.84
5	CoSnk 13101	14.45			14.43	13.64	13.52	13.79			15.09			13.72		14.04
6	MS 13081	11.14			11.43	13.89	13.88	11.52			12.61			10.36		12.23
7	Co 13006	12.84			14.37	13.49	14.22	14.62			15.31			16.11		14.43
8	Co 13008	11.40			14.03	13.27	13.86	14.34			13.78			12.57		13.20
9	Co 13009	12.97			14.13	13.36	13.89	15.63			14.14			11.63		13.60
10	Co 13013	12.24			14.10	13.35	13.98	12.99			14.71			12.72		13.33
11	Co 13014	12.08			10.27	12.57	13.29	13.09			14.90			11.54		12.91
12	Co 13018	13.91			8.57	11.98	14.11	12.43			14.29			13.84		13.43
13	Co 13020	12.27			8.37	11.49	13.34	13.68			13.71			12.10		12.77
14	CoN 13073	13.82			10.13	13.26	14.21	13.97			14.86			12.27		13.73
15	CoSnk 13103	13.88			18.40	12.52	13.77	13.69			15.04			12.98		13.65
16	CoSnk 13106	11.04			12.33	12.74	13.53	11.54			14.79			13.59		12.87
17	PI 13132	11.55			16.47	13.31	13.85	12.09			13.48			11.69		12.66
	Standards															
1	Co 86032	12.92			16.73	12.42	14.04	12.38			14.55			11.34		12.94
2	CoC 671	13.49			9.13	12.17	14.60	13.12			16.05			13.27		13.78
3	CoSnk 05103	14.55			19.63	14.03	13.82	15.57			17.20			15.59		15.13
	Mean	13.23			13.03	13.02	13.86	13.51			14.87			13.14		13.61
	SE (m)	0.27			0.18	0.52	0.38	0.44			0.23			0.83		
	CD	0.79			0.53	NS	NS	1.28			0.68			2.44		
	CV	3.58			2.45	6.92	4.70	5.68			2.74			8.89		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.9 Extraction % at harvest

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	53.27			49.69	52.71	53.62	51.22	50.95	57.57	51.75			50.11	56.45	53.07
2	Co 13003	53.98			51.99	52.19	57.35	46.16	50.00	57.20	48.91			54.03	60.66	53.39
3	Co 13004	52.91			50.82	45.22	57.97	43.84	49.85	56.02	50.25			54.20	54.77	51.67
4	CoN 13072	51.78			49.67	47.33	53.55	45.46	53.06	54.75	51.04			44.05	58.27	51.03
5	CoSnk 13101	48.93			50.05	43.92	56.32	48.79	47.78	53.33	43.76			49.05	54.39	49.59
6	MS 13081	56.66			51.53	40.91	54.23	50.72	54.44	57.94	52.69			55.26	56.37	53.25
7	Co 13006	52.93			48.58	43.50	56.29	42.27	47.67	56.22	49.49			52.13	53.39	50.43
8	Co 13008	54.36			49.55	39.35	54.57	44.23	52.17	59.45	54.17			56.75	57.24	52.48
9	Co 13009	53.56			46.86	48.58	55.18	47.57	51.58	57.50	49.42			53.83	55.93	52.57
10	Co 13013	45.03			47.43	49.17	58.59	41.84	46.15	56.57	49.00			57.04	54.43	50.87
11	Co 13014	57.32			48.25	54.37	58.57	46.80	54.80	54.03	49.94			59.37	52.52	54.19
12	Co 13018	51.43			49.79	47.12	56.05	46.44	47.33	56.73	50.58			53.97	56.21	51.76
13	Co 13020	56.48			47.56	50.49	56.77	40.19	52.28	51.67	53.60			54.27	49.48	51.69
14	CoN 13073	51.97			49.60	59.09	53.91	46.85	52.94	53.07	50.93			53.41	55.74	53.10
15	CoSnk 13103	46.14			49.11	44.61	55.67	43.11	44.85	55.08	49.98			52.51	58.63	50.06
16	CoSnk 13106	49.46			50.22	53.01	55.77	42.80	44.38	52.62	52.33			57.32	59.88	51.95
17	PI 13132	49.41			52.82	49.04	56.87	47.34	47.10	53.16	49.33			58.63	53.12	51.55
	Standards															
1	Co 86032	53.66			49.62	55.24	52.27	44.15	50.79	56.57	52.11			58.41	62.02	53.91
2	CoC 671	54.03			50.01	52.60	53.05	44.09	49.89	51.74	49.30			55.35	58.16	52.02
3	CoSnk 05103	46.19			50.72	48.75	53.65	40.16	47.17	51.30	51.88			52.93	54.98	49.67
	Mean	51.98			49.69	48.86	55.51	45.20	49.76	55.12	50.52			54.13	56.13	51.91
	SE (m)	2.25			1.56	3.74	1.16	2.78	1.58	1.03	1.00			1.52	1.73	
	CD	6.47			4.47	10.70	3.33	NS	4.54	2.97	2.88			4.49	4.92	
	CV	7.50			5.45	13.25	3.63	10.64	5.50	3.26	3.42			3.96	5.34	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Table 2.1.10 Number of millable canes (000³/ha) at harvest

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	100.66	37.50	75.11	54.46	77.08	115.89	87.11	104.25	108.93	76.43	109.81	126.74		97.93	98.18
2	Co 13003	77.55	30.14	77.05	67.30	50.42	116.63	74.79	99.91	113.75	76.40	109.70	96.76		87.11	89.10
3	Co 13004	75.46	32.50	70.32	56.54	61.88	114.83	73.67	88.93	109.78	71.80	103.66	115.97		111.23	90.68
4	CoN 13072	69.91	65.28	77.05	65.05	65.97	119.00	78.26	122.50	105.51	77.95	103.07	106.94		88.16	92.21
5	CoSnk 13101	74.31	45.83	65.49	52.03	35.76	94.93	85.28	76.79	110.29	73.76	91.16	115.86		115.74	85.40
6	MS 13081	52.78	34.31	88.60	51.68	60.76	104.40	73.06	91.33	111.60	70.50	96.94	112.04		93.37	86.85
7	Co 13006	61.81	30.56	80.89	72.28	66.32	119.42	71.85	96.67	115.47	70.12	122.27	129.17		98.63	93.87
8	Co 13008	74.31	35.97	75.11	63.02	65.69	118.65	68.55	85.45	120.48	87.90	90.43	114.24		104.04	91.35
9	Co 13009	69.21	33.61	79.94	50.58	56.95	101.69	61.10	89.94	125.91	81.04	79.63	112.27		121.14	88.98
10	Co 13013	81.51	35.45	75.50	65.74	73.89	121.60	78.00	108.96	107.83	75.04	103.61	129.74		96.42	95.65
11	Co 13014	75.69	40.28	65.49	81.54	68.54	110.42	74.88	91.79	112.61	71.98	84.95	136.00		91.67	89.46
12	Co 13018	107.87	40.97	91.88	63.25	72.43	113.93	84.24	114.84	121.46	83.85	96.53	134.14		94.09	101.39
13	Co 13020	76.39	35.79	75.11	43.75	58.54	115.75	80.69	98.37	125.93	77.09	86.99	125.58		82.25	91.15
14	CoN 13073	57.87	64.58	58.42	38.72	57.99	116.97	79.39	87.54	105.75	80.97	93.15	114.82		99.29	86.56
15	CoSnk 13103	94.24	33.19	68.35	49.88	61.04	97.84	74.53	89.55	101.80	72.62	98.56	116.67		98.74	88.54
16	CoSnk 13106	66.90	39.58	71.24	52.78	77.50	111.72	76.09	95.51	122.09	78.11	93.38	119.56		107.70	92.71
17	PI 13132	84.22	31.53	73.18	36.86	80.69	98.87	71.24	113.99	102.36	71.56	106.30	124.88		99.81	93.37
	Standards															
1	Co 86032	71.30	48.06	73.20	44.39	93.82	95.05	84.59	107.65	132.72	83.92	94.77	127.43		97.98	96.58
2	CoC 671	64.58	51.11	77.02	51.56	65.28	90.46	68.63	86.38	105.71	69.18	110.79	122.68		100.98	87.43
3	CoSnk 05103	123.03	69.44	68.05	84.95	100.56	92.65	101.75	124.43	115.00	96.63	113.75	127.32		86.81	104.54
	Mean	77.98	21.66	74.35	57.32	67.56	108.54	77.39	98.74	113.75	77.34	99.47	120.44		98.65	92.20
	SE (m)	4.04	2.43	2.81	3.30	4.54	3.71	4.13	5.68	1.59	6.13	2.16	4.56		5.03	
	CD	11.61	6.97	8.04	9.46	13.01	10.63	11.92	16.33	4.55	17.72	6.20	13.09		14.30	
	CV	8.98	10.09	6.54	9.99	11.65	5.93	9.24	9.97	2.42	13.74	3.77	6.55		8.83	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the caners were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.11 Stalk length (cm) at harvest

Sl. No	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	266.70	203.67	172.33	116.22	186.00	287.71	218.00	231.33	220.33	198.22	216.33	170.00	208.15	274.33	220.79
2	Co 13003	285.00	219.67	175.00	138.89	204.00	273.86	268.67	248.67	225.00	252.11	222.67	200.00	264.00	276.00	241.25
3	Co 13004	271.70	212.00	174.67	149.44	196.00	271.95	252.33	267.00	218.33	258.22	253.80	170.00	279.50	294.67	242.35
4	CoN 13072	235.00	210.67	181.33	164.61	194.00	272.89	260.67	239.90	217.66	235.44	231.53	160.00	259.30	279.33	230.59
5	CoSnk 13101	221.70	212.00	173.67	104.44	171.33	265.39	226.00	226.57	213.33	196.00	228.13	150.00	236.30	266.67	214.59
6	MS 13081	275.00	199.67	196.67	126.05	214.67	282.63	267.00	285.77	217.00	243.44	232.60	210.00	268.00	269.33	246.84
7	Co 13006	285.00	227.00	223.67	189.94	230.67	278.28	283.00	290.33	209.00	239.22	231.93	220.00	264.15	295.00	254.19
8	Co 13008	298.30	197.67	220.00	190.72	191.33	277.44	278.67	255.00	228.66	255.45	209.73	220.00	258.50	292.33	248.78
9	Co 13009	283.30	209.00	178.33	146.67	196.00	282.91	279.67	243.00	224.00	227.22	264.60	210.00	264.80	264.00	243.15
10	Co 13013	263.30	223.00	231.67	186.50	218.67	289.06	274.67	295.33	229.00	232.00	246.40	250.00	267.00	267.00	255.34
11	Co 13014	265.00	232.00	230.00	153.83	197.33	297.51	264.67	260.67	223.00	217.67	237.13	190.00	253.15	245.00	240.09
12	Co 13018	238.30	200.00	246.67	119.72	216.00	273.72	245.33	245.67	225.33	212.00	240.53	180.00	232.00	264.00	234.96
13	Co 13020	235.00	219.00	210.00	141.22	196.00	294.28	247.67	221.00	189.66	240.89	241.33	180.00	242.00	266.67	230.38
14	CoN 13073	265.00	253.00	211.67	106.44	210.00	266.60	265.67	245.33	199.00	239.44	210.53	190.00	244.65	273.33	235.10
15	CoSnk 13103	273.30	195.00	224.33	191.22	191.33	292.11	265.33	226.33	219.66	216.66	246.87	230.00	254.50	288.67	244.09
16	CoSnk 13106	255.00	203.00	185.67	154.00	248.67	260.27	278.67	267.33	222.00	221.22	271.33	210.00	263.00	272.33	246.29
17	PI 13132	256.70	174.00	232.00	114.17	216.00	279.65	208.00	274.00	202.66	208.33	241.40	240.00	226.00	247.33	236.01
	Standards															
1	Co 86032	286.70	156.00	176.00	116.36	229.33	268.16	230.00	241.33	215.00	222.44	224.20	240.00	262.65	265.33	238.43
2	CoC 671	231.70	183.33	208.33	123.78	233.33	252.15	260.00	222.33	207.33	216.99	238.00	190.00	243.50	266.00	230.81
3	CoSnk 05103	265.00	231.33	245.67	137.17	220.00	247.70	271.00	279.33	221.66	252.66	232.47	230.00	266.50	295.33	252.28
	Mean	262.80	208.05	204.88	143.57	208.03	267.75	257.25	253.31	216.38	229.28	236.08	202.00	252.88	273.13	238.65
	SE (m)	8.90	7.47	13.03	7.45	5.01	9.30	6.93		3.65	7.53	1.44		10.45	15.09	
	CD	25.70	21.38	37.30	21.33	14.34	26.64	20.01	NS	10.47	21.74	4.11		30.94	NS	
	CV	5.90	6.22	11.01	8.99	4.17	6.02	4.67		2.92	5.69	1.05		5.85	9.57	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.12 Stalk diameter (cm) at harvest

Sl. No	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalapalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	2.92	2.86	2.59	2.90	3.15	2.75	2.94	2.19	2.73	2.94	2.59	2.60	2.28	2.37	2.67
2	Co 13003	2.86	3.14	3.23	3.13	3.32	2.85	3.10	2.36	2.70	3.11	2.93	3.00	2.55	2.23	2.85
3	Co 13004	2.99	2.35	2.94	3.12	3.29	2.87	3.16	2.42	2.67	3.06	3.30	2.80	2.63	2.30	2.87
4	CoN 13072	2.90	2.93	2.81	2.86	3.07	2.73	2.81	2.42	2.65	2.81	2.81	3.10	2.48	2.47	2.75
5	CoSnk 13101	2.62	2.86	3.19	2.98	3.37	2.66	2.94	2.32	2.52	3.12	2.98	3.00	2.46	2.27	2.79
6	MS 13081	3.32	2.70	3.13	3.26	3.37	2.85	3.26	2.76	2.62	2.99	3.37	3.20	2.94	2.43	3.02
7	Co 13006	2.99	2.68	2.89	2.70	3.15	2.76	2.93	2.03	2.75	2.80	2.75	3.00	2.60	2.60	2.77
8	Co 13008	2.78	2.77	2.92	3.26	3.07	2.88	2.67	2.43	2.70	3.12	2.73	3.00	2.81	2.47	2.80
9	Co 13009	3.21	2.71	3.38	3.24	3.42	2.68	3.33	2.73	2.67	3.17	3.01	3.10	2.93	2.63	3.02
10	Co 13013	2.97	3.06	3.13	3.00	3.34	2.70	3.08	1.90	2.79	3.18	2.92	2.90	2.69	2.23	2.82
11	Co 13014	3.18	3.43	3.13	2.87	3.61	2.75	3.78	2.42	2.72	3.30	3.44	2.90	3.19	1.97	3.03
12	Co 13018	2.77	2.65	3.08	2.57	3.23	2.77	2.87	1.64	2.68	3.06	3.18	2.70	2.43	2.47	2.74
13	Co 13020	3.27	3.07	3.66	3.03	3.29	2.88	2.87	2.50	2.60	3.02	3.05	3.00	2.86	2.43	2.95
14	CoN 13073	2.98	3.15	3.61	3.45	3.46	2.80	3.18	2.70	2.67	3.13	3.15	3.00	2.63	2.80	3.01
15	CoSnk 13103	2.68	2.62	3.00	2.75	3.12	2.37	2.80	2.00	2.73	2.89	2.96	2.70	2.84	2.77	2.74
16	CoSnk 13106	2.87	2.98	3.18	2.47	3.17	2.86	2.93	2.17	2.73	2.95	2.71	2.80	2.96	2.53	2.82
17	PI 13132	2.93	2.83	3.65	3.08	3.26	2.72	2.67	1.90	2.63	3.06	2.99	2.60	2.90	2.53	2.82
	Standards															
1	Co 86032	2.67	2.60	3.26	3.05	3.29	2.43	3.02	1.90	2.62	3.01	3.00	2.70	2.83	2.27	2.75
2	CoC 671	3.07	2.94	3.09	3.27	3.39	2.76	3.12	2.23	2.61	3.11	3.03	2.70	2.86	2.53	2.88
3	CoSnk 05103	2.52	2.62	3.24	2.55	2.78	2.68	2.44	1.70	2.49	2.95	2.37	2.70	2.54	2.23	2.55
	Mean	2.93	2.85	3.16	2.98	3.26	2.74	2.99	2.24	2.66	3.04	2.96	2.88	2.72	2.43	2.83
	SE (m)	0.12	0.08	0.42	0.08	0.11	0.05	0.11	0.19	0.03	0.11	0.07	0.06	0.12	0.09	
	CD	0.34	0.22	0.15	0.22	0.32	0.15	0.33	0.55	0.10	0.31	0.20	0.16	0.35	0.25	
	CV	7.02	4.71	8.11	4.38	5.99	3.38	6.65	14.87	2.35	6.12	4.18	3.32	6.09	6.37	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.13 Single cane weight (kg) at harvest

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Ruduru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	1.29	0.82	1.06	0.63	0.99	1.17	1.10	1.09	1.98	1.34	0.96	0.91	0.91	1.31	1.18
2	Co 13003	1.61	1.06	1.11	0.87	1.42	1.16	1.35	1.31	1.87	1.71	1.23	1.26	1.44	1.27	1.39
3	Co 13004	1.48	0.97	1.34	0.91	1.30	1.19	1.48	1.50	1.83	1.74	1.28	1.17	1.54	1.32	1.43
4	CoN 13072	1.42	1.29	1.37	1.03	1.16	1.25	1.43	1.45	1.59	1.61	1.45	0.85	1.16	1.33	1.34
5	CoSnk 13101	1.03	0.99	1.35	0.73	1.27	1.14	1.38	1.25	1.42	1.45	1.34	1.09	1.28	1.19	1.27
6	MS 13081	2.06	1.27	1.29	1.02	1.90	1.16	1.81	2.07	1.84	1.88	1.42	1.74	2.04	1.49	1.73
7	Co 13006	1.63	0.87	1.23	1.25	1.42	1.15	1.68	1.39	1.63	1.44	1.04	0.85	1.47	1.60	1.38
8	Co 13008	1.78	0.88	1.71	1.29	1.13	1.15	1.82	1.40	1.95	1.81	1.06	1.21	1.68	1.55	1.52
9	Co 13009	2.04	0.89	1.29	1.14	1.51	1.28	1.86	1.62	2.00	1.84	1.27	1.29	1.85	1.55	1.62
10	Co 13013	1.74	0.93	1.49	1.18	1.59	1.20	1.76	1.46	1.92	1.71	1.39	1.13	1.64	1.13	1.51
11	Co 13014	1.94	1.56	1.65	1.38	1.68	1.13	1.67	1.64	2.09	1.63	1.49	1.21	1.91	1.07	1.59
12	Co 13018	1.11	0.69	1.14	0.62	1.44	1.12	1.30	1.15	1.81	1.48	1.27	0.92	1.11	1.34	1.27
13	Co 13020	1.71	1.06	1.49	0.83	1.42	1.18	1.62	1.44	1.64	1.63	1.23	1.17	1.63	1.29	1.45
14	CoN 13073	1.46	1.44	1.85	0.84	1.47	1.28	1.57	1.73	1.74	1.85	1.38	0.92	1.18	1.68	1.51
15	CoSnk 13103	1.19	0.82	1.45	1.32	1.05	1.19	1.50	0.98	1.70	1.40	1.29	1.06	1.60	1.62	1.34
16	CoSnk 13106	1.42	0.81	1.26	0.60	1.53	1.16	1.66	1.51	1.61	1.76	1.06	1.12	1.78	1.37	1.44
17	PI 13132	1.52	0.83	1.59	0.67	1.29	0.99	1.17	1.38	1.45	1.48	1.40	1.35	1.48	1.33	1.37
	Standards															
1	Co 86032	1.48	0.90	1.66	0.75	1.44	0.95	1.31	1.11	1.57	1.50	1.18	1.27	1.66	1.15	1.36
2	CoC 671	1.43	1.19	1.27	0.89	1.59	1.10	1.52	1.24	1.88	1.69	1.17	1.02	1.63	1.58	1.43
3	CoSnk 05103	0.84	0.82	1.62	0.58	1.00	0.98	1.13	1.06	1.46	1.37	0.73	0.86	1.14	1.18	1.11
	Mean	1.51	1.00	1.41	0.93	1.38	1.15	1.51	1.39	1.75	1.62	1.23	1.12	1.51	1.37	1.41
	SE (m)	0.10	0.10	0.08	0.07	0.09	0.04	0.06	0.12	0.05	0.04	0.02	0.08	0.13	0.05	
	CD	0.28	0.30	0.24	0.21	0.25	0.11	0.17	0.34	0.15	0.11	0.05	0.22	0.39	0.13	
	CV	11.36	17.78	10.16	13.43	11.10	5.94	6.87	14.96	5.19	4.20	2.44	11.78	12.50	5.99	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canters were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.14 CCS % at 10 months

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	13.55	14.60		11.12	13.48	9.28	13.11	13.30	13.36		10.49	12.69	15.19	10.86	12.53
2	Co 13003	11.85	14.35		10.75	12.20	9.98	13.11	12.85	13.66		9.96	11.56	13.29	12.89	12.13
3	Co 13004	12.34	14.06		10.80	12.41	9.92	14.26	11.47	13.81		8.76	9.87	11.71	10.50	11.51
4	CoN 13072	9.99	14.00		11.21	11.77	10.29	13.42	12.37	12.88		9.28	10.28	11.76	11.34	11.34
5	CoSnk 13101	11.22	14.60		11.86	11.76	8.96	13.82	12.75	13.81		10.25	12.07	13.18	12.26	12.01
6	MS 13081	11.54	15.31		11.40	13.33	9.97	13.29	11.76	14.46		9.07	10.72	12.14	11.74	11.80
7	Co 13006	10.78	13.97		12.07	12.83	9.74	12.80	11.27	14.38		9.35	11.27	13.47	11.57	11.75
8	Co 13008	11.15	13.85		12.19	12.80	10.31	12.72	12.23	13.58		9.70	10.37	12.81	12.07	11.77
9	Co 13009	9.95	13.29		10.78	11.55	10.28	12.77	11.04	12.66		9.89	10.46	9.78	10.99	10.94
10	Co 13013	12.28	14.03		10.53	12.42	10.72	10.65	12.19	14.01		9.71	11.08	11.55	9.96	11.46
11	Co 13014	10.59	13.60		10.45	12.43	9.03	12.96	11.24	12.76		10.68	8.79	11.31	12.03	11.18
12	Co 13018	12.37	14.97		11.02	12.52	9.84	13.27	11.53	13.62		10.89	11.63	11.53	10.23	11.74
13	Co 13020	11.48	14.77		10.35	11.90	10.28	13.41	11.58	14.07		10.86	8.83	9.81	9.86	11.21
14	CoN 13073	9.54	13.47		8.76	10.95	9.74	11.10	10.14	13.52		8.56	10.81	8.94	11.32	10.46
15	CoSnk 13103	12.03	14.31		12.19	12.88	9.88	12.53	12.37	13.80		11.73	11.27	12.78	10.49	11.98
16	CoSnk 13106	10.44	13.66		11.68	12.93	9.63	12.91	8.05	14.29		9.66	10.84	11.89	11.28	11.19
17	PI 13132	9.65	14.88		9.50	12.41	10.59	11.54	12.07	14.18		10.42	12.08	11.81	11.25	11.60
	Standards															
1	Co 86032	12.03	13.88		10.58	12.41	11.07	12.02	13.51	13.67		9.33	12.51	11.61	10.82	11.90
2	CoC 671	12.68	14.77		11.34	13.66	11.34	14.01	13.53	14.03		8.78	10.47	11.94	11.83	12.23
3	CoSnk 05103	12.08	13.86		11.09	12.51	10.91	12.31	11.21	12.93		9.47	11.25	12.24	10.41	11.53
	Mean	11.38	14.21		10.98	12.46	10.09	12.80	11.82	13.67		9.84	10.94	11.94	11.18	11.61
	SE (m)	0.52	0.36		0.45	0.38	0.29	0.61	0.58	0.45		0.11	0.75	0.35	0.56	
	CD	1.49	1.03		1.28	1.10	0.83	1.78	1.66	1.30		0.33	2.17	1.02	1.58	
	CV	7.91	4.36		7.04	5.33	4.97	8.32	8.47	5.79		2.00	11.93	4.09	8.63	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.15 Sucrose % at 10 months

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	19.30	20.61		15.76	18.83	13.84	18.65	18.71	19.76		15.31	18.10	20.97	15.55	17.90
2	Co 13003	17.24	20.18		15.16	17.17	14.78	18.73	18.32	19.99		14.63	16.90	18.39	18.43	17.46
3	Co 13004	17.69	19.62		15.16	17.32	14.42	20.14	16.55	19.46		12.83	14.50	16.42	15.07	16.44
4	CoN 13072	14.77	19.77		15.84	16.63	15.06	19.14	17.43	20.02		13.52	15.10	16.25	16.27	16.42
5	CoSnk 13101	16.11	20.37		16.62	16.62	13.31	19.49	18.25	20.63		14.88	17.40	18.35	17.54	17.26
6	MS 13081	16.55	21.37		16.08	18.62	14.61	18.90	16.64	19.53		13.06	15.60	16.90	16.79	16.72
7	Co 13006	15.75	19.83		17.12	18.01	14.43	18.33	16.34	19.84		13.72	16.30	18.78	16.55	16.81
8	Co 13008	16.21	19.47		17.14	18.00	14.87	18.15	17.21	19.39		13.99	15.10	17.85	17.30	16.81
9	Co 13009	14.72	18.68		15.23	16.40	15.27	18.22	15.81	19.40		14.39	15.40	13.60	15.73	15.89
10	Co 13013	17.53	19.73		14.98	17.48	15.49	16.24	17.57	19.44		14.19	16.00	16.04	14.28	16.43
11	Co 13014	15.32	19.04		14.76	17.48	13.47	18.59	16.18	20.32		15.57	13.40	15.66	17.23	16.32
12	Co 13018	17.70	20.89		15.61	17.55	14.31	18.92	16.56	20.44		15.79	16.80	16.09	14.68	16.88
13	Co 13020	16.62	20.66		14.62	16.72	15.05	19.05	17.15	20.43		15.78	13.30	13.77	14.14	16.20
14	CoN 13073	14.19	19.02		12.30	15.62	14.13	16.22	15.06	18.58		12.55	15.40	12.77	16.20	15.07
15	CoSnk 13103	17.29	20.03		17.27	18.08	14.36	17.88	17.56	19.81		16.92	16.30	17.82	15.04	17.11
16	CoSnk 13106	15.26	19.12		16.59	18.15	14.45	18.18	12.48	20.28		13.96	15.80	16.52	16.14	16.12
17	PI 13132	14.19	20.82		13.46	17.40	15.42	16.77	17.21	20.70		15.12	17.10	16.40	16.12	16.64
	Standards															
1	Co 86032	17.18	19.51		15.13	17.33	15.95	17.26	18.94	20.23		13.89	18.00	16.10	15.51	17.04
2	CoC 671	18.17	20.67		16.06	19.13	16.40	19.88	19.23	21.18		12.91	15.40	16.50	16.95	17.58
3	CoSnk 05103	17.39	19.67		15.82	17.56	15.90	17.83	16.10	18.93		13.74	16.40	16.94	14.90	16.57
	Mean	16.46	19.95		15.53	17.50	14.78	18.33	16.96	19.92		14.34	15.92	16.60	16.02	16.68
	SE (m)	0.65	0.49		0.55	0.51	0.36	0.65	0.62	0.59		0.11	0.95	0.46	0.80	
	CD	1.87	1.40		1.58	1.46	1.02	1.89	1.78	1.69		0.32	2.73	1.35	2.26	
	CV	6.84	4.26		6.17	5.03	4.16	6.19	6.31	5.13		1.33	10.35	3.90	8.60	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.16 Brix % at 10 months

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	21.14	22.17		17.06	19.80	16.67	20.39	19.92	21.02		17.67	20.03	21.34	17.23	19.52
2	Co 13003	19.73	21.47		16.23	18.33	17.58	20.67	20.09	20.77		17.10	19.41	18.84	20.37	19.29
3	Co 13004	19.63	20.52		16.06	18.13	16.49	21.64	18.62	20.54		14.90	16.85	17.34	16.80	18.09
4	CoN 13072	17.48	21.27		17.06	17.93	17.47	21.02	18.66	20.81		15.53	17.67	16.61	18.10	18.13
5	CoSnk 13101	17.96	21.30		17.56	17.93	15.90	20.89	20.19	21.51		16.97	19.43	19.09	19.40	18.93
6	MS 13081	18.40	22.33		17.23	19.57	16.98	20.62	17.96	20.86		14.63	17.76	17.59	18.57	18.29
7	Co 13006	18.22	21.55		18.56	19.13	17.13	20.32	18.59	20.75		16.00	18.29	19.59	18.33	18.64
8	Co 13008	18.55	20.72		18.23	19.20	16.76	19.95	18.36	20.40		15.73	17.33	18.59	19.23	18.41
9	Co 13009	17.42	19.87		16.40	17.87	18.25	20.03	17.52	20.37		16.50	17.89	14.09	17.43	17.74
10	Co 13013	19.29	20.99		16.40	18.67	17.49	20.34	19.72	20.30		16.40	18.05	16.59	15.87	18.27
11	Co 13014	17.36	20.05		15.90	18.67	16.22	20.68	18.12	21.12		17.93	16.62	16.09	19.10	18.19
12	Co 13018	19.59	21.83		16.90	18.60	16.39	20.77	18.46	21.36		17.97	18.96	16.84	16.37	18.53
13	Co 13020	18.86	21.75		15.73	17.80	17.47	20.76	20.36	21.41		18.03	16.45	14.59	15.73	18.15
14	CoN 13073	16.99	20.45		13.06	17.20	16.10	18.76	17.96	19.78		14.63	16.91	14.09	17.93	17.04
15	CoSnk 13103	19.30	21.08		18.73	19.20	16.43	19.66	19.09	20.73		19.03	18.27	18.59	16.70	18.70
16	CoSnk 13106	17.65	20.13		18.06	19.27	17.58	19.44	16.09	21.68		15.80	18.33	17.09	17.87	18.08
17	PI 13132	16.60	21.92		14.56	18.43	17.69	19.19	18.89	21.42		17.23	18.54	16.94	17.87	18.28
	Standards															
1	Co 86032	18.92	20.75		16.73	18.20	17.91	19.26	20.02	21.64		16.67	19.97	16.59	17.23	18.64
2	CoC 671	20.19	21.75		17.40	20.20	18.59	21.61	20.96	22.22		15.10	18.08	16.84	18.83	19.26
3	CoSnk 05103	19.50	21.38		17.40	18.67	18.28	20.25	17.99	19.93		15.67	18.85	17.34	16.50	18.30
	Mean	18.64	21.16		16.76	18.64	17.17	20.31	18.88	20.93		16.48	18.18	17.23	17.77	18.42
	SE (m)	0.51	0.51		0.46	0.49	0.45	0.40	0.39	0.61		0.07	0.80	0.48	0.88	
	CD	1.47	1.46		1.31	1.41	1.28	1.15	1.11	1.74		0.19	NS	1.41	2.49	
	CV	4.74	4.18		4.73	4.58	4.52	3.40	3.53	5.04		0.69	7.65	3.91	8.53	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.17 Purity % at 10 months

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	91.28	93.00		92.27	95.29	82.86	91.51	93.89	91.13		86.66	91.50	98.24	90.19	91.25
2	Co 13003	87.33	94.00		93.27	93.83	84.14	90.63	91.18	92.08		85.54	86.30	97.58	90.49	89.91
3	Co 13004	89.94	95.67		94.08	95.92	87.51	93.05	88.86	91.75		86.09	85.73	94.67	89.72	90.32
4	CoN 13072	84.35	93.00		92.83	92.94	86.81	91.07	93.35	90.62		87.02	85.52	97.80	89.88	89.94
5	CoSnk 13101	89.64	95.67		94.64	92.83	83.73	93.32	90.42	92.47		87.70	89.37	96.14	90.41	90.60
6	MS 13081	89.86	95.67		93.28	95.35	86.08	91.65	92.64	90.96		89.25	87.44	96.07	90.43	90.97
7	Co 13006	86.02	92.00		92.19	94.34	84.25	90.22	87.90	91.30		85.76	88.77	95.83	90.29	89.47
8	Co 13008	87.38	94.00		94.02	93.94	88.74	90.83	93.79	91.95		88.92	87.16	95.99	89.96	90.87
9	Co 13009	84.47	94.00		92.85	91.92	83.92	90.88	90.11	90.43		87.24	85.78	96.54	90.26	89.15
10	Co 13013	90.86	94.00		91.25	93.83	88.63	79.87	89.05	91.44		86.51	88.53	96.67	89.96	89.53
11	Co 13014	88.25	95.00		92.63	93.84	83.10	89.98	89.24	92.15		86.84	79.97	97.35	90.21	89.09
12	Co 13018	90.36	95.67		92.29	94.56	87.36	91.09	89.71	91.02		87.87	88.40	95.57	89.69	90.56
13	Co 13020	88.14	95.00		92.96	94.13	86.19	91.76	84.26	92.09		87.50	80.98	94.37	89.89	88.93
14	CoN 13073	83.33	93.00		94.30	90.84	87.84	86.46	84.05	89.51		85.79	85.46	90.57	90.34	87.42
15	CoSnk 13103	89.58	95.00		92.12	94.36	87.43	90.95	92.02	92.28		88.90	88.72	95.86	90.03	91.01
16	CoSnk 13106	86.40	95.00		91.78	94.37	82.26	93.54	77.42	91.88		88.38	86.30	96.66	90.30	88.75
17	PI 13132	85.35	95.00		92.34	94.60	87.14	87.43	91.11	90.47		87.76	89.05	96.96	90.20	90.01
	Standards															
1	Co 86032	90.79	94.00		90.45	95.43	89.02	89.62	94.59	91.13		83.32	89.79	97.04	89.97	91.07
2	CoC 671	90.00	95.00		92.39	94.89	88.23	91.98	91.75	91.74		85.48	84.98	97.95	90.00	90.70
3	CoSnk 05103	89.18	92.00		90.93	94.29	86.94	88.07	89.47	89.96		87.70	86.76	97.68	90.33	90.04
	Mean	88.13	94.28		92.64	94.07	86.11	90.20	89.74	91.32		87.01	86.83	96.28	90.13	89.98
	SE (m)	1.35	0.55		1.53	0.87	1.64	2.71	2.85	0.90		0.78	1.85	1.18	0.20	
	CD	3.88	1.57		4.39	2.48	NS	NS	8.19	2.60		2.24	5.31	3.50	NS	
	CV	2.65	1.01		2.87	1.60	3.30	5.21	5.50	1.72		1.56	3.69	1.74	0.39	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.18 Pol % Cane at 10 month

Sl. No	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalalle	Pravaranagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002		16.41		12.98		10.75	14.67					13.42	16.07		13.73
2	Co 13003		14.78		12.11		11.49	14.34					12.48	13.49		12.95
3	Co 13004		15.28		11.68		11.13	15.41					10.71	12.33		12.40
4	CoN 13072		15.37		12.30		11.69	14.70					11.18	12.17		12.44
5	CoSnk 13101		15.67		12.68		10.43	15.07					12.85	13.96		13.08
6	MS 13081		16.39		12.80		11.38	14.99					11.52	13.40		12.82
7	Co 13006		15.82		13.23		11.24	14.10					12.02	14.29		12.91
8	Co 13008		15.48		13.26		11.64	13.88					11.17	14.09		12.70
9	Co 13009		15.04		11.74		11.89	13.77					11.36	10.40		11.86
10	Co 13013		15.79		11.57		12.05	12.63					11.84	12.18		12.18
11	Co 13014		14.60		11.93		10.46	14.45					9.88	12.23		11.76
12	Co 13018		15.98		12.85		11.03	14.83					12.43	12.41		12.68
13	Co 13020		16.31		12.06		11.45	14.69					9.87	10.73		11.69
14	CoN 13073		15.25		9.95		11.03	12.46					11.40	9.93		11.21
15	CoSnk 13103		16.06		12.74		11.04	13.78					12.02	13.82		12.67
16	CoSnk 13106		15.14		13.15		11.38	14.41					11.73	12.64		12.54
17	PI 13132		16.60		10.13		11.87	13.20					12.67	12.87		12.65
	Standards															
1	Co 86032		15.39		11.29		12.28	13.54					13.28	12.46		12.89
2	CoC 671		16.23		13.12		12.72	15.44					11.40	12.54		13.03
3	CoSnk 05103		15.30		11.41		12.54	13.41					12.13	12.85		12.73
	Mean		15.64		12.15		11.47	14.19					11.77	12.74		12.54
	SE (m)		0.38		0.43		0.27	0.52					0.70	0.39		
	CD		1.08		1.24		0.77	1.49					2.02	1.16		
	CV		4.19		6.20		4.08	6.31					10.36	4.33		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.19 Fibre % at 10 month

Sl. No.	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravar anagar	Pune	Ruduru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002				7.63		12.36	11.39						13.34		12.36
2	Co 13003				10.13		12.29	13.47						16.64		14.13
3	Co 13004				12.97		12.82	13.47						14.86		13.72
4	CoN 13072				12.37		12.39	13.20						15.16		13.58
5	CoSnk 13101				13.70		11.63	12.70						13.93		12.75
6	MS 13081				10.37		12.12	10.72						10.70		11.18
7	Co 13006				12.70		12.11	13.11						13.91		13.04
8	Co 13008				12.63		11.74	13.54						11.09		12.12
9	Co 13009				12.93		12.15	14.43						13.51		13.36
10	Co 13013				12.77		12.22	12.19						14.05		12.82
11	Co 13014				9.20		12.34	12.29						11.88		12.17
12	Co 13018				7.67		12.92	11.63						12.85		12.47
13	Co 13020				7.50		13.92	12.88						12.07		12.96
14	CoN 13073				9.07		11.96	13.17						12.23		12.45
15	CoSnk 13103				16.20		13.12	12.89						12.40		12.80
16	CoSnk 13106				10.73		11.25	10.74						13.44		11.81
17	PI 13132				14.70		12.98	11.29						11.55		11.94
	Standards															
1	Co 86032				15.40		12.96	11.58						12.59		12.38
2	CoC 671				8.33		12.45	12.32						14.00		12.92
3	CoSnk 05103				17.87		11.18	14.77						14.11		13.35
	Mean				11.74		12.35	12.59						13.22		12.72
	SE (m)				0.13		0.32	0.41						1.14		
	CD				0.38		0.92	1.17						3.39		
	CV				1.98		4.52	5.59						12.24		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canters were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.20 Extraction % at 10 month

Sl. No	Clone	Coimbatore	Akola	Basmat h nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalapalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	47.95			50.50		50.57	51.94	48.32	45.42				49.56	56.82	50.08
2	Co 13003	46.62			49.43		52.13	47.10	49.06	44.51				59.73	55.06	50.60
3	Co 13004	41.65			48.97		51.06	46.84	49.29	44.41				53.53	54.64	48.78
4	CoN 13072	46.26			48.62		47.74	46.83	51.29	44.32				50.77	57.20	49.20
5	CoSnk 13101	41.12			47.82		51.07	49.79	54.26	41.79				50.72	56.82	49.37
6	MS 13081	48.21			48.20		48.96	54.15	51.37	45.79				50.73	58.00	51.03
7	Co 13006	43.78			46.23		51.02	45.53	51.85	44.73				53.89	55.28	49.44
8	Co 13008	47.58			52.01		49.81	47.23	53.03	45.93				52.35	58.44	50.63
9	Co 13009	45.20			47.70		49.80	51.36	50.57	49.62				59.39	52.36	51.19
10	Co 13013	46.73			49.99		52.71	49.44	50.58	50.45				55.19	51.35	50.92
11	Co 13014	48.08			50.96		51.56	51.11	55.55	49.00				56.05	51.95	51.90
12	Co 13018	39.40			50.85		49.48	49.44	56.53	46.05				61.81	59.31	51.72
13	Co 13020	47.20			49.82		49.99	44.29	47.49	42.80				61.31	53.22	49.47
14	CoN 13073	46.77			52.34		48.44	49.85	49.14	45.97				61.50	60.56	51.75
15	CoSnk 13103	38.11			46.95		50.54	47.86	42.64	46.27				52.77	59.95	48.31
16	CoSnk 13106	43.54			48.71		50.08	46.78	40.87	41.57				51.75	57.08	47.38
17	PI 13132	44.14			49.87		51.17	50.34	46.86	43.00				60.58	57.45	50.51
	Standards															
1	Co 86032	44.97			49.09		47.99	48.39	48.00	46.19				53.89	61.06	50.07
2	CoC 671	49.07			47.84		48.29	47.09	49.08	43.44				60.22	57.84	50.72
3	CoSnk 05103	35.24			51.08		49.05	46.20	46.90	42.94				56.84	54.92	47.44
	Mean	44.58			49.35		50.07	48.58	49.63	45.18				55.63	56.47	50.02
	SE (m)	2.00			1.51		1.13	2.36	2.29	0.84				5.15	1.71	
	CD	5.75			4.32		NS	NS	6.57	2.41				15.24	4.86	
	CV	7.77			5.29		3.91	8.41	7.98	3.23				13.09	5.25	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.21 NMC ('000/ha) at 10 month

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	100.17	37.40				132.09	88.90	129.77	111.57			127.00	82.88	101.79	109.27
2	Co 13003	77.38	30.04				129.81	76.16	113.99	122.99			97.00	82.86	92.13	99.04
3	Co 13004	75.19	32.40				134.67	74.69	106.26	117.91			116.00	69.66	116.61	101.37
4	CoN 13072	69.32	65.18				132.79	88.69	130.23	114.16			107.00	95.73	100.73	104.83
5	CoSnk 13101	68.10	45.73				127.41	85.26	89.01	114.82			116.00	92.04	122.86	101.94
6	MS 13081	52.64	34.21				132.62	79.10	105.25	119.17			112.00	65.85	104.75	96.42
7	Co 13006	59.73	30.46				134.41	95.83	115.07	121.63			129.00	82.44	102.70	105.10
8	Co 13008	69.85	35.87				138.22	74.83	91.10	125.67			114.00	77.62	112.49	100.47
9	Co 13009	65.74	33.51				128.50	80.99	90.09	136.83			112.00	63.46	126.86	100.56
10	Co 13013	79.07	35.35				134.23	83.93	113.37	118.61			130.00	76.35	100.87	104.55
11	Co 13014	77.64	40.18				131.62	77.84	103.70	121.32			136.00	72.53	97.75	102.30
12	Co 13018	102.01	40.87				129.89	86.31	134.41	128.92			134.00	70.79	106.65	111.62
13	Co 13020	76.17	35.69				127.17	92.47	105.95	130.80			126.00	73.84	88.04	102.55
14	CoN 13073	53.47	64.48				133.02	83.47	97.21	115.01			115.00	93.68	103.41	99.28
15	CoSnk 13103	96.93	33.09				120.48	86.66	97.13	106.75			117.00	83.74	102.14	101.35
16	CoSnk 13106	62.83	39.48				131.63	78.81	116.70	135.98			120.00	72.44	113.89	104.03
17	PI 13132	79.89	31.43				118.43	74.00	138.74	114.65			125.00	74.21	105.21	103.77
	Standards															
1	Co 86032	72.52	47.96				119.78	104.79	141.91	137.03			127.00	80.70	106.00	111.22
2	CoC 671	63.02	51.01				114.43	75.22	100.46	116.19			123.00	66.20	106.36	95.61
3	CoSnk 05103	119.43	69.34				118.47	102.30	154.43	125.42			127.00	119.19	94.85	120.14
	Mean	76.06	41.68				128.48	84.51	113.74	121.77			120.50	79.81	105.30	103.77
	SE (m)	4.11	2.43				3.96	4.24	4.49	1.77			4.49	5.61	5.56	
	CD	11.80	6.97				11.33	12.25	12.90	5.08			12.91	16.61	15.81	
	CV	9.35	10.11				5.34	8.69	6.84	2.52			6.46	9.94	9.15	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Table 2.1.22 Stalk length (cm) at 10 month

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	235.00	185.67		131.42	157.33	248.57	178.67	243.33	200.66			185.00	236.80	256.33	215.74
2	Co 13003	270.00	201.67		128.78	183.33	250.42	218.67	254.67	207.33			191.00	230.65	273.00	231.01
3	Co 13004	255.00	194.00		166.00	184.00	242.68	216.00	275.00	198.66			160.00	246.00	291.00	229.82
4	CoN 13072	206.67	192.67		148.08	172.67	254.52	212.33	264.67	205.33			173.00	223.00	263.67	219.54
5	CoSnk 13101	185.00	194.00		127.11	145.33	247.27	186.00	241.67	199.33			180.00	205.50	264.67	206.08
6	MS 13081	231.67	181.67		141.28	210.00	223.51	228.00	264.77	201.00			217.00	250.00	240.33	229.59
7	Co 13006	253.33	209.00		212.33	226.67	258.25	233.00	267.33	190.33			184.00	224.00	291.33	236.47
8	Co 13008	261.67	179.67		179.00	174.00	258.04	220.33	309.00	215.66			183.00	231.15	280.67	237.06
9	Co 13009	248.33	191.00		155.27	188.00	260.46	234.00	256.33	212.33			202.00	224.30	244.33	230.01
10	Co 13013	270.00	205.00		158.50	200.67	253.58	230.67	271.33	215.00			229.00	257.80	254.00	242.45
11	Co 13014	231.67	212.00		164.83	180.67	277.41	211.67	262.00	210.66			163.00	210.30	239.00	220.71
12	Co 13018	220.00	180.00		119.75	191.33	250.59	197.00	281.33	208.33			160.00	210.50	252.00	219.01
13	Co 13020	213.33	199.00		123.83	181.33	248.05	203.67	195.33	172.33			156.00	206.30	258.00	203.82
14	CoN 13073	215.00	233.00		126.78	183.33	287.73	225.33	240.67	178.66			205.00	221.50	270.00	225.25
15	CoSnk 13103	226.67	175.00		166.39	173.33	229.52	228.33	244.67	205.00			222.00	213.80	282.33	225.07
16	CoSnk 13106	201.67	183.00		133.55	220.00	224.81	206.00	151.91	209.00			193.00	215.50	260.33	209.14
17	PI 13132	230.00	154.00		117.55	182.00	219.61	170.33	257.00	182.33			237.00	191.30	235.33	211.66
	Standards															
1	Co 86032	250.00	136.00		123.33	216.67	246.47	202.67	261.67	181.33			212.00	198.65	256.67	225.12
2	CoC 671	228.33	163.33		129.00	201.33	237.68	212.67	220.00	178.66			202.00	209.50	253.67	215.98
3	CoSnk 05103	253.33	211.00		143.39	212.67	232.47	213.67	284.67	213.00			220.00	230.00	283.67	238.16
	Mean	234.33	189.03		144.76	189.23	247.58	211.45	252.37	199.25			193.70	198.46	262.52	220.99
	SE (m)	13.06	7.49		5.21	4.87	8.14	8.74	21.41	3.09			16.56	13.77	9.73	
	CD	37.53	21.43		14.93	13.93	23.31	25.23	61.52	8.86			47.60	40.74	27.65	
	CV	9.65	6.86		6.24	4.45	5.69	7.16	14.69	2.69			14.81	9.81	6.42	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Table 2.1.23 Stalk diameter (cm) at 10 month

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	2.82	2.46		2.54	2.92	2.61	2.72	2.45	2.59			2.50	2.50	2.23	2.59
2	Co 13003	2.76	2.74		2.76	3.08	2.64	3.15	2.72	2.64			2.90	2.61	2.13	2.74
3	Co 13004	3.08	1.95		2.97	3.06	2.64	3.08	2.81	2.67			3.00	2.75	2.23	2.81
4	CoN 13072	2.99	2.53		2.60	2.89	2.51	2.93	2.80	2.60			2.80	2.62	2.27	2.71
5	CoSnk 13101	2.78	2.46		2.44	3.25	2.49	2.76	2.61	2.37			3.20	2.53	2.23	2.69
6	MS 13081	3.03	2.30		2.62	3.09	2.63	3.35	3.15	2.56			3.30	2.92	1.97	2.89
7	Co 13006	2.91	2.28		2.96	2.94	2.58	2.73	2.53	2.63			2.90	2.65	2.33	2.69
8	Co 13008	3.00	2.37		2.91	2.85	2.67	3.05	2.96	2.59			2.80	2.64	2.27	2.76
9	Co 13009	3.35	2.31		2.91	3.28	2.48	3.48	3.16	2.60			3.10	2.88	2.47	2.98
10	Co 13013	3.09	2.66		2.71	3.01	2.45	3.38	2.47	2.59			2.80	2.68	2.03	2.72
11	Co 13014	3.25	3.03		2.78	3.45	2.53	3.45	3.19	2.58			2.90	3.19	1.93	2.94
12	Co 13018	2.82	2.25		2.43	3.05	2.59	2.92	2.73	2.52			2.50	2.56	2.37	2.67
13	Co 13020	3.19	2.67		2.62	3.13	2.68	2.91	2.99	2.55			3.00	2.91	2.17	2.84
14	CoN 13073	3.15	2.75		3.09	3.15	2.54	3.12	3.16	2.60			3.10	2.87	2.53	2.91
15	CoSnk 13103	2.58	2.22		2.67	2.83	2.21	2.81	2.62	2.56			2.50	2.74	2.57	2.60
16	CoSnk 13106	2.90	2.58		2.84	2.98	2.63	2.99	2.73	2.60			2.90	2.94	2.50	2.80
17	PI 13132	3.14	2.43		2.69	3.02	2.45	2.58	2.60	2.60			2.70	2.76	2.40	2.69
	Standards															
1	Co 86032	2.94	2.20		2.73	3.07	2.23	2.93	2.52	2.45			3.00	2.85	2.20	2.69
2	CoC 671	2.93	2.54		2.63	3.23	2.58	2.91	2.62	2.55			2.60	2.90	2.23	2.73
3	CoSnk 05103	2.09	2.22		2.04	2.64	2.47	2.59	2.66	2.48			2.40	2.56	2.10	2.44
	Mean	2.94	2.45		2.70	3.05	2.53	2.99	2.77	2.56			2.85	2.75	2.26	2.74
	SE (m)	0.12	0.08		0.10	0.08	0.05	0.31	0.10	0.02			0.10	0.09	0.07	
	CD	0.35	0.22		0.29	0.22	0.14	0.91	0.30	0.07			0.31	0.26	0.20	
	CV	7.21	5.48		6.48	4.44	3.36	18.16	6.40	1.87			6.58	4.49	5.34	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canters were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.24 Single Cane Weight (kg) at 10 month

Sl. No	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	1.18	0.74		0.52	0.88	1.01	0.93	1.22	1.77			0.98	0.92	1.24	1.12
2	Co 13003	1.64	0.98		0.58	1.25	1.07	1.18	1.34	1.78			1.10	1.31	1.16	1.31
3	Co 13004	1.41	0.89		0.94	1.17	1.10	1.31	1.51	1.60			1.06	1.45	1.22	1.32
4	CoN 13072	1.17	1.21		0.83	1.06	1.11	1.15	1.54	1.39			1.05	1.17	1.10	1.19
5	CoSnk 13101	1.05	0.91		0.62	1.09	1.06	1.22	1.18	1.07			1.08	1.11	1.12	1.11
6	MS 13081	1.81	1.19		0.85	1.50	1.09	1.54	1.81	1.51			1.51	1.77	1.06	1.51
7	Co 13006	1.43	0.79		1.13	1.37	1.08	1.51	1.25	1.38			1.03	1.25	1.41	1.30
8	Co 13008	1.66	0.80		1.08	1.02	1.06	1.56	1.90	1.70			1.01	1.46	1.38	1.42
9	Co 13009	2.06	0.81		1.20	1.37	1.05	1.70	1.62	1.90			1.09	1.65	1.37	1.53
10	Co 13013	1.91	0.85		0.95	1.22	1.12	1.50	1.47	2.03			1.19	1.74	1.07	1.47
11	Co 13014	1.77	1.48		1.00	1.44	1.05	1.50	1.80	1.93			0.93	1.67	1.04	1.46
12	Co 13018	1.40	0.61		0.53	1.24	1.03	1.13	1.35	1.53			0.85	1.02	1.15	1.19
13	Co 13020	1.44	0.98		0.74	1.34	1.10	1.39	1.37	1.41			0.93	1.35	1.02	1.26
14	CoN 13073	1.58	1.36		0.88	1.34	1.13	1.40	1.77	1.48			0.91	1.28	1.49	1.38
15	CoSnk 13103	0.92	0.74		0.84	0.95	1.08	1.33	1.16	1.46			0.94	1.23	1.55	1.18
16	CoSnk 13106	1.19	0.73		0.65	1.42	1.00	1.49	1.36	1.30			1.04	1.47	1.33	1.29
17	PI 13132	1.45	0.75		0.59	1.14	0.89	1.00	1.47	1.17			1.15	1.17	1.28	1.19
	Standards															
1	Co 86032	1.33	0.82		0.68	1.39	0.86	1.15	1.28	1.32			1.31	1.28	1.15	1.23
2	CoC 671	1.46	1.11		0.66	1.47	0.92	1.36	1.11	1.58			1.10	1.42	1.21	1.29
3	CoSnk 05103	0.82	0.74		0.44	0.86	0.89	0.96	1.33	1.15			0.81	1.07	0.99	0.99
	Mean	1.43	0.92		0.79	1.23	1.03	1.32	1.44	1.52			1.05	1.34	1.22	1.29
	SE (m)	0.10	0.10		0.05	0.08	0.03	0.07	0.11	0.06			0.08	0.10	0.06	
	CD	0.28	0.30		0.15	0.23	0.10	0.19	0.32	0.17			0.23	0.29	0.16	
	CV	11.82	19.32		12.02	11.14	5.77	8.66	13.50	6.92			13.45	10.43	8.07	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.25 Stalk Length (cm) at 8 month

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Ruduru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	158.33	165.67			142.00	224.56	128.00	199.67	170.33			158.67	125.80		163.42
2	Co 13003	180.00	181.67			132.00	225.21	156.33	218.33	195.33			160.67	141.50		176.17
3	Co 13004	166.67	174.00			144.67	221.89	167.00	241.67	175.00			130.00	163.80		176.34
4	CoN 13072	155.00	172.67			132.00	231.32	145.33	220.00	184.66			147.67	159.00		171.87
5	CoSnk 13101	111.67	174.00			122.67	226.44	134.00	198.00	182.33			158.00	139.00		159.01
6	MS 13081	170.00	161.67			159.33	209.89	165.00	222.67	175.00			179.00	165.50		180.80
7	Co 13006	183.33	189.00			172.00	229.89	188.00	207.00	175.33			191.67	168.50		189.47
8	Co 13008	201.67	159.67			154.00	235.85	165.33	220.67	194.33			171.00	162.00		188.11
9	Co 13009	163.33	171.00			143.33	236.72	151.67	198.33	191.66			171.00	157.50		176.69
10	Co 13013	183.33	185.00			164.67	235.21	175.00	242.00	202.33			187.00	152.50		192.76
11	Co 13014	158.33	194.00			151.33	232.94	158.67	216.00	194.33			164.33	146.00		177.74
12	Co 13018	161.67	162.00			148.67	231.93	137.00	226.67	190.33			148.67	140.65		173.20
13	Co 13020	165.00	181.00			119.33	221.02	120.33	184.67	143.33			139.33	122.50		151.94
14	CoN 13073	133.33	215.00			146.67	239.11	132.00	230.33	159.00			179.33	129.50		168.66
15	CoSnk 13103	176.67	157.00			140.00	214.15	195.33	196.33	182.00			159.67	152.15		177.04
16	CoSnk 13106	160.00	165.00			179.33	199.90	160.00	210.67	185.66			187.00	154.30		179.61
17	PI 13132	166.67	136.00			151.33	202.01	121.33	227.67	153.33			207.00	147.00		172.04
	Standards															
1	Co 86032	181.67	118.00			162.00	218.33	154.33	227.00	154.33			188.00	134.30		177.50
2	CoC 671	165.00	145.33			164.00	212.14	146.67	180.67	142.33			157.67	136.30		163.10
3	CoSnk 05103	180.00	193.00			198.00	202.20	147.33	245.00	177.00			194.00	150.65		186.77
	Mean	166.08	170.03			151.37	222.54	152.43	215.67	176.40			168.98	147.42		175.11
	SE (m)	10.77	6.19			3.69	6.49	6.63	10.97	3.73			14.42	6.93		
	CD	30.96	17.73			10.56	18.57	19.15	31.54	10.67			41.45	20.53		
	CV	11.23	6.31			4.22	5.05	7.54	8.81	3.66			14.78	6.65		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canters were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.26 Stalk diameter (cm) at 8 month

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalapalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	2.68	1.98			2.73	2.42	2.63	2.70	2.54			2.80	2.76		2.66
2	Co 13003	3.01	2.26			2.93	2.42	2.94	2.77	2.45			2.97	2.85		2.79
3	Co 13004	3.07	1.47			2.79	2.49	2.92	2.90	2.51			3.10	2.97		2.84
4	CoN 13072	2.76	2.05			2.78	2.38	2.76	2.87	2.47			3.00	2.77		2.72
5	CoSnk 13101	2.77	1.98			3.09	2.30	2.63	2.60	2.30			3.27	2.58		2.69
6	MS 13081	3.17	1.82			2.71	2.44	3.13	3.03	2.49			3.43	3.13		2.94
7	Co 13006	2.84	1.80			2.64	2.43	2.73	2.80	2.51			2.97	3.21		2.77
8	Co 13008	3.04	1.89			2.78	2.44	2.81	2.79	2.43			3.07	2.98		2.79
9	Co 13009	3.17	1.83			3.01	2.28	3.31	3.13	2.57			3.47	3.33		3.03
10	Co 13013	3.07	2.18			2.89	2.28	3.16	2.57	2.50			2.87	2.89		2.78
11	Co 13014	3.09	2.55			3.25	2.36	3.16	3.17	2.40			3.23	3.17		2.98
12	Co 13018	2.88	1.77			2.87	2.46	2.70	2.70	2.49			2.73	2.94		2.72
13	Co 13020	3.11	2.19			2.97	2.55	2.78	3.10	2.39			3.37	3.07		2.92
14	CoN 13073	3.03	2.27			2.97	2.39	2.94	3.43	2.47			3.37	3.03		2.95
15	CoSnk 13103	2.78	1.74			2.67	2.06	2.63	2.50	2.48			2.53	2.73		2.55
16	CoSnk 13106	2.89	2.10			2.85	2.46	3.08	3.00	2.50			3.23	3.21		2.90
17	PI 13132	2.81	1.95			2.62	2.26	2.55	2.73	2.38			3.03	3.07		2.68
	Standards															
1	Co 86032	2.91	1.72			2.77	2.10	2.94	2.67	2.40			2.90	2.83		2.69
2	CoC 671	3.02	2.06			3.13	2.41	2.70	2.63	2.41			2.73	2.98		2.75
3	CoSnk 05103	2.74	1.74			2.49	2.21	2.44	2.50	2.21			2.60	2.71		2.49
	Mean	2.94	1.97			2.85	2.36	2.85	2.83	2.44			3.03	2.96		2.78
	SE (m)	0.10	0.08			0.10	0.05	0.08	0.10	0.03			0.10	0.17		
	CD	0.28	0.22			0.30	0.15	0.24	0.28	0.10			0.29	0.50		
	CV	5.71	6.81			6.27	3.94	5.13	6.03	2.68			5.69	8.14		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.27 Single Cane Weight (kg) at 8 month

Sl. No	Clone	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	0.89	0.62			0.80	0.93	0.66	1.03	1.53			0.91	0.74		0.94
2	Co 13003	1.09	0.86			0.96	0.97	0.95	1.27	1.58			0.81	0.88		1.06
3	Co 13004	1.08	0.77			0.96	1.02	0.85	1.31	1.34			0.73	1.13		1.05
4	CoN 13072	0.77	1.09			0.82	1.00	0.81	1.39	1.03			1.14	1.04		1.00
5	CoSnk 13101	0.63	0.79			0.95	0.97	0.79	1.13	0.93			0.95	0.74		0.89
6	MS 13081	1.11	1.07			1.34	0.99	0.91	1.50	1.32			1.28	1.31		1.22
7	Co 13006	0.97	0.67			1.12	0.98	1.04	1.19	1.14			1.06	0.98		1.06
8	Co 13008	1.30	0.68			0.89	0.95	1.07	1.34	1.34			0.99	1.11		1.12
9	Co 13009	1.26	0.69			1.19	1.00	1.06	1.44	1.59			1.08	1.41		1.25
10	Co 13013	1.28	0.73			1.16	1.01	0.87	1.38	1.63			1.10	1.07		1.19
11	Co 13014	1.03	1.36			1.18	0.95	0.97	1.57	1.69			0.97	1.15		1.19
12	Co 13018	0.81	0.49			1.03	0.93	0.73	1.11	1.23			0.67	0.95		0.93
13	Co 13020	1.17	0.86			0.95	0.97	0.75	1.25	1.17			0.67	0.87		0.98
14	CoN 13073	0.75	1.24			1.18	0.98	1.19	1.90	1.25			1.01	0.92		1.15
15	CoSnk 13103	0.88	0.62			0.83	0.94	0.87	0.93	1.22			0.67	0.88		0.90
16	CoSnk 13106	0.92	0.61			1.08	0.89	0.89	1.17	0.93			1.09	1.18		1.02
17	PI 13132	0.96	0.63			0.87	0.80	0.61	1.23	0.92			1.01	1.03		0.93
	Standards															
1	Co 86032	1.05	0.70			1.27	0.81	0.91	1.17	1.14			1.05	0.83		1.03
2	CoC 671	1.09	0.99			1.29	0.82	0.90	1.04	1.36			0.98	1.00		1.06
3	CoSnk 05103	0.81	0.62			0.82	0.83	0.62	1.03	0.95			0.83	0.89		0.85
	Mean	0.99	0.80			1.04	0.94	0.87	1.27	1.26			0.95	1.01		0.89
	SE (m)	0.08	0.10			0.07	0.03	0.26	0.11	0.06			0.07	0.07		
	CD	0.23	0.30			0.21	0.09	0.76	0.31	0.19			0.19	0.21		
	CV	13.73	22.20			12.55	5.89	52.53	14.55	9.15			12.28	9.93		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.28 CCS % at 8 months

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	11.41	10.31			11.55	6.84	11.81	12.33	12.41		7.68	12.04	12.88		10.99
2	Co 13003	9.14	10.02			10.12	7.99	10.49	11.64	12.78		8.43	10.92	10.10		10.18
3	Co 13004	8.90	9.65			11.13	8.10	11.13	9.05	12.84		8.55	10.13	8.37		9.80
4	CoN 13072	7.60	9.74			8.06	8.45	9.48	9.41	12.80		8.33	10.17	6.93		9.03
5	CoSnk 13101	8.52	10.18			9.15	7.68	10.96	11.97	12.83		9.47	11.71	10.46		10.31
6	MS 13081	8.64	10.87			11.26	8.03	11.44	9.98	12.41		8.22	10.93	8.80		9.97
7	Co 13006	9.85	11.04			10.82	8.51	9.36	9.05	13.32		7.86	11.72	10.75		10.14
8	Co 13008	9.55	9.86			11.27	7.92	10.78	11.36	12.96		7.39	11.26	8.78		10.14
9	Co 13009	8.52	9.31			9.17	7.91	9.89	10.23	12.09		7.55	9.37	6.50		9.03
10	Co 13013	10.53	10.04			8.94	7.91	10.72	10.92	12.62		9.76	10.95	8.16		10.06
11	Co 13014	9.51	9.57			8.91	7.75	10.23	9.56	11.96		7.60	10.98	8.25		9.42
12	Co 13018	8.52	10.87			9.04	7.95	9.64	8.52	12.86		8.11	10.74	6.97		9.15
13	Co 13020	9.18	10.70			8.17	8.59	9.93	11.90	13.14		10.60	9.64	6.62		9.75
14	CoN 13073	5.91	9.54			6.69	7.72	7.63	9.25	12.29		6.64	9.42	4.77		7.81
15	CoSnk 13103	10.73	10.26			11.52	7.76	11.04	11.73	12.98		10.61	10.76	9.65		10.75
16	CoSnk 13106	8.66	9.63			11.53	7.39	10.91	8.33	12.00		7.63	11.86	8.94		9.69
17	PI 13132	8.65	10.81			9.79	7.29	10.60	11.59	12.81		10.14	10.29	8.28		9.94
	Standards															
1	Co 86032	10.13	9.90			11.01	7.76	10.90	12.82	13.05		7.98	11.39	8.65		10.41
2	CoC 671	11.79	10.70			10.18	8.90	11.38	13.64	13.28		7.05	12.19	9.98		10.93
3	CoSnk 05103	8.53	9.97			9.77	8.96	9.80	8.45	11.91		9.91	11.47	6.97		9.53
	Mean	9.21	10.15			9.90	7.97	10.41	10.59	12.67		8.48	10.90	8.54		9.85
	SE (m)	0.75	0.47			0.55	0.22	0.38	0.62	0.36		0.08	0.52	0.51		
	CD	2.16	1.34			1.57	0.63	1.09	1.79	1.04		0.22	1.49	1.51		
	CV	14.14	8.00			9.62	4.78	6.27	10.21	4.99		1.54	8.22	8.46		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canters were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.29 Sucrose % at 8 months

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	16.33	14.71			16.24	10.30	17.00	17.49	17.50		11.79	17.47	17.89		15.78
2	Co 13003	13.39	14.23			14.41	11.95	15.36	16.84	17.05		12.73	15.95	14.46		14.68
3	Co 13004	13.18	13.59			15.73	12.11	16.16	13.72	16.57		12.97	14.81	12.34		14.18
4	CoN 13072	11.46	13.89			12.01	12.65	14.09	13.99	16.74		12.32	15.04	10.36		13.18
5	CoSnk 13101	12.26	14.33			13.29	11.51	15.97	17.03	17.93		13.95	16.85	14.67		14.83
6	MS 13081	12.80	15.30			15.87	11.95	16.52	14.36	17.67		12.30	15.89	12.54		14.43
7	Co 13006	14.20	15.82			15.26	12.61	14.00	13.45	16.43		11.90	17.07	15.02		14.44
8	Co 13008	13.98	14.00			15.80	11.97	15.72	16.20	16.62		11.11	16.42	12.52		14.48
9	Co 13009	12.54	13.22			13.22	11.98	14.45	14.60	16.47		11.56	13.87	9.57		13.14
10	Co 13013	14.95	14.25			13.12	11.75	15.57	15.65	17.51		14.58	15.92	11.84		14.54
11	Co 13014	13.69	13.52			13.03	11.57	15.02	13.95	16.48		11.37	15.99	11.79		13.65
12	Co 13018	12.48	15.30			13.06	11.86	14.23	12.96	17.17		12.48	15.78	10.18		13.36
13	Co 13020	13.54	15.11			12.10	12.83	14.58	17.08	16.99		15.36	14.22	9.76		14.05
14	CoN 13073	9.19	13.61			10.48	11.38	11.77	13.90	17.12		9.96	14.13	7.60		11.72
15	CoSnk 13103	15.31	14.49			16.15	11.75	16.16	16.86	17.96		15.69	15.78	13.95		15.51
16	CoSnk 13106	12.93	13.60			16.18	11.13	15.77	12.24	16.47		11.35	17.04	12.96		14.01
17	PI 13132	12.49	15.27			14.14	10.95	15.54	16.63	16.98		14.65	14.98	12.10		14.27
	Standards															
1	Co 86032	14.59	14.04			15.44	11.51	15.80	18.23	17.76		12.24	16.57	12.46		14.96
2	CoC 671	16.79	15.12			14.46	13.25	16.50	19.28	18.10		10.88	17.58	14.12		15.66
3	CoSnk 05103	12.46	14.29			13.93	13.32	14.40	12.75	16.87		14.27	16.67	10.25		13.88
	Mean	13.43	14.38			14.20	11.92	15.23	15.36	17.12		12.67	15.90	12.32		14.24
	SE (m)	0.68	0.66			0.65	0.26	0.46	0.70	0.53		0.08	0.65	0.59		
	CD	1.95	1.88			1.87	0.73	1.34	2.00	1.53		0.23	1.86	1.74		
	CV	8.75	7.90			7.98	3.72	5.27	7.86	5.44		1.09	7.04	6.73		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.30 Brix % at 8 months

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	18.11	16.17			17.33	12.60	19.03	18.99	18.62		14.97	19.92	18.50		17.56
2	Co 13003	15.59	15.47			15.80	14.43	17.84	19.05	18.15		15.70	18.42	16.00		16.78
3	Co 13004	15.65	14.52			17.00	14.64	18.45	17.02	17.79		16.10	17.16	14.50		16.48
4	CoN 13072	14.10	15.27			14.47	15.33	16.83	16.72	17.62		14.60	17.80	12.50		15.55
5	CoSnk 13101	13.75	15.30			15.20	13.98	18.33	18.62	18.65		16.37	18.89	15.50		16.59
6	MS 13081	15.21	16.33			17.00	14.32	18.63	16.05	18.79		14.90	18.16	13.75		16.31
7	Co 13006	15.96	17.55			16.40	14.98	16.94	16.09	17.49		14.73	19.62	15.75		16.44
8	Co 13008	16.23	15.22			16.73	14.77	18.10	17.79	17.65		13.57	18.91	13.75		16.39
9	Co 13009	14.72	14.37			14.93	14.84	16.72	16.05	17.59		14.60	16.48	11.25		15.24
10	Co 13013	16.24	15.49			15.33	14.04	17.77	17.39	18.55		17.60	18.22	13.50		16.52
11	Co 13014	15.34	14.55			15.13	13.96	17.55	16.09	17.42		13.77	18.37	13.00		15.62
12	Co 13018	14.52	16.33			14.80	14.28	16.80	16.19	18.25		15.90	18.45	11.75		15.66
13	Co 13020	15.94	16.25			14.40	15.49	17.04	19.05	17.92		17.47	16.76	11.50		16.17
14	CoN 13073	11.93	14.95			13.80	13.40	15.08	16.95	18.35		12.10	17.19	10.25		14.34
15	CoSnk 13103	16.83	15.58			17.13	14.53	18.73	18.82	18.75		18.57	18.39	15.75		17.50
16	CoSnk 13106	15.57	14.63			17.20	13.64	17.84	14.32	17.35		13.57	19.02	14.75		15.92
17	PI 13132	14.09	16.42			16.00	13.36	18.09	18.52	18.12		16.57	17.20	14.00		16.22
	Standards															
1	Co 86032	16.39	15.25			16.40	13.70	17.95	19.89	18.85		15.50	18.98	14.00		16.85
2	CoC 671	18.39	16.25			15.80	15.90	18.80	20.75	19.75		13.93	19.76	15.25		17.59
3	CoSnk 05103	14.37	15.88			15.33	15.93	16.82	15.65	17.55		16.00	19.06	12.00		15.86
	Mean	15.45	15.59			15.81	14.41	17.67	17.50	18.16		15.33	18.34	13.86		16.28
	SE (m)	0.37	0.70			0.49	0.38	0.35	0.42	0.58		0.10	0.53	0.38		
	CD	1.06	2.00			1.40	1.09	1.02	1.20	1.67		0.29	1.53	1.13		
	CV	4.12	7.77			5.37	4.59	3.46	4.13	5.58		1.15	5.03	3.91		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Table 2.1.31 Purity % at 8 months

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumala palle	Pravara nagar	Pune	Rudruru	Sameer wadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	86.95	91.00			93.90	81.83	89.33	92.05	91.13		78.75	87.73	96.66		88.70
2	Co 13003	80.42	92.00			91.37	83.10	86.07	88.33	92.96		81.11	86.50	90.35		86.69
3	Co 13004	81.41	93.67			92.77	82.77	87.56	80.07	92.75		80.54	86.20	85.08		85.46
4	CoN 13072	76.92	91.00			83.06	82.55	83.74	83.67	93.71		84.38	84.53	82.72		83.92
5	CoSnk 13101	81.61	93.67			87.60	82.38	87.09	91.58	92.65		85.21	89.22	94.61		88.00
6	MS 13081	82.68	93.67			93.59	83.67	88.61	89.42	91.32		82.55	87.50	90.94		87.81
7	Co 13006	82.56	90.00			93.26	84.23	82.56	83.58	92.65		80.80	87.00	95.46		86.90
8	Co 13008	82.20	92.00			94.64	81.14	86.87	91.01	93.20		81.90	86.75	91.08		87.64
9	Co 13009	80.15	92.00			88.70	81.13	86.45	90.73	92.59		79.20	84.14	85.06		85.35
10	Co 13013	86.61	92.00			85.62	83.71	87.61	89.89	90.86		82.84	87.26	87.69		86.90
11	Co 13014	84.43	93.00			85.96	83.06	85.34	86.71	92.81		82.57	87.06	90.68		86.51
12	Co 13018	80.25	93.67			88.36	83.27	84.60	80.06	92.01		78.47	85.51	86.53		84.34
13	Co 13020	81.71	93.00			83.91	83.07	85.57	89.68	92.35		87.96	84.87	84.84		86.00
14	CoN 13073	69.75	91.00			76.11	85.15	78.08	81.86	92.69		82.29	82.05	74.04		80.22
15	CoSnk 13103	85.76	93.00			94.50	81.31	86.28	89.58	91.27		84.51	85.59	88.58		87.49
16	CoSnk 13106	81.39	93.00			94.28	81.55	88.39	85.42	91.59		83.64	89.59	87.87		87.08
17	PI 13132	82.10	93.00			88.74	82.11	85.82	89.76	91.13		88.45	87.02	86.37		86.83
	Standards															
1	Co 86032	85.47	92.00			94.39	84.12	87.96	91.63	91.55		78.97	87.14	88.91		87.79
2	CoC 671	88.00	93.00			91.72	83.34	87.72	92.88	90.91		78.06	88.91	92.58		88.24
3	CoSnk 05103	80.35	90.00			91.04	83.59	85.61	81.42	92.83		89.24	87.48	85.42		86.33
	Mean	82.04	92.28			89.68	82.72	86.06	87.47	92.15		82.57	86.60	88.27		86.40
	SE (m)	1.63	0.55			2.39	1.90	1.15	2.81	0.75		0.65	1.50	2.71		
	CD	4.68	1.57			6.85	NS	3.31	8.06	2.14		1.85	NS	8.01		
	CV	3.44	1.03			4.62	3.96	2.31	5.56	1.40		1.36	3.00	4.33		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.32 Number of shoots (000³/ha) at 240 days

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	102.27	50.63			102.50	152.59	110.07	183.43	114.75	79.12	120.60	138.66	103.10		120.71
2	Co 13003	78.96	40.69			57.22	148.58	94.29	152.97	123.88	78.56	116.32	104.17	87.70		104.26
3	Co 13004	84.19	43.88			69.44	153.14	92.47	138.58	121.51	73.95	92.07	127.08	83.69		103.61
4	CoN 13072	65.71	88.13			86.88	152.64	109.81	191.79	112.75	80.21	100.06	115.51	106.10		112.15
5	CoSnk 13101	68.21	61.88			54.51	148.90	105.56	143.92	121.21	76.14	72.28	131.60	93.39		101.57
6	MS 13081	50.21	46.31			77.50	146.38	101.31	139.82	125.67	71.85	104.51	120.60	90.93		102.88
7	Co 13006	68.96	41.25			78.61	154.01	118.65	151.26	126.04	72.54	119.50	145.25	83.57		111.84
8	Co 13008	70.75	48.56			96.32	151.24	92.65	129.07	129.08	90.93	93.87	124.42	79.68		105.80
9	Co 13009	73.54	45.37			75.83	146.60	100.27	140.05	139.37	83.80	70.37	122.57	83.61		103.60
10	Co 13013	83.49	47.85			84.58	150.80	103.91	141.91	117.85	77.27	108.68	137.15	92.32		109.80
11	Co 13014	80.97	54.38			74.79	146.46	96.37	129.53	121.96	74.69	95.78	151.85	88.93		106.13
12	Co 13018	109.28	55.31			88.19	148.14	106.86	189.62	132.18	86.69	108.16	147.34	100.63		121.71
13	Co 13020	76.57	48.32			90.83	149.82	114.49	161.16	135.18	79.52	100.41	122.92	80.46		111.14
14	CoN 13073	58.61	87.19			61.67	152.50	99.93	144.61	116.44	83.36	66.44	128.59	97.70		100.98
15	CoSnk 13103	99.18	44.81			66.39	146.05	98.63	153.97	109.64	75.42	77.37	133.33	82.18		104.22
16	CoSnk 13106	64.32	53.44			80.76	154.84	93.77	170.75	136.04	80.71	58.39	132.52	71.99		104.41
17	PI 13132	85.87	42.56			94.24	146.90	80.60	183.05	115.72	74.68	116.20	130.56	84.08		111.19
	Standards															
1	Co 86032	70.08	64.88			105.00	141.32	127.14	192.64	114.75	85.81	105.96	140.05	95.93		117.87
2	CoC 671	61.10	69.00			72.64	138.11	84.93	144.15	123.88	71.57	117.65	128.70	93.62		103.63
3	CoSnk 05103	120.41	93.75			113.68	137.86	122.20	203.62	121.51	98.58	117.19	147.46	120.72		130.32
	Mean	78.63	56.41			81.58	148.34	102.70	159.30	122.97	79.77	98.09	131.52	91.02		109.39
	SE (m)	5.16	3.28			4.77	5.02	5.95	8.18	2.04	6.32	11.38	5.31	3.36		
	CD	14.82	9.40			13.65	NS	17.19	23.51	5.85	18.27	32.59	15.26	9.93		
	CV	11.36	10.09			10.12	5.87	10.04	8.90	2.88	13.62	20.10	6.99	5.21		

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.33 Number of tillers (000'/ha) at 120 days

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	113.15	83.33		136.40	127.99	167.77	100.69	193.57	121.23	188.65	175.46	118.24	120.66	104.98	139.31
2	Co 13003	83.62	69.44		118.46	58.68	166.65	93.29	176.01	135.45	161.59	121.70	78.24	106.41	94.85	116.04
3	Co 13004	88.48	72.22		131.08	74.17	165.23	88.19	156.75	128.32	133.98	98.21	89.07	101.87	122.34	113.33
4	CoN 13072	86.38	83.33		148.32	91.74	185.61	129.86	204.39	121.25	233.41	161.34	115.56	154.85	104.34	144.43
5	CoSnk 13101	86.10	80.56		172.28	66.04	166.25	95.60	168.28	129.89	188.52	121.01	85.09	127.67	127.49	123.81
6	MS 13081	60.76	69.44		159.37	111.18	166.59	103.70	151.11	127.08	158.26	144.62	78.89	144.22	108.28	123.15
7	Co 13006	72.28	88.89		138.77	96.18	170.55	106.48	168.12	130.43	175.88	136.98	92.31	106.26	110.19	124.15
8	Co 13008	80.02	86.11		148.32	105.97	165.29	100.69	144.30	140.43	193.06	114.24	95.56	122.35	118.41	125.48
9	Co 13009	84.78	86.11		149.94	87.78	180.55	96.53	176.63	142.26	200.83	132.23	90.93	117.04	132.12	131.06
10	Co 13013	98.48	69.44		152.14	105.63	177.87	106.25	169.90	129.38	153.40	128.07	87.96	114.73	104.46	125.10
11	Co 13014	87.01	75.00		128.99	80.28	175.36	85.65	132.86	135.26	160.09	102.89	101.48	102.87	104.34	115.28
12	Co 13018	116.49	102.78		139.52	91.53	162.96	104.86	197.90	141.77	167.43	106.13	111.48	128.82	112.96	131.12
13	Co 13020	93.69	130.56		139.58	107.71	174.11	121.53	195.50	146.88	170.55	157.52	90.74	142.60	91.90	135.70
14	CoN 13073	64.09	44.44		113.08	70.42	183.38	97.69	168.20	125.69	163.95	122.69	94.45	128.13	107.41	120.55
15	CoSnk 13103	106.55	72.22		168.46	90.49	165.52	115.05	175.62	120.47	187.81	135.24	100.74	132.21	107.52	130.66
16	CoSnk 13106	82.76	61.11		160.82	103.86	181.42	102.31	164.33	143.88	202.13	129.57	90.55	106.34	117.77	129.54
17	PI 13132	107.69	33.33		159.72	117.43	171.66	94.91	191.48	121.67	168.39	136.92	99.26	116.81	109.03	130.48
	Standards															
1	Co 86032	80.03	116.67		125.75	135.56	159.59	107.64	193.10	145.91	167.49	129.17	118.24	136.75	109.90	134.85
2	CoC 671	70.62	67.22		127.02	81.95	158.10	93.52	154.74	127.41	147.72	146.47	107.13	136.98	109.90	121.32
3	CoSnk 05103	127.05	108.33		197.63	137.99	153.89	118.52	222.57	130.35	190.87	168.98	139.81	163.47	102.37	150.53
	Mean	89.50	80.03		145.78	97.13	169.92	103.15	175.27	132.25	175.70	133.47	99.29	125.55	110.02	128.30
	SE (m)	4.92	3.83		12.98	4.73	6.23	9.88	10.80	2.50	7.86	13.09	5.06	5.24	4.60	
	CD	14.15	10.95		37.17	13.54	17.82	NS	31.03	7.16	22.69	37.49	14.55	15.51	13.09	
	CV	9.53	8.28		15.43	8.43	6.35	16.59	10.67	3.27	7.74	16.99	8.83	5.90	7.25	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the canterers were less than the state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

Table 2.1.34 Germination % at 30 days

Sl. No	Clone	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalappalle	Pravara nagar	Pune	Rudruru	Sameerwadi	Sankeshwar	Thiruvalla	Mean ^ψ
1	Co 13002	54.63	60.00		74.46	42.83	54.71	54.33	67.30	35.46	51.04	46.22	46.68	75.88	59.05	53.47
2	Co 13003	50.41	61.00		70.06	42.00	53.79	54.33	53.58	35.02	46.24	35.35	26.16	51.40	48.11	45.13
3	Co 13004	60.13	59.33		64.04	50.06	53.92	51.67	55.49	33.74	40.80	44.91	35.18	43.54	48.90	47.12
4	CoN 13072	64.64	65.33		87.42	49.92	56.31	59.00	85.06	37.01	47.63	50.56	52.00	67.80	48.63	56.23
5	CoSnk 13101	59.32	67.67		74.77	39.92	52.62	58.33	47.91	37.58	51.44	49.33	54.17	92.17	59.28	54.73
6	MS 13081	56.13	61.00		64.51	47.57	57.51	54.00	56.13	34.85	39.13	58.72	32.56	60.98	64.03	51.06
7	Co 13006	54.84	66.33		63.35	43.05	54.78	65.00	51.21	27.67	37.36	42.09	34.65	52.67	63.86	47.93
8	Co 13008	45.31	63.33		74.15	50.02	53.89	64.67	56.13	43.28	55.95	52.28	45.83	76.81	58.65	54.80
9	Co 13009	56.25	64.67		95.83	62.54	54.97	66.67	46.35	50.59	48.31	48.17	55.87	77.85	50.09	56.15
10	Co 13013	67.36	63.67		71.45	49.41	59.87	53.67	55.90	32.50	47.05	42.50	44.14	55.90	63.10	51.95
11	Co 13014	65.80	63.33		69.68	40.04	51.15	57.33	58.97	29.37	39.58	54.61	48.38	51.74	61.02	50.73
12	Co 13018	60.01	60.67		65.35	44.63	52.02	55.00	53.58	41.08	37.45	38.72	42.13	62.02	47.95	48.60
13	Co 13020	66.90	62.00		88.73	49.30	50.42	67.33	64.69	47.09	53.31	65.00	67.44	88.82	53.84	61.29
14	CoN 13073	57.47	60.33		70.68	40.16	55.66	53.00	57.69	39.74	32.64	62.61	37.96	71.26	58.64	51.53
15	CoSnk 13103	56.54	61.00		99.77	43.16	56.78	66.00	63.02	34.36	39.84	54.06	44.44	68.84	45.95	52.09
16	CoSnk 13106	44.16	60.67		95.22	44.06	51.78	62.00	47.16	42.16	48.55	52.39	48.92	74.84	51.18	51.56
17	PI 13132	61.23	62.33		86.81	46.53	54.80	64.33	74.13	36.30	48.20	52.50	55.17	61.45	50.20	54.98
	Standards															
1	Co 86032	43.46	66.33		64.66	50.27	50.51	61.00	47.97	41.89	41.30	52.44	44.83	68.95	61.54	51.29
2	CoC 671	40.91	61.67		86.34	48.31	54.32	61.67	59.89	32.15	44.50	61.83	44.44	83.04	50.02	52.83
3	CoSnk 05103	62.73	64.00		77.78	42.48	52.74	59.00	78.99	42.80	52.21	58.28	57.95	82.81	57.95	58.90
	Mean	56.41	62.73		77.25	46.31	54.13	59.42	59.06	37.73	45.13	51.13	45.95	68.44	55.10	52.62
	SE (m)	3.43	1.65		3.98	4.44	1.69	3.92	4.32	1.65	1.68	2.25	3.86	4.96	3.01	
	CD	9.85	4.71		11.38	NS	4.84	11.32	12.42	4.73	4.86	6.44	11.08	14.69	8.56	
	CV	8.25	4.55		8.91	16.59	5.41	11.43	12.68	7.58	6.46	7.62	14.53	10.26	9.47	

^ψ Data of Akola and Kolhapur centers were not considered for the calculation of the zone mean, as the mean yields of the centers were less than the state average

Performance of entries in AVT- II Plant

Table 2.1.35 Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entries	Perumala palle	Coimba tore	Thiru valla	Mandya	Sankesh war	Sameer wadi	Kolha pur
Co 13002	Better	On par	Better	Average	Better	Average	Average
Co 13003	Better	On par	On par	Better	On par	Better	Better
Co 13004	Better	On par	Better	Better	On par	Better	Better
CoN 13072	On par	Better	On par	Better	On par	On par	Better
CoSnk 13101	Better	Better	Better	Average	Better	Better	Average
MS 13081	On par	Better	Average	Better	On par	Better	Better
Co 13006	Better	Better	Better	Better	Better	On par	On par
Co 13008	Average	On par	On par	On par	Better	Better	On par
Co 13009	Better	Better	On par	Better	Better	On par	Better
Co 13013	On par	Better	Better	Better	Better	Better	Better
Co 13014	On par	On par	Better	Better	On par	On par	On par
Co 13018	Better	On par	On par	On par	Better	Better	Better
Co 13020	Average	Average	Better	Better	On par	Average	Average
CoN 13073	On par	Better	On par	On par	Better	On par	Poor
CoSnk 13103	Average	Better	On par	Average	Better	Better	Better
CoSnk 13106	Better	On par	On par	Better	On par	Better	Better
PI 13132	Better	Better	Better	Better	Better	On par	Poor
Standards							
Co 86032	Best	-	-	Best	Best	Best	-
CoC 671	-	Best	-	-	-	-	-
CoSnk 05103	-	-	Best	-	-	-	Best

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT II Plant

S.No	Entries	Rudrur	Pade gaon	Pune	Pravaran agar	Powerkheda	Navsari
1	Co 13002	On Par	Poor	Poor	Poor	On Par	Poor
2	Co 13003	On Par	Better	Better	Better	Wild Boar damage	On Par
3	Co 13004	Better	On Par	On Par	On Par	Better	Better
4	Co 13006	Poor	Better	On Par	Better	Better	Better
5	Co 13008	Better	Better	Better	Better	Better	Better
6	Co 13009	Better	Better	On Par	On Par	Better	Better
7	Co 13013	Better	Better	On Par	On Par	On Par	On Par
8	Co 13014	Better	On Par	On Par	On Par	Better	Better
9	Co 13018	On Par	On Par	Poor	Poor	Wild Boar damage	On Par
10	Co 13020	Better	OP	On Par	On Par	Wild Boar damage	Better
11	CoN 13072	Better	Better	Better	On Par	Better	Better
12	CoN 13073	Poor	On Par	Better	On Par	Wild Boar damage	Better
13	MS 13081	Better	Better	Better	On Par	Wild Boar damage	On Par
14	CoSnk 13101	Poor	On Par	Poor	Poor	On Par	Poor
15	CoSnk 13103	On Par	On Par	Poor	Poor	On Par	Poor
16	CoSnk 13106	Poor	On Par	On Par	On Par	Better	On Par
17	PI 13132	On Par	Poor	Poor	Poor	On Par	Poor
Standards							
1	Co 86032		Best	Best			
2	CoC 671	Best					
3	CoSnk 05103				Best	Best	Best

2.2. Advanced Varietal Trial Ratoon (2019-20)

Centers where trial was conducted (13)	Coimbatore, Akola ^ψ , Kolhapur ^ψ , Mandya, Navsari, Padegaon, Perumallapalle ^ψ , Pravaranagar, Pune, Rudrur, Sameervadi, Sankeshwar, Thiruvalla
Entries (17)	Co 13002, Co 13003, Co 13004, Co 13006, Co 13008, Co 13009, Co 13013, Co 13014, Co 13018, Co 13020, CoN 13072, CoN 13073, CoSnk 13101, CoSnk 13103, CoSnk 13106, MS 13081 and PI 13132
Standards (3)	Co 86032, CoC 671 and CoSnk 05103
Design	RBD
Replications	Three
Plot size	6 m x 8 rows x 1.2 m (Gross) 5 m x 6 rows x 1.2 m (Net)
Planting time	After harvest of I plant crop
Crop duration	11 months

^ψ Data of Akola, Kolhapur and Perumallapalle center were not considered for the calculation of the zone mean, as the mean yield of the centers were less than the state average.

Results of the previous year: Seventeen entries along with three standards (Co 86032, CoC 671 & CoSnk 05103) were evaluated at 15 centers during 2018-19. The trial was not conducted at Kawardha, Powerkheda, Pugalur and Sirugamani. The entry MS 13081 (17.71 t/ha) was best in the zone, followed by Co 13013 (16.54 t/ha) and were numerically superior to the best standard Co 86032 (15.38 t/ha). None of the entries had recorded > 10 % improvement over the best standard across the locations in the zone for CCS yield, however the entry MS 13081 recorded 9.74 % improvement and Co 13013 recorded 7.08 % improvement over the best standard across the locations and recorded >10 % improvement over the best standards at six locations each. For the cane yield Co 13013 (121.65 t/ha) and MS 13018 (121.33) were the best test entries in this zone and ranked first and second respectively and Co 86032 was the best standard (110.77 t/ha). None of the entries had recorded > 10 % improvement for cane yield over the best standard across all the locations in this zone. However Co 13013 and MS 13081 recorded 9.82 % and 9.51 % improvement respectively over the best standard in the zone and also they recorded >10% improvement over the best standard at five and seven locations respectively. None of the entries recorded higher CCS % in the zone over the best standard CoC 671 (14.69 %). However the entries Co 13006 and Co 13009 recorded significantly higher and > 5 % improvement over the best standard at Basmathnagar, Co 13002 (14.92), Co 13006 (14.72), MS 13081 (14.42) and Co 13014 (14.39) recorded > 5% improvement over the best standard (CoC 671) at Sankeshwar. None of the entries recorded higher sucrose % in the zone over the best standard CoC 671 (20.77 %). However the entry Co 13006 recorded > 5% improvement at Basmathnagar and Sankeshwar, and the entries Co 13002, Co 13004, Co 13014 and MS 13081 recorded > 5 % improvement over the best standard at Sankeshwar. The entry Co 13013 and MS 13081 were the best entries in the zone for CCS yield and cane yield but they were inferior to best standard CoC 671 for CCS % and sucrose. Based on the cane yield and juice quality parameters none of the entries was identified as qualifying entry.

Results of the current year: In ratoon trial, seventeen entries along with three standards (Co 86032, CoC 671 & CoSnk 05103) were evaluated at 12 centers during 2019-20. Rudrur centre reported that the trial was vitiated due to water scarcity. The entry Co 13013 was the best in the zone for sugar yield (14.81 t/ha) and cane yield (106.96 t/ha) compared to the best standard Co 86032 (13.61 t/ha; 100.39 t/ha). None of the entries recorded > 10% improvement over the best standard across the locations in the zone for sugar yield as well as cane yield. However, Co 13013 recorded > 10% improvement over the best standards at four locations followed by MS 13081 at three locations. Next best entry was MS 13081 which recorded 14.64 t/ha sugar yield and 101.48 t/ha ratoon cane yield. For juice quality, none of the entries recorded higher CCS % and sucrose % in the zone over the best standard CoC 671 (14.54 %; 20.54%). However > 5% improvement over the best standard was observed with the entry CoSnk 13101 at Kolhapur and Sankeshwar, Co 13009 and Co 13013 at Kolhapur and Co 13006 at Sankeshwar. Based on the cane yield and juice quality parameters none of the entries was identified as qualifying entry. The data are presented in the tables 2.2.1 to 2.2.26.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.1: CCS t/ha at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Man dya	Nava sari	Padegaon	Perumalapalle	Pravara nagar	Pune	Sameer wadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 13002	14.38	2.39	3.52	8.77	12.61	8.76	7.70	17.42	7.88	11.37	10.12	10.75	11.34	
2	Co 13003	17.41	2.86	2.70	10.04	12.77	12.33	3.42	17.46	17.47	8.95	14.34	11.65	13.60	
3	Co 13004	12.80	2.98	4.12	11.20	12.69	13.40	4.71	14.30	12.83	9.23	11.29	10.26	12.00	
4	CoN 13072	10.13	2.60	3.79	8.11	15.60	11.38	9.02	14.24	13.41	9.09	16.31	12.70	12.33	
5	CoSnk 13101	9.47	2.28	2.79	7.81	12.60	11.67	5.50	15.56	10.57	9.66	16.91	13.29	11.95	
6	MS 13081	15.12	1.26	5.29	12.24	13.59	17.51	9.24	18.45	15.86	10.20	15.81	13.01	14.64	2
7	Co 13006	14.00	3.12	5.89	9.81	12.67	15.21	7.36	16.26	13.85	9.22	16.20	12.71	13.33	
8	Co 13008	12.79	1.61	4.65	7.89	11.71	15.81	5.63	18.96	18.52	8.90	11.38	10.14	12.90	
9	Co 13009	13.59	3.01	5.57	9.58	10.86	16.60	4.73	16.66	13.37	9.11	9.37	9.24	12.04	
10	Co 13013	11.74	1.89	3.56	12.29	13.88	15.88	9.08	19.73	18.53	10.42	17.05	13.74	14.81	1
11	Co 13014	17.81	1.65	6.87	10.03	13.89	15.25	7.36	18.70	12.26	10.16	10.45	10.31	13.21	
12	Co 13018	14.34	2.28	3.06	13.61	13.01	12.21	7.22	18.05	11.65	10.48	12.39	11.44	13.02	
13	Co 13020	11.54	2.37	3.99	9.87	13.97	12.66	8.26	17.14	11.32	10.17	14.04	12.11	12.54	
14	CoN 13073	8.61	5.09	3.39	9.89	14.25	13.28	5.89	14.06	12.63	7.99	15.36	11.68	11.97	
15	CoSnk 13103	11.89	2.55	5.01	6.99	11.33	12.05	4.36	15.44	10.41	9.63	16.14	12.89	11.86	
16	CoSnk 13106	9.17	3.57	3.87	10.48	12.63	12.29	9.13	16.05	14.69	9.98	14.41	12.20	12.43	
17	PI 13132	17.16	1.47	3.48	11.59	12.16	7.33	6.72	15.32	10.01	10.28	7.09	8.69	11.07	
	Standards														
1	Co 86032	13.85	2.78	3.61	13.11	11.34	13.52	8.66	19.83	15.53	10.16	13.38	11.77	13.61	3
2	CoC 671	12.76	1.95	3.15	14.36	10.77	10.26	2.07	17.96	11.60	9.58	10.21	9.90	11.93	
3	CoSnk 05103	13.60	4.82	3.43	11.89	12.54	12.00	8.50	15.94	11.09	9.30	15.61	12.46	12.71	
	Grand Mean	13.18	2.63	4.09	10.48	12.74	12.97	6.73	16.88	13.17	9.69	13.39	10.36	12.54	
	SE(m)	3.93	0.28	0.45	0.67	0.50	0.65	1.13	0.99	0.97	0.37	1.26	0.65		
	CD	1.37	0.83	1.28	1.97	1.44	1.87	3.37	2.83	2.81	1.05	3.72	1.84		
	CV	17.98	19.00	18.93	9.00	6.85	8.66	23.80	10.16	12.79	6.54	13.27	10.82		
	Top three qualifying entries at each centre														
	1	Co 13014	CoN 13073	Co 13014		CoN 13072	MS 13081			Co 13013	Co 13002	MS 13081	MS 13081		
	2	Co 13003	CoSnk 05103	Co 13006		CoN 13073	Co 13009			Co 13008		Co 13013	Co 13013		
	3	PI 13132	CoSnk 13106	Co 13009		Co 13020	Co 13013			Co 13003		CoSnk 13101	CoSnk 13101		

Qualifying entries: Co 13013(4), MS 13081 (3), Co 13003 (2), CoSnk 13101(2), CoN 13072(2)

Performance across the locations: Co 13013 (14.81 t/ha) was the best test entry in this zone followed MS 13081 (14.64 t/ha) and the best standard was Co 86032 (13.61 t/ha). None of the entries recorded > 10% improvement over the best standard across the locations in the zone for CCS yield. However, Co 13013 recorded > 10% improvement over the best standards at four locations followed by MS 13081 at three locations. Other entries Co 13003, CoSnk 13101 and CoN 13072 recorded >10% improvement over the best standard in two locations of the zone.

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's Report (2019-20)

Peninsular zone AVT Ratoon

Table 2.2.2: Cane yield t/ha at harvest

I. No.	Entries	Coimbatore	Akola	Kolhapur	Man dya	Nava sari	Pade gaon	Perumala palle	Pravara nagar	Pune	Samee rwadi	Sankes hwar	Thiru valla	Mean	Rank	
1	Co 13002	99.80	17.97	28.03	64.17	102.04	61.39	62.69	131.64	56.73	81.02	67.78	75.07	82.18		
2	Co 13003	118.57	22.52	21.92	68.75	100.19	81.60	29.22	127.73	125.68	67.59	97.58	71.14	95.43		
3	Co 13004	87.32	23.25	33.54	74.58	107.47	86.25	39.22	117.51	90.05	74.31	79.63	99.85	90.77		
4	CoN 13072	77.37	19.82	31.31	59.58	119.77	78.67	73.79	117.33	96.56	71.91	110.11	89.24	91.17		
5	CoSnk 13101	65.57	18.46	21.16	56.88	97.16	79.62	45.81	107.84	75.18	70.91	104.49	79.70	81.93		
6	MS 13081	120.23	9.94	41.92	84.17	107.63	113.82	70.47	135.03	115.26	74.61	109.82	52.73	101.48	2	
7	Co 13006	103.05	25.82	48.23	65.52	110.03	104.85	67.41	118.42	97.89	72.61	103.70	69.24	93.92		
8	Co 13008	89.39	13.95	39.93	56.25	91.67	109.87	45.34	134.92	130.14	70.99	96.53	57.65	93.05		
9	Co 13009	97.47	23.48	42.69	72.92	106.18	113.12	51.48	127.72	122.79	74.62	94.39	71.82	97.89		
10	Co 13013	88.75	14.35	26.16	93.54	120.06	108.33	74.90	140.54	131.80	77.47	121.58	80.53	106.96	1	
11	Co 13014	132.95	14.36	54.29	82.71	105.66	103.04	60.34	136.64	90.84	79.40	102.05	72.12	100.60	3	
12	Co 13018	106.49	17.92	24.39	89.79	104.12	82.75	71.57	129.93	83.27	81.02	89.47	87.88	94.97		
13	Co 13020	81.01	19.97	33.66	66.56	107.51	82.97	63.29	117.71	78.32	76.62	111.99	68.26	87.88		
14	CoN 13073	73.32	41.42	26.25	71.25	117.32	104.38	58.37	110.39	105.94	73.53	119.35	91.52	96.33		
15	CoSnk 13103	83.98	20.94	40.87	48.13	90.85	86.90	33.45	114.98	74.38	79.78	116.87	85.83	86.86		
16	CoSnk 13106	67.39	27.65	31.08	70.52	103.34	85.22	90.02	110.64	109.79	73.92	112.86	76.89	90.06		
17	PI 13132	130.56	11.80	27.50	78.85	90.37	52.41	53.42	101.69	74.63	81.79	55.85	84.32	83.39		
	Standards															
1	Co 86032	101.51	20.81	30.36	96.04	94.76	99.38	62.79	148.26	110.65	77.09	102.75	73.10	100.39	4	
2	CoC 671	85.79	15.30	25.35	94.79	82.04	67.25	16.85	120.84	78.52	67.21	72.15	68.41	81.89		
3	CoSnk 05103	102.80	39.81	27.96	86.98	98.15	83.21	71.10	120.63	84.06	70.75	107.58	73.70	91.98		
	Grand Mean	95.47	20.98	32.83	74.10	102.82	89.25	57.08	123.52	96.62	74.86	98.83	76.45	92.44		
	SE(m)	27.48	1.77	3.41	3.91	3.16	4.38	9.51	3.32	6.51	1.51	7.84	3.96			
	CD	9.56	5.22	9.75	11.59	9.05	12.65	28.34	9.51	18.79	4.33	23.21	11.26			
	CV	17.35	14.62	17.97	7.47	5.32	8.50	23.55	4.65	11.66	3.48	11.22	8.97			
	Top three qualifying entries at each centre															
		Co 13014	CoN 13073	Co 13014		Co 13013	MS 13081	CoSnk 13106		Co 13013		Co 13013	Co 13004			
		PI 13132	CoSnk 05103	Co 13006		CoN 13072	Co 13009	Co 13013		Co 13008		CoN 13073	CoN 13073			
		MS 13081	CoSnk 13106	Co 13009		CoN 13073	Co 13008	CoN 13072		Co 13003		CoSnk 13103	CoN 13072			

Qualifying entries: Co 13013 (4), CoN 13073 (4), CoN 13072 (3), MS 13081 (2), Co 13014 (2), Co 13009(2)

Performance across the locations: Three entries viz., Co 13013 (106.96 t/ha), MS 13081 (101.48) and Co 13014 (100.6 t/ha) recorded higher cane yield over the best standard Co 86032 (100.39 t/ha). None of the entries recorded > 10 % improvement for cane yield over the best standard, however the entries Co 13013 and CoN 13073 recorded > 10 % improvement over the best standard at four locations each and CoN 13072 at three locations in the zone.

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's Report (2019-20)

Peninsular zone AVT Ratoon

Table 2.2.3: CCS % at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Man dya	Nava sari	Padegaon	Perumal apalle	Pravar anagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 13002	14.42	13.25	12.52	13.70	12.36	14.31	12.47	13.26	13.92	14.03	14.93	13.27	13.80	
2	Co 13003	14.68	12.78	12.31	14.61	12.74	15.10	11.68	13.68	13.93	13.24	14.68	14.42	14.12	3
3	Co 13004	14.64	12.69	12.30	15.00	11.78	15.53	12.00	12.19	14.27	12.43	14.22	12.51	13.62	
4	CoN 13072	12.99	13.05	12.10	13.61	13.03	14.47	12.23	12.19	13.89	12.64	14.76	14.28	13.54	
5	CoSnk 13101	14.49	12.45	13.19	13.72	12.98	14.64	11.97	14.44	14.10	13.65	16.08	13.96	14.23	2
6	MS 13081	12.64	12.73	12.63	14.51	12.63	15.39	13.24	13.68	13.76	13.65	14.37	13.45	13.79	5
7	Co 13006	13.62	12.07	12.21	14.99	11.53	14.50	11.03	13.73	14.20	12.71	15.78	14.45	13.95	4
8	Co 13008	14.31	11.56	11.55	14.00	12.78	14.39	12.42	14.08	14.21	12.54	11.81	14.11	13.58	
9	Co 13009	13.97	12.81	13.06	13.13	10.23	14.67	9.30	13.04	10.88	12.22	9.84	12.52	12.28	
10	Co 13013	13.17	13.03	13.69	13.13	11.53	14.62	12.02	14.05	14.06	13.44	13.92	13.02	13.44	
11	Co 13014	13.47	11.46	12.65	12.13	13.15	14.79	12.26	13.68	13.52	12.79	10.08	14.52	13.13	
12	Co 13018	13.47	12.86	12.52	15.15	12.49	14.75	10.04	13.90	13.98	12.95	13.85	13.24	13.75	
13	Co 13020	14.26	11.89	11.85	14.84	13.01	15.27	13.07	14.56	14.35	13.29	12.64	11.93	13.79	
14	CoN 13073	11.7	12.26	12.83	13.87	12.13	12.71	10.21	12.77	11.95	10.88	12.74	14.47	12.58	
15	CoSnk 13103	14.25	12.06	12.23	14.52	12.47	13.92	13.08	13.50	13.99	12.09	13.87	13.33	13.55	
16	CoSnk 13106	13.57	12.84	12.40	14.85	12.22	14.42	10.10	14.36	13.37	13.5	12.8	13.86	13.66	
17	PI 13132	13.15	12.48	12.65	14.69	13.45	13.97	12.56	15.03	13.44	12.55	12.78	12.92	13.55	
Standards															
1	Co 86032	13.6	13.43	12.01	13.65	12.02	13.61	13.80	13.38	14.02	13.17	12.94	13.75	13.35	
2	CoC 671	14.88	12.82	12.46	15.14	13.13	15.29	12.28	14.86	14.70	14.26	14.54	14.06	14.54	1
3	CoSnk 05103	13.24	12.07	12.33	13.67	12.75	14.41	11.96	13.23	13.19	13.15	14.39	12.92	13.44	
Grand Mean		13.83	12.53	12.47	14.15	12.42	14.54	11.88	13.68	13.69	12.96	13.55	13.55	13.60	
SE(m)		1.22	0.61	0.35	0.30	0.35	0.30	0.55	0.71	0.27	0.48	0.91	0.396		
CD		0.42	NS	1.00	0.89	1.00	0.88	1.65	2.05	0.83	1.37	2.69	1.126		
CV		5.32	8.49	4.83	2.99	4.87	3.62	6.60	9.09	3.63	6.35	9.49	5.063		
Top three qualifying entries at each centre															
	1			Co 13013								CoSnk 13101			
	2			CoSnk 13101								Co 13006			
	3														

Qualifying entries: CoSnk 13101 (2), Co 13006 (1), Co 13013 (1)

Performance across the locations: None of the entries recorded higher CCS % in the zone over the best standard CoC 671 (14.54 %). Among the entries, CoSnk 13101 recorded CCS% of 14.23 followed by 13003 (14.12) and Co 13006 (13.95). The entry CoSnk 13101 recorded significantly higher and > 5 % improvement over the standard CoC 671 in two centres viz., Kolhapur and Sankeshwar and Co 13006 and Co 13013 recorded > 5 % improvement at Sankeshwar and Kolhapur respectively.

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's Report (2019-20)

Peninsular zone AVT Ratoon

Table 2.2.4: Sucrose% at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravar anagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 13002	20.31	19.02	17.66	19.17	18.04	20.11	17.83	18.94	19.25	20.01	21.37	18.77	19.55	
2	Co 13003	20.80	18.43	17.15	20.49	18.48	21.12	17.30	19.08	19.39	19.00	21.06	20.44	19.98	3
3	Co 13004	20.62	18.38	17.29	21.04	17.30	21.69	17.55	16.98	19.82	17.94	20.46	17.78	19.29	
4	CoN 13072	18.56	18.32	17.06	19.16	18.80	20.29	17.64	17.35	19.44	18.37	21.28	20.23	19.28	
5	CoSnk 13101	20.35	18.01	18.49	19.16	18.68	20.49	17.55	20.33	19.42	19.58	22.79	19.78	20.06	2
6	MS 13081	18.00	18.40	17.81	20.19	18.41	21.56	18.85	19.56	19.31	19.50	20.83	19.05	19.60	5
7	Co 13006	19.30	17.76	17.21	20.94	16.95	20.34	16.01	19.31	19.73	18.30	22.49	20.50	19.76	4
8	Co 13008	20.13	17.40	16.23	19.60	18.49	20.11	17.64	19.82	19.67	18.06	17.32	20.01	19.25	
9	Co 13009	19.84	18.39	18.45	18.38	15.41	20.53	13.65	18.61	15.15	17.60	14.47	17.78	17.53	
10	Co 13013	18.76	18.69	19.42	18.38	16.78	20.46	17.29	19.83	19.48	19.29	20.17	18.46	19.07	
11	Co 13014	19.11	17.31	17.68	17.03	18.89	20.48	17.51	19.45	18.62	18.36	15.05	20.59	18.62	
12	Co 13018	19.03	18.60	17.66	21.16	18.09	20.63	14.61	19.77	19.44	18.64	20.10	18.75	19.51	
13	Co 13020	20.22	17.78	16.62	20.74	18.83	21.26	18.91	20.61	19.83	19.09	18.71	16.95	19.58	
14	CoN 13073	16.83	17.84	18.10	19.39	17.47	18.06	15.13	18.55	16.83	15.91	18.52	20.51	18.01	
15	CoSnk 13103	20.13	17.75	17.08	20.29	18.19	19.67	18.48	18.94	19.35	17.52	20.20	18.90	19.24	
16	CoSnk 13106	19.20	18.61	17.44	20.72	17.70	20.04	15.05	19.09	18.36	19.33	18.64	19.63	19.19	
17	PI 13132	18.55	18.17	17.88	20.51	19.30	19.63	18.09	21.13	18.68	18.03	18.56	18.31	19.19	
	Standards														
1	Co 86032	19.55	19.15	16.97	19.06	17.51	19.08	19.44	19.17	19.47	18.84	18.85	19.50	19.00	
2	CoC 671	21.11	18.81	17.45	21.26	18.93	21.48	17.51	20.74	20.35	20.31	20.78	19.93	20.54	1
3	CoSnk 05103	18.72	17.85	17.23	19.16	18.44	20.24	17.26	18.76	18.40	18.80	20.33	18.31	19.02	
	Grand Mean	19.57	18.23	17.54	19.79	18.03	20.36	17.16	19.30	19.00	18.62	19.60	19.21	19.28	
	SE(m)	1.58	0.59	0.48	0.41	0.43	0.38	0.68	0.90	0.39	0.63	1.11	0.56		
	CD	0.55	NS	1.37	1.20	1.24	1.10	2.04	2.58	1.12	1.81	3.29	1.58		
	CV	4.88	5.64	4.74	2.90	4.16	3.24	5.64	8.10	3.53	5.85	8.01	5.01		
Top three qualifying entries at each centre															
1				Co 13013									CoSnk 13101		
2				CoSnk 13101									Co 13006		
3				Co 13009											

Qualifying entries: CoSnk 13101 (2), Co 13006 (1), Co 13009 (1), Co 13013 (1)

Performance across the locations: None of the entries recorded higher sucrose % in the zone over the best standard CoC 671 (20.54 %). Among the entries, CoSnk 13101 (20.06 %) recorded the highest first in the zone followed by Co 13003 (19.98 %), Co13006 (19.76%) and MS 1081 (19.60 %). Fourteen entries recorded higher mean sucrose than the standard Co 86032 (19.00%).The entry CoSnk 13101 recorded > 5% improvement at Kolhapur and Sankeshwar, and the entries Co 13009 and Co 13013 at Kolhapur and Co 13006 at Sankeshwar over the best standard.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon
Table 2.2.5: Brix% at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalapalle	Pravaranagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	21.71	21.19	18.91	20.20	20.80	21.37	19.69	20.90	20.35	21.99	23.68	20.23	21.25
2	Co 13003	22.51	20.73	17.91	21.70	21.07	22.19	20.54	19.90	20.80	21.15	23.43	22.17	21.66
3	Co 13004	22.03	20.89	18.41	22.30	20.18	22.74	20.34	17.67	21.17	20.21	22.93	19.37	20.96
4	CoN 13072	20.46	19.43	18.25	20.50	21.20	21.46	19.84	18.87	21.14	21.02	23.93	21.90	21.16
5	CoSnk 13101	21.62	20.39	19.58	20.10	20.93	21.58	20.44	21.63	20.29	21.80	24.68	21.43	21.56
6	MS 13081	19.69	20.79	19.08	21.00	21.17	22.77	20.64	21.60	21.07	21.48	23.68	20.60	21.45
7	Co 13006	20.90	20.83	18.41	22.00	19.83	21.53	18.24	20.47	21.10	20.55	24.68	22.27	21.48
8	Co 13008	21.45	21.33	17.25	20.70	20.93	21.13	19.19	21.13	20.82	20.25	20.17	21.70	20.92
9	Co 13009	21.62	20.49	19.91	19.40	18.90	21.63	15.94	20.50	16.26	19.77	16.92	19.33	19.37
10	Co 13013	20.55	20.79	21.08	19.40	19.23	21.56	19.34	21.27	20.66	21.50	22.93	20.03	20.79
11	Co 13014	20.78	21.36	18.58	18.10	21.07	21.04	19.29	21.20	19.49	20.47	18.17	22.33	20.29
12	Co 13018	20.47	21.06	18.91	22.20	20.53	21.66	16.74	21.53	20.80	20.87	22.93	20.30	21.25
13	Co 13020	21.92	21.49	17.58	21.80	21.37	22.12	21.44	22.33	20.94	21.32	22.17	18.50	21.39
14	CoN 13073	18.83	20.46	19.41	20.40	19.60	19.68	17.99	21.17	18.57	18.44	21.17	22.23	20.01
15	CoSnk 13103	21.64	20.83	17.91	21.30	20.93	21.19	19.89	20.07	20.47	19.90	23.18	20.50	21.02
16	CoSnk 13106	20.71	21.16	18.58	21.70	20.10	20.75	18.09	17.63	19.12	21.41	21.42	21.27	20.46
17	PI 13132	19.92	20.86	19.25	21.50	21.50	20.84	20.29	22.43	19.97	20.10	21.17	19.83	20.81
	Standards													
1	Co 86032	21.84	21.03	18.25	20.00	20.10	20.15	20.79	21.20	20.75	20.85	21.68	21.13	20.86
2	CoC 671	23.60	21.94	18.41	22.60	21.27	22.81	19.24	21.77	21.59	22.28	22.93	21.60	22.27
3	CoSnk 05103	20.21	21.13	18.08	20.30	20.90	21.48	19.44	20.37	19.84	20.77	21.87	19.83	20.62
	Grand Mean	21.12	20.91	18.69	20.86	20.58	21.48	19.37	20.68	20.26	20.81	22.18	20.83	20.98
	SE(m)	1.41	0.42	0.53	0.43	0.44	0.35	0.55	1.12	0.41	0.60	0.93	0.59	
	CD	0.49	NS	1.51	1.27	1.25	1.02	1.65	3.22	1.17	1.72	2.75	1.68	
	CV	4.02	3.51	4.88	2.91	3.67	2.84	4.03	9.44	3.46	4.97	5.93	4.90	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's Report (2019-20)

Peninsular zone AVT Ratoon

Table 2.2.6: Purity % at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravarana	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	93.55	89.76	93.36	95.06	86.74	94.06	90.37	90.68	94.60	91.03	90.25	92.75	92.08
2	Co 13003	92.39	89.02	95.87	94.59	87.77	95.17	84.20	92.72	93.21	89.83	89.88	92.21	91.97
3	Co 13004	93.55	88.03	93.99	94.54	85.72	95.43	86.29	93.36	93.64	88.38	89.32	91.77	91.75
4	CoN 13072	90.66	94.35	93.51	93.66	88.85	94.56	88.89	90.71	92.00	87.46	88.86	92.36	91.01
5	CoSnk 13101	94.12	88.38	94.48	95.51	89.49	94.93	85.84	93.98	95.68	89.81	92.28	92.29	93.12
6	MS 13081	91.31	88.45	93.37	96.30	87.00	94.71	91.26	90.56	91.62	90.75	87.94	92.46	91.41
7	Co 13006	92.31	85.83	93.48	95.36	85.50	94.46	87.57	91.80	93.50	89.01	91.08	92.07	91.68
8	Co 13008	93.85	81.62	94.19	94.88	88.54	95.19	91.94	93.75	94.47	89.84	86.00	92.20	92.08
9	Co 13009	91.78	89.73	92.79	94.91	81.62	94.94	85.69	90.82	93.15	89.03	85.35	91.92	90.39
10	Co 13013	91.22	89.83	92.10	94.89	87.30	94.84	89.33	93.23	94.28	89.74	87.88	92.12	91.72
11	Co 13014	91.97	81.17	95.18	94.30	89.73	97.35	90.77	91.80	95.56	89.68	82.00	92.18	91.62
12	Co 13018	92.98	88.40	93.38	95.49	88.31	95.22	87.22	91.79	93.48	89.32	87.70	92.38	91.85
13	Co 13020	92.21	82.75	94.54	95.31	88.21	96.13	88.20	92.70	94.75	89.52	84.32	91.64	91.64
14	CoN 13073	89.33	87.24	93.25	95.21	89.17	91.76	84.03	89.29	90.65	86.17	87.25	92.25	90.12
15	CoSnk 13103	93.00	85.40	95.36	95.41	86.89	92.88	92.89	94.03	94.53	87.91	87.09	92.17	91.55
16	CoSnk 13106	92.65	87.97	93.89	95.66	88.18	96.55	83.16	93.16	96.03	90.27	86.98	92.32	92.42
17	PI 13132	93.12	87.12	92.91	95.54	89.94	94.16	89.14	94.15	93.55	89.69	87.62	92.30	92.23
	Standards													
1	Co 86032	89.57	91.11	92.97	95.49	87.17	94.67	93.56	90.43	93.83	90.28	86.81	92.24	91.17
2	CoC 671	92.07	85.82	94.75	94.20	89.26	94.19	90.99	95.30	94.27	91.19	90.18	92.25	92.55
3	CoSnk 05103	92.63	84.52	95.38	94.58	88.32	94.21	88.77	89.39	92.78	90.51	93.13	92.31	91.98
	Grand Mean	92.59	87.32	93.94	95.05	87.69	94.77	88.50	92.18	93.78	89.46	88.10	92.21	91.72
	SE(m)	2.02	3.28	0.89	0.62	1.35	0.88	1.65	1.15	0.50	0.80	2.62	0.19	
	CD	0.70	NS	2.55	NS	3.87	NS	4.92	3.31	1.44	2.29	7.75	NS	
	CV	1.32	6.51	1.64	0.92	2.67	1.60	2.64	2.17	0.92	1.54	4.20	0.35	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's Report (2019-20)

Peninsular zone AVT Ratoon

Table 2.2.7: Pol% Cane at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravaranaagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	15.67			14.76	13.74	15.57			14.81	14.81	16.80		15.17
2	Co 13003	15.55			15.46	14.13	16.16			14.36	14.06	15.61		15.05
3	Co 13004	15.44			15.98	13.19	16.66			14.88	13.28	15.36		14.97
4	CoN 13072	14.13			14.60	14.33	15.59			14.42	13.60	16.23		14.70
5	CoSnk 13101	15.30			14.54	14.13	15.93			14.60	14.49	17.12		15.16
6	MS 13081	14.19			15.43	13.98	16.85			14.99	14.43	16.41		15.18
7	Co 13006	14.53			15.96	12.85	15.70			14.96	13.55	17.18		14.96
8	Co 13008	15.63			15.26	13.97	15.54			15.05	13.36	13.48		14.61
9	Co 13009	15.14			14.12	11.77	15.94			11.57	13.02	11.46		13.29
10	Co 13013	14.07			14.02	12.74	15.97			14.78	14.28	15.70		14.51
11	Co 13014	14.63			13.21	14.37	15.82			14.08	13.59	11.79		13.93
12	Co 13018	14.49			16.24	13.77	15.97			14.80	13.79	15.25		14.90
13	Co 13020	15.39			16.05	14.29	16.46			15.10	14.13	14.66		15.15
14	CoN 13073	12.76			14.93	13.28	13.99			12.65	11.78	14.62		13.43
15	CoSnk 13103	15.58			15.74	13.86	15.24			14.56	12.96	15.73		14.81
16	CoSnk 13106	14.71			16.14	13.44	15.56			13.92	14.30	14.28		14.62
17	PI 13132	14.21			15.95	14.64	15.05			14.31	13.34	14.82		14.62
	Standards													
1	Co 86032	14.86			14.77	13.32	14.82			14.68	13.95	14.71		14.44
2	CoC 671	16.07			16.22	14.35	16.72			15.38	15.03	16.10		15.70
3	CoSnk 05103	14.05			14.60	14.01	15.46			13.60	13.91	15.26		14.41
	Grand Mean	14.90			15.20	13.71	15.75			14.38	13.75	15.13		14.69
	SE(m)	1.22			0.33	0.32	0.27			0.31	0.47	0.88		
	CD	0.43			0.98	0.93	0.79			0.89	1.34	2.59		
	CV	4.95			3.08	4.10	3.01			3.71	5.86	8.18		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.8: Fibre % at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	12.84			13.01	13.79	12.58			13.06		11.40		12.78
2	Co 13003	15.23			14.55	13.57	13.47			15.94		15.85		14.77
3	Co 13004	15.10			14.06	13.74	13.20			14.92		14.90		14.32
4	CoN 13072	13.87			13.79	13.80	13.20			15.82		13.86		14.06
5	CoSnk 13101	14.83			14.10	14.40	12.27			14.82		14.93		14.23
6	MS 13081	11.17			13.57	14.07	11.85			12.38		11.18		12.37
7	Co 13006	14.71			13.76	14.20	12.80			14.20		13.60		13.88
8	Co 13008	12.38			12.11	14.46	12.71			13.48		12.13		12.88
9	Co 13009	13.71			13.16	13.67	12.40			14.05		10.74		12.96
10	Co 13013	14.99			13.70	14.04	12.00			14.10		12.31		13.52
11	Co 13014	13.46			12.42	13.95	12.80			14.42		11.46		13.09
12	Co 13018	13.87			13.26	13.86	12.57			13.87		14.12		13.59
13	Co 13020	13.88			12.65	14.13	12.59			13.84		11.64		13.12
14	CoN 13073	14.17			12.97	13.96	12.49			14.82		11.00		13.24
15	CoSnk 13103	12.58			12.41	13.77	12.50			14.77		12.12		13.03
16	CoSnk 13106	13.38			12.08	14.13	12.40			14.18		13.38		13.26
17	PI 13132	14.12			12.21	14.14	13.31			13.40		10.10		12.88
	Standards													
1	Co 86032	13.98			12.51	13.93	12.34			14.57		11.96		13.22
2	CoC 671	13.87			13.67	14.18	12.17			14.45		12.61		13.49
3	CoSnk 05103	14.98			13.83	14.04	13.60			16.08		14.99		14.59
	Grand Mean	13.85			13.19	13.99	12.66			14.36		12.71		13.46
	SE(m)	0.41			0.57	0.25	0.28			0.18		0.98		
	CD	0.14			NS	NS	0.82			0.52		2.91		
	CV	1.82			6.15	3.15	3.88			2.18		10.95		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.9: Extraction % at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	53.61		45.13	58.58	53.79	42.67	54.34	55.72	43.69		53.93	58.27	52.53
2	Co 13003	53.69		46.37	56.49	55.25	46.39	49.44	55.71	50.00		50.40	56.55	53.06
3	Co 13004	50.87		42.30	59.47	50.97	44.33	53.51	54.49	46.24		50.88	59.58	52.10
4	CoN 13072	47.12		46.29	56.80	54.56	43.00	52.45	53.57	51.52		49.80	58.90	51.91
5	CoSnk 13101	48.31		44.46	60.23	52.09	43.00	39.37	51.33	45.99		50.78	54.16	50.74
6	MS 13081	52.86		41.35	61.14	53.25	50.20	56.63	55.72	51.00		53.32	59.90	54.67
7	Co 13006	48.17		43.89	54.29	55.64	51.51	52.42	54.34	50.62		52.21	56.12	52.86
8	Co 13008	51.03		46.55	57.79	52.31	45.43	52.55	57.87	47.42		57.37	56.86	53.26
9	Co 13009	50.46		45.01	60.91	52.89	46.86	51.79	55.73	45.18		52.14	58.42	52.82
10	Co 13013	49.64		49.80	59.53	54.28	46.74	53.25	54.68	50.41		55.44	59.26	53.75
11	Co 13014	54.29		45.47	61.84	55.73	44.00	55.97	52.57	51.56		58.61	52.28	53.86
12	Co 13018	47.62		51.10	58.41	53.50	44.33	55.53	54.36	49.22		51.93	62.34	52.71
13	Co 13020	48.21		50.73	54.27	53.18	43.55	52.07	49.25	49.68		53.39	50.25	50.22
14	CoN 13073	47.07		51.14	60.32	53.83	45.33	53.28	48.12	51.06		53.54	56.53	51.98
15	CoSnk 13103	48.66		45.05	51.24	52.58	43.07	46.22	53.68	49.67		55.75	60.67	51.92
16	CoSnk 13106	48.59		46.21	54.59	53.24	40.08	48.76	51.47	53.82		50.65	57.47	51.24
17	PI 13132	50.87		46.71	55.77	52.68	45.28	48.09	51.54	45.89		55.23	58.79	52.01
	Standards													
1	Co 86032	47.44		48.20	58.64	53.11	47.15	52.88	54.62	53.31		58.24	58.45	53.87
2	CoC 671	50.54		48.11	62.65	56.68	43.93	47.00	50.49	50.16		55.19	55.14	53.10
3	CoSnk 05103	35.26		48.38	58.34	54.99	45.55	43.79	49.81	50.95		78.21	55.48	53.57
	Grand Mean	49.22		46.61	58.07	53.73	45.12	50.97	53.26	49.37		54.85	57.27	52.61
	SE(m)	6.08		2.06	2.43	1.47	2.52	1.97	0.89	0.40		5.16	1.73	
	CD	2.12		5.90	NS	NS	NS	5.88	2.57	1.15		15.29	4.91	
	CV	7.44		7.65	5.91	4.75	9.69	5.47	2.92	1.40		13.31	5.22	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.10: Number of millable canes (000'/ha) at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	101.0	19.5	36.9	64.4	88.9	65.0	69.1	105.9	65.3	76.9	65.1	90.2	80.3
2	Co 13003	85.5	23.5	38.3	46.6	91.1	68.5	41.6	114.1	84.4	62.4	62.8	81.7	77.5
3	Co 13004	73.4	24.1	38.0	52.5	81.7	65.2	38.4	104.0	64.5	69.8	45.7	110.5	74.2
4	CoN 13072	77.6	21.1	39.7	51.0	94.6	62.0	62.3	100.3	71.7	65.7	81.2	95.0	77.7
5	CoSnk 13101	74.8	20.6	43.8	43.3	95.1	64.9	50.2	102.7	61.6	64.8	77.7	98.6	75.9
6	MS 13081	76.2	11.3	42.5	62.9	92.4	70.1	46.9	110.1	70.2	69.0	64.2	69.0	76.0
7	Co 13006	79.0	25.6	53.1	48.9	88.6	68.8	68.3	112.3	72.8	67.7	79.6	88.0	78.4
8	Co 13008	78.5	13.5	54.8	43.2	89.1	70.4	47.8	115.3	80.9	68.5	58.3	79.1	75.9
9	Co 13009	76.8	19.2	39.0	53.6	93.4	68.8	46.2	119.0	79.3	70.1	53.8	83.0	77.5
10	Co 13013	77.9	14.7	35.6	70.2	97.1	67.4	57.3	103.6	79.1	73.5	67.0	89.1	80.5
11	Co 13014	94.1	16.1	46.0	63.2	97.1	70.9	44.0	108.6	67.9	74.6	55.1	89.1	80.1
12	Co 13018	110.5	17.5	35.3	76.6	86.4	72.1	68.9	118.9	69.3	75.3	70.8	96.0	86.2
13	Co 13020	68.6	20.8	34.9	38.4	93.3	56.7	54.1	122.6	57.9	72.9	62.7	81.0	72.7
14	CoN 13073	67.1	34.4	35.1	65.6	90.6	73.6	40.8	99.7	67.8	68.0	78.8	101.5	79.2
15	CoSnk 13103	76.5	16.0	49.1	46.7	88.8	64.5	45.7	95.9	61.3	73.6	66.4	104.5	75.4
16	CoSnk 13106	58.9	25.3	43.8	60.2	90.1	56.7	79.3	120.6	73.4	68.1	69.0	93.0	76.7
17	PI 13132	104.7	12.6	32.6	66.6	94.0	51.6	58.7	99.5	61.5	74.9	48.8	97.6	77.7
	Standards													
1	Co 86032	88.6	21.0	36.6	77.1	78.4	76.3	57.0	121.3	79.4	73.9	83.0	93.9	85.8
2	CoC 671	69.7	15.8	32.0	73.3	73.7	49.1	21.9	99.6	62.8	63.5	48.8	87.3	69.8
3	CoSnk 05103	132.2	38.6	48.6	95.8	83.2	85.4	82.7	98.7	88.9	67.8	64.7	87.6	89.4
	Grand Mean	83.3	20.6	40.8	60.0	89.4	66.4	54.1	108.7	71.0	70.05	64.7	90.8	78.3
	SE(m)	19.6	1.7	2.4	4.2	3.5	2.4	7.0	2.1	4.8	1.4	5.8	4.4	
	CD	6.8	5.0	6.8	12.5	10.0	6.9	20.8	6.1	13.8	3.9	17.2	12.5	
	CV	14.2	14.2	10.1	9.9	6.8	6.2	18.2	3.4	11.7	3.4	12.7	8.4	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.11: Stalk length (cm) at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	201.7	161.0	154.1	166.0	229.4	179.0	194.5	214.7	158.2	159.7	196.0	226.0	192.3
2	Co 13003	240.0	164.1	135.1	186.0	222.3	209.7	157.0	221.0	220.7	241.3	245.8	204.3	221.2
3	Co 13004	255.0	167.8	163.2	188.0	225.5	258.7	174.5	212.0	211.1	172.7	246.5	243.7	223.7
4	CoN 13072	206.7	157.5	157.7	198.0	232.4	238.3	219.5	211.7	214.2	190.0	244.7	236.7	219.2
5	CoSnk 13101	208.3	149.5	113.2	151.0	223.2	192.0	136.5	206.7	213.4	206.3	215.5	202.7	202.1
6	MS 13081	218.3	151.9	182.3	193.0	233.0	239.0	203.5	211.0	192.6	220.3	231.8	233.7	219.2
7	Co 13006	240.0	168.0	187.7	212.0	220.4	251.0	210.5	202.3	260.9	187.0	218.1	262.0	228.2
8	Co 13008	230.0	163.3	160.6	169.0	246.6	262.3	186.5	218.7	224.7	210.0	243.5	251.7	228.5
9	Co 13009	203.3	161.3	166.1	187.0	234.4	245.3	188.0	216.3	192.8	206.7	226.0	220.3	214.7
10	Co 13013	213.3	171.0	150.5	206.0	248.0	296.7	236.0	225.7	230.7	204.0	261.0	239.3	236.1
11	Co 13014	233.3	158.7	187.9	186.0	242.6	244.7	195.5	216.0	182.3	227.3	227.5	243.7	222.6
12	Co 13018	208.3	167.9	142.7	190.0	225.9	226.0	201.5	219.3	187.1	194.7	229.5	216.7	210.8
13	Co 13020	198.3	160.6	153.5	162.0	246.2	220.0	187.0	193.3	201.7	191.0	235.2	222.7	207.8
14	CoN 13073	211.7	199.3	125.6	191.0	225.0	238.7	185.5	191.0	195.4	217.7	233.3	243.7	216.4
15	CoSnk 13103	221.7	162.0	179.3	168.0	245.4	260.3	177.0	211.7	206.4	214.3	235.8	259.7	224.8
16	CoSnk 13106	213.3	157.2	147.7	203.0	208.5	206.7	215.0	215.7	198.8	192.7	221.8	214.0	208.3
17	PI 13132	250.0	161.1	150.8	205.0	231.2	175.0	190.5	189.3	172.2	236.3	191.8	218.3	207.7
	Standards													
1	Co 86032	200.0	164.1	164.2	221.0	219.9	209.0	225.5	211.0	191.7	219.3	223.5	225.3	213.4
2	CoC 671	230.0	150.0	154.3	200.0	208.0	173.3	172.5	203.0	183.4	188.3	207.0	208.7	200.2
3	CoSnk 05103	255.0	210.0	146.3	221.0	203.2	242.3	268.5	218.0	290.8	172.0	252.5	252.7	234.2
	Grand Mean	221.9	165.3	156.1	190.2	228.6	228.4	196.3	210.4	206.5	202.58	229.3	231.3	216.6
	SE(m)	N/A	10.3	8.8	4.6	7.5	13.0		3.7	6.3	7.8	9.3	14.1	
	CD	14.0	NS	25.1	13.7	21.5	37.5	NS	10.6	18.2	22.3	27.7	NS	
	CV	10.9	10.8	9.7	3.4	5.7	9.8		3.1	5.3	6.6	5.8	10.6	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.12: Stalk diameter (cm) at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	2.84	2.56	2.56	2.59	2.23	2.49	2.68	2.65	2.88	2.80	2.44	2.20	2.57
2	Co 13003	3.06	2.48	2.45	2.75	2.26	2.59	2.42	2.63	2.83	2.87	2.60	2.10	2.63
3	Co 13004	2.94	2.49	2.60	3.11	2.27	2.98	2.86	2.66	2.99	3.00	2.68	2.40	2.78
4	CoN 13072	2.59	2.69	2.33	2.83	2.21	2.64	2.55	2.65	2.94	2.73	2.51	2.30	2.60
5	CoSnk 13101	2.86	2.46	2.30	3.00	2.20	2.63	2.45	2.41	2.93	2.90	2.56	2.40	2.65
6	MS 13081	3.22	2.61	2.44	3.08	2.23	3.09	3.45	2.52	3.12	3.13	2.74	2.70	2.87
7	Co 13006	2.76	3.04	2.56	2.58	2.24	2.60	2.58	2.68	2.83	2.80	2.58	2.20	2.59
8	Co 13008	2.70	2.85	2.84	2.92	2.23	2.82	2.66	2.59	3.05	3.23	2.59	2.40	2.73
9	Co 13009	2.91	3.08	2.74	3.15	2.20	3.12	3.11	2.69	3.35	3.23	2.75	2.50	2.88
10	Co 13013	2.81	3.08	2.56	2.87	2.30	3.19	2.90	2.68	2.91	3.23	2.66	2.00	2.74
11	Co 13014	3.20	2.51	2.87	2.77	2.24	3.01	2.92	2.62	3.22	3.40	3.02	2.10	2.84
12	Co 13018	2.71	3.21	2.51	2.82	2.27	2.68	2.81	2.65	2.95	3.10	2.41	2.40	2.67
13	Co 13020	2.44	2.64	2.87	2.92	2.24	2.92	2.93	2.48	3.28	3.10	2.74	2.20	2.70
14	CoN 13073	2.93	3.32	2.56	3.17	2.21	2.49	3.30	2.63	3.07	3.23	2.64	2.80	2.80
15	CoSnk 13103	2.76	2.54	2.44	2.36	2.14	2.67	2.48	2.69	2.81	3.27	2.85	2.40	2.66
16	CoSnk 13106	3.05	3.52	2.39	2.79	2.28	2.86	2.83	2.66	3.18	2.80	2.98	2.40	2.78
17	PI 13132	2.87	3.13	2.78	2.93	2.32	2.70	2.61	2.58	2.95	3.00	2.80	2.50	2.74
	Standards													
1	Co 86032	2.87	2.90	2.73	2.91	2.14	2.79	2.53	2.50	3.10	3.07	2.66	2.30	2.70
2	CoC 671	2.99	2.65	2.52	3.15	2.12	2.52	2.05	2.55	2.88	3.10	2.70	2.40	2.71
3	CoSnk 05103	2.35	3.44	2.23	2.44	2.15	2.23	2.35	2.52	2.80	3.03	2.50	2.20	2.47
	Grand Mean	2.84	2.86	2.57	2.86	2.23	2.75	2.72	2.60	3.00	3.05	2.67	2.40	2.71
	SE(m)	0.43	0.22	0.16	0.12	0.04	0.11	0.11	0.04	0.10	0.03	0.07	0.08	
	CD	0.15	0.66	0.47	0.35	0.10	0.31	0.32	0.11	0.30	0.09	0.22	0.22	
	CV	9.00	13.49	10.99	5.85	2.84	6.73	5.47	2.67	6.01	1.76	3.95	5.82	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.13: Single cane weight (kg) at harvest

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	0.99	1.10	0.78	0.87	1.10	0.95	0.99	1.88	0.91	0.89	0.94	1.14	1.07
2	Co 13003	1.42	1.15	0.58	1.00	1.12	1.19	0.70	1.83	1.51	1.02	1.40	0.99	1.28
3	Co 13004	1.19	1.16	0.89	1.25	1.13	1.32	1.12	1.63	1.36	0.91	1.51	1.28	1.29
4	CoN 13072	0.99	1.13	0.79	1.14	1.20	1.27	1.26	1.50	1.39	0.80	1.25	1.29	1.20
5	CoSnk 13101	0.87	1.08	0.48	0.89	1.12	1.23	0.99	1.19	1.25	0.93	1.23	1.09	1.09
6	MS 13081	1.58	1.06	0.98	1.37	1.14	1.63	1.62	1.63	1.63	1.62	1.57	1.61	1.53
7	Co 13006	1.32	1.21	0.91	1.17	1.17	1.52	1.05	1.45	1.38	1.27	1.20	1.28	1.31
8	Co 13008	1.16	1.23	0.73	1.00	1.14	1.56	1.14	1.76	1.69	1.37	1.48	1.48	1.40
9	Co 13009	1.27	1.47	1.09	1.11	1.16	1.64	1.23	2.02	1.61	1.45	1.56	1.46	1.48
10	Co 13013	1.05	1.16	0.73	1.15	1.16	1.61	1.46	2.14	1.66	1.36	1.64	1.14	1.43
11	Co 13014	1.40	1.07	1.18	1.20	1.17	1.45	1.42	2.07	1.39	1.20	1.65	1.20	1.41
12	Co 13018	0.90	1.23	0.69	1.13	1.15	1.15	1.08	1.57	1.28	1.01	1.15	1.19	1.17
13	Co 13020	1.18	1.16	0.97	1.00	1.17	1.47	1.21	1.43	1.48	1.04	1.61	1.13	1.28
14	CoN 13073	1.11	1.45	0.74	1.25	1.19	1.41	1.50	1.53	1.57	0.83	1.40	1.55	1.32
15	CoSnk 13103	1.10	1.57	0.83	0.71	0.98	1.35	0.77	1.55	1.29	0.88	1.62	1.50	1.22
16	CoSnk 13106	1.14	1.31	0.70	1.00	1.13	1.50	1.20	1.37	1.52	1.02	1.49	1.15	1.26
17	PI 13132	1.25	1.12	0.85	1.36	1.14	1.02	0.91	1.29	1.31	1.21	1.26	1.32	1.24
	Standards													
1	Co 86032	1.15	1.20	0.83	1.36	0.88	1.30	1.16	1.47	1.41	1.09	1.39	1.24	1.25
2	CoC 671	1.23	1.16	0.80	1.37	0.94	1.37	0.82	1.78	1.56	0.99	1.29	1.21	1.30
3	CoSnk 05103	0.78	1.24	0.57	0.80	0.93	0.98	0.98	1.21	0.95	0.72	1.20	1.09	0.96
	Grand Mean	1.13	1.21	0.81	1.11	1.11	1.35	1.13	1.61	1.41	1.08	1.39	1.27	1.27
	SE(m)	0.21	0.04	0.08	0.10	0.03	0.05	0.17	0.05	0.08	0.09	0.11	0.07	
	CD	0.07	0.11	0.22	0.29	0.10	0.16	0.50	0.16	0.25	0.25	0.32	0.19	
	CV	11.30	5.26	16.20	12.34	5.45	7.05	20.89	6.24	10.62	13.68	10.85	9.05	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.14: CCS % at 9 months

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	13.63	10.50	10.64	13.05	9.74	14.61	12.60	12.78		12.36		11.36	12.50
2	Co 13003	12.58	10.60	10.42	12.64	10.71	13.54	12.00	12.96		11.24		11.52	12.17
3	Co 13004	13.19	10.30	10.53	13.84	9.83	13.40	11.40	13.31		10.00		10.10	11.95
4	CoN 13072	10.57	10.70	9.99	12.90	10.98	12.28	10.70	12.09		10.22		11.69	11.53
5	CoSnk 13101	12.16	10.60	11.04	12.73	9.53	14.29	12.70	13.11		11.89		12.62	12.33
6	MS 13081	10.88	11.60	11.17	13.07	10.67	14.79	10.40	13.76		10.83		10.92	12.13
7	Co 13006	12.24	11.80	9.74	13.79	10.54	13.36	10.70	14.18		11.49		12.68	12.61
8	Co 13008	12.73	11.70	9.68	12.76	9.69	12.73	11.60	13.01		10.81		12.06	11.97
9	Co 13009	11.01	11.50	10.49	12.13	9.43	13.03	11.40	11.79		9.91		11.03	11.19
10	Co 13013	11.26	10.90	11.76	12.81	10.09	14.20	11.20	13.23		11.01		10.69	11.90
11	Co 13014	10.81	11.10	10.77	11.91	10.84	13.35	10.30	12.15		9.89		12.09	11.58
12	Co 13018	12.60	12.10	11.05	13.64	9.85	14.00	12.60	12.82		11.18		9.56	11.95
13	Co 13020	13.41	12.60	10.72	13.12	10.42	13.31	11.00	13.64		9.23		9.65	11.83
14	CoN 13073	9.80	12.60	10.74	12.77	9.11	11.88	10.50	11.90		10.11		11.46	11.00
15	CoSnk 13103	12.17	12.00	10.64	12.57	9.53	13.86	11.90	13.50		11.02		10.88	11.93
16	CoSnk 13106	11.32	11.10	10.37	14.12	10.36	13.74	8.80	13.73		11.35		12.14	12.39
17	PI 13132	11.50	11.50	10.92	13.32	10.45	13.41	11.10	13.53		11.19		11.25	12.09
	Standards													
1	Co 86032	11.90	12.40	11.28	12.81	11.69	12.81	12.20	13.12		11.95		12.31	12.37
2	CoC 671	13.73	11.30	10.28	13.98	11.19	13.49	11.70	14.26		11.33		12.61	12.94
3	CoSnk 05103	12.39	12.30	10.47	12.92	10.57	13.22	8.40	12.28		11.36		10.30	11.86
	Grand Mean	11.99	11.50	10.63	13.04	10.26	13.46	11.20	13.06		10.92		11.35	12.01
	SE(m)	1.05	0.52	0.36	0.40	0.28	0.31	0.60	0.54		0.42		0.46	
	CD	0.36	NS	1.02	1.17	0.80	0.90	1.70	1.56		1.20		1.32	
	CV	5.26	7.84	5.80	4.29	4.74	4.02	7.10	7.23		6.62		7.08	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.15: Sucrose % at 9 months

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	19.33	15.84	14.87	18.26	14.70	20.57	17.70	18.26		17.81		16.27	17.89
2	Co 13003	18.07	15.73	14.56	17.68	15.87	19.51	17.30	18.42		16.40		16.49	17.49
3	Co 13004	18.81	15.34	14.72	19.29	14.74	19.48	16.20	18.84		14.65		14.45	17.18
4	CoN 13072	15.45	15.95	13.95	18.05	16.39	18.05	15.70	17.34		15.07		16.71	16.72
5	CoSnk 13101	17.40	15.86	15.55	17.91	14.45	20.23	18.10	18.71		17.11		18.05	17.69
6	MS 13081	15.70	16.89	15.77	18.28	15.94	20.81	14.90	19.64		15.73		15.64	17.39
7	Co 13006	17.58	16.86	13.70	19.27	15.72	19.00	15.30	19.85		16.67		18.14	18.03
8	Co 13008	18.18	16.66	13.70	17.83	14.32	18.57	16.50	18.47		15.76		17.24	17.20
9	Co 13009	16.12	16.42	14.77	17.01	13.98	18.50	16.10	16.98		14.61		15.79	16.14
10	Co 13013	16.54	16.19	16.53	17.93	14.81	20.09	16.20	18.81		15.96		15.29	17.06
11	Co 13014	15.67	16.20	15.09	16.68	15.95	19.24	14.90	17.21		14.67		17.31	16.68
12	Co 13018	18.02	17.20	15.41	19.14	14.88	19.86	17.70	18.29		16.29		13.68	17.17
13	Co 13020	19.12	17.53	14.95	18.38	15.26	19.05	15.70	19.37		13.78		13.82	16.97
14	CoN 13073	14.46	17.45	15.16	17.95	13.60	17.08	15.30	16.92		14.77		16.42	15.89
15	CoSnk 13103	17.43	16.77	14.87	17.73	14.42	19.57	17.00	19.09		16.02		15.57	17.12
16	CoSnk 13106	16.38	16.01	14.55	19.73	15.11	19.36	13.00	19.46		16.44		17.39	17.70
17	PI 13132	16.57	16.36	15.52	18.60	15.64	19.06	16.10	19.36		16.05		16.12	17.34
	Standards													
1	Co 86032	17.07	17.22	15.79	17.93	17.10	18.31	17.40	18.85		17.26		17.61	17.73
2	CoC 671	19.51	16.31	14.47	19.51	16.60	19.20	16.60	20.28		16.50		18.05	18.52
3	CoSnk 05103	17.71	17.08	14.71	18.05	15.49	18.84	12.60	17.41		16.54		14.76	16.97
	Grand Mean	17.26	16.49	14.93	18.26	15.25	19.22	16.00	18.58		15.90		16.24	17.24
	SE(m)	1.33	0.56	0.44	0.52	0.32	0.37	0.60	0.65		0.53		0.66	
	CD	0.46	NS	1.27	1.55	0.92	1.06	1.90	1.87		1.53		1.88	
	CV	4.63	5.90	5.15	4.06	3.66	3.32	5.70	6.10		5.79		7.04	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.16: Brix % at 9 months

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	20.98	19.64	15.62	19.30	18.11	21.95	18.70	20.14		19.98		18.03	19.78
2	Co 13003	20.17	18.77	15.29	18.70	18.85	21.92	19.20	20.08		18.92		18.27	19.56
3	Co 13004	20.65	18.42	15.45	20.20	17.91	22.27	17.70	20.34		17.01		16.00	19.20
4	CoN 13072	17.87	19.27	14.62	19.10	19.75	21.12	18.60	19.28		17.74		18.47	19.05
5	CoSnk 13101	19.26	19.29	16.62	19.20	17.94	21.87	19.90	20.55		19.16		19.97	19.71
6	MS 13081	17.72	19.40	16.95	19.30	19.27	22.18	16.50	21.62		17.96		17.37	19.35
7	Co 13006	19.62	18.64	14.62	20.30	18.92	20.73	16.80	20.91		18.96		20.07	19.93
8	Co 13008	20.06	18.13	14.79	18.80	16.96	21.41	18.20	20.08		18.13		19.07	19.22
9	Co 13009	18.72	18.09	15.79	18.10	16.63	20.10	17.10	19.05		17.19		17.50	18.18
10	Co 13013	19.34	19.27	17.62	19.00	17.29	21.68	18.60	20.51		18.14		16.90	18.98
11	Co 13014	17.84	18.65	15.95	17.70	18.71	21.63	16.70	18.61		17.50		19.17	18.74
12	Co 13018	19.92	18.61	16.12	20.40	18.34	21.55	18.80	20.11		18.71		15.13	19.17
13	Co 13020	21.05	18.21	15.62	19.50	17.70	21.10	17.40	21.07		16.61		15.33	18.91
14	CoN 13073	17.06	18.01	16.29	19.20	16.39	19.10	17.60	18.94		17.05		18.23	18.00
15	CoSnk 13103	19.32	17.51	15.62	19.10	17.84	21.01	18.60	20.58		18.33		17.23	19.06
16	CoSnk 13106	18.55	18.11	15.45	20.80	17.41	20.70	15.30	21.08		18.68		19.27	19.50
17	PI 13132	18.60	17.75	16.95	19.60	18.94	20.76	18.30	21.43		17.87		17.90	19.30
	Standards													
1	Co 86032	19.01	17.93	16.62	19.00	19.79	20.20	19.20	20.97		19.48		19.50	19.71
2	CoC 671	21.27	18.33	15.45	20.50	19.77	21.00	18.20	22.15		18.92		20.00	20.52
3	CoSnk 05103	19.56	17.76	15.62	19.05	18.02	20.65	15.40	18.85		18.96		16.40	18.78
	Grand Mean	19.33	18.49	15.84	19.34	18.23	21.15	17.80	20.32		18.27		17.99	19.23
	SE(m)	1.13	0.71	0.40	0.49	0.50	0.30	0.40	0.61		0.47		0.72	
	CD	0.39	NS	1.16	1.46	1.44	0.87	1.30	1.76		1.36		2.05	
	CV	3.51	6.68	4.42	3.60	4.78	2.46	3.40	5.26		4.48		6.95	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.17: Purity % at 9 months

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	92.13	80.60	95.26	95.12	81.17	93.69	94.60	90.66		89.12		90.22	90.30
2	Co 13003	89.56	83.90	95.30	95.07	84.33	89.02	89.80	91.79		86.52		90.27	89.51
3	Co 13004	91.10	83.50	95.30	96.01	82.42	87.52	91.60	92.60		86.06		90.31	89.43
4	CoN 13072	86.33	82.90	95.39	95.05	83.04	85.47	84.60	89.92		85.03		90.51	87.91
5	CoSnk 13101	90.31	83.00	93.54	93.78	80.58	92.48	91.00	90.99		89.30		90.41	89.69
6	MS 13081	88.58	87.30	93.00	95.23	82.77	93.79	90.50	90.85		87.54		90.08	89.83
7	Co 13006	89.55	90.60	93.69	95.42	83.11	91.64	90.90	90.69		87.89		90.40	89.81
8	Co 13008	90.64	92.00	92.71	95.36	84.71	86.75	90.80	92.05		86.96		90.44	89.56
9	Co 13009	86.10	90.90	93.41	94.54	84.12	92.01	93.80	89.22		85.00		90.24	88.75
10	Co 13013	85.66	84.20	93.85	94.91	85.57	92.65	87.30	91.14		87.91		90.48	89.76
11	Co 13014	87.74	87.20	94.71	94.82	85.45	88.87	89.30	92.54		83.80		90.31	89.08
12	Co 13018	90.42	92.60	95.64	94.33	81.29	92.13	94.20	90.93		87.03		90.38	89.50
13	Co 13020	90.78	96.30	95.73	94.77	86.24	90.26	90.40	91.77		82.97		90.13	89.56
14	CoN 13073	84.77	97.00	93.07	94.02	83.30	89.41	87.20	86.99		86.63		90.04	87.88
15	CoSnk 13103	90.20	95.90	95.28	93.36	80.86	93.11	91.40	92.65		87.30		90.34	89.69
16	CoSnk 13106	88.25	88.80	93.18	95.33	86.72	93.51	84.90	92.30		87.98		90.24	90.62
17	PI 13132	89.04	92.50	91.66	95.43	82.65	91.79	88.10	90.41		89.92		90.05	89.90
	Standards													
1	Co 86032	89.75	96.20	95.09	94.91	86.47	90.65	90.90	89.90		88.63		90.31	90.09
2	CoC 671	91.70	88.90	93.64	95.66	84.02	91.41	91.40	91.52		87.07		90.27	90.24
3	CoSnk 05103	90.55	96.20	94.22	95.28	86.05	91.23	82.20	88.02		87.20		90.04	89.77
	Grand Mean	89.16	89.50	94.18	94.92	83.74	90.87	89.70	90.88		86.99		90.27	89.55
	SE(m)	2.49	3.35	1.35	0.60	2.08	1.05	2.10	1.37		1.14		0.17	
	CD	0.87	9.89	3.87	NS	NS	3.03	6.40	3.94		3.26		NS	
	CV	1.68	6.59	2.48	0.89	4.31	2.00	3.40	2.62		2.26		0.32	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.18: Pol % Cane at 9 month

Sl. No.	Entries	Kolha pur	Nava sari	Pade gaon	Sameer wadi	Mean
1	Co 13002	10.85	11.45	16.02	13.18	13.55
2	Co 13003	10.37	12.31	15.12	12.14	13.19
3	Co 13004	11.10	11.38	15.16	10.84	12.46
4	CoN 13072	9.98	12.79	14.05	11.15	12.66
5	CoSnk 13101	10.36	11.18	15.77	12.66	13.20
6	MS 13081	12.19	12.30	16.36	11.64	13.43
7	Co 13006	9.32	12.08	14.76	12.33	13.06
8	Co 13008	9.69	11.05	14.38	11.66	12.36
9	Co 13009	11.26	10.82	14.44	10.81	12.02
10	Co 13013	11.98	11.44	15.73	11.81	12.99
11	Co 13014	11.61	12.36	14.88	10.86	12.70
12	Co 13018	12.15	11.57	15.47	12.06	13.03
13	Co 13020	11.41	11.71	14.78	10.20	12.23
14	CoN 13073	11.02	10.49	13.29	10.93	11.57
15	CoSnk 13103	11.48	11.25	15.25	11.85	12.78
16	CoSnk 13106	10.97	11.67	15.12	12.17	12.99
17	PI 13132	12.40	12.09	14.78	11.88	12.92
	Standards					
1	Co 86032	12.30	13.28	14.31	12.77	13.45
2	CoC 671	11.00	12.96	14.95	12.20	13.37
3	CoSnk 05103	11.26	11.98	14.48	12.23	12.90
	Grand Mean	11.13	11.81	14.96	11.77	12.85
	SE(m)	0.34	0.26	0.29	0.39	
	CD	0.96	0.74	0.82	1.13	
	CV	5.23	3.77	3.30	5.80	

Table 2.2.19: Fibre % at 9 month

Entries	Kolha pur	Nava sari	Pade gaon	Mean	
Co 13002	16.90	12.12	12.10	12.11	
Co 13003	18.70	12.41	12.48	12.45	
Co 13004	14.43	12.80	12.18	12.49	
CoN 13072	18.30	11.94	12.15	12.05	
CoSnk 13101	23.40	12.63	12.01	12.32	
MS 13081	12.70	12.85	11.37	12.11	
Co 13006	21.83	13.12	12.28	12.70	
Co 13008	19.27	12.83	12.55	12.69	
Co 13009	13.77	12.60	11.92	12.26	
Co 13013	17.53	12.74	11.68	12.21	
Co 13014	12.97	12.53	12.61	12.57	
Co 13018	11.23	12.22	12.09	12.16	
Co 13020	13.83	13.25	12.41	12.83	
CoN 13073	17.23	12.87	12.14	12.51	
CoSnk 13103	12.73	12.02	12.07	12.05	
CoSnk 13106	14.50	12.75	11.92	12.34	
PI 13132	10.10	12.71	12.42	12.57	
	Standards				
Co 86032	12.17	12.30	11.86	12.08	
CoC 671	13.90	11.92	12.15	12.04	
CoSnk 05103	13.27	12.67	13.12	12.90	
	Grand Mean	15.44	12.56	12.18	12.37
	SE(m)	0.2	0.32	0.48	
	CD	0.58	NS	NS	
	CV	2.25	4.44	6.86	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's Report (2019-20)

Peninsular zone AVT Ratoon

Table 2.2.20: Extraction % at 9 month

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravarana	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	58.34		47.19		52.60	43.26	50.60	43.51				59.22	50.67
2	Co 13003	57.39		48.30		53.81	45.45	48.10	42.69				60.96	50.96
3	Co 13004	51.96		49.46		53.19	46.55	45.80	42.83				54.53	49.19
4	CoN 13072	66.79		48.46		54.39	46.82	51.30	41.92				56.88	52.37
5	CoSnk 13101	52.65		47.48		53.85	48.33	43.40	41.54				50.62	48.27
6	MS 13081	54.70		48.81		55.09	50.99	52.00	43.06				56.46	51.59
7	Co 13006	52.86		47.69		53.66	52.82	51.50	42.11				57.31	51.14
8	Co 13008	58.98		44.26		54.60	44.02	56.50	44.63				58.95	51.71
9	Co 13009	49.68		48.91		55.09	46.01	42.50	48.62				56.69	49.64
10	Co 13013	58.81		48.28		57.83	44.23	49.50	46.99				51.32	50.99
11	Co 13014	59.16		48.28		55.23	49.37	51.00	48.28				52.56	51.98
12	Co 13018	56.51		47.05		52.69	48.66	43.60	43.87				61.07	50.49
13	Co 13020	52.95		47.77		53.01	50.59	48.40	41.41				54.37	49.79
14	CoN 13073	53.27		47.08		53.05	45.59	52.60	44.49				61.02	51.01
15	CoSnk 13103	51.79		46.13		53.30	40.55	48.80	43.90				61.38	49.41
16	CoSnk 13106	52.45		48.37		52.06	49.81	44.50	40.31				58.32	49.40
17	PI 13132	54.40		50.07		53.72	49.20	48.30	41.38				56.41	50.50
	Standards													
1	Co 86032	58.64		48.62		53.43	51.51	54.50	46.04				59.00	53.11
2	CoC 671	54.52		48.00		52.69	46.07	55.00	42.15				54.73	50.45
3	CoSnk 05103	49.22		47.76		55.46	42.71	46.50	40.85				57.62	48.59
	Grand Mean	55.25		47.90		53.94	47.13	49.20	43.56				56.97	50.56
	SE(m)	3.84		1.08		1.47	3.59		0.75				1.79	
	CD	1.34		3.09		NS	NS	NS	2.17				5.08	
	CV	4.19		3.90		4.72	13.20		3.02				5.43	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's Report (2019-20)

Peninsular zone AVT Ratoon

Table 2.2.21: NMC ('000/ha) at 9 month

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002		24.4			111.0	73.0	91.6	109.1		91.3		95.3	95.9
2	Co 13003		22.2			109.6	85.3	47.4	117.7		68.9		90.8	94.5
3	Co 13004		26.2			101.7	80.6	46.3	110.7		83.7		117.5	98.8
4	CoN 13072		23.7			116.0	88.6	65.8	108.7		76.3		103.7	98.7
5	CoSnk 13101		20.5			114.6	73.4	48.0	106.1		85.9		109.7	97.9
6	MS 13081		11.9			110.9	89.7	53.0	115.3		79.8		76.0	94.3
7	Co 13006		30.6			107.0	97.4	83.5	116.4		95.1		95.7	102.3
8	Co 13008		23.7			111.7	75.7	52.7	119.9		82.0		86.2	95.1
9	Co 13009		20.7			112.4	77.5	49.5	126.2		80.8		89.9	97.4
10	Co 13013		25.8			111.3	89.7	67.0	109.3		91.1		96.2	99.5
11	Co 13014		19.2			116.7	96.7	47.8	115.4		99.5		92.5	104.2
12	Co 13018		18.4			110.6	88.4	73.0	115.3		97.0		103.1	102.9
13	Co 13020		21.4			114.0	75.2	63.0	127.0		83.3		88.1	97.5
14	CoN 13073		32.7			115.9	82.3	43.8	107.2		84.2		106.4	99.2
15	CoSnk 13103		15.6			109.2	72.5	34.5	101.0		86.9		112.2	96.4
16	CoSnk 13106		23.6			110.7	64.3	89.2	126.1		87.0		100.9	97.8
17	PI 13132		12.5			114.5	60.6	69.1	107.7		87.0		104.5	94.8
	Standards													
1	Co 86032		24.4			99.4	84.5	61.2	126.8		92.2		97.3	100.0
2	CoC 671		14.5			97.3	55.0	20.5	108.7		85.7		93.1	88.0
3	CoSnk 05103		45.5			101.1	101.3	93.5	108.9		95.8		91.3	99.7
	Grand Mean		22.9			109.8	80.6	60.0	114.7		86.7		97.5	97.8
	SE(m)		1.7			3.3	6.4	5.1	1.7		3.3		5.2	
	CD		5.0			9.4	18.5	15.2	4.9		9.4		14.7	
	CV		12.8				5.2	13.8	12.0		2.6		6.5	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.22: Stalk length (cm) at 9month

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravaranaagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	179.4	146.0	142.9	143.0	198.8	155.0	185.5	192.0		171.6		216.0	179.4
2	Co 13003	195.0	149.1	128.4	156.0	198.6	182.0	169.5	202.3		175.8		195.3	186.4
3	Co 13004	191.1	152.8	151.7	179.0	201.8	225.7	157.0	191.0		144.8		235.7	195.6
4	CoN 13072	180.0	142.5	148.1	180.0	228.4	208.3	181.0	200.3		160.1		229.7	198.1
5	CoSnk 13101	180.6	134.5	115.5	131.0	198.9	171.0	125.0	193.0		168.8		202.7	178.0
6	MS 13081	177.2	136.9	172.7	185.0	206.8	206.7	179.5	193.0		198.0		220.0	198.1
7	Co 13006	192.8	153.0	171.7	204.0	194.5	220.7	215.5	181.7		187.9		255.0	205.2
8	Co 13008	195.6	148.3	162.0	113.0	200.7	232.3	150.7	210.3		177.0		240.7	195.7
9	Co 13009	176.1	146.3	155.1	171.0	204.7	217.7	180.0	205.7		186.4		207.0	195.5
10	Co 13013	170.6	156.0	147.4	197.0	214.5	268.3	189.0	207.7		207.9		225.3	213.0
11	Co 13014	175.6	143.7	175.9	194.0	214.0	218.0	156.5	203.0		163.8		234.3	200.4
12	Co 13018	187.2	152.9	134.4	182.0	202.8	204.3	164.5	199.7		154.1		199.3	189.9
13	Co 13020	177.2	145.6	144.4	157.6	223.8	198.7	142.0	161.7		147.6		221.7	184.0
14	CoN 13073	160.6	184.3	126.2	191.5	200.8	212.0	168.5	170.0		192.2		218.3	192.2
15	CoSnk 13103	169.4	147.0	165.0	159.0	212.1	233.0	147.5	197.3		190.7		245.3	201.0
16	CoSnk 13106	168.9	142.2	135.1	197.0	191.2	181.3	146.5	200.7		190.2		202.3	190.2
17	PI 13132	201.1	146.1	135.4	189.0	213.4	152.3	170.5	173.7		221.8		215.0	195.2
	Standards													
1	Co 86032	167.2	149.1	144.4	197.0	190.6	177.0	194.0	172.0		200.1		209.7	187.7
2	CoC 671	173.3	135.0	134.2	203.0	188.8	155.0	183.5	170.3		179.8		190.0	180.0
3	CoSnk 05103	213.9	195.0	138.3	240.0	186.5	216.7	234.0	205.7		207.2		242.3	216.0
	Grand Mean	181.6	150.3	146.4	178.5	203.6	201.8	172.0	191.6		181.3		220.2	194.1
	SE(m)	20.7	10.3	7.1	4.4	6.6	12.2		3.0		13.7		9.0	
	CD	7.2	NS	20.2	13.2	18.8	35.2	NS	8.5		39.2		25.5	
	CV	6.9	12.0	8.4	3.5	5.1	10.5		2.7		13.0		7.0	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's Report (2019-20)

Peninsular zone AVT Ratoon

Table 2.2.23: Stalk diameter (cm) at 9 month

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravaranaagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	3.02	2.00	2.44	2.47	2.00	2.32	2.90	1.68			2.67		2.34
2	Co 13003	2.87	1.92	2.40	2.82	1.98	2.42	3.00	1.66			2.92		2.40
3	Co 13004	3.03	1.93	2.53	3.16	2.01	2.84	2.80	1.51			3.03		2.54
4	CoN 13072	2.94	2.13	2.22	2.87	1.96	2.45	2.80	1.33			2.88		2.39
5	CoSnk 13101	2.84	1.90	2.25	3.02	1.93	2.46	2.70	0.97			3.24		2.37
6	MS 13081	2.92	2.05	2.27	3.20	2.00	2.89	3.30	1.39			3.37		2.55
7	Co 13006	2.92	2.48	2.41	2.95	1.96	2.36	2.80	1.27			2.95		2.37
8	Co 13008	2.90	2.33	2.68	3.06	1.94	2.51	2.60	1.62			2.95		2.47
9	Co 13009	3.44	2.52	2.55	3.31	1.91	2.82	3.20	1.78			3.30		2.69
10	Co 13013	2.92	2.52	2.35	3.21	2.01	2.82	2.90	1.90			2.84		2.49
11	Co 13014	3.24	1.95	2.75	3.20	1.95	2.72	3.10	1.80			3.09		2.59
12	Co 13018	2.97	2.65	2.37	2.85	2.03	2.48	2.60	1.42			2.62		2.35
13	Co 13020	3.17	2.08	2.61	3.18	1.95	2.67	3.30	1.31			3.16		2.49
14	CoN 13073	3.19	2.76	2.45	3.21	1.92	2.23	3.40	1.46			3.26		2.57
15	CoSnk 13103	2.73	1.98	2.30	2.74	1.95	2.40	2.50	1.36			2.52		2.30
16	CoSnk 13106	3.12	2.96	2.31	2.84	2.02	2.62	2.80	1.18			3.07		2.46
17	PI 13132	2.56	2.57	2.59	2.71	2.01	2.50	2.80	1.12			2.85		2.28
	Standards													
1	Co 86032	2.92	2.34	2.51	2.86	1.88	2.47	2.70	1.17			2.93		2.33
2	CoC 671	2.90	2.09	2.35	3.14	1.89	2.37	2.50	1.61			2.68		2.38
3	CoSnk 05103	2.27	2.88	2.13	2.76	1.85	1.98	2.70	1.04			2.52		2.07
	Grand Mean	2.94	2.30	2.42	2.98	1.96	2.52	2.90	1.43			2.94		2.42
	SE(m)	0.38	0.19	0.08	0.15	0.04	0.10	0.16	0.05			0.08		
	CD	0.13	0.55	0.23	NS	NS	0.29	0.46	0.14			0.23		
	CV	7.74	14.00	5.81	7.35	3.56	6.84	7.62	6.32			4.70		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.24: Single Cane Weight (kg) at 9month

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravaranaagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	0.96	0.90	0.63	0.66	0.97	0.71	1.10				0.94		0.88
2	Co 13003	1.03	0.95	0.51	0.88	1.00	1.01	1.30				0.95		0.98
3	Co 13004	1.09	0.96	0.77	0.92	0.99	1.04	0.90				0.89		1.01
4	CoN 13072	0.99	0.93	0.71	0.96	1.04	0.87	1.40				1.10		1.03
5	CoSnk 13101	0.88	0.88	0.48	0.85	0.96	0.83	1.00				1.02		0.94
6	MS 13081	1.22	0.86	0.87	1.40	1.00	1.26	1.80				1.40		1.25
7	Co 13006	1.08	1.02	0.82	1.19	1.03	0.86	1.20				1.04		1.07
8	Co 13008	1.04	1.04	0.76	0.93	1.00	1.43	1.10				1.00		1.14
9	Co 13009	1.30	1.27	0.90	1.12	1.04	1.34	1.40				1.09		1.18
10	Co 13013	1.04	0.96	0.69	1.25	1.06	1.52	1.10				1.14		1.16
11	Co 13014	1.23	0.87	1.00	1.30	1.00	1.08	1.30				0.95		1.10
12	Co 13018	0.96	1.03	0.62	0.98	1.01	0.85	1.00				0.76		0.94
13	Co 13020	1.15	0.96	0.91	0.97	0.98	0.95	1.40				0.80		0.99
14	CoN 13073	1.02	1.25	0.64	1.29	1.05	1.05	1.70				0.96		1.15
15	CoSnk 13103	0.77	1.37	0.72	0.78	0.87	1.34	1.00				0.80		0.99
16	CoSnk 13106	1.15	1.11	0.67	0.98	0.98	0.87	1.10				1.06		1.03
17	PI 13132	1.08	0.92	0.74	0.76	0.97	0.66	1.20				1.08		0.97
	Standards													
1	Co 86032	0.91	1.00	0.76	1.00	0.79	0.94	1.10				1.18		0.99
2	CoC 671	0.99	0.96	0.70	1.41	0.73	0.79	0.90				1.04		1.01
3	CoSnk 05103	0.76	1.04	0.51	0.91	0.82	0.90	1.00				0.82		0.87
	Grand Mean	1.03	1.01	0.72	1.03	0.96	1.01	1.20				1.00		2.61
	SE(m)	0.18	0.04	0.03	0.10	0.04	0.07	0.20				0.07		
	CD	0.06	0.11	0.08	0.29	0.12	0.21	0.50				0.21		
	CV	10.35	6.15	7.14	13.54	7.72	12.35	18.00				12.43		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.25: Number of shoots (000'/ha) at 180 days

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	122.7	38.1		132.8	125.5	77.5	101.5	112.9	66.7	82.9	81.2		100.3
2	Co 13003	87.6	36.8		74.1	122.6	87.6	68.0	121.4	86.9	66.4	87.2		91.7
3	Co 13004	76.7	49.1		82.6	118.6	83.4	48.3	113.9	67.4	73.0	77.5		86.6
4	CoN 13072	82.8	35.5		110.3	125.4	94.1	99.6	110.4	74.5	71.8	93.3		95.3
5	CoSnk 13101	98.8	37.0		57.7	128.7	80.4	49.6	110.0	64.0	69.5	80.2		86.2
6	MS 13081	81.0	29.6		120.3	120.2	95.3	62.8	120.1	73.0	72.6	71.3		94.2
7	Co 13006	106.5	23.5		95.6	116.4	103.1	114.7	120.6	75.9	71.2	83.7		96.6
8	Co 13008	84.3	35.7		91.6	120.6	86.5	81.0	124.4	84.1	75.5	66.6		91.7
9	Co 13009	88.2	39.3		97.2	122.0	87.9	64.3	130.7	82.1	75.6	70.9		94.3
10	Co 13013	102.3	37.5		117.4	122.6	95.1	71.3	112.2	80.9	79.1	88.2		99.7
11	Co 13014	99.0	25.4		107.7	121.2	103.2	70.2	118.5	71.6	76.9	78.3		97.0
12	Co 13018	127.2	30.5		150.1	118.6	93.8	103.8	129.1	72.4	79.6	87.2		107.3
13	Co 13020	82.2	36.2		124.1	123.1	78.6	94.7	130.5	61.7	78.2	77.5		94.5
14	CoN 13073	88.2	49.3		92.1	124.5	87.8	40.5	109.4	69.1	76.3	87.5		91.9
15	CoSnk 13103	79.1	46.4		52.0	114.6	78.2	25.6	105.3	66.0	81.8	72.9		81.2
16	CoSnk 13106	94.0	38.4		95.1	121.6	70.2	132.0	130.3	80.9	72.5	72.4		92.1
17	PI 13132	140.0	30.9		140.0	124.4	66.6	86.9	110.4	64.9	79.0	65.6		98.9
	Standards													
1	Co 86032	97.3	33.5		110.2	110.3	92.2	84.3	131.2	84.7	80.2	83.2		98.6
2	CoC 671	85.4	30.3		137.1	109.5	61.1	18.2	112.7	64.6	70.7	68.2		88.7
3	CoSnk 05103	133.3	68.1		148.4	111.4	106.5	124.7	113.6	92.6	70.6	97.3		109.2
	Grand Mean	97.8	37.6		106.8	120.1	86.4	77.1	118.4	74.2	75.2	79.5		94.8
	SE(m)	15.5	3.2		4.7	3.6	6.0	12.2	1.6	4.8	1.4	6.1		
	CD	7.1	9.6		13.9	10.2	17.3	36.4	4.7	13.9	4.0	18.0		
	CV	22.5	15.0		6.2	5.1	12.0	22.4	2.4	11.2	3.2	10.8		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

Table 2.2.26: Number of tillers (000²/ha) at 90 days

Sl. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	136.0	31.1	81.1	148.3	136.5	111.1	120.2	120.6	161.4	104.9	103.6	100.0	128.16
2	Co 13003	95.0	27.8	75.2	83.4	140.5	115.1	65.9	129.1	177.0	94.7	113.1	96.2	119.09
3	Co 13004	85.0	39.2	81.9	93.7	135.2	94.9	47.6	120.4	124.8	107.3	95.7	122.9	113.23
4	CoN 13072	93.8	28.4	73.0	126.7	136.7	122.5	114.8	118.2	187.5	120.1	146.2	107.5	131.94
5	CoSnk 13101	104.6	29.9	74.9	64.9	141.4	116.7	57.8	118.0	164.6	107.6	114.4	115.3	119.71
6	MS 13081	93.0	23.0	72.1	136.3	137.8	160.0	64.3	124.0	145.3	111.2	115.0	81.0	125.16
7	Co 13006	116.1	44.9	80.6	107.6	133.9	109.5	146.4	125.2	165.0	91.2	82.4	100.0	119.53
8	Co 13008	93.5	26.7	83.6	104.2	134.0	101.4	91.5	128.8	181.3	111.3	91.1	90.3	118.06
9	Co 13009	97.9	27.0	59.8	111.5	145.1	118.5	63.7	136.9	192.0	111.7	99.6	97.0	126.35
10	Co 13013	114.0	35.5	56.5	133.4	135.3	125.2	79.8	118.9	183.6	87.3	112.4	103.3	127.66
11	Co 13014	109.8	14.9	81.0	121.3	131.9	112.5	71.6	125.3	145.1	114.3	98.4	97.6	119.00
12	Co 13018	142.2	24.8	70.8	173.7	130.0	106.7	110.1	134.8	155.6	115.1	119.0	107.6	134.38
13	Co 13020	94.6	31.7	69.3	140.5	137.8	104.2	98.6	139.3	159.3	101.2	116.1	91.9	124.06
14	CoN 13073	97.4	38.7	55.9	104.6	140.7	95.6	39.4	118.2	155.2	94.0	109.7	111.0	118.34
15	CoSnk 13103	84.3	39.4	73.6	58.1	128.1	92.4	23.8	114.5	163.0	99.0	85.1	117.1	109.01
16	CoSnk 13106	103.5	27.4	68.6	107.9	132.1	114.8	152.0	141.5	171.7	98.3	108.3	105.3	123.41
17	PI 13132	154.0	14.1	55.1	158.2	140.1	69.2	96.5	119.1	145.4	114.9	92.7	109.9	124.17
	Standards													
1	Co 86032	108.3	25.0	59.6	122.7	120.0	109.0	87.7	140.4	157.0	146.3	101.6	103.2	125.96
2	CoC 671	99.1	19.0	63.5	153.4	125.8	58.8	13.8	121.6	142.3	88.6	97.6	98.0	111.57
3	CoSnk 05103	148.1	62.4	85.0	182.8	120.4	182.2	138.5	125.5	164.3	85.4	157.3	95.7	147.12
	Grand Mean	108.5	30.5	71.1	121.7	134.2	111.0	84.2	126.0	162.1	105.2	108.0	102.5	111.61
	SE(m)	15.0	6.1	4.5	4.4	4.1	7.3	13.6	1.6	6.0	9.3	8.8	5.2	
	CD	7.9	18.1	12.8	12.9	11.7	21.1	13.6	4.7	17.4	26.9	26.2	14.7	
	CV	23.4	29.9	10.9	5.1	5.3	11.4	22.8	2.2	6.4	15.4	11.6	8.7	

Performance of entries in AVT- Ratoon

Table 2.2.27: Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entries	Perumala palle	Coimba tore	Thiru valla	Mandya	Sankesh war	Sameer wadi	Kolha pur
Co 13002	Better	Better	Better	Average	Better	Better	Average
Co 13003	Poor	Average	Average	Average	Better	Better	Better
Co 13004	Better	Better	Average	Better	Better	Better	Poor
CoN 13072	Better	Better	Better	Average	On par	On par	Better
CoSnk 13101	Poor	Average	Average	Poor	On par	Better	Poor
MS 13081	Average	On par	Better	Better	Better	On par	Average
Co 13006	On par	On par	Better	Better	Average	Better	Better
Co 13008	Better	On par	Average	Average	On par	Better	Better
Co 13009	Better	Better	Better	Better	Better	Average	Better
Co 13013	Better	Average	Better	Better	Better	Better	Better
Co 13014	Average	Better	Better	On par	On par	On par	Better
Co 13018	Average	Average	Better	On par	On par	Better	Average
Co 13020	Average	Better	Average	Average	Better	Average	Average
CoN 13073	Average	Average	Average	On par	On par	Better	Average
CoSnk 13103	Poor	Average	Better	Poor	Better	Better	Average
CoSnk 13106	Better	Average	Average	Average	Better	Average	Poor
PI 13132	Poor	Average	Average	Better	Better	On par	Poor
Standards							
Co 86032	-	-	-	Best	Best	Best	-
CoC 671	-	-	-	-	-	-	-
CoSnk 05103	Best	Best	Best	-	-	-	Best

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT Ratoon

S.No	Entries	Padegaon	Pune	Pravaranagar	Akola	Navsari
1	Co 13002	Poor	Poor	On par	Poor	Poor
2	Co 13003	Better	Better	Better	On par	Better
3	Co 13004	Better	On par	On par	Better	On par
4	Co 13006	Better	Better	On par	Better	On par
5	Co 13008	Better	Better	Better	Better	Better
6	Co 13009	Better	Better	Better	Better	Better
7	Co 13013	Better	Better	Better	Better	On par
8	Co 13014	On par	On par	On par	Poor	On par
9	Co 13018	Better	On par	On par	Poor	On par
10	Co 13020	Poor	Poor	On par	On par	Poor
11	CoN 13072	On par	On par	Better	On par	Better
12	CoN 13073	Better	Better	On par	Better	Better
13	MS 13081	Better	On par	On par	Poor	On par
14	CoSnk 13101	On par	Poor	Poor	On par	Poor
15	CoSnk 13103	Better	On par	Better	On par	On par
16	CoSnk 13106	Poor	On par	Poor	Poor	On par
17	PI 13132	Poor	Poor	Poor	Poor	Poor
Standarads						
1	Co 86032			Best		
2	CoC 671					
3	CoSnk 05103	Best	Best		Best	Best

2.3 Advanced Varietal Trial –Pooled data

2.3 Mean performance of two plant and one ratoon crops (2018—2020)

Seventeen entries were evaluated along with three standards (Co 86032, CoC 671 & CoSnk 05103) in fourteen centers under AVT IP during 2018-19 and AVT IIP during 2019-20. The trials were not conducted at Kawardha, Powerkheda, Pugalur and Sirugamani. Only 12 centres conducted AVT ratoon trial during 2019-20. Basmathnagar, Kawardha didn't conduct AVT Ratoon. Rudrur centre reported that the AVT ratoon trial was vitiated due to water scarcity. For estimation of pooled mean of plant crops, the trials where the cane yield was lower compared to the respective state average were not considered. AVT I Plant at Akola, AVT II Plant at Akola and Kolhapur and AVT Ratoon at Akola, Kolhapur and Perumalapalle were not considered. Mean performance of seventeen entries compared to zonal standards across peninsular zone in terms of weighted average is presented in tables 2.3.1 to 2.3.4 and fig 2.3.1 to 2.3.4. The salient results pertaining to CCS (t/ha), cane yield (t/ha), CCS % and sucrose % are discussed below.

2.3.1 Commercial Cane Sugar (t/ha):

Two test entries viz., MS 13081 (16.84 t/ha) and Co 13013 (16.48 t/ha) recorded higher sugar yield (t/ha) compared to the best standard Co 86032 (15.09 t/ha). The entry MS 13081 ranked first in the zone followed by Co 13013 and showed an improvement of 11.60 % and 9.20 % over Co 86032 respectively. The entry MS 13081 performed well in all the locations except Pravaranagar.

2.3.2 Cane yield (t/ha):

The entry Co 13013 recorded the highest cane yield of 121.96 t/ha followed by MS 13081 (118.51 t/ha) compared to the best standard Co 86032 (110.33 t/ha) in the zone. The entry Co 13013 had shown an improvement of 10.57% and MS 13081 had 7.44 % improvement over the best standard Co 86032. Co 13013 performed better in all the centers except Mandya and Pravaranagar.

2.3.3 CCS %:

For CCS%, none of the entries was better than the best standard CoC 671 (14.21%), however 12 entries recorded higher CCS% than Co 86032 (13.16%). Among the entries, Co 13003 recorded the highest CCS of 13.54% followed by Co 13002 (13.50%) and MS 13081 (13.46 %). None of the entries had shown more than 5% improvement for CCS%.

2.3.4 Sucrose %:

None of the entries was superior to the best standard CoC 671 (20.70%) for juice sucrose. However, 11 entries recorded higher mean sucrose% than Co 86032 (19.24%) and the entry MS 13081 had shown 3.06% improvement over Co 86032.

Overall performance: Based on the weighted average of two plant and one ratoon crops, the entries MS 13081 and Co 13013 had shown an improvement of 11.60 % and 9.20 % respectively over Co 86032 for sugar yield. For cane yield, the entry Co 13013 had shown an improvement of 10.57% and the entry MS 13081 had 7.44% improvement over the best standard Co 86032. For juice quality traits, the entry MS 13081 had shown 3.05% improvement over Co 86032. Based the pooled data, the entry MS 13081 with more than 10% improvement for sugar yield and Co 13013 with more than 10% improvement for cane yield were best entries for peninsular zone.

Table 2.3.1 Pooled Mean CCS t/ha at harvest

S No	Entries	Coimbatore				Akola				Basmathnagar				Kolhapur			
		AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP*	AVT IIP*	AVT Ratoon*	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP*	AVT Ratoon*	Mean
1	Co 13002	14.65	18.07	14.38	15.70	2.59	4.70	2.39	3.23	10.48	8.99		9.74	11.84	4.30	3.52	6.55
2	Co 13003	17.10	19.20	17.41	17.90	3.59	4.88	2.86	3.78	10.62	10.64		10.63	12.04	6.85	2.70	7.20
3	Co 13004	18.19	14.78	12.80	15.26	2.77	4.31	2.98	3.35	11.95	11.68		11.82	16.57	6.11	4.12	8.93
4	CoN 13072	12.69	12.03	10.13	11.62	4.91	12.58	2.60	6.70	15.47	11.05		13.26	16.82	8.12	3.79	9.58
5	CoSnk 13101	15.47	10.64	9.47	11.86	2.90	7.04	2.28	4.07	10.17	11.43		10.80	13.03	4.88	2.79	6.90
6	MS 13081	18.89	14.89	15.12	16.30	1.69	5.09	1.26	2.68	14.51	15.58		15.05	23.51	6.63	5.29	11.81
7	Co 13006	17.34	13.25	14.00	14.86	3.61	4.06	3.12	3.60	13.92	12.82		13.37	16.51	13.21	5.89	11.87
8	Co 13008	14.39	18.09	12.79	15.09	2.19	2.02	1.61	1.94	16.80	16.78		16.79	12.47	11.75	4.65	9.62
9	Co 13009	13.09	16.76	13.59	14.48	3.76	3.02	3.01	3.26	16.05	13.08		14.57	10.72	7.00	5.57	7.76
10	Co 13013	18.38	18.09	11.74	16.07	4.41	4.97	1.89	3.76	16.92	12.70		14.81	18.24	8.93	3.56	10.24
11	Co 13014	17.76	18.57	17.81	18.05	1.21	9.09	1.65	3.98	14.74	12.98		13.86	11.04	15.24	6.87	11.05
12	Co 13018	16.72	17.15	14.34	16.07	3.88	4.49	2.28	3.55	14.83	11.60		13.22	12.74	4.79	3.06	6.86
13	Co 13020	16.91	18.24	11.54	15.56	2.20	4.30	2.37	2.96	15.66	13.98		14.82	15.93	4.70	3.99	8.21
14	CoN 13073	12.83	9.86	8.61	10.43	4.97	13.48	5.09	7.85	11.43	12.40		11.92	16.57	3.25	3.39	7.74
15	CoSnk 13103	14.29	15.54	11.89	13.91	1.67	3.69	2.55	2.64	14.83	12.55		13.69	16.03	9.36	5.01	10.13
16	CoSnk 13106	16.12	12.29	9.17	12.53	3.78	4.60	3.57	3.98	15.38	10.42		12.90	14.53	4.04	3.87	7.48
17	PI 13132	19.95	16.50	17.16	17.87	1.31	2.83	1.47	1.87	11.89	15.54		13.72	13.39	2.67	3.48	6.51
	Stds																
1	Co 86032	15.87	13.76	13.85	14.49	4.95	3.95	2.78	3.89	14.64	15.01		14.83	15.86	4.03	3.61	7.83
2	CoC 671	15.15	13.21	12.76	13.71	3.35	5.34	1.95	3.55	10.47	11.85		11.16	14.34	5.67	3.15	7.72
3	CoSnk 05103	13.89	12.97	13.60	13.49	8.96	8.52	4.82	7.43	13.77	13.22		13.50	14.14	6.07	3.43	7.88
	Mean	15.98	15.20	13.18	14.79	3.44	5.65	2.63	3.91	13.73	12.71		13.22	14.82	6.88	4.09	8.60

*Not included for calculating overall mean since the trial mean was lower than respective state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2018-20)
Peninsular zone pooled data of two plant and ratoon

Entries	Mandya				Navsari				Padegaon				Perumalapalle			
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon*	Mean
Co 13002	11.82	11.63	8.77	10.74	16.81	16.49	12.61	15.30	13.28	13.50	8.76	11.85	11.94	13.06	7.70	10.90
Co 13003	11.54	12.65	10.04	11.41	17.45	16.45	12.77	15.56	17.71	15.04	12.33	15.03	12.45	15.64	3.42	10.51
Co 13004	10.81	10.95	11.20	10.99	16.37	17.96	12.69	15.67	16.68	16.80	13.40	15.63	9.48	16.82	4.71	10.34
CoN 13072	9.93	11.93	8.11	9.99	18.24	19.38	15.60	17.74	18.47	16.01	11.38	15.29	15.49	21.94	9.02	15.48
CoSnk 13101	11.92	9.71	7.81	9.81	17.23	14.15	12.60	14.66	13.22	17.15	11.67	14.01	12.25	12.29	5.50	10.01
MS 13081	17.48	13.33	12.24	14.35	18.42	14.71	13.59	15.57	23.90	20.58	17.51	20.66	9.96	24.82	9.24	14.67
Co 13006	11.26	12.91	9.81	11.33	14.66	17.57	12.67	14.97	21.85	17.21	15.21	18.09	12.90	14.19	7.36	11.48
Co 13008	12.25	11.35	7.89	10.50	16.99	17.08	11.71	15.26	19.40	17.62	15.81	17.61	14.22	14.88	5.63	11.58
Co 13009	12.92	11.49	9.58	11.33	16.32	16.33	10.86	14.50	20.87	16.53	16.60	18.00	5.56	15.74	4.73	8.68
Co 13013	15.94	14.45	12.29	14.23	19.38	18.62	13.88	17.29	24.22	19.82	15.88	19.97	15.87	19.73	9.08	14.89
Co 13014	11.03	13.05	10.03	11.37	15.73	17.17	13.89	15.60	20.52	18.30	15.25	18.02	9.24	18.32	7.36	11.64
Co 13018	14.69	12.66	13.61	13.65	16.31	16.08	13.01	15.13	16.26	15.87	12.21	14.78	12.49	16.81	7.22	12.17
Co 13020	13.60	13.04	9.87	12.17	17.01	17.53	13.97	16.17	21.68	19.70	12.66	18.01	13.61	17.36	8.26	13.08
CoN 13073	13.02	13.69	9.89	12.20	18.24	16.07	14.25	16.19	14.21	15.50	13.28	14.33	14.37	15.78	5.89	12.01
CoSnk 13103	9.89	10.49	6.99	9.12	16.63	15.25	11.33	14.40	17.11	15.33	12.05	14.83	9.45	12.10	4.36	8.63
CoSnk 13106	13.21	14.09	10.48	12.59	17.21	15.03	12.63	14.96	18.58	17.91	12.29	16.26	9.35	14.52	9.13	11.00
PI 13132	14.35	12.23	11.59	12.72	17.21	15.00	12.16	14.79	11.35	11.53	7.33	10.07	16.76	17.18	6.72	13.55
Stds																
Co 86032	18.49	14.94	13.11	15.51	14.56	14.15	11.34	13.35	19.57	14.90	13.52	16.00	12.35	14.56	8.66	11.86
CoC 671	19.56	15.44	14.36	16.45	15.02	15.01	10.77	13.60	14.13	16.32	10.26	13.57	11.46	14.54	2.07	9.36
CoSnk 05103	16.33	12.81	11.89	13.68	15.17	15.03	12.54	14.25	16.15	16.36	12.00	14.84	11.89	15.26	8.50	11.88
Mean	13.50	12.64	10.48	12.21	16.75	16.25	12.74	15.25	17.96	16.60	12.97	15.84	12.06	16.28	6.73	11.69

*Not included for calculating overall mean since the trial mean was lower than respective state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2018-20)
Peninsular zone pooled data of two plant and ratoon

Entries	Pravaranagar				Pune				Rudrur				Sameerwadi			
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean
Co 13002	17.98	19.99	17.42	18.46	8.61	14.33	7.88	10.27	17.21	12.56		14.88	9.21	17.68	11.37	12.75
Co 13003	17.99	18.73	17.46	18.06	10.78	18.32	17.47	15.52	15.31	19.29		17.30	10.11	18.26	8.95	12.44
Co 13004	14.78	17.24	14.30	15.44	14.21	17.98	12.83	15.01	15.25	18.93		17.09	10.46	14.27	9.23	11.32
CoN 13072	14.76	16.53	14.24	15.18	14.78	16.20	13.41	14.80	20.47	18.95		19.71	9.50	15.65	9.09	11.41
CoSnk 13101	16.02	17.61	15.56	16.40	12.44	14.79	10.57	12.60	17.88	15.20		16.54	9.95	14.75	9.66	11.45
MS 13081	19.11	20.33	18.45	19.30	16.98	18.90	15.86	17.25	20.50	17.57		19.04	11.03	24.20	10.20	15.14
Co 13006	16.61	18.37	16.26	17.08	15.36	12.94	13.85	14.05	14.83	16.83		15.83	10.89	22.26	9.22	14.12
Co 13008	19.41	19.71	18.96	19.36	20.25	22.13	18.52	20.30	18.41	13.07		15.74	8.54	21.55	8.90	13.00
Co 13009	17.08	20.01	16.66	17.92	18.60	19.24	13.37	17.07	22.55	13.59		18.07	8.93	23.55	9.11	13.86
Co 13013	20.41	20.21	19.73	20.12	17.09	16.61	18.53	17.41	14.17	17.26		15.72	11.19	24.52	10.42	15.38
Co 13014	19.41	21.26	18.70	19.79	15.55	14.78	12.26	14.20	15.42	15.98		15.70	11.95	21.44	10.16	14.52
Co 13018	18.74	20.02	18.05	18.94	14.78	16.89	11.65	14.44	13.78	17.59		15.68	8.98	22.45	10.48	13.97
Co 13020	17.71	20.51	17.14	18.45	12.01	16.50	11.32	13.28	18.97	12.69		15.83	9.38	23.06	10.17	14.20
CoN 13073	14.73	16.69	14.06	15.16	16.78	17.26	12.63	15.56	19.37	15.14		17.26	7.55	19.78	7.99	11.77
CoSnk 13103	15.90	17.22	15.44	16.19	12.52	13.67	10.41	12.20	18.41	17.87		18.14	8.29	17.85	9.63	11.92
CoSnk 13106	17.68	16.69	16.05	16.81	16.62	17.90	14.69	16.40	15.47	11.77		13.62	9.94	21.52	9.98	13.81
PI 13132	15.87	16.87	15.32	16.02	12.01	14.24	10.01	12.09	14.17	18.21		16.19	11.40	24.27	10.28	15.32
Stds																
Co 86032	20.71	21.85	19.83	20.80	17.40	17.02	15.53	16.65	14.64	14.04		14.34	11.24	22.11	10.16	14.50
CoC 671	18.56	19.35	17.96	18.62	16.18	17.71	11.60	15.16	15.82	17.98		16.90	8.38	19.40	9.58	12.45
CoSnk 05103	16.54	18.31	15.94	16.93	12.58	14.22	11.09	12.63	14.34	10.48		12.41	6.65	15.73	9.30	10.56
Mean	17.50	18.87	16.88	17.75	14.78	16.58	13.17	14.84	16.85	15.75		16.30	9.68	20.22	9.69	13.20

*Not included for calculating overall mean since the trial mean was lower than respective state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2018-20)
Peninsular zone pooled data of two plant and ratoon

Entries	Sankeshwar				Thiruvalla				Overall Mean			Weighted Average	Rank
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon		
Co 13002	8.56	12.31	10.12	10.33	10.04	12.67	10.75	11.15	12.49	14.27	11.34	12.82	
Co 13003	14.39	19.76	14.34	16.16	8.47	11.09	11.65	10.40	13.54	16.26	13.60	14.51	
Co 13004	14.69	18.18	11.29	14.72	11.10	11.95	10.26	11.10	13.89	15.63	12.00	14.00	
CoN 13072	10.74	17.79	16.31	14.95	8.53	10.10	12.70	10.44	14.30	15.63	12.33	14.25	
CoSnk 13101	11.96	18.79	16.91	15.89	10.32	14.17	13.29	12.59	13.22	14.22	11.95	13.24	
MS 13081	17.85	22.20	15.81	18.62	11.05	10.46	13.01	11.51	17.17	18.13	14.64	16.84	1
Co 13006	13.36	20.09	16.20	16.55	9.00	11.92	12.71	11.21	14.50	15.86	13.33	14.67	
Co 13008	9.68	17.83	11.38	12.96	8.93	12.73	10.14	10.60	14.75	16.90	12.90	15.02	
Co 13009	12.57	13.72	9.37	11.89	7.44	14.09	9.24	10.26	14.05	16.18	12.04	14.27	
Co 13013	14.53	19.45	17.05	17.01	8.69	10.53	13.74	10.98	16.54	17.67	14.81	16.48	2
Co 13014	13.43	18.28	10.45	14.05	8.61	11.07	10.31	9.99	14.19	16.77	13.21	14.84	
Co 13018	11.84	12.49	12.39	12.24	8.69	10.53	11.44	10.22	13.91	15.84	13.02	14.36	
Co 13020	10.08	17.99	14.04	14.04	8.24	8.74	12.11	9.70	14.68	16.61	12.54	14.79	
CoN 13073	10.28	15.94	15.36	13.86	12.03	12.31	11.68	12.01	13.95	15.03	11.97	13.81	
CoSnk 13103	12.75	20.43	16.14	16.44	9.46	10.72	12.89	11.02	13.50	14.92	11.86	13.57	
CoSnk 13106	15.07	19.65	14.41	16.38	10.58	14.55	12.20	12.44	14.60	15.53	12.43	14.35	
PI 13132	12.54	17.39	7.09	12.34	11.33	11.40	8.69	10.47	14.02	15.86	11.07	13.89	
Stds													
Co 86032	14.45	16.69	13.38	14.84	10.20	11.65	11.77	11.21	15.38	15.89	13.61	15.09	3
CoC 671	13.10	23.82	10.21	15.71	7.68	11.78	9.90	9.79	13.83	16.37	11.93	14.23	
CoSnk 05103	12.06	20.26	15.61	15.98	10.08	9.46	12.46	10.67	13.35	14.51	12.71	13.59	
Mean	12.70	18.15	13.39	14.75	9.52	11.60	10.36	10.49	14.29	15.90	12.54	14.40	

*Not included for calculating overall mean since the trial mean was lower than respective state average

Table 2.3.2 Pooled Mean cane yield t/ha at harvest

S No	Entries	Coimbatore				Akola				Basmathnagar				Kolhapur			
		AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP*	AVT IIP*	AVT Ratoon*	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP*	AVT Ratoon*	Mean
1	Co 13002	106.70	129.48	99.80	111.99	22.63	30.80	17.97	23.80	77.29	79.41		78.35	74.35	34.52	28.03	45.63
2	Co 13003	119.70	126.00	118.57	121.42	29.47	31.84	22.52	27.94	83.35	85.48		84.42	84.74	58.70	21.92	55.12
3	Co 13004	123.60	111.13	87.32	107.35	21.93	31.60	23.25	25.59	92.48	94.74		93.61	101.50	51.54	33.54	62.19
4	CoN 13072	104.20	99.37	77.37	93.65	41.36	85.28	19.82	48.82	118.69	105.46		112.08	106.81	67.34	31.31	68.49
5	CoSnk 13101	109.70	76.11	65.57	83.79	23.28	44.91	18.46	28.88	75.95	89.53		82.74	84.43	38.24	21.16	47.94
6	MS 13081	132.30	108.82	120.23	120.45	12.87	43.60	9.94	22.14	109.28	114.51		111.90	148.40	53.58	41.92	81.30
7	Co 13006	117.10	100.75	103.05	106.97	26.78	26.65	25.82	26.42	95.09	99.14		97.12	108.49	90.16	48.23	82.29
8	Co 13008	106.50	130.17	89.39	108.69	16.74	31.79	13.95	20.83	119.84	128.07		123.96	84.15	81.40	39.93	68.49
9	Co 13009	98.30	142.72	97.47	112.83	29.13	29.94	23.48	27.52	110.99	102.94		106.97	71.42	57.23	42.69	57.11
10	Co 13013	142.80	141.78	88.75	124.44	33.24	32.53	14.35	26.71	122.29	113.03		117.66	116.58	77.21	26.16	73.32
11	Co 13014	137.60	145.80	132.95	138.78	10.12	62.72	14.36	29.07	107.08	108.02		107.55	73.79	112.21	54.29	80.10
12	Co 13018	118.60	119.83	106.49	114.97	29.66	28.31	17.92	25.30	107.65	104.92		106.29	81.99	39.56	24.39	48.65
13	Co 13020	113.50	131.75	81.01	108.75	15.87	36.88	19.97	24.24	112.86	112.22		112.54	100.20	36.40	33.66	56.75
14	CoN 13073	97.50	84.73	73.32	85.18	38.6	93.83	41.42	57.95	88.2	108.93		98.57	109.72	32.14	26.25	56.04
15	CoSnk 13103	99.20	112.33	83.98	98.50	13.04	27.03	20.94	20.34	106.4	98.71		102.56	102.99	65.44	40.87	69.77
16	CoSnk 13106	116.20	95.56	67.39	93.05	30.22	32.12	27.65	30.00	112.68	89.66		101.17	92.41	31.65	31.08	51.71
17	PI 13132	156.10	128.11	130.56	138.26	9.87	26.20	11.80	15.96	87.25	116.54		101.90	87.22	24.73	27.50	46.48
	Stds																
1	Co 86032	114.20	100.79	101.51	105.50	37.96	43.23	20.81	34.00	109.55	121.30		115.43	107.64	33.34	30.36	57.11
2	CoC 671	98.70	91.41	85.79	91.97	26.12	60.25	15.30	33.89	81.18	98.36		89.77	91.09	46.14	25.35	54.19
3	CoSnk 05103	110.60	103.48	102.80	105.63	64.92	56.85	39.81	53.86	101.32	110.47		105.90	96.44	49.37	27.96	57.92
	Mean	116.16	114.01	95.47	108.55	26.69	42.82	20.98	30.16	100.97	104.07		102.52	96.22	54.04	32.83	61.03

*Not included for calculating overall mean since the trial mean was lower than respective state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2018-20)
Peninsular zone pooled data of two plant and ratoon

Entries	Mandya				Navsari				Padegaon				Perumalapalle			
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon*	Mean
Co 13002	79.27	82.01	64.17	75.15	120.47	121.66	102.04	114.72	81.40	94.39	61.39	79.06	88.93	112.59	62.69	88.07
Co 13003	84.62	86.04	68.75	79.80	128.80	120.61	100.19	116.53	118.05	95.35	81.60	98.33	91.41	116.09	29.22	78.91
Co 13004	74.11	74.93	74.58	74.54	127.80	123.22	107.47	119.50	106.84	105.52	86.25	99.54	70.14	128.45	39.22	79.27
CoN 13072	72.92	83.33	59.58	71.94	130.00	135.71	119.77	128.49	125.07	123.34	78.67	109.03	122.30	174.46	73.79	123.52
CoSnk 13101	87.34	73.61	56.88	72.61	127.30	104.40	97.16	109.62	86.65	123.30	79.62	96.52	99.76	87.46	45.81	77.68
MS 13081	122.52	95.97	84.17	100.89	131.70	111.77	107.63	117.03	154.60	134.78	113.82	134.40	79.19	179.88	70.47	109.85
Co 13006	81.73	90.28	65.52	79.18	118.49	128.61	110.03	119.04	144.86	115.48	104.85	121.73	102.08	140.07	67.41	103.19
Co 13008	88.35	78.61	56.25	74.40	129.30	126.21	91.67	115.73	125.62	130.95	109.87	122.15	112.83	115.99	45.34	91.39
Co 13009	90.61	85.90	72.92	83.14	117.61	111.76	106.18	111.85	128.50	114.80	113.12	118.81	55.06	140.06	51.48	82.20
Co 13013	108.33	105.49	93.54	102.45	137.40	139.12	120.06	132.19	155.80	138.67	108.33	134.27	124.70	152.46	74.90	117.35
Co 13014	80.75	94.79	82.71	86.08	115.05	118.45	105.66	113.05	129.77	117.08	103.04	116.63	89.90	146.14	60.34	98.79
Co 13018	99.9	85.49	89.79	91.73	120.83	121.12	104.12	115.36	106.13	107.15	82.75	98.68	94.15	128.99	71.57	98.24
Co 13020	93.12	88.75	66.56	82.81	125.50	123.25	107.51	118.75	136.46	128.60	82.97	116.01	100.77	136.61	63.29	100.22
CoN 13073	93.55	95.83	71.25	86.88	130.70	125.62	117.32	124.55	102.39	126.09	104.38	110.95	139.30	151.26	58.37	116.31
CoSnk 13103	73.47	74.31	48.13	65.30	122.40	103.91	90.85	105.72	114.43	122.67	86.90	108.00	78.49	90.19	33.45	67.38
CoSnk 13106	93.75	97.08	70.52	87.12	127.10	120.09	103.34	116.84	119.12	112.65	85.22	105.66	86.77	141.03	90.02	105.94
PI 13132	101.88	86.74	78.85	89.16	126.60	107.76	90.37	108.24	74.49	89.96	52.41	72.29	134.40	134.55	53.42	107.45
Stds																
Co 86032	131.85	107.08	96.04	111.66	96.20	98.60	94.76	96.52	128.08	113.98	99.38	113.81	95.20	113.63	62.79	90.54
CoC 671	127.88	101.32	94.79	108.00	93.79	96.45	82.04	90.76	90.81	97.79	67.25	85.28	84.10	102.68	16.85	67.88
CoSnk 05103	106.65	95.83	86.98	96.49	108.89	101.77	98.15	102.94	109.03	113.09	83.21	101.78	99.37	128.98	71.10	99.81
Mean	94.63	89.17	74.10	85.97	121.82	117.01	102.82	113.88	116.91	115.28	89.25	107.15	97.45	131.08	57.08	95.20

*Not included for calculating overall mean since the trial mean was lower than respective state average

Entries	Pravaranagar				Pune				Rudrur				Sameerwadi			
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean
Co 13002	135.64	141.25	131.64	136.18	62.09	96.28	56.73	71.70	119.27	105.45		112.36	67.69	116.44	81.02	88.38
Co 13003	131.40	129.31	127.73	129.48	84.27	124.45	125.68	111.47	120.57	134.43		127.50	75.18	122.45	67.59	88.41
Co 13004	121.18	131.14	117.51	123.28	104.55	119.76	90.05	104.79	124.02	132.21		128.11	77.51	108.10	74.31	86.64
CoN 13072	121.33	124.93	117.33	121.20	114.93	121.18	96.56	110.89	151.13	149.80		150.47	79.17	109.61	71.91	86.90
CoSnk 13101	110.84	116.78	107.84	111.82	92.02	104.86	75.18	90.69	130.37	122.28		126.33	76.96	97.69	70.91	81.85
MS 13081	139.70	138.66	135.03	137.80	124.69	129.32	115.26	123.09	141.48	137.95		139.72	79.29	161.11	74.61	105.00
Co 13006	120.75	125.87	118.42	121.68	106.44	96.44	97.89	100.26	112.45	127.47		119.96	73.76	158.22	72.61	101.53
Co 13008	137.92	135.61	134.92	136.15	146.60	154.84	130.14	143.86	130.68	95.71		113.19	68.51	155.21	70.99	98.24
Co 13009	130.72	141.45	127.72	133.30	141.20	143.17	122.79	135.72	162.10	101.37		131.74	64.83	166.44	74.62	101.96
Co 13013	145.00	145.77	140.54	143.77	127.68	124.09	131.80	127.86	131.44	144.11		137.77	88.02	174.54	77.47	113.34
Co 13014	141.64	146.53	136.64	141.60	117.86	114.72	90.84	107.81	118.55	126.56		122.56	81.23	146.76	79.40	102.46
Co 13018	134.59	134.96	129.93	133.16	115.91	122.05	83.27	107.08	99.93	122.55		111.24	64.72	157.29	81.02	101.01
Co 13020	121.38	131.17	117.71	123.42	96.57	123.62	78.32	99.50	137.03	107.06		122.05	63.19	153.01	76.62	97.61
CoN 13073	115.39	121.10	110.39	115.63	139.72	142.96	105.94	129.54	159.00	128.22		143.61	58.78	143.98	73.53	92.10
CoSnk 13103	118.31	121.52	114.98	118.27	91.19	97.47	74.38	87.68	126.45	126.71		126.58	62.95	122.80	79.78	88.51
CoSnk 13106	114.98	127.28	110.64	117.63	119.61	128.58	109.79	119.33	133.74	99.09		116.41	71.72	149.31	73.92	98.32
PI 13132	105.35	110.32	101.69	105.79	92.84	101.92	74.63	89.80	114.65	148.34		131.49	89.17	168.40	81.79	113.12
Stds																
Co 86032	154.59	153.40	148.26	152.08	127.37	125.78	110.65	121.27	108.76	111.75		110.26	81.59	155.79	77.09	104.82
CoC 671	124.84	126.31	120.84	124.00	108.45	114.54	78.52	100.50	103.92	130.13		117.02	58.78	136.00	67.21	87.33
CoSnk 05103	124.97	129.64	120.63	125.08	96.78	109.62	84.06	96.82	123.82	82.96		103.39	51.54	112.73	70.75	78.34
Mean	127.54	131.65	123.52	127.57	110.54	119.78	96.62	108.98	127.47	121.71		124.59	71.73	140.79	74.86	95.79

*Not included for calculating overall mean since the trial mean was lower than respective state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2018-20)
Peninsular zone pooled data of two plant and ratoon

Entries	Sankeshwar				Thiruvalla			Mean	Overall Mean (all)			Weighted Average	Rank
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon		AVT IP	AVT IIP	AVT Ratoon		
Co 13002	57.34	83.24	67.78	69.45	79.31	88.86	75.07	81.08	88.44	104.26	82.18	92.37	
Co 13003	109.91	130.79	97.58	112.76	65.35	77.80	71.14	71.43	99.80	112.40	95.43	103.09	
Co 13004	104.97	118.16	79.63	100.92	86.25	95.76	99.85	93.95	101.15	111.93	90.77	102.21	
CoN 13072	89.07	119.85	110.11	106.34	66.74	73.86	89.24	76.61	107.87	118.41	91.17	107.17	
CoSnk 13101	93.67	127.56	104.49	108.57	75.42	101.89	79.70	85.67	96.19	102.12	81.93	94.51	
MS 13081	123.96	149.77	109.82	127.85	90.14	76.29	52.73	73.05	121.33	128.24	101.48	118.51	2
Co 13006	91.31	132.71	103.70	109.24	76.53	86.89	69.24	77.55	103.78	116.83	93.92	105.77	
Co 13008	83.37	141.26	96.53	107.05	69.72	90.98	57.65	72.78	107.95	123.63	93.05	109.54	
Co 13009	112.34	131.29	94.39	112.67	61.67	106.97	71.82	80.15	103.49	124.07	97.89	109.27	
Co 13013	107.60	137.92	121.58	122.37	73.68	85.83	80.53	80.01	121.64	133.57	106.96	121.96	1
Co 13014	94.81	153.54	102.05	116.80	66.87	72.95	72.12	70.65	104.22	124.28	100.60	110.34	3
Co 13018	92.23	86.34	89.47	89.35	67.85	80.15	87.88	78.63	100.34	114.24	94.97	103.82	
Co 13020	79.11	133.11	111.99	108.07	75.21	73.64	68.26	72.37	104.22	120.23	87.88	105.55	
CoN 13073	92.07	120.34	119.35	110.59	100.00	88.33	91.52	93.28	109.72	119.78	96.33	109.73	
CoSnk 13103	98.20	146.75	116.87	120.61	79.17	81.36	85.83	82.12	97.97	108.23	86.86	98.65	
CoSnk 13106	109.42	142.50	112.86	121.59	83.12	96.21	76.89	85.41	106.20	116.59	90.06	105.59	
PI 13132	92.48	121.58	55.85	89.97	96.90	86.21	84.32	89.14	104.56	116.70	83.39	103.24	
Stds													
Co 86032	106.53	120.30	102.75	109.86	78.47	85.38	73.10	78.98	110.77	117.32	100.39	110.33	4
CoC 671	96.40	146.91	72.15	105.15	56.11	85.23	68.41	69.92	93.54	110.59	81.89	96.48	
CoSnk 05103	94.12	143.90	107.58	115.20	78.82	74.17	73.70	75.56	100.18	108.89	91.98	101.08	
Mean	96.44	129.39	98.83	108.22	76.37	85.44	76.45	79.42	104.17	116.61	92.44	105.46	

*Not included for calculating overall mean since the trial mean was lower than respective state average

Table 2.3.3 Pooled mean CCS % at harvest

S No	Entries	Coimbatore				Akola				Basmathnagar				Kolhapur			Mean
		AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP*	AVT Ratoon*	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP*	AVT Ratoon*	
1	Co 13002	13.77	13.91	14.42	14.03		15.27	13.25	14.26	13.56	11.46		12.51	15.92	12.42	12.52	13.62
2	Co 13003	14.29	15.16	14.68	14.71		15.36	12.78	14.07	12.67	12.42		12.55	14.2	11.64	12.31	12.72
3	Co 13004	14.72	13.28	14.64	14.21		15.05	12.69	13.87	12.99	12.31		12.65	16.33	11.72	12.30	13.45
4	CoN 13072	14.82	12.14	12.99	13.32		15.00	13.05	14.03	14.62	10.44		12.53	15.21	12.09	12.10	13.13
5	CoSnk 13101	12.38	13.94	14.49	13.60		15.61	12.45	14.03	13.08	12.85		12.97	15.75	12.67	13.19	13.87
6	MS 13081	14.08	13.57	12.64	13.43		16.36	12.73	14.55	13.38	13.61		13.50	15.4	12.38	12.63	13.47
7	Co 13006	14.25	13.19	13.62	13.69		14.97	12.07	13.52	13.27	12.82		13.05	15.83	14.65	12.21	14.23
8	Co 13008	13.52	13.87	14.31	13.90		14.84	11.56	13.20	14.03	13.09		13.56	14.83	14.39	11.55	13.59
9	Co 13009	13.33	11.75	13.97	13.02		14.24	12.81	13.53	14.5	12.67		13.59	15	12.28	13.06	13.45
10	Co 13013	12.81	12.76	13.17	12.91		15.02	13.03	14.03	13.83	11.21		12.52	15.64	11.64	13.69	13.66
11	Co 13014	12.99	12.72	13.47	13.06		14.57	11.46	13.02	13.79	12.05		12.92	14.96	13.35	12.65	13.65
12	Co 13018	14.09	14.29	13.47	13.95		16.00	12.86	14.43	13.96	11.12		12.54	15.53	12.11	12.52	13.39
13	Co 13020	14.86	13.83	14.26	14.32		15.79	11.89	13.84	13.86	12.53		13.20	15.93	12.73	11.85	13.50
14	CoN 13073	13.12	11.59	11.70	12.14		14.44	12.26	13.35	12.81	11.33		12.07	15.13	10.14	12.83	12.70
15	CoSnk 13103	14.37	13.78	14.25	14.13		15.31	12.06	13.69	13.99	12.72		13.36	15.57	14.19	12.23	14.00
16	CoSnk 13106	13.85	12.83	13.57	13.42		14.63	12.84	13.74	13.65	11.62		12.64	15.72	12.80	12.40	13.64
17	PI 13132	12.99	12.84	13.15	12.99		15.91	12.48	14.20	13.66	13.33		13.50	15.39	10.74	12.65	12.93
	Stds																
1	Co 86032	13.89	13.59	13.60	13.69		14.87	13.43	14.15	13.39	12.38		12.89	14.73	12.05	12.01	12.93
2	CoC 671	15.35	14.50	14.88	14.91		15.79	12.82	14.31	12.9	12.06		12.48	15.77	12.38	12.46	13.54
3	CoSnk 05103	12.55	12.51	13.24	12.77		14.86	12.07	13.47	13.5	11.97		12.74	14.64	12.30	12.33	13.09
	Mean	13.8	13.30	13.83	13.64		15.20	12.53	13.87	13.57	12.20		12.89	15.37	12.46	12.47	13.43

*Not included for calculating overall mean since the trial mean was lower than respective state average

Entries	Mandya				Navsari				Padegaon				Perumalapalle			
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon*	Mean
Co 13002	14.89	14.17	13.70	14.25	13.95	13.56	12.36	13.29	16.28	14.11	14.31	14.90	13.42	11.63	12.47	12.51
Co 13003	13.64	14.70	14.61	14.32	13.54	13.65	12.74	13.31	15.02	14.90	15.10	15.01	13.63	13.39	11.68	12.90
Co 13004	14.57	14.62	15.00	14.73	12.81	14.56	11.78	13.05	15.64	15.46	15.53	15.54	13.5	13.14	12.00	12.88
CoN 13072	13.79	14.34	13.61	13.91	12.37	14.27	13.03	13.22	15	14.27	14.47	14.58	12.59	12.53	12.23	12.45
CoSnk 13101	13.62	13.19	13.72	13.51	14.02	13.55	12.98	13.52	14.75	14.57	14.64	14.65	12.66	14.14	11.97	12.92
MS 13081	13.64	13.87	14.51	14.01	13.53	13.19	12.63	13.12	15.27	15.59	15.39	15.42	12.27	13.78	13.24	13.10
Co 13006	14.27	14.22	14.99	14.49	13.98	13.67	11.53	13.06	15.41	14.30	14.50	14.74	12.57	10.33	11.03	11.31
Co 13008	13.87	14.39	14.00	14.09	13.13	13.49	12.78	13.13	15.41	14.19	14.39	14.66	12.61	12.87	12.42	12.63
Co 13009	14.27	13.37	13.13	13.59	13.88	14.60	10.23	12.90	16.22	14.47	14.67	15.12	10.06	11.21	9.30	10.19
Co 13013	14.71	13.68	13.13	13.84	14.1	13.37	11.53	13.00	15.54	14.42	14.62	14.86	12.7	12.95	12.02	12.56
Co 13014	13.66	13.77	12.13	13.19	13.67	14.50	13.15	13.77	15.79	14.59	14.79	15.06	10.22	12.53	12.26	11.67
Co 13018	14.69	14.82	15.15	14.89	13.5	13.26	12.49	13.08	15.29	14.55	14.75	14.86	13.29	12.96	10.04	12.09
Co 13020	14.6	14.68	14.84	14.71	13.55	14.22	13.01	13.59	15.89	15.07	15.27	15.41	13.56	12.80	13.07	13.14
CoN 13073	13.93	14.28	13.87	14.03	13.95	12.79	12.13	12.96	13.7	12.51	12.71	12.97	10.37	10.41	10.21	10.33
CoSnk 13103	13.48	14.12	14.52	14.04	13.58	14.68	12.47	13.58	14.93	13.72	13.92	14.19	12	13.43	13.08	12.84
CoSnk 13106	14.1	14.57	14.85	14.51	13.54	12.51	12.22	12.76	15.55	14.22	14.42	14.73	10.72	10.30	10.10	10.37
PI 13132	14.08	14.10	14.69	14.29	13.59	13.95	13.45	13.66	15.21	13.77	13.97	14.32	12.44	12.77	12.56	12.59
Stds																
Co 86032	14.02	13.95	13.65	13.87	15.13	14.36	12.02	13.84	15.29	13.41	13.61	14.10	12.98	12.83	13.80	13.20
CoC 671	15.27	15.23	15.14	15.21	16.01	15.54	13.13	14.89	15.55	15.59	15.29	15.48	13.62	14.19	12.28	13.36
CoSnk 05103	15.38	13.36	13.67	14.14	13.93	14.75	12.75	13.81	14.81	14.21	14.41	14.48	11.87	11.83	11.96	11.89
Mean	14.22	14.17	14.15	14.18	13.79	13.92	12.42	13.38	15.33	14.40	14.54	14.76	12.35	12.50	11.88	12.25

*Not included for calculating overall mean since the trial mean was lower than respective state average

Varietal Improvement Programme- AICRP (Sugarcane)
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Peninsular zone pooled data of two plant and ratoon

Entries	Pravaranagar				Pune				Rudrur				Sameerwadi			
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP*	AVT IIP	AVT Ratoon	Mean
Co 13002	13.27	14.16	13.26	13.56	13.89	14.88	13.92	14.23	14.43	11.92		13.17	13.66	15.17	14.03	14.29
Co 13003	13.70	14.49	13.68	13.96	12.78	14.69	13.93	13.80	12.70	14.35		13.52	13.44	14.94	13.24	13.87
Co 13004	12.21	13.18	12.19	12.53	13.59	15.03	14.27	14.30	12.29	14.32		13.30	13.50	13.22	12.43	13.05
CoN 13072	13.76	13.27	12.19	13.07	14.41	13.41	13.89	13.90	13.19	12.65		12.92	14.77	14.28	12.64	13.90
CoSnk 13101	12.24	15.08	14.44	13.92	12.84	14.13	14.10	13.69	13.55	12.43		12.99	12.02	15.08	13.65	13.58
MS 13081	14.47	14.67	13.68	14.27	13.49	14.60	13.76	13.95	13.72	12.74		13.23	12.98	15.01	13.65	13.88
Co 13006	13.70	14.60	13.73	14.01	13.63	13.44	14.20	13.76	14.49	13.20		13.85	13.93	14.07	12.71	13.57
Co 13008	14.25	14.54	14.08	14.29	13.80	14.29	14.21	14.10	14.08	13.66		13.87	12.46	13.88	12.54	12.96
Co 13009	13.05	13.90	13.04	13.33	13.17	13.42	10.88	12.49	13.91	13.41		13.66	13.67	14.15	12.22	13.35
Co 13013	14.07	14.75	14.05	14.29	13.39	13.38	14.06	13.61	10.78	11.98		11.38	12.64	14.05	13.44	13.38
Co 13014	13.70	14.31	13.68	13.90	13.19	12.88	13.52	13.20	13.01	12.63		12.82	14.70	14.61	12.79	14.03
Co 13018	13.92	14.86	13.90	14.23	12.74	13.82	13.98	13.51	13.79	14.35		14.07	13.90	14.26	12.95	13.70
Co 13020	14.58	15.17	14.56	14.77	12.40	13.31	14.35	13.35	13.84	11.86		12.85	14.79	15.10	13.29	14.39
CoN 13073	12.79	13.81	12.77	13.12	12.00	12.05	11.95	12.00	12.18	11.81		11.99	12.86	13.70	10.88	12.48
CoSnk 13103	13.52	14.22	13.50	13.75	13.71	14.04	13.99	13.91	14.56	14.10		14.33	13.20	14.58	12.09	13.29
CoSnk 13106	14.37	13.15	14.36	13.96	13.85	13.94	13.37	13.72	11.56	11.88		11.72	13.85	14.42	13.50	13.92
PI 13132	15.05	15.27	15.03	15.12	12.90	13.99	13.44	13.44	12.36	12.28		12.32	12.82	14.40	12.55	13.26
Stds																
Co 86032	13.40	14.24	13.38	13.67	13.66	13.52	14.02	13.73	13.46	12.57		13.01	13.75	14.18	13.17	13.70
CoC 671	14.86	15.26	14.86	14.99	14.93	15.48	14.70	15.04	15.22	13.82		14.52	14.29	14.39	14.26	14.31
CoSnk 05103	13.26	14.12	13.23	13.54	13.03	12.95	13.19	13.06	11.59	12.63		12.11	12.97	13.99	13.15	13.37
Mean	13.71	14.35	13.68	13.91	13.37	13.86	13.69	13.64	13.24	12.93		13.08	13.51	14.37	12.96	13.61

*Not included for calculating overall mean since the trial mean was lower than respective state average

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2018-20)
Peninsular zone pooled data of two plant and ratoon

Entries	Sankeshwar				Thiruvalla				Overall Mean			Weighted Average	Rank
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon		
Co 13002	14.92	14.80	14.93	14.88	12.75	14.26	13.27	13.43	14.21	13.67	13.80	13.91	3
Co 13003	13.13	15.10	14.68	14.30	12.95	14.25	14.42	13.87	13.51	14.34	14.12	13.97	2
Co 13004	14.06	15.34	14.22	14.54	12.88	12.45	12.51	12.61	13.78	13.91	13.62	13.78	
CoN 13072	14.72	14.89	14.76	14.79	11.76	13.65	14.28	13.23	13.92	13.35	13.54	13.62	
CoSnk 13101	12.04	14.74	16.08	14.29	12.80	13.91	13.96	13.56	13.21	13.97	14.23	13.75	
MS 13081	12.77	14.82	14.37	13.99	13.68	13.78	13.45	13.64	13.74	14.10	13.79	13.88	4
Co 13006	14.42	15.11	15.78	15.10	12.27	13.72	14.45	13.48	14.00	13.56	13.95	13.83	5
Co 13008	11.79	12.61	11.81	12.07	12.78	13.98	14.11	13.62	13.58	13.74	13.58	13.64	
Co 13009	11.40	10.45	9.84	10.56	12.05	13.17	12.52	12.58	13.42	13.05	12.28	12.99	
Co 13013	13.38	14.10	13.92	13.80	11.83	12.35	13.02	12.40	13.49	13.25	13.44	13.39	
Co 13014	14.39	11.94	10.08	12.14	12.86	15.13	14.52	14.17	13.61	13.47	13.13	13.43	
Co 13018	12.86	14.50	13.85	13.74	12.81	13.06	13.24	13.04	13.87	13.82	13.75	13.82	
Co 13020	12.72	13.54	12.64	12.97	10.97	11.83	11.93	11.58	13.97	13.66	13.79	13.81	
CoN 13073	11.17	13.25	12.74	12.39	12.03	13.97	14.47	13.49	12.77	12.63	12.58	12.67	
CoSnk 13103	12.99	13.94	13.87	13.60	11.98	13.19	13.33	12.83	13.68	13.88	13.55	13.72	
CoSnk 13106	13.81	13.76	12.80	13.46	12.73	15.07	13.86	13.89	13.64	13.19	13.66	13.49	
PI 13132	13.60	14.24	12.78	13.54	11.70	13.23	12.92	12.62	13.52	13.68	13.55	13.59	
Stds													
Co 86032	11.67	13.90	12.94	12.84	13.02	13.59	13.75	13.45	13.72	13.54	13.35	13.56	
CoC 671	13.54	16.28	14.54	14.79	13.68	13.86	14.06	13.87	14.69	14.68	14.54	14.65	1
CoSnk 05103	12.80	14.10	14.39	13.76	12.77	12.82	12.92	12.84	13.32	13.27	13.44	13.33	
Mean	13.11	14.07	13.55	13.58	12.52	13.56	13.55	13.21	13.68	13.64	13.60	13.64	

*Not included for calculating overall mean since the trial mean was lower than respective state average

Table 2.3.4 Pooled Mean sucrose % at harvest

S No	Entries	Coimbatore				Akola				Basmathnagar				Kolhapur			
		AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP*	AVT Ratoon*	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP*	AVT Ratoon*	Mean
1	Co 13002	19.55	19.72	20.31	19.86		21.28	19.02	20.15	19.03	16.55		17.79	22.16	17.25	17.66	19.02
2	Co 13003	20.29	21.44	20.80	20.84		21.31	18.43	19.87	17.96	17.88		17.92	20.14	16.25	17.15	17.85
3	Co 13004	20.77	18.85	20.62	20.08		20.73	18.38	19.56	18.22	17.56		17.89	22.46	16.33	17.29	18.69
4	CoN 13072	17.95	17.62	18.56	18.04		20.89	18.32	19.61	18.05	15.69		16.87	21.90	16.93	17.06	18.63
5	CoSnk 13101	19.89	19.75	20.35	20.00		21.51	18.01	19.76	18.66	18.38		18.52	21.17	17.69	18.49	19.12
6	MS 13081	20.09	19.17	18.00	19.09		22.53	18.40	20.47	18.50	19.09		18.80	21.79	17.31	17.81	18.97
7	Co 13006	20.79	18.74	19.30	19.61		20.95	17.76	19.36	20.09	18.40		19.25	21.28	20.86	17.21	19.78
8	Co 13008	19.25	19.73	20.13	19.70		20.58	17.40	18.99	19.60	18.60		19.10	20.57	20.56	16.23	19.12
9	Co 13009	19.07	16.81	19.84	19.06		19.76	18.39	19.08	19.84	18.03		18.94	20.83	17.16	18.45	18.81
10	Co 13013	18.33	18.28	18.76	18.46		20.84	18.69	19.77	19.38	16.06		17.72	21.70	16.25	19.42	19.12
11	Co 13014	18.49	18.13	19.11	18.58		20.13	17.31	18.72	19.28	17.16		18.22	20.69	18.68	17.68	19.02
12	Co 13018	19.99	20.24	19.03	19.75		22.04	18.60	20.32	19.40	15.97		17.69	21.39	16.99	17.66	18.68
13	Co 13020	21.10	19.76	20.22	20.36		21.81	17.78	19.80	19.49	17.99		18.74	21.98	17.43	16.62	18.68
14	CoN 13073	18.66	16.79	16.83	17.43		20.12	17.84	18.98	18.32	16.16		17.24	21.10	14.11	18.10	17.77
15	CoSnk 13103	20.30	19.56	20.13	20.00		21.15	17.75	19.45	19.64	18.43		19.04	21.48	20.08	17.08	19.55
16	CoSnk 13106	19.60	18.27	19.20	19.02		20.21	18.61	19.41	19.14	16.62		17.88	21.68	17.91	17.44	19.01
17	PI 13132	18.59	18.24	18.55	18.46		21.97	18.17	20.07	19.03	19.08		19.06	21.26	14.89	17.88	18.01
	Stds																
1	Co 86032	19.68	19.30	19.55	19.51		20.62	19.15	19.89	19.04	17.89		18.47	20.47	16.79	16.97	18.08
2	CoC 671	22.61	20.47	21.11	21.40		21.81	18.81	20.31	18.24	17.40		17.82	21.82	17.31	17.45	18.86
3	CoSnk 05103	17.98	17.85	18.72	18.18		20.79	17.85	19.32	18.84	17.24		18.04	20.48	17.22	17.23	18.31
	Mean	19.65	18.94	19.57	19.39		21.05	18.23	19.64	18.99	17.51		18.25	21.32	17.40	17.54	18.75

*Not included for calculating overall mean since the trial mean was lower than respective state average

Entries	Mandya				Navsari				Padegaon				Perumalapalle			
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon*	Mean
Co 13002	20.92	19.92	19.17	20.00	19.49	19.21	18.04	18.91	23.02	20.06	20.11	21.06	18.79	16.69	17.83	17.77
Co 13003	19.08	20.60	20.49	20.06	18.92	19.41	18.48	18.94	21.36	21.06	21.12	21.18	19.28	19.16	17.30	18.58
Co 13004	20.39	20.46	21.04	20.63	18.34	20.49	17.30	18.71	22.62	21.76	21.69	22.02	18.88	18.45	17.55	18.29
CoN 13072	19.14	20.04	19.16	19.45	19.95	20.04	18.80	19.60	21.28	20.24	20.29	20.60	17.92	17.71	17.64	17.76
CoSnk 13101	19.06	18.48	19.16	18.90	19.16	19.17	18.68	19.00	21.69	20.57	20.49	20.92	17.54	19.95	17.55	18.35
MS 13081	19.95	19.39	20.19	19.84	19.69	18.96	18.41	19.02	21.82	21.88	21.56	21.75	17.80	19.09	18.85	18.58
Co 13006	19.39	19.90	20.94	20.08	17.55	19.32	16.95	17.94	21.40	20.29	20.34	20.68	17.83	15.02	16.01	16.29
Co 13008	19.40	20.22	19.60	19.74	18.62	19.18	18.49	18.76	21.76	20.06	20.11	20.64	17.74	18.04	17.64	17.81
Co 13009	19.93	18.69	18.38	19.00	19.43	20.46	15.41	18.43	22.81	20.48	20.53	21.27	14.45	15.96	13.65	14.69
Co 13013	20.60	19.17	18.38	19.38	20.00	18.90	16.78	18.56	21.94	20.41	20.46	20.94	17.94	18.45	17.29	17.89
Co 13014	19.06	19.27	17.03	18.45	19.35	20.34	18.89	19.53	22.38	20.43	20.48	21.10	15.02	17.62	17.51	16.72
Co 13018	20.58	20.77	21.16	20.84	19.16	18.93	18.09	18.73	21.69	20.57	20.63	20.96	18.66	18.22	14.61	17.16
Co 13020	20.48	20.60	20.74	20.61	19.22	20.04	18.83	19.36	22.47	21.21	21.26	21.65	19.00	18.30	18.91	18.74
CoN 13073	19.58	20.08	19.39	19.68	19.64	18.07	17.47	18.39	19.63	18.00	18.06	18.56	15.01	15.07	15.13	15.07
CoSnk 13103	18.94	19.79	20.29	19.67	19.26	20.65	18.19	19.37	21.24	19.62	19.67	20.18	16.89	18.82	18.48	18.06
CoSnk 13106	19.69	20.38	20.72	20.26	19.01	18.24	17.70	18.32	21.96	19.99	20.04	20.66	15.23	14.93	15.05	15.07
PI 13132	19.90	19.69	20.51	20.03	19.14	19.90	19.30	19.45	21.63	19.57	19.63	20.28	17.50	18.05	18.09	17.88
Stds																
Co 86032	19.59	19.50	19.06	19.38	21.02	20.04	17.51	19.52	21.67	19.02	19.08	19.92	18.21	18.24	19.44	18.63
CoC 671	21.38	21.33	21.26	21.32	22.35	21.79	18.93	21.02	22.17	21.92	21.48	21.86	19.22	19.94	17.51	18.89
CoSnk 05103	21.57	18.68	19.16	19.80	19.54	20.84	18.44	19.61	21.28	20.19	20.24	20.57	17.09	17.06	17.26	17.14
Mean	19.93	19.85	19.79	19.86	19.43	19.70	18.03	19.05	21.79	20.37	20.36	20.84	17.50	17.74	17.16	17.47

*Not included for calculating overall mean since the trial mean was lower than respective state average

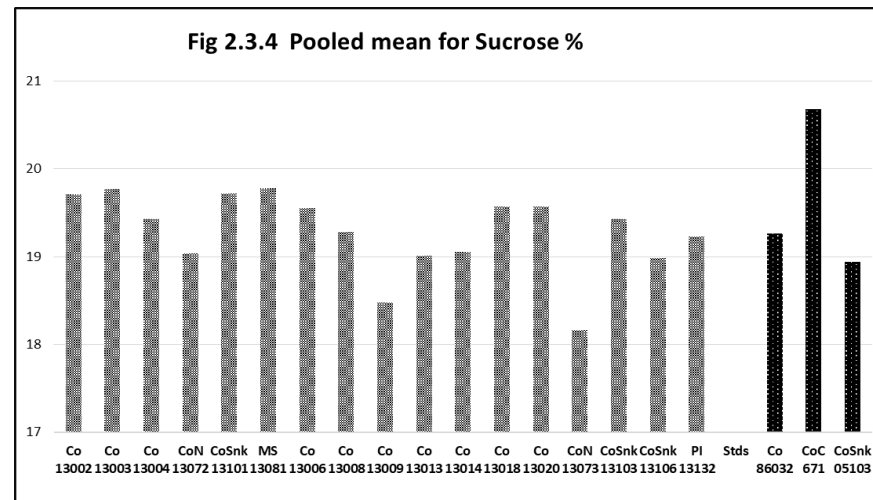
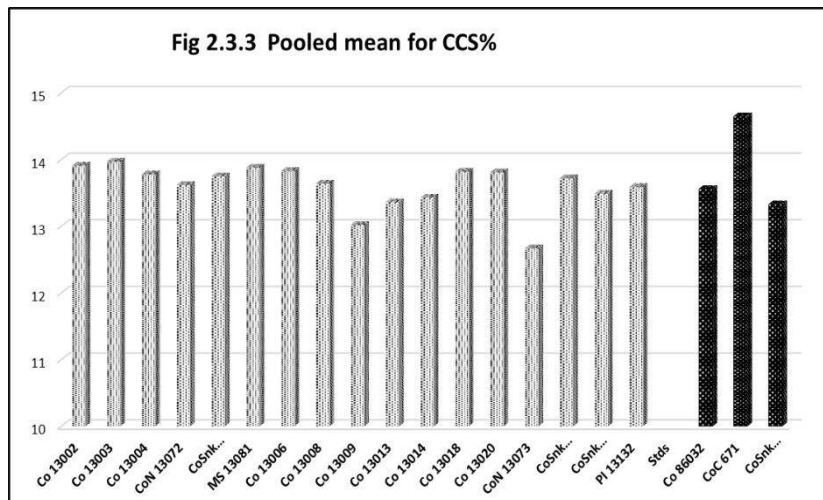
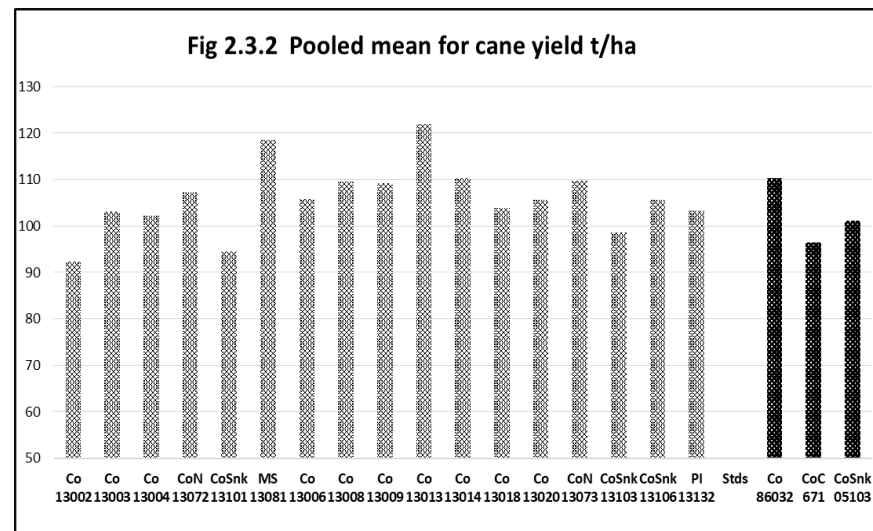
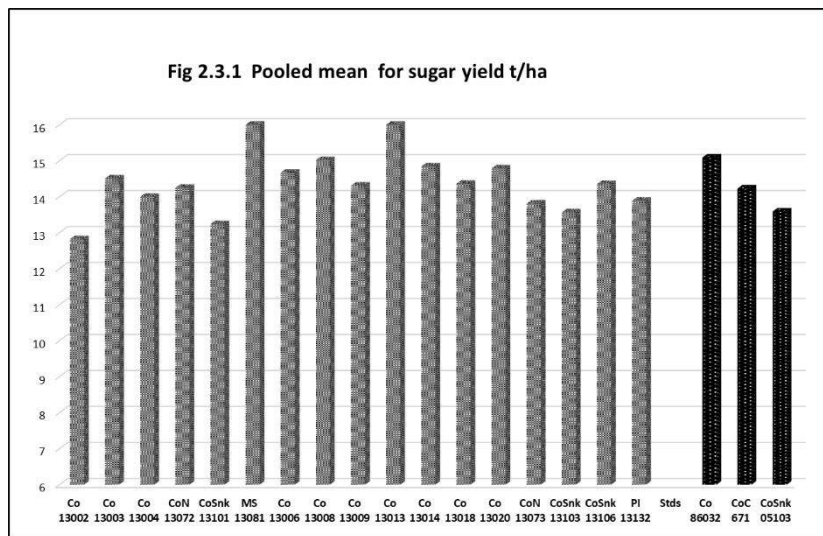
Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2018-20)
Peninsular zone pooled data of two plant and ratoon

Entries	Pravaranagar				Pune				Rudrur				Sameerwadi			
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean
Co 13002	18.96	20.72	18.94	19.54	19.51	20.44	19.25	19.73	20.35	16.87		18.61	19.41	21.65	20.01	20.36
Co 13003	19.10	20.06	19.08	19.41	18.08	20.36	19.39	19.28	18.27	20.05		19.16	19.22	21.27	19.00	19.83
Co 13004	17.00	17.06	16.98	17.01	19.04	20.73	19.82	19.86	17.61	20.04		18.83	19.26	18.96	17.94	18.72
CoN 13072	17.36	20.00	17.35	18.24	18.02	18.93	19.44	18.80	19.20	18.07		18.63	17.44	20.37	18.37	18.73
CoSnk 13101	20.34	21.09	20.33	20.59	18.99	19.49	19.42	19.30	19.42	17.67		18.55	18.57	21.57	19.58	19.91
MS 13081	19.58	21.24	19.56	20.13	19.38	20.14	19.31	19.61	20.34	18.09		19.22	19.77	21.42	19.50	20.23
Co 13006	19.32	20.33	19.31	19.65	20.37	19.10	19.73	19.73	18.75	18.74		18.74	20.91	20.14	18.30	19.78
Co 13008	19.84	20.55	19.82	20.07	19.37	19.83	19.67	19.62	19.88	19.21		19.54	17.92	19.82	18.06	18.60
Co 13009	18.63	20.36	18.61	19.20	18.55	18.79	15.15	17.50	19.65	19.06		19.36	19.53	20.19	17.60	19.11
Co 13013	19.85	20.79	19.83	20.16	18.91	18.75	19.48	19.05	15.96	17.19		16.57	18.11	20.07	19.29	19.16
Co 13014	19.47	20.97	19.45	19.96	18.61	18.12	18.62	18.45	18.74	18.06		18.40	20.78	20.99	18.36	20.04
Co 13018	19.78	21.09	19.77	20.21	18.15	19.23	19.44	18.94	19.63	20.04		19.84	19.78	20.34	18.64	19.59
Co 13020	20.62	21.15	20.61	20.79	17.78	18.52	19.83	18.71	19.63	17.17		18.40	21.06	21.50	19.09	20.55
CoN 13073	18.56	21.03	18.55	19.38	17.22	17.05	16.83	17.03	17.59	16.90		17.25	18.42	19.65	15.91	17.99
CoSnk 13103	18.96	20.85	18.94	19.58	19.16	19.50	19.35	19.34	20.35	19.70		20.03	18.86	20.61	17.52	19.00
CoSnk 13106	19.10	18.02	19.09	18.74	19.48	19.22	18.36	19.02	16.89	16.63		16.76	19.72	20.49	19.33	19.85
PI 13132	21.14	21.46	21.13	21.24	18.23	19.51	18.68	18.81	17.82	17.44		17.63	18.42	20.49	18.03	18.98
Stds																
Co 86032	19.18	21.04	19.17	19.80	19.18	18.95	19.47	19.20	19.18	17.95		18.57	19.58	20.15	18.84	19.52
CoC 671	20.76	21.29	20.74	20.93	20.85	21.41	20.35	20.87	21.44	19.41		20.43	20.29	20.62	20.31	20.41
CoSnk 05103	18.78	20.34	18.76	19.29	18.38	18.13	18.40	18.30	16.88	17.93		17.40	18.55	19.98	18.80	19.11
Mean	19.32	20.47	19.30	19.70	18.86	19.31	19.00	19.06	18.88	18.31		18.60	19.28	20.51	18.62	19.47

*Not included for calculating overall mean since the trial mean was lower than respective state average

Entries	Sankeshwar				Thiruvalla				Overall Mean			Weighted Average	Rank
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP	AVT IIP	AVT Ratoon		
Co 13002	21.39	21.18	21.37	21.31	18.18	20.22	18.77	19.06	20.06	19.44	19.55	19.70	5
Co 13003	18.99	21.55	21.06	20.53	18.47	20.22	20.44	19.71	19.17	20.25	19.98	19.77	3
Co 13004	20.33	21.71	20.46	20.83	18.32	17.65	17.78	17.92	19.48	19.48	19.29	19.43	
CoN 13072	17.93	21.34	21.28	20.18	18.26	19.34	20.23	19.28	18.80	19.12	19.28	19.04	
CoSnk 13101	19.07	21.05	22.79	20.97	19.50	19.71	19.78	19.66	19.47	19.74	20.06	19.72	4
MS 13081	20.69	21.27	20.83	20.93	17.50	19.50	19.05	18.68	19.76	19.94	19.60	19.78	2
Co 13006	21.19	21.62	22.49	21.77	16.77	19.48	20.50	18.92	19.66	19.26	19.76	19.55	
Co 13008	17.26	18.04	17.32	17.54	18.19	19.79	20.01	19.33	19.18	19.42	19.25	19.28	
Co 13009	16.51	15.28	14.47	15.42	17.15	18.62	17.78	17.85	18.95	18.68	17.53	18.48	
Co 13013	19.45	20.14	20.17	19.92	16.85	17.54	18.46	17.62	19.16	18.81	19.07	19.01	
Co 13014	20.45	17.24	15.05	17.58	18.32	21.01	20.59	19.97	19.28	19.11	18.62	19.05	
Co 13018	18.73	20.74	20.10	19.86	18.26	18.53	18.75	18.51	19.63	19.56	19.51	19.57	
Co 13020	18.38	19.16	18.71	18.75	15.69	16.75	16.95	16.46	19.76	19.35	19.58	19.57	
CoN 13073	16.79	18.95	18.52	18.09	17.13	19.79	20.51	19.14	18.28	18.13	18.01	18.15	
CoSnk 13103	19.00	19.98	20.20	19.73	17.07	18.68	18.90	18.22	19.32	19.68	19.24	19.43	
CoSnk 13106	19.73	19.59	18.64	19.32	18.11	20.93	19.63	19.56	19.18	18.61	19.19	18.98	
PI 13132	19.52	20.20	18.56	19.43	16.70	18.75	18.31	17.92	19.14	19.37	19.19	19.23	
Stds													
Co 86032	17.28	19.94	18.85	18.69	18.55	19.27	19.50	19.11	19.43	19.27	19.00	19.26	
CoC 671	19.32	22.98	20.78	21.03	19.51	19.63	19.93	19.69	20.77	20.68	20.54	20.68	1
CoSnk 05103	18.82	20.06	20.33	19.74	18.19	18.16	18.31	18.22	18.95	18.87	19.02	18.94	
Mean	19.04	20.10	19.60	19.58	17.84	19.18	19.21	18.74	19.37	19.33	19.28	19.33	

*Not included for calculating overall mean since the trial mean was lower than respective state average



2.4. Advanced Varietal Trial I Plant (2019-20)

Centers where trial was conducted (14)	Coimbatore, Basmathnagar, Kolhapur, Mandya, Navsari, Padegaon, Perumallapalle, Pravaranagar, Pugalur, Pune, Rudrur, Sameervadi, Sankeshwar, Thiruvalla
Entries (15)	Co 14002, Co 14004, Co 14012, Co 14016, Co 14027, Co 14030, Co 14032, CoN 14073, CoSnk 14102, CoSnk 14103, CoT 14367, CoTI 14111, CoVC 14062, MS 14081, MS 14082
Standards (3)	Co 86032, CoC 671 and CoSnk 05103
Design	RBD
Replications	Three
Plot size	6 m x 8 rows x 1.2 m (Gross) 5m x 6 rows x 1.2 m (Net)
Seed rate	12 buds per meter
Planting time	December- January
Crop duration	12 months

Results of the previous year: Thirty seven entries along with three standards (Co 86032, CoC 671 and CoSnk 05103) were evaluated in alpha design at 15 locations in IVT during 2017-18. The test entry MS 14082 (17.38 t/ha) recorded higher sugar yield than the best standard Co 86032 (17.12 t/ha) in the zone. Four entries *viz.*, CoN14071 (131.84 t/ha), MS 14082 (127.93 t/ha), CoN14074 (125.98 t/ha) and CoT14366 (124.56 t/ha) recorded numerically superior mean cane yield than the best standard Co 86032 (123.50 t/ha). Co 14012 (14.22%) recorded numerically higher CCS % over the best standard CoC 671 (14.09%) in the zone. Similarly for sucrose per cent Co14012 (20.23 %) was numerically superior to CoC 671 (20.11%). None of the entries were identified as qualifying in the zone.

Results of the current year: Fifteen clones were evaluated along with three standards (Co 86032, CoC 671 and CoSnk 05103) at 14 centres during 2019-20. Akola, Kawardha, Powerkheda, and Sirugamani centres didn't conduct the trial. Four test entries *viz.*, MS 14082 (16.24 t/ha), CoTI 14111 (15.60 t/ha), CoN 14073 (15.49 t/ha) and Co 14016 (15.27 t/ha) recorded higher sugar yield than the best standard Co 86032 (15.25 t/ha) in the zone. MS 14082 and CoTI 14111 recorded more than 10% improvement for sugar yield over the best standard at four and three locations respectively. Four entries *viz.*, CoN 14073 (123.62 t/ha), MS 14082 (122.73 t/ha), CoTI 14111 (117.30 t/ha), and Co 14016 (114.63 t/ha) had higher cane yield than the best check Co 86032 (114.39 t/ha). The entry MS 14082 recorded more than 10% improvement for cane yield over the best standard at six locations followed by Co 14002, CoN 14073 and CoTI 14111 at five locations each. None of the entries recorded more than 10% improvement over the best standard for mean CCS yield and cane yield across the locations. None of the entries recorded higher CCS % and sucrose per cent than the best standard CoC 671 (14.38% and 20.31% respectively) in this trial. The test entries Co 14032 and Co 14012 ranked as second and third respectively in the zone for CCS% (13.79% and 13.73% respectively) and sucrose per cent (19.58% and 19.48% respectively). No qualifying entry was identified in the zone. The data are presented in the tables **2.4.1 to 2.4.34**.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.1 CCS t/ha at harvest

S No	Entries	Coimbatore#	Basmath nagar	Kolhapur#	Mandya	Navsari#	Padegao n#	Perumalpalale#	Pravara nagar	Pugalur	Pune#	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 14002	19.37	14.62	13.48	13.24	17.96	13.71	9.29	17.05	14.24	21.03	16.97	15.79	12.39	12.06	15.09	
2	Co 14004	20.20	11.13	9.42	14.77	17.62	14.15	12.75	18.89	14.40	18.29	13.98	16.99	13.22	10.13	14.71	
3	Co 14012	17.87	7.90	6.30	12.12	17.97	16.92	9.53	21.85	15.36	19.25	13.33	11.81	15.73	12.60	14.18	
4	Co 14016	20.53	10.57	5.70	15.36	16.62	17.23	15.80	19.84	17.35	16.30	14.66	17.99	13.83	12.04	15.27	4
5	Co 14027	20.30	8.73	5.82	15.43	18.53	14.88	13.17	20.44	12.38	10.95	14.07	13.44	17.53	11.44	14.08	
6	Co 14030	16.55	12.63	9.31	11.36	16.01	11.86	12.40	21.11	8.33	16.07	13.68	14.92	9.69	11.18	13.22	
7	Co 14032	16.52	13.29	10.46	15.94	15.59	12.61	13.34	17.34	9.17	16.30	12.67	13.72	15.74	10.22	13.78	
8	CoN 14073	15.67	12.33	21.10	14.29	17.80	17.06	12.10	16.19	10.25	20.22	12.89	19.83	14.46	12.65	15.49	3
9	CoSnk 14102	16.80	12.13	5.76	15.97	14.97	14.17	10.16	15.91	8.47	16.24	13.41	20.38	16.28	11.29	13.71	
10	CoSnk 14103	12.60	12.30	5.84	15.89	14.29	8.95	13.63	18.51	13.09	7.05	10.06	17.95	9.51	10.89	12.18	
11	CoT 14367	9.47	11.63	5.70	12.29	16.80	10.20	16.93	18.87	6.96	11.17	13.41	12.07	12.51	12.28	12.16	
12	CoTI 14111	13.20	14.33	13.85	14.81	16.60	14.44	12.54	17.85	13.50	19.78	21.08	19.06	16.43	10.96	15.60	2
13	CoVC 14062	14.43	9.98	7.17	17.23	15.78	11.92	17.12	19.12	6.38	13.18	12.92	19.17	18.46	11.69	13.90	
14	MS 14081	16.43	10.67	6.25	11.94	17.59	15.79	12.87	19.52	7.24	18.56	10.12	15.11	12.30	12.15	13.32	
15	MS 14082	19.23	17.64	6.05	18.05	16.30	17.92	18.00	19.22	11.52	20.28	17.13	17.42	15.27	13.27	16.24	1
Stds																	
1	Co 86032	16.40	16.14	6.27	19.23	13.24	14.38	13.59	22.71	15.35	17.14	12.81	17.20	14.75	14.26	15.25	5
2	CoC 671	17.30	14.40	5.40	16.62	15.26	11.57	9.81	21.75	14.92	16.56	13.10	16.22	15.44	13.50	14.42	
3	CoSnk 05103	12.07	14.22	6.12	12.99	13.80	12.31	13.14	18.12	13.25	13.96	15.65	18.50	14.98	11.41	13.61	
	Grand mean	16.39	12.48	8.33	14.86	16.26	13.89	13.12	19.13	11.78	16.24	14.00	16.53	14.36	11.89	14.23	
	SE	3.44	1.41	0.76	0.60	0.84	0.62	0.93	0.27	0.85	0.85	0.76	1.31	1.42	0.75		
	CD	1.19	4.06	2.20	1.73	2.41	1.78	2.67	0.80	2.45	2.45	2.18	3.78	4.23	2.13		
	CV	12.73	19.62	15.88	7.03	8.92	7.68	12.22	2.53	12.56	9.11	9.37	13.73	13.95	10.93		
Top three qualifying entries at each location																	
		Co 14016		CoN 14073		Co 14027	MS 14082	MS 14082		Co 14016	Co 14002	CoTI 14111	CoSnk 14102	CoVC 14062			
		Co 14027		CoTI 14111		Co 14012	Co 14016	CoVC 14062			MS 14082			Co 14027			
		Co 14004		Co 14002		Co 14002	Co 14012	CoT 14367			CoN 14073						

*Significant at 5% level # only top three qualifying entries are mentioned

Qualifying entries: Co 14016 (4), Co 14002 (4), MS 14082 (4), Co 14004 (3), Co 14027 (3), Co 14012 (3), CoN 14073 (3), CoTI 14111 (3), CoVC 14062 (3), CoT 14367 (2), CoSnk 14102 (1), Co 14030 (1), Co 14032 (1), MS 14081 (1)

Performance across locations: Four entries viz., MS 14082 (16.24 t/ha), CoTI 14111 (15.60 t/ha), CoN 14073 (15.49 t/ha) and Co 14016 (15.27 t/ha) recorded higher sugar yield than the best standard Co 86032 (15.25 t/ha) in the zone. The first ranked entry in the zone MS 14082 recorded more than 10% improvement over the best standard at four locations. The second and third ranked entries were CoTI 14111 and CoN 14073 respectively and had more than 10% improvement over the best standard at three locations each. The test entries Co 14002 and Co 14016 had more than 10% improvement over the best standard at four locations.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.2 Cane yield t/ha at harvest

S No	Entries	Coimbatore#	Basmat h Nagar	Kolhapur#	Mandya	Navsari#	Padegao n#	Perumallapalle#	Pravar anagar	Pugalur	Pune#	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 14002	143.33	115.97	93.40	102.85	125.92	90.28	65.29	123.66	122.54	146.35	123.56	117.01	128.11	88.33	113.33	
2	Co 14004	140.27	88.80	81.60	100.07	124.78	92.10	91.73	120.46	114.59	122.86	97.72	125.69	105.83	84.47	106.50	
3	Co 14012	131.47	69.98	52.75	83.47	122.44	113.02	67.37	137.07	138.98	129.31	108.36	96.30	93.86	92.20	102.61	
4	Co 14016	150.42	89.91	50.36	106.18	120.81	117.19	114.93	141.34	151.09	114.78	107.92	145.95	94.48	99.40	114.63	4
5	Co 14027	139.30	76.24	48.35	106.74	130.22	103.65	96.96	141.35	106.57	79.10	110.19	144.93	115.32	98.87	106.98	
6	Co 14030	121.64	103.24	94.00	82.29	108.15	76.65	102.90	135.85	74.47	103.92	110.60	119.56	75.26	90.91	99.96	
7	Co 14032	109.73	114.19	97.41	110.90	110.90	82.81	98.86	107.87	69.68	107.68	95.93	101.04	113.63	82.27	100.21	
8	CoN 14073	127.60	107.12	150.35	117.02	130.49	120.66	96.27	113.94	94.76	154.29	113.36	154.05	134.90	115.83	123.62	1
9	CoSnk 14102	132.94	93.18	56.30	120.00	118.74	104.95	80.57	121.02	79.87	123.40	110.65	157.29	130.95	89.54	108.53	
10	CoSnk 14103	92.87	103.70	50.83	122.01	114.63	69.18	97.55	128.48	104.10	70.25	92.71	139.47	76.35	96.51	97.05	
11	CoT 14367	79.90	96.55	54.16	88.54	119.82	72.74	124.27	134.53	65.82	86.40	104.61	109.72	89.14	101.06	94.80	
12	CoTI 14111	104.73	122.47	96.42	108.61	120.76	91.32	93.32	122.81	128.79	142.98	158.47	145.14	117.50	88.86	117.30	3
13	CoVC 14062	98.80	80.82	64.20	118.54	109.92	81.08	127.73	126.77	58.57	104.09	140.11	142.94	121.74	86.97	104.45	
14	MS 14081	118.25	84.14	56.10	84.93	124.81	114.58	101.37	133.98	103.74	130.37	86.54	122.34	96.55	93.56	103.66	
15	MS 14082	145.47	138.87	55.13	143.20	130.32	126.48	125.90	132.75	99.62	156.40	121.33	135.07	105.34	102.35	122.73	2
Stds																	
1	Co 86032	121.97	119.68	52.55	140.76	97.81	101.82	106.59	155.02	129.18	122.89	96.95	145.25	104.97	105.99	114.39	5
2	CoC 671	114.67	111.99	46.04	118.89	100.91	79.25	66.33	137.14	125.24	110.49	92.82	119.33	91.24	95.08	100.67	
3	CoSnk 05103	96.00	109.62	51.95	100.00	105.68	85.42	107.62	129.44	107.11	103.08	139.34	136.11	103.92	87.88	104.51	
Grand mean		120.52	101.47	69.55	108.61	117.62	95.73	98.09	130.19	102.06	117.15	111.73	130.96	105.50	94.45	107.40	
SE		26.02	10.85	6.11	4.42	4.74	3.67	7.04	1.49	7.19	5.93	5.86	9.48	7.75	5.29		
CD		9.02	31.17	17.56	12.72	13.63	10.59	20.31	4.30	2.66	17.04	16.85	27.36	23.11	15.04		
CV		13.10	18.51	15.22	7.06	6.98	6.64	12.43	1.99	12.20	8.76	9.09	12.63	10.38	9.70		
Top three qualifying entries at each location																	
		Co 14016	MS 14082	CoN 14073		CoN 14073	MS 14082	CoVC 14062		Co 14016	MS 14082	CoTI 14111		CoN 14073			
		MS 14082		Co 14032		MS 14082	CoN 14073	MS 14082			CoN 14073			CoSnk 14102			
		Co 14002		CoTI 14111		Co 14027	Co 14016	CoT 14367			Co 14002			Co 14002			

*Significant at 5% level # only top three qualifying entries are mentioned

Qualifying entries: MS 14082 (6), Co 14002 (5), CoN 14073 (5), CoTI 14111 (5), Co 14016 (4), Co 14004 (3), CoVC 14062 (3), Co 14027 (2), Co 14012 (2), CoSnk 14102 (2), CoT 14367 (2), MS 14081 (2), Co 14030 (1), Co 14032 (1)

Performance across locations: Four entries viz., CoN 14073 (123.62 t/ha), MS 14082 (122.73 t/ha), CoTI 14111 (117.30 t/ha), and Co 14016 (114.63 t/ha) recorded higher cane yield than the best check Co 86032 (114.39 t/ha). The first ranked entry in the zone was CoN 14073 with more than 10% improvement over the best standard at five locations. MS 14082 and CoTI 14111 were at second and third positions respectively in the zone and had more than 10% improvement over the best standard at six and five centres respectively.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.3 CCS % at harvest

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravar anagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 14002	13.51	12.64	14.43	12.65	14.24	15.23	14.26	13.79	11.63	14.36	13.73	13.51	9.65	13.65	13.38	5
2	Co 14004	14.39	12.49	11.56	14.54	14.15	15.43	13.86	15.70	12.53	14.88	14.31	13.49	12.51	12.02	13.70	4
3	Co 14012	13.63	11.28	11.93	14.19	14.71	15.35	14.17	15.96	11.04	14.90	12.31	12.40	16.73	13.64	13.73	3
4	Co 14016	13.67	11.64	11.38	13.72	13.76	14.50	13.74	14.04	11.50	14.18	13.61	12.33	14.62	12.10	13.20	
5	Co 14027	14.59	11.56	12.04	13.95	14.20	14.28	13.60	14.47	11.59	13.85	12.77	11.63	15.23	11.54	13.24	
6	Co 14030	13.61	12.26	9.89	14.59	14.80	15.11	12.08	15.54	11.17	15.45	12.37	12.47	13.02	12.40	13.20	
7	Co 14032	15.06	11.62	10.76	14.20	14.01	15.84	13.65	16.08	13.15	15.17	13.21	13.72	14.09	12.45	13.79	2
8	CoN 14073	12.25	11.50	14.03	12.29	13.32	13.91	12.55	14.22	10.81	13.10	11.37	12.88	10.59	10.92	12.41	
9	CoSnk 14102	12.60	12.97	10.24	13.13	12.61	13.71	12.58	13.15	10.63	13.16	12.12	12.97	12.46	12.43	12.48	
10	CoSnk 14103	13.62	11.89	11.46	13.14	12.46	13.20	14.00	14.41	12.56	10.01	10.85	12.85	12.39	11.23	12.43	
11	CoT 14367	11.89	12.03	10.52	13.03	14.02	14.36	13.61	14.03	10.61	12.95	12.81	10.89	13.92	12.15	12.63	
12	CoTI 14111	12.61	11.61	14.39	13.10	13.75	14.63	13.46	14.54	10.46	13.84	13.30	13.17	13.94	12.39	13.23	
13	CoVC 14062	14.65	12.42	11.17	14.73	14.35	14.48	13.58	15.08	10.92	12.66	9.22	13.43	15.14	13.34	13.23	
14	MS 14081	13.93	12.61	11.10	14.77	14.07	14.11	12.64	14.58	10.91	14.24	11.69	12.38	13.07	12.99	13.08	
15	MS 14082	13.24	12.70	10.98	12.80	12.52	14.51	14.29	14.48	11.60	12.96	14.13	12.82	14.49	12.93	13.17	
Stds																	
1	Co 86032	13.48	13.45	11.85	13.41	13.54	14.41	12.83	14.65	11.89	13.95	13.22	11.84	14.02	13.49	13.29	
2	CoC 671	15.10	12.84	11.75	14.52	15.11	15.40	14.86	15.86	11.91	15.00	14.12	13.80	16.89	14.20	14.38	1
3	CoSnk 05103	12.56	12.98	11.81	13.81	13.05	14.33	12.21	14.00	12.38	13.54	11.23	13.58	14.42	12.98	13.06	
	Grand mean	13.58	12.25	11.74	13.70	13.82	14.60	13.44	14.70	11.51	13.79	12.58	12.79	13.73	12.60	13.20	
	SE	0.64	0.40	0.31	0.35	0.38	0.26	0.53	0.11	0.21	0.19	0.11	0.63	1.00	0.41		
	CD	0.22	1.16	0.89	1.00	1.09	0.74	1.52	0.32	0.60	0.53	0.30	NS	2.97	1.16		
	CV	2.83	5.69	4.58	4.38	4.77	3.04	6.77	1.32	3.15	2.34	1.46	8.58	10.26	5.61		
Top three qualifying entries at each location																	
				Co 14002							Co 14032						
				CoTI 14111													
				CoN 14073													

*Significant at 5% level

Qualifying entries: Co 14002 (1), Co 14032 (1), CoTI 14111 (1), CoN 14073 (1)

Performance across locations: None of the entries recorded higher CCS% than the best standard CoC 671 (14.38%). The test entry Co 14032 (13.79%) ranked second in the zone with more than 5% improvement over the best standard at Pugalur centre. The entries Co 14002, CoTI 14111 and CoN 14073 had more than 5% improvement over the best standard at Kolhapur centre.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.4 Sucrose% at harvest

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaoon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 14002	19.10	18.17	20.57	17.70	20.16	21.40	20.10	19.86	16.77	19.86	19.22	19.40	14.11	19.34	18.98	5
2	Co 14004	20.24	17.78	16.24	20.31	20.07	21.58	19.77	21.86	17.92	20.50	20.33	19.30	18.41	17.04	19.38	4
3	Co 14012	19.35	16.45	16.69	19.80	20.91	21.50	20.26	22.37	15.96	20.70	18.07	17.80	23.62	19.29	19.48	3
4	Co 14016	19.37	16.79	15.87	19.26	19.29	20.42	19.43	19.80	16.46	19.63	19.22	17.70	21.05	17.19	18.68	
5	Co 14027	20.61	16.84	16.85	19.50	19.99	20.30	19.21	20.43	16.72	19.31	18.28	17.40	21.79	16.36	18.83	
6	Co 14030	19.26	17.57	13.80	20.43	20.77	21.22	17.12	21.70	16.44	21.38	17.99	17.90	19.20	17.56	18.74	
7	Co 14032	21.22	17.01	15.03	19.84	20.14	22.26	19.40	22.56	18.87	21.05	18.87	19.80	20.46	17.65	19.58	2
8	CoN 14073	17.65	16.39	19.99	17.18	18.91	19.69	18.05	19.77	15.87	18.34	18.15	18.40	15.89	15.52	17.84	
9	CoSnk 14102	17.94	18.47	14.33	18.38	18.00	19.41	17.99	18.67	15.45	18.27	18.24	18.60	18.29	17.63	17.83	
10	CoSnk 14103	19.25	17.25	15.95	18.37	17.88	18.69	19.80	20.54	18.04	13.95	15.88	18.50	18.09	15.90	17.72	
11	CoT 14367	17.07	17.21	14.65	18.23	19.73	20.26	19.02	19.78	15.74	18.10	18.28	17.10	19.87	17.26	18.02	
12	CoTI 14111	18.05	17.01	20.44	18.44	19.47	20.65	19.12	20.56	15.19	19.23	18.85	19.00	19.96	17.57	18.82	
13	CoVC 14062	20.78	17.77	15.57	20.61	20.41	20.48	19.26	21.25	16.06	17.69	14.95	19.20	21.78	18.90	18.91	
14	MS 14081	19.67	17.98	15.55	20.61	19.81	19.90	18.19	20.44	15.87	19.78	17.25	17.90	19.11	18.38	18.60	
15	MS 14082	18.73	18.18	15.33	17.86	17.94	20.46	20.29	20.66	16.74	18.06	19.86	18.40	20.63	18.32	18.68	
Stds																	
1	Co 86032	19.10	19.03	16.62	18.68	19.30	20.27	18.17	20.70	17.12	19.35	18.75	17.10	20.03	19.13	18.81	
2	CoC 671	21.14	18.30	16.47	20.37	21.37	21.63	21.03	22.25	17.26	20.82	20.04	19.80	23.70	20.14	20.31	1
3	CoSnk 05103	17.89	18.38	16.48	19.27	18.74	20.28	17.47	19.95	17.77	18.92	17.42	19.40	20.57	18.38	18.64	
	Grand mean	19.25	17.59	16.47	19.16	19.61	20.58	19.09	20.73	16.66	19.16	18.31	18.48	19.81	17.86	18.77	
	SE	0.87	0.48	0.42	0.48	0.45	0.35	0.65	0.14	0.28	0.26	0.13	0.68	1.24	0.57		
	CD	0.30	1.38	1.20	1.37	1.30	1.01	1.88	0.40	0.81	0.73	0.36	1.98	3.69	1.63		
	CV	2.71	4.73	4.39	4.32	4.00	2.95	5.92	1.18	2.91	2.31	1.19	6.46	8.83	5.56		
Top three qualifying entries at each location																	
				Co 14002							Co 14032						
				CoTI 14111													
				CoN 14073													

*Significant at 5% level.

Qualifying entries: Co 14002 (1), Co 14032 (1), CoTI 14111 (1), CoN 14073 (1)

Performance across locations: None of the entries recorded higher juice sucrose per cent than the best standard CoC 671 (20.31%). The test entry Co 14032 (19.58%) ranked second in the zone with more than 5% improvement over the best standard at Pugalur centre. The entries Co 14002, CoTI 14111 and CoN 14073 had more than 5% improvement over the best standard at Kolhapur centre.

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.5 Brix % at harvest

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaoon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	20.57	20.88	22.58	18.73	21.80	22.76	21.52	22.24	18.86	20.99	20.23	21.60	16.34	20.97	20.72
2	Co 14004	21.56	20.03	17.25	21.40	21.80	22.70	21.72	22.71	19.79	21.46	22.17	21.30	21.60	18.47	21.00
3	Co 14012	21.05	19.47	17.58	20.80	22.80	22.70	22.39	23.64	18.02	22.14	20.03	19.90	25.36	20.80	21.19
4	Co 14016	20.99	19.45	16.58	20.53	20.40	21.81	20.95	21.21	18.24	20.78	20.67	19.70	23.60	18.73	20.26
5	Co 14027	22.16	19.89	17.75	20.60	21.33	22.17	20.65	21.95	18.82	20.80	20.27	21.00	24.10	17.77	20.66
6	Co 14030	20.80	20.07	14.41	21.67	22.02	22.53	18.55	22.71	19.27	22.62	20.00	20.10	22.60	19.00	20.45
7	Co 14032	22.66	20.29	15.75	20.93	22.50	23.68	21.15	23.91	21.01	22.43	20.83	22.40	23.35	19.13	21.43
8	CoN 14073	19.84	18.50	21.91	18.13	20.57	21.27	20.19	20.51	18.53	19.94	19.93	20.40	19.34	16.93	19.71
9	CoSnk 14102	19.61	20.84	15.08	19.47	19.80	20.99	19.89	20.31	17.65	19.50	20.07	20.70	21.35	19.10	19.60
10	CoSnk 14103	20.75	20.22	16.58	19.40	19.90	20.21	21.35	21.95	20.12	15.03	17.47	20.60	20.85	17.20	19.40
11	CoT 14367	19.05	19.57	15.25	19.27	21.03	21.73	19.99	21.18	17.76	19.59	20.13	19.30	21.85	18.80	19.61
12	CoTI 14111	19.98	20.32	22.25	19.80	21.07	22.17	20.82	22.15	17.36	20.56	20.40	21.50	22.10	19.03	20.68
13	CoVC 14062	22.58	20.23	16.25	21.80	22.27	22.09	20.92	22.71	18.81	19.16	16.43	21.20	24.36	20.47	20.66
14	MS 14081	21.16	20.35	16.41	21.67	21.17	21.32	20.39	22.61	18.18	21.11	19.17	20.10	22.10	19.83	20.40
15	MS 14082	20.20	20.71	16.08	18.80	19.93	21.92	22.09	21.54	18.86	19.44	21.13	20.30	22.60	19.83	20.25
	Stds															
1	Co 86032	20.68	21.16	17.58	19.57	21.17	21.59	19.65	22.24	19.19	20.61	20.37	19.30	22.10	20.77	20.43
2	CoC 671	22.31	20.70	17.41	21.67	23.03	22.96	22.72	23.55	19.61	22.19	21.80	22.00	25.11	21.87	21.92
3	CoSnk 05103	19.59	20.47	17.25	20.27	20.90	21.91	19.32	21.87	19.77	20.50	19.13	21.30	22.60	19.87	20.34
	Grand mean	20.86	20.17	17.44	20.25	21.31	22.03	20.79	22.11	18.88	20.49	20.01	20.71	22.29	19.36	20.48
	SE	0.89	0.42	0.43	0.51	0.38	0.37	0.57	0.09	0.28	0.27	0.24	0.50	1.09	0.61	
	CD	0.31	1.21	1.23	1.48	1.10	1.06	1.64	0.26	0.79	0.71	0.69	1.44	3.26	1.73	
	CV	2.55	3.62	4.24	4.40	3.11	2.89	4.74	0.71	2.54	2.25	2.08	4.19	6.94	5.45	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.6 Purity % at harvest

S No	Entries	Coimbatore	Basmat h Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravar anagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	92.82	87.02	91.11	94.99	92.47	94.04	93.41	89.20	88.92	94.60	95.00	90.71	86.40	92.25	91.64
2	Co 14004	93.91	88.77	94.21	95.39	92.06	95.04	91.02	96.23	90.51	95.52	91.73	90.34	85.61	92.22	92.33
3	Co 14012	91.91	84.49	94.99	95.68	91.76	94.75	90.51	94.55	88.52	93.52	90.24	86.72	93.14	92.73	91.68
4	Co 14016	92.28	86.32	95.78	94.40	94.56	93.61	92.76	93.35	90.22	94.46	93.03	92.07	89.21	91.76	92.42
5	Co 14027	92.97	84.67	94.95	95.17	93.70	91.59	93.14	92.54	88.84	92.84	90.24	83.27	90.41	92.12	91.17
6	Co 14030	92.62	87.54	95.72	94.79	94.35	94.18	92.26	95.55	85.29	94.50	90.02	88.04	84.89	92.42	91.58
7	Co 14032	93.62	83.83	95.43	95.32	89.52	94.03	91.50	94.36	89.80	93.85	90.60	88.87	87.22	92.21	91.44
8	CoN 14073	88.97	88.59	91.24	95.31	91.98	92.55	89.46	96.40	85.64	91.98	91.07	92.78	82.13	91.65	90.70
9	CoSnk 14102	91.45	88.63	95.04	94.94	90.86	92.47	90.51	91.92	87.50	93.71	90.92	90.42	85.74	92.24	91.17
10	CoSnk 14103	92.77	85.31	96.23	95.23	89.81	92.46	92.74	92.76	89.66	92.86	90.92	89.58	87.10	92.45	91.42
11	CoT 14367	89.63	87.94	96.11	95.13	93.82	93.24	95.18	93.98	87.02	92.38	90.86	84.66	90.82	91.80	91.61
12	CoTl 14111	90.36	83.71	91.90	93.69	92.50	93.16	91.84	92.76	87.50	93.53	92.42	91.59	90.30	92.29	91.25
13	CoVC 14062	92.04	87.84	95.85	95.04	91.63	92.75	92.01	93.55	85.36	92.33	90.96	90.56	89.41	92.33	91.55
14	MS 14081	92.96	88.35	94.80	95.61	93.59	93.33	89.25	94.57	87.30	93.68	90.03	87.92	86.08	92.67	91.44
15	MS 14082	92.70	87.78	95.35	95.56	89.95	93.34	91.86	94.30	88.76	92.90	94.00	87.88	91.31	92.38	92.01
	Stds															
1	Co 86032	92.36	89.93	94.54	96.01	91.17	93.89	92.43	92.95	89.21	93.89	92.11	87.24	90.66	92.11	92.04
2	CoC 671	94.76	88.41	94.63	94.52	92.78	94.19	92.56	94.44	88.01	93.82	91.94	87.21	94.40	92.10	92.41
3	CoSnk 05103	91.29	89.79	95.53	95.63	89.62	92.58	90.43	91.25	89.85	92.30	91.05	89.21	91.04	92.51	91.58
	Grand mean	92.19	87.16	94.63	95.13	92.01	93.40	91.83	93.59	88.22	93.48	91.51	88.84	88.66	92.24	91.63
	SE	1.09		0.72	0.64	1.30	0.43		0.42	0.39	0.19	1.19	NS	2.90	0.27	
	CD	0.38		2.07	NS	NS	1.24	NS	1.22	1.11	0.56	3.41	3.12	8.66	NS	
	CV	0.71		1.32	1.17	2.45	0.80		0.78	0.76	0.36	2.25	6.09	4.63	0.51	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.7 Pol% Cane at harvest

S No	Entries	Coimbatore	Bas math nagar	Kolhapur	Mandya	Navsari	Padegao n	Perumallapalle	Pravar anagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	14.34		16.83	13.63	15.38	16.52			12.95	15.13		14.35	10.80		14.44
2	Co 14004	13.87		12.94	15.69	15.32	16.58			13.83	15.84		14.28	14.49		14.76
3	Co 14012	13.78		12.55	15.25	15.88	16.70			12.34	15.39		13.17	18.45		14.83
4	Co 14016	15.71		12.62	14.96	14.67	15.76			12.69	14.68		13.10	16.44		14.51
5	Co 14027	15.11		12.64	15.03	15.20	15.57			12.91	14.31		12.87	16.49		14.46
6	Co 14030	16.35		10.70	15.72	15.83	16.48			12.71	16.01		13.28	15.04		14.68
7	Co 14032	14.63		11.54	15.32	15.36	16.93			14.57	16.47		14.66	15.82		15.03
8	CoN 14073	15.04		16.35	13.28	14.40	15.11			12.23	14.33		13.64	12.25		14.07
9	CoSnk 14102	15.97		10.78	14.00	13.64	14.64			11.90	13.56		13.77	13.73		13.55
10	CoSnk 14103	14.52		11.59	14.34	13.54	14.10			13.89	10.87		13.66	13.75		13.36
11	CoT 14367	15.20		11.67	14.06	15.06	15.62			11.91	14.14		12.11	15.76		13.95
12	CoTl 14111	14.37		15.44	14.08	14.82	15.16			11.73	14.27		14.09	14.41		14.26
13	CoVC 14062	16.08		12.15	15.78	15.52	15.74			12.42	13.37		14.20	16.53		14.64
14	MS 14081	13.11		12.37	16.00	15.02	15.38			12.24	15.32		13.21	14.99		14.18
15	MS 14082	13.92		12.41	13.94	13.61	15.54			12.93	13.83		13.58	15.91		13.96
	Stds															
1	Co 86032	14.71		13.21	14.32	14.75	15.91			13.21	14.58		12.66	15.48		14.31
2	CoC 671	13.49		13.26	15.67	16.22	16.82			13.31	15.66		14.65	18.31		15.27
3	CoSnk 05103	14.96		13.08	14.83	14.23	14.98			13.68	14.20		14.33	15.15		14.38
	Grand mean	14.73		12.90	14.77	14.91	15.75			12.85	14.55		13.65	15.21		14.37
	SE	0.75		0.33	0.41	0.36	0.27			0.22	0.20		0.51	0.91		
	CD	0.26		0.95	1.18	1.02	0.79			0.63	0.57		1.47	2.72		
	CV	3.05		4.43	4.81	4.13	2.99			2.96	2.36		6.46	8.47		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.8 Fibre % at harvest

S No	Entries	Coimbatore	Basmat hnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	13.42		8.20	12.99	13.73	12.80			12.74	13.79			13.40		12.63
2	Co 14004	12.46		10.33	12.76	13.66	13.14			12.84	12.69			11.32		12.40
3	Co 14012	13.68		14.83	12.95	14.05	12.36			12.64	15.65			11.85		13.50
4	Co 14016	13.77		10.53	12.30	13.96	12.78			12.92	15.20			11.89		12.92
5	Co 14027	15.38		15.00	12.91	13.94	13.32			12.81	15.88			14.31		14.19
6	Co 14030	11.32		12.43	13.07	13.78	12.38			12.69	15.13			11.62		12.80
7	Co 14032	14.04		13.23	12.79	13.74	13.97			12.80	11.77			12.43		13.10
8	CoN 14073	12.37		8.23	12.67	13.87	13.23			12.96	11.88			13.01		12.28
9	CoSnk 14102	14.74		14.77	13.83	14.24	14.58			12.99	15.79			14.91		14.48
10	CoSnk 14103	13.95		17.37	11.94	14.29	14.54			12.99	12.09			13.93		13.89
11	CoT 14367	11.05		10.37	12.87	13.66	12.91			12.94	11.88			10.69		12.05
12	CoTI 14111	14.74		14.43	13.64	13.89	16.60			12.78	15.81			17.78		14.96
13	CoVC 14062	13.95		11.97	13.45	13.92	13.12			12.69	14.42			14.07		13.45
14	MS 14081	13.25		10.47	12.36	14.18	12.69			12.89	12.53			11.44		12.48
15	MS 14082	12.37		9.07	11.93	14.15	14.07			12.78	13.44			12.88		12.59
	Stds															
1	Co 86032	13.95		10.47	13.12	13.60	11.55			12.82	14.66			12.76		12.87
2	CoC 671	13.60		9.50	13.10	14.09	12.24			12.90	14.79			12.74		12.87
3	CoSnk 05103	13.96		10.63	13.04	14.05	16.14			13.02	14.96			16.36		14.02
	Grand mean	13.44		11.77	12.87	13.93	13.47			12.84	14.02			13.19		13.19
	SE	0.92		0.13	0.63	0.27	0.41			0.11	0.21			0.83		
	CD	0.32		0.37	NS	NS	1.19			0.31	0.60			2.48		
	CV	4.08		1.91	8.51	3.37	5.29			1.47	2.57			8.90		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.9 Extraction % at harvest

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravar anagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	49.46		45.85	45.55	57.83	46.41	52.58	54.32	53.08	47.08			55.75	56.10	51.27
2	Co 14004	53.44		47.13	44.91	57.96	50.07	49.62	52.29	51.96	45.90			55.19	55.35	51.26
3	Co 14012	53.52		50.97	48.55	58.38	49.86	49.62	50.68	53.32	45.23			57.13	59.50	52.43
4	Co 14016	53.43		50.03	41.71	58.53	51.06	50.47	53.08	51.36	48.90			54.72	60.03	52.12
5	Co 14027	48.89		46.81	43.07	56.61	41.91	43.65	54.07	49.97	39.98			47.92	58.79	48.33
6	Co 14030	53.53		53.23	49.10	57.80	47.61	46.24	49.94	51.81	41.51			53.83	58.74	51.21
7	Co 14032	50.55		49.93	43.38	57.68	49.94	45.30	57.33	48.89	40.53			55.06	53.56	50.20
8	CoN 14073	52.01		47.41	39.02	55.80	47.16	48.18	57.36	50.20	49.44			54.34	59.78	50.97
9	CoSnk 14102	42.14		48.40	41.60	58.53	38.29	43.88	56.18	49.97	39.53			46.19	53.62	47.12
10	CoSnk 14103	48.59		46.91	44.18	55.02	42.03	47.47	52.91	50.01	43.04			52.91	56.79	49.08
11	CoT 14367	52.89		48.39	43.46	57.11	52.54	50.63	53.21	49.34	43.70			50.36	58.37	50.91
12	CoTl 14111	50.70		48.47	40.82	58.68	43.77	46.90	56.52	47.87	49.22			47.64	54.43	49.55
13	CoVC 14062	54.43		47.91	51.08	57.77	49.07	46.73	48.77	47.91	49.32			56.53	57.93	51.59
14	MS 14081	50.83		51.33	49.72	56.68	45.59	47.46	59.18	46.99	43.03			52.89	56.22	50.90
15	MS 14082	51.03		50.90	46.57	59.83	43.45	44.83	53.58	47.96	45.93			54.76	57.99	50.62
	Stds															
1	Co 86032	55.10		46.11	49.97	57.20	46.07	45.02	55.69	51.64	49.46			53.05	60.53	51.80
2	CoC 671	55.58		48.56	43.13	56.09	46.90	43.88	50.02	50.90	49.66			53.82	53.31	50.17
3	CoSnk 05103	41.55		45.94	39.77	55.96	47.55	47.47	48.87	49.27	49.94			50.56	54.18	48.28
	Grand mean	50.98		48.57	44.75	57.41	46.63	47.22	53.55	50.21	45.63			52.92	56.96	50.44
	SE	5.36		1.67	3.43	1.40	1.98		0.54	1.70	0.58			1.45	1.45	
	CD	1.86		4.79	9.86	NS	5.72	NS	1.55	4.89	1.66			4.34	4.12	
	CV	6.32		5.94	13.27	4.63	7.36		1.74	5.86	2.20			3.89	4.40	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's Report (2019-20)

Peninsular zone AVT I Plant

Table 2.4.10 Number of millable canes(000'/ha) at harvest

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	103.39	67.42	84.20	86.46	108.47	79.13	67.98	102.19	108.83	87.10	75.42	109.15		96.87	90.51
2	Co 14004	95.82	72.23	75.93	89.44	107.24	89.03	71.53	101.95	117.62	93.97	84.63	120.37		90.86	93.12
3	Co 14012	90.12	59.71	69.10	69.51	108.27	92.56	60.71	113.36	112.17	86.72	82.97	107.52		99.31	88.62
4	Co 14016	107.54	71.26	58.80	85.76	107.54	92.29	83.44	114.45	125.64	77.67	90.79	122.45		103.82	95.50
5	Co 14027	75.18	57.78	62.27	68.06	119.68	77.67	64.81	117.21	75.47	60.55	74.07	100.00		105.50	81.40
6	Co 14030	90.10	66.44	73.84	82.64	101.15	69.54	69.06	117.80	66.70	86.56	75.00	125.23		96.30	86.18
7	Co 14032	70.34	61.61	76.10	74.65	88.53	67.37	62.18	97.71	59.42	61.56	65.85	102.20		90.16	75.21
8	CoN 14073	58.72	74.15	88.02	82.64	119.39	88.49	56.53	93.55	69.89	81.31	76.99	116.55		121.70	86.76
9	CoSnk 14102	85.94	60.67	61.23	83.68	114.20	97.91	64.88	94.10	81.43	85.96	83.66	131.94		94.97	87.74
10	CoSnk 14103	66.05	66.44	43.92	70.49	107.19	56.37	64.19	104.74	77.45	50.48	69.17	119.56		102.90	76.84
11	CoT 14367	49.77	58.75	50.06	66.67	111.89	56.41	83.21	108.84	60.56	65.71	70.36	93.75		106.71	75.59
12	CoTI 14111	76.78	69.32	66.03	73.26	115.80	70.29	72.54	102.77	96.98	84.32	80.14	117.71		95.71	86.28
13	CoVC 14062	74.85	62.59	57.41	72.08	100.37	57.90	59.62	107.81	56.13	68.33	74.31	112.50		93.69	76.74
14	MS 14081	74.69	64.51	59.61	55.90	115.79	69.02	70.76	118.47	51.74	75.51	68.05	104.40		97.51	78.92
15	MS 14082	75.90	67.40	71.53	85.83	117.72	86.73	90.94	113.32	75.05	85.40	88.38	107.29		107.06	90.20
	Stds															
1	Co 86032	82.18	68.35	47.92	103.89	90.74	73.86	76.41	126.76	98.58	86.12	85.60	120.02		111.87	90.18
2	CoC 671	69.12	66.43	45.08	73.19	93.75	59.30	50.73	116.73	83.68	78.00	76.30	117.01		100.98	79.25
3	CoSnk 05103	108.49	68.36	91.15	101.74	95.68	103.38	103.01	118.46	111.77	90.72	117.73	125.81		94.44	102.36
	Grand mean	80.83	65.75	65.68	79.22	106.86	77.07	70.70	109.45	84.95	78.11	79.97	114.08		100.58	85.63
	SE	12.92	3.11	3.13	4.19	3.49	6.41	5.36	0.48	4.87	4.51	4.00	3.36		5.76	
	CD	4.48	8.94	8.99	12.03	10.02	18.51	15.48	1.40	13.99	12.95	11.50	9.69		NS	
	CV	9.70	8.20	8.25	9.15	5.65	14.40	13.14	0.77	9.93	9.99	8.67	5.10		9.92	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.11 Stalk length (cm) at harvest

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	301.67	236.00	222.67	273.33	274.60	237.00	261.67	266.00	253.57	254.55	275.00	245.00	280.15	236.67	258.42
2	Co 14004	251.67	152.00	213.28	222.67	260.55	225.00	250.00	174.50	240.70	235.11	254.93	220.00	250.15	227.00	226.97
3	Co 14012	266.67	191.67	148.33	196.67	271.46	227.50	241.00	168.50	250.77	228.78	212.40	209.00	248.00	227.00	220.55
4	Co 14016	246.67	206.33	126.94	201.33	260.54	214.00	296.33	156.50	251.77	236.56	231.67	247.00	220.00	232.67	223.45
5	Co 14027	280.00	174.00	151.55	231.33	250.81	254.00	278.00	222.00	285.77	212.89	252.40	220.00	234.80	231.33	234.21
6	Co 14030	240.00	215.67	210.89	203.33	269.62	221.00	339.67	206.00	259.50	194.00	239.27	205.00	231.00	220.67	232.54
7	Co 14032	280.00	240.00	185.50	229.33	238.53	270.00	304.53	228.00	272.10	234.44	268.87	245.00	273.00	262.67	252.28
8	CoN 14073	326.67	181.67	245.22	273.33	263.03	275.50	316.33	247.50	282.23	287.89	260.53	233.00	277.00	255.33	266.09
9	CoSnk 14102	322.00	256.67	135.05	262.00	260.02	272.00	242.33	230.00	243.20	247.67	252.67	227.00	281.50	256.67	249.20
10	CoSnk 14103	255.00	217.33	206.67	232.67	286.16	259.50	268.00	242.00	268.03	234.00	253.00	218.00	251.50	262.00	246.70
11	CoT 14367	226.67	231.00	180.33	206.00	255.65	229.00	274.00	200.00	225.30	211.44	254.20	194.00	229.50	249.67	226.20
12	CoTI 14111	276.67	245.33	216.44	226.00	256.22	266.00	275.00	241.50	270.03	272.56	295.87	257.00	283.00	266.67	260.59
13	CoVC 14062	233.33	198.67	212.00	240.00	262.11	257.00	342.27	209.00	237.90	228.33	248.27	247.00	272.50	262.00	246.46
14	MS 14081	275.00	200.00	147.22	222.67	268.40	269.50	298.67	246.50	260.93	246.78	225.20	230.00	277.00	245.33	243.80
15	MS 14082	301.67	244.67	132.72	246.67	260.09	268.50	286.33	245.00	282.00	271.11	260.67	236.00	259.50	263.00	254.14
	Stds															
1	Co 86032	245.00	200.67	195.17	261.33	256.67	248.50	310.00	214.50	282.33	237.78	230.53	241.00	264.15	229.33	244.07
2	CoC 671	253.33	240.00	154.72	231.33	235.11	251.00	246.33	204.50	287.97	206.33	251.40	244.00	238.00	229.00	233.79
3	CoSnk 05103	263.33	225.00	163.33	237.33	232.29	262.50	292.83	207.50	290.27	251.44	221.07	253.00	260.50	264.33	244.62
	Grand mean	269.19	214.26	180.45	233.19	258.99	250.42	284.63	217.19	263.57	238.43	249.33	231.72	257.29	245.63	242.45
	SE	35.96	13.60	7.88	4.99	8.05	8.35		1.24	7.50	8.60	2.03	12.31	18.86	8.54	
	CD	12.46	39.07	22.64	14.35	23.14	24.12	NS	3.57	21.55	24.72	5.83	35.54	56.26	24.27	
	CV	8.02	10.99	7.56	3.71	5.38	5.78		0.99	4.92	6.25	1.41	9.20	10.36	6.02	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.12 Stalk diameter (cm) at harvest

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	2.78	3.07	2.36	3.09	2.45	3.01	2.65	2.66	2.70	3.10	2.84	2.70	2.59	2.31	2.74
2	Co 14004	2.80	2.65	2.63	2.85	2.66	2.86	2.58	2.52	2.48	2.70	2.75	2.90	2.52	2.13	2.65
3	Co 14012	2.72	2.86	2.49	2.86	2.53	3.07	2.45	2.52	2.79	2.85	2.87	2.90	2.53	2.57	2.72
4	Co 14016	2.88	2.86	2.67	2.79	2.35	3.00	2.75	2.56	2.80	3.04	2.97	2.80	2.41	2.39	2.73
5	Co 14027	3.06	3.07	2.20	3.31	2.68	3.28	2.77	2.62	3.09	3.00	2.84	2.90	2.75	2.22	2.84
6	Co 14030	2.94	3.02	2.77	3.00	2.45	2.94	2.75	2.55	2.70	2.80	3.02	3.00	2.51	2.60	2.79
7	Co 14032	2.94	3.39	3.15	3.32	2.75	3.02	2.67	2.57	2.83	3.06	2.90	3.10	2.53	2.39	2.90
8	CoN 14073	2.96	2.75	2.61	3.23	2.46	3.00	3.05	2.54	2.96	3.02	2.85	3.00	2.44	2.36	2.80
9	CoSnk 14102	2.55	2.65	2.51	2.97	2.34	2.60	2.97	2.45	2.23	2.61	2.70	2.70	2.33	2.06	2.55
10	CoSnk 14103	2.97	2.78	2.49	3.43	2.56	2.88	2.97	2.58	3.15	2.82	3.05	3.00	2.70	2.48	2.85
11	CoT 14367	3.12	3.61	2.44	3.51	2.41	3.20	3.02	2.55	2.85	3.08	3.07	3.10	2.49	2.86	2.95
12	CoTI 14111	3.16	3.45	2.65	3.11	2.53	3.16	2.75	2.54	2.79	3.01	3.02	2.90	2.55	2.75	2.88
13	CoVC 14062	2.94	3.07	2.89	3.40	2.66	3.20	3.02	2.46	2.86	3.15	3.28	3.10	2.70	2.43	2.94
14	MS 14081	2.90	2.71	2.97	3.12	2.55	3.28	2.63	2.62	2.83	2.91	2.79	3.10	2.49	2.51	2.81
15	MS 14082	2.79	3.29	2.62	3.05	2.44	2.97	2.77	2.65	2.87	2.95	2.86	2.90	2.58	2.57	2.81
	Stds															
1	Co 86032	3.02	3.29	2.76	3.15	2.33	3.02	2.44	2.59	2.95	2.92	2.75	3.10	2.45	2.41	2.80
2	CoC 671	3.07	3.34	2.73	3.35	2.30	3.07	2.66	2.45	3.03	2.89	2.75	2.90	2.77	2.60	2.85
3	CoSnk 05103	2.38	2.70	2.10	2.72	2.29	2.42	2.44	2.43	2.39	2.61	2.67	2.70	2.38	2.48	2.48
	Grand mean	2.89	3.03	2.61	3.13	2.49	3.00	2.74	2.54	2.79	2.92	2.89	2.93	2.54	2.45	2.78
	SE	0.28		0.10	0.11	0.06	0.09	0.09	0.01	0.87	0.08	0.06	0.04	0.08	0.08	
	CD	0.10		0.30	0.31	0.17	0.27	0.26	0.04	0.25	0.22	0.17	0.13	0.24	0.23	
	CV	5.75		6.92	6.04	4.08	5.39	5.78	1.16	5.37	4.52	3.52	2.77	4.55	5.60	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.13 Single cane weight (kg) at harvest

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravar anagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	1.39	1.71	1.11	1.46	1.27	1.19	1.08	1.60	1.41	1.75	1.64	1.00	1.51	1.07	1.37
2	Co 14004	1.47	1.23	1.07	1.25	1.25	1.05	1.34	1.34	1.24	1.32	1.16	0.80	1.39	0.90	1.20
3	Co 14012	1.45	1.18	0.76	1.04	1.26	1.23	1.24	1.49	1.49	1.51	1.31	0.90	1.29	1.12	1.23
4	Co 14016	1.39	1.26	0.86	1.06	1.23	1.30	1.46	1.44	1.54	1.50	1.18	0.90	1.07	1.04	1.23
5	Co 14027	1.86	1.31	0.78	1.52	1.30	1.35	1.30	1.63	1.79	1.44	1.48	1.20	1.44	1.10	1.39
6	Co 14030	1.35	1.57	1.29	1.00	1.23	1.14	1.43	1.67	1.38	1.24	1.47	0.90	1.17	1.24	1.29
7	Co 14032	1.56	1.86	1.28	1.33	1.10	1.18	1.49	1.83	1.53	1.58	1.46	1.30	1.64	1.23	1.46
8	CoN 14073	2.15	1.45	1.71	1.49	1.27	1.39	1.71	1.74	1.80	2.00	1.47	1.00	1.60	1.18	1.57
9	CoSnk 14102	1.55	1.53	0.93	1.55	1.13	1.06	1.34	1.64	1.15	1.45	1.32	1.00	1.54	0.91	1.29
10	CoSnk 14103	1.39	1.56	1.16	1.47	1.28	1.22	1.55	1.56	1.73	1.47	1.34	1.30	1.76	1.22	1.43
11	CoT 14367	1.58	1.65	1.08	1.46	1.34	1.27	1.73	1.46	1.41	1.49	1.49	1.10	1.21	1.39	1.40
12	CoTI 14111	1.36	1.76	1.46	1.15	1.32	1.40	1.35	1.73	1.67	1.74	1.98	1.10	1.37	1.39	1.48
13	CoVC 14062	1.32	1.32	1.12	1.57	1.27	1.43	1.66	1.44	1.38	1.66	1.89	1.30	1.77	1.13	1.45
14	MS 14081	1.58	1.28	0.94	1.43	1.26	1.63	1.48	2.02	1.63	1.79	1.27	1.20	1.46	1.07	1.43
15	MS 14082	1.92	2.06	0.77	1.69	1.06	1.47	1.38	1.52	1.72	1.87	1.37	1.30	1.34	1.44	1.49
	Stds															
1	Co 86032	1.48	1.75	1.07	1.58	1.02	1.35	1.32	1.59	1.69	1.44	1.13	1.50	1.31	1.11	1.38
2	CoC 671	1.66	1.70	1.01	1.57	1.09	1.27	1.32	1.52	1.98	1.52	1.21	0.90	1.59	1.14	1.39
3	CoSnk 05103	0.89	1.60	0.57	0.93	1.04	0.84	1.21	1.12	1.25	1.15	1.18	1.00	1.16	1.15	1.08
	Grand mean	1.52	1.54	1.05	1.36	1.21	1.26	1.41	1.57	1.54	1.55	1.41	1.09	1.42	1.16	1.36
	SE	0.23	0.16	0.07	0.10	0.06	0.07	0.08	0.01	0.76	0.04	0.02	0.08	0.07	0.05	
	CD	0.08	0.45	0.21	0.27	0.16	0.21	0.22	0.04	0.22	0.12	0.07	0.24	0.21	0.15	
	CV	9.08	17.65	12.31	12.12	8.05	10.12	9.48	1.56	8.55	4.82	3.04	13.26	7.16	7.74	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.14 CCS % at 10 month

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	12.29		11.88	11.35	10.27	12.66	12.09	12.75	11.55		10.49	11.93	12.43	11.75	11.79
2	Co 14004	13.49		10.00	13.09	10.13	12.73	11.52	13.98	11.27		9.90	10.32	12.42	10.43	11.61
3	Co 14012	10.94		10.80	12.62	10.50	12.38	14.04	13.56	10.65		10.62	11.17	11.18	12.13	11.72
4	Co 14016	10.72		10.49	11.67	9.61	11.60	11.85	11.52	10.60		11.39	9.98	10.25	11.78	10.96
5	Co 14027	12.37		11.14	12.45	10.17	12.41	12.58	12.93	10.50		11.52	11.74	12.59	10.02	11.70
6	Co 14030	11.44		8.08	13.80	10.10	12.83	10.23	12.40	10.35		9.77	11.84	13.02	10.33	11.18
7	Co 14032	13.92		9.32	12.58	9.83	13.53	10.84	13.09	12.77		11.62	10.22	11.80	10.92	11.70
8	CoN 14073	8.57		11.84	11.07	10.15	12.16	10.97	11.36	10.04		9.92	9.67	10.03	9.88	10.47
9	CoSnk 14102	10.37		8.78	12.10	10.45	11.47	11.55	11.78	9.88		11.10	10.41	11.23	11.24	10.86
10	CoSnk 14103	11.38		10.60	12.08	9.38	12.48	11.26	11.45	12.03		9.90	11.73	10.76	9.71	11.06
11	CoT 14367	10.62		8.30	11.78	10.48	12.41	12.46	13.38	9.89		10.39	10.71	9.92	10.78	10.93
12	CoTl 14111	12.33		11.61	11.60	9.85	12.78	11.54	13.27	8.96		9.42	11.48	10.21	10.56	11.13
13	CoVC 14062	12.03		9.75	12.47	10.22	13.17	13.05	13.13	10.66		10.23	10.66	11.69	11.94	11.58
14	MS 14081	11.89		10.07	13.06	10.27	13.58	11.20	13.01	10.69		10.80	11.68	11.55	12.22	11.67
15	MS 14082	10.44		9.92	11.77	10.30	13.04	11.76	12.97	10.90		9.92	10.47	11.85	11.74	11.26
	Stds															
1	Co 86032	11.31		10.91	12.61	10.29	12.51	12.42	13.13	11.34		11.16	11.16	11.85	11.57	11.69
2	CoC 671	13.63		10.28	13.86	10.57	13.30	13.15	13.84	11.50		10.63	12.84	12.88	11.98	12.37
3	CoSnk 05103	11.62		10.34	12.40	10.30	11.70	11.01	12.21	11.16		11.59	12.05	11.61	10.94	11.41
	Grand mean	11.63		10.23	12.35	10.16	12.60	11.86	12.76	10.81		10.58	11.11	11.51	11.11	11.39
	SE	1.71		0.38	0.32	0.29	0.22	0.53	0.33	0.15		0.07	0.76	0.80	0.48	
	CD	0.59		1.08	0.91	NS	0.64	1.54	0.96	0.44		0.20	NS	2.39	1.36	
	CV	8.84		6.36	4.45	5.02	3.03	7.78	4.55	2.45		1.17	11.79	9.83	7.48	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.15 Sucrose %at 10 month

S No	Entries	Coimbatore	Basmath nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	17.61		16.69	16.09	14.87	18.36	17.89	18.61	16.70		15.21	17.17	17.25	16.79	16.94
2	Co 14004	19.16		14.42	18.30	14.68	18.35	16.75	20.10	16.33		14.63	15.03	17.17	14.95	16.66
3	Co 14012	15.78		15.30	17.71	15.07	18.04	19.71	19.27	15.26		15.52	16.20	15.46	17.38	16.72
4	Co 14016	15.65		14.71	16.41	14.04	16.67	16.88	16.64	15.27		16.42	14.86	14.27	16.86	15.72
5	Co 14027	17.81		15.63	17.53	14.80	17.88	17.92	19.11	15.36		16.51	16.99	17.42	14.36	16.78
6	Co 14030	16.56		11.50	19.29	14.71	18.63	15.53	17.77	15.20		14.59	17.08	18.05	14.81	16.14
7	Co 14032	19.83		13.20	17.63	14.43	19.65	16.04	19.07	18.30		16.92	14.88	16.35	15.65	16.83
8	CoN 14073	13.07		16.75	15.64	14.62	17.67	15.67	16.46	14.86		14.45	14.34	14.05	14.14	15.14
9	CoSnk 14102	15.03		12.52	17.09	15.31	16.79	16.65	16.93	14.37		16.19	15.28	15.58	16.09	15.65
10	CoSnk 14103	16.46		14.87	16.95	13.96	17.81	16.31	16.74	17.24		14.43	16.90	15.20	13.91	15.90
11	CoT 14367	15.55		12.09	16.56	15.32	18.21	17.64	18.79	14.45		15.30	15.70	13.73	15.45	15.73
12	CoTI 14111	17.64		16.38	16.27	14.39	18.82	16.49	19.04	13.43		13.77	16.60	14.30	15.13	16.02
13	CoVC 14062	17.48		13.84	17.54	14.76	19.01	18.28	18.86	15.50		15.04	15.65	16.17	17.09	16.60
14	MS 14081	17.08		14.30	18.31	14.75	19.56	16.14	18.71	15.45		15.59	16.88	15.97	17.48	16.68
15	MS 14082	15.16		14.01	16.58	14.93	18.56	16.92	18.67	15.78		14.54	15.37	16.33	16.79	16.14
	Stds															
1	Co 86032	16.30		15.46	17.64	14.88	17.95	17.57	18.81	16.26		16.22	16.11	16.33	16.58	16.68
2	CoC 671	19.33		14.74	19.36	15.16	19.35	18.79	19.42	16.53		15.41	18.47	17.19	17.16	17.58
3	CoSnk 05103	16.76		14.75	17.34	14.87	17.34	15.80	18.62	16.28		16.70	17.36	16.17	15.68	16.47
	Grand mean	16.79		14.51	17.35	14.75	18.26	17.06	18.42	15.69		15.41	16.16	15.94	15.91	16.35
	SE	2.20		0.46	0.41	0.27	0.24	0.63	0.40	0.21		0.07	0.97	0.98	0.68	
	CD	0.76		1.33	1.19	0.77	0.70	1.83	1.15	0.61		0.20	NS	2.91	1.94	
	CV	7.86		5.52	4.12	3.15	2.30	6.44	3.78	2.36		0.79	10.45	8.66	7.45	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.16 Brix % at 10 month

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	19.54		17.73	17.47	16.85	20.90	21.22	20.75	18.92		17.30	19.23	17.82	18.53	18.86
2	Co 14004	20.88		16.23	19.27	16.70	20.62	19.19	21.25	18.53		17.30	17.27	17.58	16.63	18.45
3	Co 14012	17.77		16.56	18.80	16.79	20.73	20.92	21.05	16.93		17.93	18.46	15.82	19.30	18.42
4	Co 14016	18.04		15.56	17.50	16.25	18.64	18.49	18.79	17.15		18.47	17.83	14.82	18.67	17.52
5	Co 14027	19.98		16.56	18.77	16.98	20.05	19.65	21.39	17.79		18.33	19.24	17.82	15.93	18.54
6	Co 14030	18.80		12.56	20.27	16.91	21.27	19.32	19.75	17.74		17.60	19.25	18.57	16.47	18.21
7	Co 14032	21.72		14.73	18.67	16.86	22.43	19.02	20.65	20.31		19.43	17.08	16.82	17.37	18.76
8	CoN 14073	16.38		17.90	16.87	16.41	20.18	17.25	19.19	17.61		16.60	17.07	14.82	15.63	17.16
9	CoSnk 14102	17.08		13.73	18.40	17.78	19.50	18.75	18.95	16.47		18.67	17.81	16.07	17.83	17.59
10	CoSnk 14103	18.65		15.73	18.00	16.71	19.60	18.52	19.89	19.15		16.60	18.99	16.32	15.40	17.80
11	CoT 14367	18.07		13.90	17.67	17.75	21.23	19.09	19.65	16.68		17.97	18.27	14.07	17.17	17.63
12	CoTI 14111	19.51		17.56	17.27	16.63	22.11	18.19	21.25	16.31		16.10	18.80	15.07	16.80	17.97
13	CoVC 14062	20.00		15.06	18.73	16.67	21.44	19.29	21.09	17.75		17.63	18.28	16.57	18.93	18.45
14	MS 14081	19.05		15.56	19.40	16.46	21.94	18.12	20.65	17.45		17.57	19.07	16.32	19.33	18.41
15	MS 14082	17.33		15.06	17.73	17.00	20.29	18.99	20.75	17.91		16.93	17.96	16.57	18.57	17.92
	Stds															
1	Co 86032	18.30		16.73	18.60	16.87	19.98	18.99	20.75	18.08		18.53	18.19	16.57	18.40	18.33
2	CoC 671	20.97		16.40	20.33	16.88	22.19	20.75	21.29	18.45		17.53	20.65	16.07	19.03	19.21
3	CoSnk 05103	18.88		16.23	18.27	16.77	20.64	17.62	19.59	18.77		18.77	19.48	16.82	17.43	18.27
	Grand mean	18.94		15.77	18.44	16.85	20.76	19.08	20.37	17.88		17.74	18.50	16.36	17.64	18.19
	SE	1.85		0.47	0.38	0.22	0.22	0.55	0.38	0.25		0.05	0.84	0.74	0.75	
	CD	0.64		1.34	1.08	0.63	0.63	1.58	1.09	0.72		0.16	NS	2.20	2.14	
	CV	5.87		5.13	3.53	2.25	1.81	4.98	3.23	2.41		0.54	7.94	6.37	7.39	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.17 Purity % at 10 month

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padeg aon	Perumallapalle	Pravar anagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	89.96		94.13	92.32	88.31	87.84	84.28	90.99	88.30		87.92	89.04	96.80	90.60	90.04
2	Co 14004	91.74		88.80	95.18	87.95	88.98	87.26	93.17	88.10		84.59	86.96	97.71	89.91	90.03
3	Co 14012	88.40		92.52	94.40	89.83	87.05	94.24	90.10	90.17		86.52	87.74	97.40	90.05	90.70
4	Co 14016	86.67		94.37	93.95	86.41	89.45	91.36	88.74	89.09		88.92	84.31	96.22	90.32	89.98
5	Co 14027	89.13		94.42	93.63	87.17	89.16	91.21	90.58	86.34		90.04	88.11	97.69	90.11	90.63
6	Co 14030	88.02		91.51	95.36	87.02	87.69	80.35	90.17	85.68		82.88	88.70	97.20	89.93	88.71
7	Co 14032	91.26		89.47	94.65	85.61	87.58	84.25	91.65	90.12		87.07	87.01	97.32	90.10	89.67
8	CoN 14073	79.73		92.71	92.92	89.15	87.52	90.82	87.46	84.37		87.05	83.75	94.50	90.45	88.37
9	CoSnk 14102	87.78		91.21	93.04	86.24	86.10	89.09	89.52	87.24		86.73	85.66	96.95	90.23	89.15
10	CoSnk 14103	88.18		94.48	94.39	83.50	90.88	87.97	85.26	90.02		86.91	89.01	92.95	90.24	89.48
11	CoT 14367	86.06		87.06	93.91	86.49	85.77	92.48	94.14	86.60		85.18	85.83	97.54	89.98	89.25
12	CoTI 14111	90.05		93.24	94.45	86.57	85.11	90.63	89.74	82.36		86.44	88.22	94.89	90.03	89.31
13	CoVC 14062	87.28		91.82	93.83	88.58	88.70	94.75	89.47	87.34		85.31	85.58	97.58	90.28	90.04
14	MS 14081	89.60		92.11	94.58	89.64	89.16	89.01	90.88	88.50		88.73	88.52	97.82	90.40	90.75
15	MS 14082	87.51		92.95	93.60	87.88	91.45	89.24	91.14	88.09		85.86	85.34	98.52	90.44	90.17
	Stds															
1	Co 86032	89.08		92.36	95.05	88.25	89.84	92.56	90.59	89.94		87.50	88.54	98.56	90.09	91.03
2	CoC 671	92.16		89.97	95.39	89.87	87.17	90.70	89.79	89.59		87.87	89.43	106.85	90.16	91.58
3	CoSnk 05103	88.74		90.95	95.14	88.71	84.01	89.64	89.65	86.75		88.99	89.03	96.12	89.94	89.81
	Grand mean	88.41		91.89	94.21	87.62	87.97	89.44	90.17	87.67		86.92	87.27	97.37	90.18	89.93
	SE	3.35		1.41	0.70	2.12	1.03	2.04	0.65	0.45		0.43	1.74	2.51	0.19	
	CD	1.16		4.05	NS	NS	2.96	5.89	1.88	1.74		1.24	NS	7.50	Ns	
	CV	2.27		2.66	1.29	4.18	2.02	3.95	1.25	0.90		0.86	3.45	3.65	0.36	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.18 Pol % Cane at 10 month

S No	Entries	Coimbatore	Basmat h Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002			13.74		11.54	13.99			13.02			12.70	13.38		13.06
2	Co 14004			11.71		11.44	14.16			12.73			11.13	13.44		12.44
3	Co 14012			11.78		11.84	13.94			11.90			11.99	12.03		12.25
4	Co 14016			11.85		11.07	12.84			11.86			10.99	11.12		11.62
5	Co 14027			12.00		11.54	13.69			11.95			12.57	13.12		12.48
6	Co 14030			9.05		11.39	14.31			11.83			12.64	14.11		12.22
7	Co 14032			10.31		11.41	15.00			14.25			11.01	12.54		12.42
8	CoN 14073			13.80		11.44	13.45			11.55			10.61	10.96		11.97
9	CoSnk 14102			9.75		11.90	12.66			11.20			11.31	11.81		11.44
10	CoSnk 14103			11.19		10.81	13.37			13.42			12.51	11.40		12.12
11	CoT 14367			9.86		11.79	14.11			11.23			11.62	10.85		11.58
12	CoTI 14111			12.74		11.23	13.96			10.46			12.29	10.43		11.85
13	CoVC 14062			11.14		11.52	14.68			12.08			11.58	12.53		12.26
14	MS 14081			11.60		11.55	15.06			12.01			12.49	12.57		12.55
15	MS 14082			11.48		11.59	13.97			12.29			11.37	12.86		12.26
	Stds															
1	Co 86032			12.53		11.67	14.07			12.61			11.92	12.70		12.58
2	CoC 671			12.02		11.83	14.85			12.81			13.67	13.42		13.10
3	CoSnk 05103			11.88		11.63	13.00			12.61			12.84	11.88		12.31
	Grand mean			11.58		11.51	13.95			12.20			11.96	12.29		12.25
	SE			0.37		0.22	0.21			0.17			0.72	0.77		
	CD			1.07		NS	0.60			0.48			NS	2.31		
	CV			5.59		3.33	2.58			2.35			10.45	8.91		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.19 Fibre % at 10 month

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padeg aon	Perumallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002			7.67		12.39	12.18			12.07				12.46		11.35
2	Co 14004			8.83		12.08	11.82			12.04				11.72		11.30
3	Co 14012			13.03		11.43	12.18			12.02				12.10		12.15
4	Co 14016			9.43		11.13	12.14			12.30				12.03		11.41
5	Co 14027			13.23		12.00	13.32			12.17				14.67		13.08
6	Co 14030			11.27		12.56	11.74			12.16				11.83		11.91
7	Co 14032			11.90		10.90	13.33			12.14				13.37		12.33
8	CoN 14073			7.60		11.79	13.18			12.27				12.15		11.40
9	CoSnk 14102			12.10		12.21	13.94			12.08				14.18		12.90
10	CoSnk 14103			14.77		12.58	14.70			12.13				14.89		13.81
11	CoT 14367			8.50		13.03	12.27			12.23				10.97		11.40
12	CoTI 14111			12.20		12.00	15.33			12.11				17.08		13.74
13	CoVC 14062			9.53		11.94	11.80			12.02				12.50		11.56
14	MS 14081			8.87		11.75	12.05			12.26				11.29		11.24
15	MS 14082			8.07		12.39	13.71			12.10				11.23		11.50
	Stds															
1	Co 86032			8.93		11.58	10.91			12.46				12.20		11.22
2	CoC 671			8.47		11.98	11.60			12.51				11.91		11.29
3	CoSnk 05103			9.50		11.82	14.30			12.55				16.55		12.94
	Grand mean			10.22		11.98	12.81			12.20				12.95		12.03
	SE			0.15		0.32	0.43			0.10				0.63		
	CD			0.43		0.91	1.25			0.29				1.88		
	CV			2.53		4.57	5.88			1.45				6.88		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.20 Extraction % at 10 month

S No	Entries	Coimbatore	Basmat hnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	46.93		47.76		51.77	48.23	58.78	46.65	53.83				58.65	61.81	52.71
2	Co 14004	45.72		49.43		51.99	50.57	58.50	46.13	53.63				55.96	55.33	51.92
3	Co 14012	45.89		51.32		56.04	52.12	59.82	42.44	55.81				60.97	61.47	53.99
4	Co 14016	46.28		54.65		52.54	49.68	59.48	43.99	49.59				61.88	59.39	53.05
5	Co 14027	44.14		47.34		54.72	52.11	55.04	46.19	47.47				47.89	53.89	49.87
6	Co 14030	46.76		51.37		51.99	51.04	56.36	46.14	51.47				57.13	50.49	51.42
7	Co 14032	45.97		47.93		53.62	48.64	51.28	48.57	49.93				58.22	56.14	51.14
8	CoN 14073	47.34		50.40		51.84	46.53	57.52	49.41	49.44				55.47	56.77	51.64
9	CoSnk 14102	40.39		49.01		51.70	47.86	52.37	48.66	48.14				53.64	53.81	49.51
10	CoSnk 14103	43.86		47.51		54.18	49.95	56.88	44.94	50.78				52.16	57.15	50.82
11	CoT 14367	50.22		53.12		55.22	54.64	56.29	43.40	46.06				59.20	57.75	52.88
12	CoTI 14111	45.20		46.33		51.70	54.58	58.24	49.90	48.93				53.34	56.77	51.67
13	CoVC 14062	45.83		48.80		52.60	48.58	57.41	41.75	50.07				63.53	57.67	51.80
14	MS 14081	43.77		49.90		51.36	45.69	55.73	50.37	46.54				59.51	56.30	51.02
15	MS 14082	46.07		49.52		53.83	49.94	53.08	44.84	47.84				57.65	58.10	51.21
	Stds															
1	Co 86032	48.74		49.43		49.78	51.41	55.60	48.49	49.96				51.20	61.55	51.80
2	CoC 671	48.78		48.57		53.68	53.53	56.41	44.79	52.43				48.58	54.79	51.28
3	CoSnk 05103	39.06		46.16		50.96	50.94	55.26	42.69	51.60				57.34	58.61	50.29
	Grand mean	45.61		49.36		52.75	50.33	56.34	46.07	50.27				56.24	57.10	51.56
	SE	4.02		1.82		0.64	4.25		0.45	1.67				3.42	2.75	
	CD	1.39		5.23		1.83	NS	NS	1.31	4.79				10.20	NS	
	CV	5.29		6.38		2.09	14.62		1.71	5.75				8.60	8.33	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.21 NMC (000/ha) at 10 month

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002					132.07	96.00	79.11	106.54	117.51			113.00	82.12	101.91	103.53
2	Co 14004					137.71	94.00	71.61	108.63	128.41			124.00	73.46	97.51	104.42
3	Co 14012					128.99	98.00	64.88	116.24	121.22			109.00	69.71	103.65	101.46
4	Co 14016					126.24	101.00	87.70	118.38	134.56			125.00	85.52	114.00	111.55
5	Co 14027					134.49	83.00	70.99	120.11	89.32			102.00	77.44	112.15	98.69
6	Co 14030					132.84	75.00	76.95	115.88	75.17			128.00	61.34	102.61	95.97
7	Co 14032					130.05	72.00	70.68	100.87	67.86			105.00	66.84	96.82	88.76
8	CoN 14073					137.44	90.00	62.95	97.69	78.18			121.00	81.15	127.26	99.46
9	CoSnk 14102					135.73	103.00	63.10	97.15	88.39			134.00	82.16	104.05	100.95
10	CoSnk 14103					130.24	61.00	65.42	107.43	87.00			123.00	40.48	109.78	90.54
11	CoT 14367					137.80	61.00	84.68	113.03	69.72			98.00	70.33	111.51	93.26
12	CoTI 14111					132.16	75.00	70.68	104.39	108.00			125.00	82.58	103.07	100.11
13	CoVC 14062					137.25	63.00	69.91	109.05	65.77			117.00	65.78	98.55	90.79
14	MS 14081					139.07	72.00	74.16	118.13	61.13			107.00	64.70	107.52	92.96
15	MS 14082					135.36	83.00	92.10	114.08	85.61			111.00	75.41	113.08	101.21
	Stds															
1	Co 86032					120.12	79.00	82.59	130.70	107.53			125.00	76.93	121.07	105.37
2	CoC 671					113.72	64.00	62.79	119.90	91.29			122.00	54.61	106.54	91.86
3	CoSnk 05103					119.08	106.00	92.57	119.66	120.52			129.00	86.52	101.10	109.31
	Grand mean					131.13	82.00	74.61	112.07	94.28			117.67	72.06	107.34	98.89
	SE					4.28	6.00	6.62	0.98	4.99			3.88	6.13	5.10	
	CD					12.30	17.00	19.11	2.82	14.35			11.21	18.29	14.51	
	CV					5.65	12.00	15.36	1.52	9.17			5.71	12.03	8.24	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.22 Stalk length (cm) at 10 month

S No	Entries	Coimbatore	Basmat h Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	271.67		184.89	245.33	237.51	202.50	230.57	258.00	232.47			220.00	240.00	230.00	232.09
2	Co 14004	245.00		167.44	210.67	245.00	203.00	226.53	158.00	221.60			209.00	224.80	223.00	212.19
3	Co 14012	243.33		150.67	184.00	230.71	210.00	223.63	154.00	237.50			191.00	216.45	213.00	204.94
4	Co 14016	243.33		110.16	190.67	237.45	192.50	255.53	141.50	235.67			221.00	167.50	214.00	200.85
5	Co 14027	246.67		125.11	215.33	228.15	224.50	263.63	207.50	269.47			211.00	173.15	218.67	216.65
6	Co 14030	221.67		177.28	197.33	239.57	198.00	273.67	200.00	244.60			207.00	186.50	209.67	214.12
7	Co 14032	228.33		177.89	198.00	209.37	205.00	297.10	210.00	254.47			259.00	238.65	240.33	228.92
8	CoN 14073	271.67		190.00	254.00	245.62	242.00	265.43	228.00	264.33			274.00	252.00	241.33	248.04
9	CoSnk 14102	271.67		142.05	242.67	238.75	221.50	235.57	215.50	226.33			239.00	229.50	230.33	226.62
10	CoSnk 14103	245.00		184.17	211.33	221.67	217.50	265.33	230.50	249.00			235.00	224.00	229.00	228.41
11	CoT 14367	235.00		165.39	190.67	225.56	179.00	262.00	185.50	207.33			200.00	205.00	228.33	207.62
12	CoTI 14111	241.67		168.67	203.33	233.58	197.50	251.57	228.00	252.67			254.00	259.50	243.33	230.35
13	CoVC 14062	221.67		180.11	235.33	247.23	210.50	257.57	196.50	220.67			236.00	228.50	239.33	224.86
14	MS 14081	260.00		154.50	224.00	226.25	233.50	296.43	222.50	243.13			238.00	246.50	223.33	233.47
15	MS 14082	251.67		144.44	224.00	231.75	219.00	268.33	227.50	266.53			240.00	209.50	256.33	230.82
	Stds															
1	Co 86032	236.67		155.61	232.67	213.29	209.00	260.00	198.50	265.87			250.00	218.50	208.67	222.62
2	CoC 671	245.00		130.44	198.00	210.83	219.50	238.57	181.50	271.53			213.00	197.50	214.00	210.90
3	CoSnk 05103	265.00		164.00	219.33	212.95	226.50	284.77	196.50	274.40			262.00	216.50	257.00	234.45
	Grand mean	246.94		159.60	215.37	229.74	211.72	258.68	202.19	246.53			231.06	192.74	228.87	220.31
	SE	N/A		7.64	4.92	7.36	10.99		1.30	6.60			14.07	9.30	8.32	
	CD	13.21		21.96	14.15	21.14	NS	NS	3.74	18.98			40.61	27.74	23.65	
	CV	9.27		8.29	3.96	5.55	8.99		1.11	4.64			10.54	6.82	6.30	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.23 Stalk diameter (cm) at 10 month

S No	Entries	Coimbatore	Basmat hnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	2.63		2.32	2.95	2.21	3.00	2.50	2.51	2.61			2.57	2.67	2.24	2.56
2	Co 14004	2.62		2.62	2.73	2.34	2.78	2.60	2.46	2.02			2.37	2.52	1.93	2.45
3	Co 14012	2.66		2.63	2.67	2.35	3.08	2.60	2.43	2.67			2.7	2.67	2.55	2.64
4	Co 14016	2.52		2.87	2.78	2.18	3.10	2.60	2.48	2.75			2.73	2.66	2.38	2.64
5	Co 14027	3.04		2.87	3.25	2.41	3.29	2.90	2.55	2.90			2.97	2.8	1.92	2.81
6	Co 14030	2.86		2.7	2.75	2.35	2.97	2.80	2.44	2.61			2.73	2.54	2.43	2.66
7	Co 14032	3.09		2.82	3.01	2.48	3.10	2.80	2.44	2.70			2.93	2.62	2.21	2.74
8	CoN 14073	2.91		2.94	2.98	2.31	3.02	3.00	2.42	2.87			2.93	2.66	2.35	2.76
9	CoSnk 14102	2.61		2.59	2.85	2.18	2.63	2.90	2.38	2.15			2.50	2.56	2.05	2.49
10	CoSnk 14103	2.96		2.67	3.03	2.37	3.02	3.20	2.46	3.07			2.83	2.64	2.24	2.77
11	CoT 14367	3.05		2.60	3.33	2.28	3.02	3.10	2.41	2.69			3.20	2.92	2.83	2.86
12	CoTI 14111	2.99		2.55	2.91	2.34	3.26	2.90	2.46	2.65			2.83	2.89	2.59	2.76
13	CoVC 14062	2.61		2.86	3.21	2.39	3.21	2.80	2.37	2.77			2.90	2.67	2.40	2.74
14	MS 14081	2.66		3.08	3.09	2.34	3.21	3.00	2.49	2.77			2.97	2.72	2.39	2.79
15	MS 14082	2.66		2.61	2.96	2.27	2.89	2.60	2.52	2.69			2.77	2.61	2.46	2.64
	Stds															
1	Co 86032	2.88		2.64	2.83	2.16	2.94	2.60	2.48	2.80			2.87	2.58	2.31	2.64
2	CoC 671	2.99		3.06	3.32	2.15	3.16	2.80	2.46	2.90			2.73	2.83	2.36	2.79
3	CoSnk 05103	2.20		2.31	2.52	2.11	2.47	2.40	2.28	2.17			2.53	2.66	2.25	2.36
	Grand mean	2.77		2.71	2.95	2.29	3.01	2.80	2.44	2.65			2.78	2.68	2.33	2.67
	SE	0.29		0.08	0.09	0.06	0.28	0.10	0.02	0.68			0.10	0.07	0.06	
	CD	0.10		0.22	0.25	0.17	0.82	0.30	0.06	0.19			0.30	0.21	0.17	
	CV	6.27		4.98	5.20	4.39	16.35	5.60	2.11	4.40			6.49	3.64	4.55	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant
Table 2.4.24 Single cane weight (kg) at 10 month

S No	Entries	Coimbatore	Basmath nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	1.33		0.81	1.15	1.14	1.16	1.06	1.41	1.16			0.90	1.48	1.00	1.15
2	Co 14004	1.17		0.83	1.05	1.13	1.02	1.17	1.16	0.98			0.96	1.29	0.88	1.06
3	Co 14012	1.33		0.74	0.92	1.12	1.09	1.15	1.03	1.24			0.86	1.23	1.09	1.07
4	Co 14016	1.17		0.70	0.96	1.20	0.86	1.21	1.18	1.32			0.88	0.97	1.02	1.04
5	Co 14027	1.72		0.59	1.40	1.13	0.98	1.37	1.28	1.56			1.02	1.11	0.90	1.19
6	Co 14030	1.08		0.96	0.96	1.12	1.04	1.37	1.35	1.13			0.94	1.00	1.17	1.10
7	Co 14032	1.45		1.05	1.19	0.92	1.16	1.44	1.58	1.28			1.03	1.44	0.96	1.23
8	CoN 14073	1.75		1.23	1.36	1.19	1.43	1.40	1.63	1.56			0.27	1.51	1.04	1.31
9	CoSnk 14102	1.42		0.74	1.29	1.16	1.00	1.29	1.47	0.87			1.02	1.20	0.89	1.12
10	CoSnk 14103	1.35		0.98	1.25	1.15	1.16	1.50	1.29	1.49			1.07	1.38	0.97	1.24
11	CoT 14367	1.65		0.83	1.41	1.08	1.03	1.47	1.09	1.18			1.05	1.44	1.28	1.23
12	CoTI 14111	1.33		0.83	0.99	1.16	1.11	1.18	1.53	1.44			1.04	1.59	1.21	1.22
13	CoVC 14062	1.06		1.01	1.33	1.16	1.35	1.73	0.97	1.15			1.14	1.56	1.09	1.23
14	MS 14081	1.42		1.05	1.36	1.14	1.45	1.37	1.79	1.37			1.17	1.53	1.05	1.34
15	MS 14082	1.50		0.87	1.48	1.15	1.17	1.43	1.20	1.49			1.12	1.41	1.40	1.29
	Stds															
1	Co 86032	1.46		0.83	1.33	1.07	1.13	1.12	1.33	1.45			1.25	1.30	1.02	1.21
2	CoC 671	1.62		0.84	1.46	1.05	1.11	1.27	1.10	1.73			1.07	1.39	1.00	1.24
3	CoSnk 05103	0.82		0.58	0.88	0.96	0.69	0.99	1.05	0.99			0.85	1.24	1.07	0.92
	Grand mean	1.38		0.86	1.21	1.11	1.11	1.31	1.30	1.30			0.98	1.34	1.06	1.18
	SE	0.32		0.05	0.08	0.04	0.07	0.07	0.01	0.51			0.06	0.11	0.05	
	CD	0.11		0.14	0.24	0.09	0.21	0.19	0.04	0.15			0.18	0.33	0.15	
	CV	13.90		10.10	11.91	5.07	11.28	8.82	2.11	6.76			10.90	11.67	8.41	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT 1 Plant

Table 2.4.25 Stalk length (cm) at 8 month

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	228.33			182.67	212.91	159.50	212.33	244.50	200.05			197.00	170.30		200.84
2	Co 14004	171.67			158.00	213.61	139.00	222.00	144.00	188.93			184.00	165.80		176.33
3	Co 14012	180.00			119.33	209.67	132.50	193.67	136.50	211.50			156.67	133.15		163.67
4	Co 14016	151.67			144.00	215.79	115.00	227.67	128.50	200.33			173.33	113.50		163.31
5	Co 14027	185.00			153.33	210.42	148.00	232.00	184.50	243.40			180.67	129.50		185.20
6	Co 14030	155.00			151.33	217.67	139.50	232.67	174.00	211.30			152.33	126.95		173.42
7	Co 14032	193.33			168.67	189.71	140.00	231.67	192.50	225.53			176.00	162.00		186.60
8	CoN 14073	183.33			188.67	221.88	166.50	234.33	214.50	235.77			207.67	187.00		204.41
9	CoSnk 14102	213.33			193.33	211.07	157.50	145.00	208.00	196.43			194.67	161.95		186.81
10	CoSnk 14103	175.00			148.00	207.61	152.00	217.67	206.00	218.13			188.33	169.45		186.91
11	CoT 14367	168.33			136.00	207.81	121.50	205.67	172.50	171.30			163.67	135.30		164.68
12	CoTI 14111	186.67			162.00	206.92	143.50	213.33	205.50	220.27			192.67	144.80		186.18
13	CoVC 14062	190.00			168.67	215.97	147.00	223.33	183.00	187.40			187.33	163.00		185.08
14	MS 14081	195.00			183.33	212.71	160.00	226.67	214.00	209.40			195.67	179.30		197.34
15	MS 14082	198.33			158.00	200.21	149.00	223.67	205.00	236.30			188.00	132.00		187.83
	Stds															
1	Co 86032	170.00			178.00	192.01	149.00	229.00	185.50	233.20			188.67	142.80		185.35
2	CoC 671	186.67			177.33	194.14	148.50	177.33	168.50	238.10			170.33	134.80		177.30
3	CoSnk 05103	223.33			194.00	189.61	150.00	233.33	185.00	242.57			220.33	154.65		199.20
	Grand mean	186.39			164.70	207.21	145.44	215.63	186.22	214.99			184.30	150.35		183.91
	SE	37.95			4.53	6.12	6.18	17.79	2.46	6.40			11.41	6.48		
	CD	13.15			13.01	17.58	17.85	NS	7.09	18.39			32.93	19.35		
	CV	12.22			4.76	5.11	7.36	14.29	2.29	5.15			10.72	6.10		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.26 Stalk diameter (cm) at 8 month

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaoon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	2.55			2.85	2.03	2.94	2.53	2.42	2.30			2.83	2.87		2.59
2	Co 14004	2.65			2.59	2.00	2.78	2.47	2.37	2.03			2.67	2.77		2.48
3	Co 14012	2.53			2.65	2.08	3.00	2.40	2.28	2.36			2.70	2.89		2.54
4	Co 14016	2.56			2.61	2.05	2.97	2.57	2.36	2.44			2.80	2.85		2.58
5	Co 14027	2.83			3.08	2.11	3.29	2.87	2.46	2.55			3.07	3.07		2.81
6	Co 14030	2.71			2.61	2.15	3.02	2.70	2.33	2.41			2.93	2.77		2.63
7	Co 14032	2.96			2.73	2.19	3.02	2.60	2.38	2.42			3.03	2.93		2.70
8	CoN 14073	2.74			2.79	2.07	2.94	3.03	2.32	2.60			3.03	2.98		2.72
9	CoSnk 14102	2.57			2.61	1.97	2.70	2.83	2.32	1.88			2.93	2.73		2.50
10	CoSnk 14103	2.87			2.84	2.18	3.02	3.00	2.36	2.80			2.93	2.99		2.78
11	CoT 14367	2.94			3.11	2.10	3.10	2.77	2.39	2.39			3.37	3.25		2.82
12	CoTI 14111	2.88			2.84	2.14	3.29	2.69	2.42	2.37			2.93	3.12		2.74
13	CoVC 14062	2.77			3.02	2.09	3.18	2.70	2.25	2.49			3.20	3.08		2.75
14	MS 14081	2.72			2.95	2.05	3.18	2.63	2.49	2.54			3.17	3.11		2.76
15	MS 14082	2.93			2.87	2.09	2.97	2.40	2.46	2.41			2.87	2.82		2.65
	Stds															
1	Co 86032	3.09			2.76	1.99	3.00	2.53	2.40	2.54			3.03	2.77		2.68
2	CoC 671	2.98			3.10	1.93	3.16	2.34	2.35	2.58			2.80	2.95		2.69
3	CoSnk 05103	2.26			2.36	1.97	2.41	2.37	2.15	1.85			2.77	2.74		2.32
	Grand mean	2.75			2.80	2.07	3.00	2.64	2.36	2.38			2.95	2.93		2.65
	SE	0.25			0.08	0.04	0.10	0.12	0.02	0.78			0.10	0.14		
	CD	0.09			0.24	0.12	0.29	0.34	0.06	0.23			0.29	0.43		
	CV	5.39			5.17	3.57	5.87	7.64	1.61	5.68			5.83	6.98		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.27 Single cane weight (kg) at 8 month

S No	Entries	Coimbatore	Basmat hnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	1.23			1.00	1.14	1.19	1.13	1.05	0.84			1.05	1.18		1.09
2	Co 14004	0.85			0.83	1.13	0.57	1.03	1.03	0.62			0.82	1.02		0.88
3	Co 14012	0.85			0.70	1.12	0.63	1.01	0.82	0.98			0.61	0.87		0.84
4	Co 14016	0.82			0.78	1.20	0.67	1.17	0.92	1.00			0.89	0.71		0.91
5	Co 14027	1.18			0.95	1.13	0.84	1.48	1.07	1.00			1.32	0.89		1.10
6	Co 14030	0.84			0.87	1.12	0.78	1.30	1.13	0.83			0.75	0.73		0.93
7	Co 14032	1.18			0.89	0.92	1.02	1.29	1.21	0.86			1.01	1.12		1.06
8	CoN 14073	1.02			1.17	1.19	1.08	1.57	1.34	1.08			1.11	1.28		1.20
9	CoSnk 14102	0.92			0.95	1.16	0.65	1.12	1.26	0.55			0.92	1.00		0.95
10	CoSnk 14103	0.99			0.99	1.15	1.02	1.36	1.04	1.03			1.00	1.21		1.09
11	CoT 14367	1.11			1.12	1.08	1.06	1.21	0.96	0.81			1.05	1.11		1.06
12	CoTI 14111	0.94			0.91	1.16	1.03	1.13	1.09	0.90			0.91	1.00		1.01
13	CoVC 14062	1.04			1.19	1.16	0.85	1.27	0.83	0.75			1.21	1.22		1.06
14	MS 14081	1.03			1.25	1.14	1.01	1.31	1.56	0.85			1.18	1.32		1.18
15	MS 14082	1.19			1.00	1.15	0.93	1.15	0.98	1.04			0.93	0.92		1.03
	Stds															
1	Co 86032	1.16			1.11	1.07	0.85	1.13	1.07	0.98			1.05	0.92		1.04
2	CoC 671	1.25			1.27	1.05	0.94	0.89	0.92	1.03			0.89	0.98		1.02
3	CoSnk 05103	0.76			0.86	0.96	0.60	1.04	0.85	0.77			0.90	0.95		0.85
	Grand mean	1.02			0.99	1.00	0.87	1.20	1.06	0.88			0.98	1.02		1.00
	SE	0.29			0.07	0.03	0.07	0.12	0.01	0.41			0.08	0.09		
	CD	0.10			0.20	0.07	0.21	0.34	0.05	0.12			0.23	0.28		
	CV	16.76			12.18	4.50	14.47	16.97	2.99	7.99			14.05	13.08		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.28 CCS % at 8 month

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravar anagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	10.40			7.62	7.23	8.28	11.53	11.20	10.28		8.98	11.67	9.21		9.64
2	Co 14004	9.61			8.68	7.29	8.03	11.20	12.11	10.28		7.50	10.89	9.07		9.47
3	Co 14012	10.12			8.49	6.69	8.56	11.18	12.00	9.69		8.22	11.82	9.35		9.61
4	Co 14016	8.18			9.71	6.18	7.53	9.12	12.12	9.91		7.94	9.95	7.56		8.82
5	Co 14027	11.18			9.61	6.81	8.34	10.41	11.41	9.69		10.27	12.02	11.31		10.11
6	Co 14030	10.78			10.68	7.37	8.03	7.18	12.12	10.37		10.05	11.35	11.75		9.97
7	Co 14032	9.80			11.13	7.05	7.96	7.16	12.51	8.63		7.85	10.64	8.86		9.16
8	CoN 14073	6.54			6.29	7.09	6.31	7.82	10.55	8.37		8.80	9.55	6.39		7.77
9	CoSnk 14102	8.70			8.80	6.82	6.08	9.30	11.13	9.14		8.25	11.13	8.84		8.82
10	CoSnk 14103	10.09			9.33	6.51	7.44	9.55	10.41	9.27		8.11	12.19	8.28		9.12
11	CoT 14367	7.16			6.55	5.99	4.62	7.89	10.69	8.59		7.27	10.22	5.10		7.41
12	CoTl 14111	9.15			7.32	7.74	5.85	8.99	12.74	9.47		6.97	10.58	7.77		8.66
13	CoVC 14062	9.06			7.91	6.57	6.32	9.66	11.71	10.56		7.76	10.18	7.92		8.77
14	MS 14081	9.82			9.75	6.80	7.02	9.44	11.43	10.02		10.25	11.81	7.77		9.41
15	MS 14082	9.71			9.44	7.34	7.85	8.76	12.06	8.72		10.46	11.49	9.67		9.55
	Stds															
1	Co 86032	10.34			10.47	7.56	8.87	8.86	11.51	10.40		8.04	11.37	9.24		9.67
2	CoC 671	11.71			11.09	7.16	8.18	10.76	12.48	9.27		8.27	12.38	9.39		10.07
3	CoSnk 05103	9.92			9.99	7.23	6.29	7.57	11.46	10.75		7.48	10.90	7.33		8.89
	Grand mean	9.57			9.05	6.96	7.31	9.24	11.64	9.63		8.47	11.12	8.60		9.16
	SE	1.29			0.58	0.18	0.62	0.72	0.24	0.18		0.08	0.54	0.54		
	CD	0.45			1.66	0.50	1.79	2.06	0.69	0.51		0.23	1.56	1.62		
	CV	8.12			11.02	4.37	14.71	13.37	3.64	3.21		1.66	8.39	8.91		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.29 Sucrose % at 8month

S No	Entries	Coimbatore	Basmath nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	15.19			11.64	10.69	12.90	16.42	16.29	14.91		13.46	16.94	13.20		14.16
2	Co 14004	14.30			12.79	10.81	12.44	16.07	17.24	14.75		11.58	16.04	12.98		13.90
3	Co 14012	14.80			12.49	10.00	13.41	16.07	17.16	14.09		12.13	17.13	13.17		14.05
4	Co 14016	12.38			13.92	9.24	11.15	13.47	17.43	14.34		12.25	14.74	11.07		13.00
5	Co 14027	16.26			13.84	10.21	13.20	15.02	16.49	14.22		15.00	17.37	15.88		14.75
6	Co 14030	15.86			15.16	11.03	13.05	11.17	17.22	14.92		14.61	16.61	16.38		14.60
7	Co 14032	14.62			15.64	10.52	12.84	11.12	17.86	12.90		11.89	15.70	12.70		13.58
8	CoN 14073	10.59			10.14	10.73	10.82	11.81	15.15	12.52		13.21	14.36	9.71		11.90
9	CoSnk 14102	12.94			12.96	10.13	10.39	13.70	15.88	13.51		12.45	16.32	12.68		13.10
10	CoSnk 14103	14.84			13.65	9.70	12.08	14.03	14.91	13.63		12.26	17.67	12.06		13.48
11	CoT 14367	11.21			10.23	9.07	8.56	11.86	15.36	12.66		10.95	15.20	7.87		11.30
12	CoTI 14111	13.68			11.06	11.29	10.07	13.28	18.08	13.87		10.59	15.56	11.20		12.87
13	CoVC 14062	13.69			11.92	9.98	10.67	14.11	16.77	15.36		11.79	15.15	11.56		13.10
14	MS 14081	14.42			14.12	10.15	11.55	13.75	16.45	14.63		14.87	17.11	10.99		13.80
15	MS 14082	14.37			13.72	10.79	12.61	13.10	17.26	13.00		15.10	16.65	13.49		14.01
	Stds															
1	Co 86032	15.15			14.86	10.87	13.89	13.18	16.36	15.03		12.18	16.59	13.14		14.13
2	CoC 671	16.99			15.77	10.58	13.12	15.69	17.76	13.48		12.33	17.86	13.36		14.69
3	CoSnk 05103	14.66			14.37	10.38	10.88	11.63	16.57	15.40		11.39	16.04	10.77		13.21
	Grand mean	14.22			13.24	10.34	11.87	13.64	16.68	14.06		12.67	16.28	12.34		13.53
	SE	1.66			0.66	0.24	0.62	0.88	0.30	0.24		0.08	0.68	0.66		
	CD	0.58			1.90	0.69	1.79	2.53	0.88	0.68		0.22	1.98	1.97		
	CV	7.02			8.63	4.02	9.03	11.12	3.18	2.91		1.07	7.28	7.58		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.30 Brix % at 8 month

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	17.54			14.77	12.67	16.79	17.98	17.95	16.97		16.37	19.32	14.64		16.50
2	Co 14004	17.14			15.13	12.86	16.03	17.88	19.19	16.43		14.83	18.84	14.34		16.27
3	Co 14012	17.14			14.73	12.11	17.62	17.98	18.95	16.13		14.30	19.51	14.09		16.26
4	Co 14016	15.33			15.60	11.17	13.25	15.88	19.25	16.27		15.67	17.52	12.84		15.28
5	Co 14027	18.63			15.67	12.39	17.64	16.91	18.65	16.61		17.30	19.61	16.84		17.03
6	Co 14030	18.59			16.60	13.36	18.18	14.48	18.79	16.73		16.70	19.25	17.08		16.98
7	Co 14032	17.63			16.73	12.67	17.65	14.38	19.69	15.59		14.73	18.52	14.09		16.17
8	CoN 14073	14.66			14.03	12.32	16.24	14.58	16.89	15.14		16.10	17.57	12.09		14.96
9	CoSnk 14102	15.49			15.33	12.11	15.54	16.11	17.49	16.00		15.30	18.99	14.09		15.65
10	CoSnk 14103	17.38			15.93	11.64	16.80	16.41	16.55	15.93		15.13	20.08	13.84		15.97
11	CoT 14367	14.69			13.47	11.22	14.12	14.48	17.15	14.90		13.40	18.22	10.10		14.17
12	CoTI 14111	16.53			13.73	13.00	15.22	15.68	18.92	16.11		13.20	18.22	12.59		15.32
13	CoVC 14062	16.87			14.73	12.44	15.72	16.31	18.59	17.59		14.67	18.17	13.34		15.84
14	MS 14081	16.85			16.13	12.24	16.36	15.81	18.45	16.89		16.93	19.43	11.85		16.09
15	MS 14082	17.06			15.80	12.62	17.24	15.88	18.89	15.66		17.03	18.94	14.09		16.32
	Stds															
1	Co 86032	17.61			16.27	12.84	18.22	15.78	17.85	17.00		15.10	19.15	14.34		16.42
2	CoC 671	19.36			17.33	12.61	17.90	18.08	19.45	15.45		14.83	20.11	14.59		16.97
3	CoSnk 05103	17.32			16.20	12.47	16.53	14.78	17.89	17.10		14.23	18.81	12.59		15.79
	Grand mean	16.99			15.46	12.37	16.50	16.07	18.36	16.25		15.32	18.90	13.75		16.00
	SE	1.42			0.41	0.29	0.58	0.66	0.26	0.22		0.05	0.57	0.55		
	CD	0.49			1.17	0.82	1.68	1.89	0.77	0.64		0.14	NS	1.64		
	CV	5.00			4.57	4.00	6.10	7.06	2.53	2.39		0.56	5.26	5.66		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.31 Purity % at 8 month

S No	Entries	Coimbatore	Basmat hnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	86.59			79.27	84.41	76.97	90.84	88.21	87.83		82.26	87.66	90.13		85.42
2	Co 14004	83.31			85.02	84.03	77.46	89.84	89.82	89.74		78.05	84.98	90.41		85.27
3	Co 14012	86.01			85.45	82.77	76.04	89.48	90.59	87.31		84.80	87.72	93.47		86.36
4	Co 14016	80.75			89.77	82.88	89.85	84.75	88.50	88.12		78.17	84.11	86.07		85.30
5	Co 14027	87.31			89.02	82.32	74.74	88.77	88.40	85.64		86.69	88.57	94.37		86.58
6	Co 14030	85.34			91.97	82.60	71.84	77.09	91.75	89.19		87.47	86.28	95.90		85.94
7	Co 14032	82.86			94.07	83.02	72.70	76.73	90.70	82.76		80.70	84.77	89.63		83.79
8	CoN 14073	72.16			72.82	84.93	66.64	80.86	89.72	82.67		82.08	81.31	80.27		79.35
9	CoSnk 14102	83.45			84.85	83.71	66.90	85.05	90.80	84.45		81.35	85.89	89.97		83.64
10	CoSnk 14103	85.40			85.98	83.41	71.94	85.40	90.15	85.52		81.02	87.97	87.16		84.39
11	CoT 14367	76.28			76.48	80.98	60.70	81.64	89.61	84.94		81.69	83.42	77.94		79.37
12	CoTI 14111	82.56			81.10	86.81	66.16	84.65	94.20	86.06		80.21	85.34	88.92		83.60
13	CoVC 14062	81.06			81.43	80.26	67.79	86.53	90.20	87.30		80.36	83.33	86.69		82.50
14	MS 14081	85.48			88.07	82.90	70.54	86.95	90.85	86.62		87.80	86.33	92.78		85.83
15	MS 14082	84.13			87.39	85.52	73.17	82.45	89.44	83.04		88.63	87.93	95.75		85.74
	Stds															
1	Co 86032	86.02			91.97	86.19	76.13	83.15	91.67	88.41		80.66	86.58	91.80		86.26
2	CoC 671	87.77			91.47	84.19	73.32	86.80	91.37	87.27		83.15	88.68	91.37		86.54
3	CoSnk 05103	84.58			89.21	85.31	65.77	78.59	88.50	90.05		80.01	85.20	85.63		83.28
	Grand mean	83.39			85.85	83.68	72.15	84.42	90.25	86.49		82.50	85.89	89.35		84.40
	SE	3.14			2.66	1.31	5.95	2.52	0.60	0.38		0.60	1.43	2.43		
	CD	1.09			7.66	NS	17.18	7.28	1.75	1.09		1.74	4.13	7.25		
	CV	2.26			5.37	2.71	14.28	5.18	1.16	0.76		1.27	2.88	3.85		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.32 No. of Shoots (000/ha) at 240 days

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	117.60			97.22	149.41	104.17	86.54	110.47	123.08	88.44	81.77	131.56	92.70		107.54
2	Co 14004	110.50			95.69	154.61	102.05	72.15	110.49	133.28	93.30	105.79	146.18	91.24		110.48
3	Co 14012	105.10			82.22	146.47	105.58	78.96	118.75	135.95	88.64	103.24	126.81	93.01		107.70
4	Co 14016	118.40			92.78	144.74	108.58	98.68	120.69	155.90	79.68	113.48	148.15	99.71		116.44
5	Co 14027	86.80			72.71	158.90	90.69	72.54	123.99	99.18	64.43	92.59	115.39	85.96		96.65
6	Co 14030	96.00			96.39	150.28	82.56	88.01	122.90	116.46	96.41	81.25	151.04	102.48		107.62
7	Co 14032	76.70			84.44	148.91	80.39	80.66	104.55	120.52	71.03	77.31	129.75	88.24		96.59
8	CoN 14073	67.90			93.26	143.42	97.95	65.50	100.41	112.98	86.51	96.24	124.42	96.78		98.67
9	CoSnk 14102	102.30			102.36	145.27	110.93	56.69	101.60	113.80	82.52	100.41	157.75	85.31		105.36
10	CoSnk 14103	81.40			79.31	149.39	69.39	64.65	112.12	109.27	55.26	86.46	143.17	44.65		90.46
11	CoT 14367	63.00			74.58	141.30	69.43	98.75	117.37	107.18	68.11	67.07	116.20	84.46		91.59
12	CoTI 14111	94.30			85.49	146.56	83.31	80.04	107.08	122.26	91.31	87.67	154.05	84.73		103.35
13	CoVC 14062	88.40			81.67	152.44	70.92	65.35	113.06	110.78	68.12	88.72	134.84	77.15		95.59
14	MS 14081	86.50			59.72	155.87	79.82	64.50	121.95	112.23	77.55	80.90	135.88	79.69		95.87
15	MS 14082	97.70			102.92	154.25	90.74	93.81	118.45	134.79	92.18	110.47	139.35	86.31		111.00
	Stds															
1	Co 86032	91.00			107.85	133.63	86.88	95.12	136.44	127.83	86.58	107.00	154.86	103.02		111.84
2	CoC 671	90.60			77.50	132.00	72.32	54.98	122.35	91.64	80.21	95.37	147.22	74.68		94.44
3	CoSnk 05103	125.10			113.13	135.40	113.89	103.47	122.75	132.59	92.20	147.16	153.24	97.86		121.53
	Grand mean	94.40			88.85	146.83	89.98	78.91	115.85	120.00	81.25	95.72	139.44	87.11		103.48
	SE	18.00			4.41	4.34	5.81	9.63	0.34	7.32	3.99	8.17	4.55	2.39		
	CD	6.20			12.68	12.47	16.77	27.78	0.98	21.05	11.46	23.48	13.31	7.15		
	CV	11.20			8.60	5.12	11.18	21.11	0.51	10.57	8.50	14.78	5.65	3.89		

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.33 Number of tillers ('000/ha) at 120 days

S No	Entries	Coimbatore	Basmathnagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	131.88		252.16	141.94	166.31	117.82	126.13	119.13	178.29	174.18	123.73	149.54	121.97	104.69	146.75
2	Co 14004	125.21		205.09	116.11	169.97	106.71	134.17	118.09	205.90	159.90	128.70	106.57	104.64	101.22	137.10
3	Co 14012	120.14		176.08	119.38	165.89	106.48	122.19	125.49	219.01	165.09	169.16	117.41	118.12	107.41	140.91
4	Co 14016	129.17		208.64	126.81	167.77	117.59	150.95	129.21	245.57	138.17	145.43	130.00	116.81	118.34	148.04
5	Co 14027	98.47		163.27	98.19	171.82	98.38	115.30	133.31	150.45	128.09	120.02	107.97	103.49	115.33	123.39
6	Co 14030	107.85		246.83	126.46	175.23	116.44	121.72	130.12	154.98	159.88	101.97	124.54	138.06	106.48	139.27
7	Co 14032	93.05		212.27	106.30	161.34	102.78	132.01	113.42	176.32	150.06	101.91	106.30	100.79	100.35	127.45
8	CoN 14073	77.01		237.65	148.47	176.55	101.85	104.25	105.78	178.64	165.93	125.17	120.93	123.66	130.55	138.19
9	CoSnk 14102	118.61		235.49	128.61	171.16	121.99	89.47	109.32	227.01	173.92	135.65	115.37	128.13	107.18	143.22
10	CoSnk 14103	96.67		82.64	98.47	172.98	73.61	95.43	119.17	161.59	123.92	92.13	101.20	36.19	112.38	105.11
11	CoT 14367	76.32		222.14	101.18	163.79	109.95	124.58	124.82	174.12	143.22	132.99	113.43	119.81	114.93	132.41
12	CoTI 14111	111.88		185.11	98.89	169.80	121.06	122.81	114.29	195.23	176.43	122.86	127.32	110.03	106.25	135.54
13	CoVC 14062	102.01		161.19	114.65	172.05	102.78	112.37	119.08	137.46	145.65	109.38	94.91	98.10	102.54	120.94
14	MS 14081	98.40		198.22	68.34	171.36	116.44	126.90	129.51	162.40	161.94	126.68	124.35	139.83	110.71	133.47
15	MS 14082	119.58		262.58	114.30	167.00	125.69	150.57	128.58	230.26	183.33	173.96	162.41	143.22	117.07	159.89
	Stds															
1	Co 86032	99.79		242.13	150.70	158.32	119.44	138.12	143.95	231.07	175.48	133.56	130.55	132.83	125.46	152.42
2	CoC 671	112.15		108.87	110.42	153.98	90.74	91.79	128.15	192.79	148.90	109.49	106.94	95.25	110.53	120.00
3	CoSnk 05103	141.67		253.86	152.64	156.52	129.40	174.54	130.74	239.31	177.62	191.49	145.83	129.21	105.03	163.68
	Grand mean	108.88		203.01	117.88	167.32	109.95	124.07	123.45	192.24	158.43	130.24	121.42	114.45	110.91	137.10
	SE	23.15		11.80	4.23	4.58	5.22	9.53	0.36	15.01	6.55	7.64	7.35	5.22	6.08	
	CD	8.02		33.92	12.14	13.16	15.07	27.52	1.03	43.15	18.84	21.97	21.22	15.57	17.28	
	CV	12.76		10.07	6.21	4.74	8.22	13.31	0.50	13.52	7.17	10.17	10.48	6.45	9.50	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

Table 2.4.34 Germination % at 30 days

S No	Entries	Coimbatore	Basmath nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 14002	67.36		64.35	45.14	52.14	42.00	52.02	43.43	70.49	53.06	29.61	66.05	44.89	45.66	52.02
2	Co 14004	59.20		65.05	53.99	53.46	42.67	42.65	43.77	72.80	48.57	42.44	65.43	38.41	53.30	52.44
3	Co 14012	62.85		48.46	41.09	51.27	35.33	39.06	47.16	70.95	45.13	30.67	54.94	40.31	56.48	47.98
4	Co 14016	61.98		49.31	39.58	54.19	39.00	48.96	49.29	71.06	33.65	37.89	47.53	32.52	56.48	47.80
5	Co 14027	67.88		69.21	44.33	54.94	46.00	50.46	50.97	76.74	46.05	53.78	69.60	56.57	57.35	57.22
6	Co 14030	54.11		76.39	35.76	54.40	44.33	55.32	44.96	68.17	45.82	34.89	57.33	40.48	44.33	50.48
7	Co 14032	65.51		70.14	37.91	56.24	50.33	51.50	42.38	71.53	49.80	32.06	54.40	33.48	44.50	50.75
8	CoN 14073	47.28		71.30	46.53	51.98	44.33	52.72	44.73	75.12	66.03	47.06	65.89	57.09	48.79	55.30
9	CoSnk 14102	88.43		66.36	51.10	53.35	51.00	46.93	47.92	82.52	44.62	44.00	70.76	59.34	46.70	57.93
10	CoSnk 14103	73.31		34.41	36.34	53.35	32.67	54.97	43.66	76.39	38.36	34.94	69.29	11.68	47.17	46.66
11	CoT 14367	59.95		59.80	46.93	54.41	51.00	67.30	42.65	67.01	41.76	50.22	62.58	42.73	55.04	53.95
12	CoTI 14111	73.38		63.27	45.66	56.98	47.33	64.93	39.12	76.62	58.94	45.22	65.20	35.21	58.39	56.17
13	CoVC 14062	69.39		66.44	39.76	58.29	45.67	50.05	39.90	71.99	36.69	45.33	60.96	52.25	59.32	53.54
14	MS 14081	63.08		55.79	50.23	57.03	54.33	47.68	50.32	73.84	44.88	40.44	54.71	49.39	53.82	53.50
15	MS 14082	83.39		71.30	50.69	55.16	48.67	61.45	48.62	81.02	50.75	48.06	71.99	52.77	48.73	59.43
	Stds															
1	Co 86032	59.03		60.26	39.81	50.78	49.33	46.29	56.08	81.83	48.40	34.89	52.39	57.26	57.93	53.41
2	CoC 671	68.98		54.40	48.15	55.25	37.33	31.71	41.92	73.73	48.33	43.61	57.25	36.68	47.74	49.62
3	CoSnk 05103	76.10		70.06	39.76	53.00	52.67	72.45	49.03	80.90	57.87	63.78	68.36	52.07	51.04	60.55
	Grand mean	66.73		62.02	44.04	54.14	45.22	52.03	45.88	74.59	47.71	42.16	61.93	44.06	51.82	53.26
	SE	10.70		4.71	1.86	1.90	3.06	4.96	1.34	4.11	2.21	3.36	2.67	3.81	2.70	
	CD	3.71		13.61	5.35	NS	8.84	14.31	3.87	11.81	6.37	9.67	7.70	11.36	7.69	
	CV	9.63		13.23	7.32	6.07	11.72	16.51	5.08	9.54	8.04	13.82	7.46	12.22	9.04	

Table 2.4.35. Assessment of the performance of entries compared to the best standard by monitoring team

Entries	Perumala palle	Pugalur	Coimba tore	Thiru valla	Mandya	Sankesh war	Sameer wadi	Kolha pur
Co 14002	Average	Better	Better	Better	Better	Better	Better	Better
Co 14004	Better	Better	On par	On par	On par	On par	Better	On par
Co 14012	Average	Average	On par	On par	Average	On par	Better	Better
Co 14016	On par	On par	On par	Better	Better	On par	On par	Average
Co 14027	Better	Better	Better	Better	Better	Better	Better	Better
Co 14030	On par	On par	Better	On par	Better	Better	Better	Better
Co 14032	Better	Better	Better	Better	Average	Average	Better	Better
CoN 14073	Average	Better	Better	On par	On par	On par	On par	On par
CoSnk 14102	Average	Better	Better	Better	On par	On par	On par	Better
CoSnk 14103	Average	Better	Better	Better	Better	Better	Average	Average
CoT 14367	Better	Poor	Better	Better	Average	Better	Better	Average
CoTI 14111	Better	Average	Better	Better	Better	Better	Better	Better
CoVC 14062	On par	Average	On par	Better	On par	On par	On par	Better
MS 14081	Better	Average	Better	Better	Better	Better	Better	Average
MS 14082	On par	Better	On par	On par	On par	Better	On par	Average
Standards								
Co 86032	Best	-	Best	-	Best	Best	Best	Best
CoC 671	-	Best	-	Best	-	-	-	-
CoSnk 05103	-	-	-	-	-	-	-	-

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
Peninsular zone AVT I Plant

S.No	Entries	Rudrur	Pade gaon	Pune	Pravara nagar	Power kheda	Navsari
1	Co 14002	On Par	Better	On Par	On Par	Better	Better
2	Co 14004	On Par	On Par	On Par	Poor	No cane	On Par
3	Co 14012	On Par	Poor	On Par	On Par	Better	On Par
4	Co 14016	Better	Better	Better	On Par	Better	Better
5	Co 14027	OP	Poor	Poor	On Par	Poor	On Par
6	Co 14030	Better	On Par	Poor	Poor	No Cane	Poor
7	Co 14032	On Par	On Par	Poor	Poor	Better	Poor
8	CoN 14073	Better	Better	Better	On Par	Better	Better
9	CoSnk 14102	Better	Better	On Par	Better	Better	On Par
10	CoSnk 14103	Better	On Par	Poor	Poor	No Cane	Poor
11	CoT 14367	Poor	Poor	Poor	Poor	On Par	On Par
12	CoTl 14111	Better	On Par	On Par	On Par	Better	On Par
13	CoVC 14062	Better	On Par	On Par	Poor	On Par	On Par
14	MS 14081	Better	Better	On Par	On Par	On Par	On Par
15	MS 14082	Better	Better	On Par	Better	Better	Better
Standards							
1	Co 86032	Best	Best	Best	Best		Best
2	CoC 671						
3	CoSnk 05103					Best	

2.5. INTIAL VARIETAL TRIAL

Centres (16)	Coimbatore, Basmathnagar, Kawardha, Kohlapur, Mandya, Navsari, Padegaon, Permallapalle, Powerkheda, Pravaranagar, Pugalur, Pune, Rudrur, Sameerwadi, Sankeshwar and Tiruvalla
Entries (15)	<ol style="list-style-type: none"> 1. Co 11015: CoC 671 x Co 86011 2. Co 16006: (Co 8371 x ISH 69) x (Co 86010 x Co 94019) 3. Co 16009: Co 0327 x Co 97015 4. Co 16010: Co 86032 x Co 94008 5. Co 16017: Co 87044 x Co 86011 6. Co 16018: SES 168/SES 240//Co 89029///CoJ 64 ////Co 89029/////Co 94008/////CoT 8201 7. CoVC 16061: Co 85002 PC 8. CoVC 16062: Co 8371 x CoH 110 9. CoN 16071: 87 A 289 x CoS 510 10. CoM 16081: CoM 0265 x Co 94012 11. CoM 16082: CoM 0265 x Co 94008 12. CoVSI 16121: Co 94012 x 85 R 186 13. PI 16131: PI 98-1160 PC 14. CoR 16141: Co 7201 PC 15. CoR 16142: Co 86011 x Co 775
Standards (3)	Co 86032, CoC 671 & Co 09004
Design	Randomized Block Design
Replications	3
Plot size	Gross : 6.0 m x 6r x 0.90 m Net : 5.0 m x 4r x 0.90 m
Bud rate	12 buds per meter
Planting time	2019-20
Crop duration	12 months

Results of the previous year: The entries were under multiplication.

Results of the current year: Fifteen test entries and three standards (Co 86032, CoC 671 & Co 09004) were evaluated in randomized block design with three replications in sixteen locations. Akola centre did not conduct the trial. Data from Kolhapur, Powerkheda and Thiruvalla were not considered for calculating the mean because the trial mean yield were lower than average cane yield of the respective states. For CCS yield (t/ha), Co 86032 was the best standard with zonal mean yield of 16.47 t/ha. None of the entries performed better than Co 86032 across the locations. However the test entries, Co 11015 (16.29 t/ha) was the top ranking entry followed by Co 16009 (15.37 t/ha) across the locations. For cane yield (t/ha), CoR 16141 recorded the highest zonal mean yield of 120.21 t/ha followed by Co 16009 with zonal mean of 116.69 t/ha when compared to Co 86032 (120.78 t/ha) across the locations. For juice quality (CCS % & sucrose %), CoVSI 16121 and Co 11015 were the top ranking entries. For CCS %, the entry CoVSI 16121 recorded the highest zonal mean of 14.73% followed by the entry Co 11015 (14.65%) while the best standard Co 09004 recorded

14.3 %. For sucrose %, CoVSI 16121 ranked first & recorded the mean zonal sucrose of 20.84 % and the second best entry was Co 11015 with zonal mean of 20.78% and both were numerically better than the best standard CoC 671 (20.33%). Both the entries (CoVSI 16121 & Co 11015) recorded >5 percent improvement over the standard Co 86032 across the locations for juice quality but were not numerically better than Co 86032 for cane yield. CO 11015 and CoVSI 16121 showed clear superiority for sucrose and CCS % at 300 days over all the three standards. Both entries exhibited improvement of above 10 %, 7.63 % and 4.05 % compared to the standards Co 86032, CoC 671 and Co 09004 respectively for sucrose % at 300 days thus showing their early maturing potential. The data are presented in Tables 2.5.1 to 2.5.34.

Table 2.5.1 CCS yield at harvest (t/ha)

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permallapalle	Pravarannagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean	Rank
1	Co 11015	23.19	14.15	14.63	10.24	11.67	18.05	13.68	18.38	17.43	15.28	19.45	15.43	18.59	13.91	7.27	16.29	2
2	Co 16006	18.97	14.17	12.33	7.11	11.92	16.29	17.19	18.32	20.33	12.24	12.55	14.48	15.84	16.89	6.04	15.27	5
3	Co 16009	19.35	12.11	10.17	9.45	14.65	16.04	12.22	20.32	15.74	17.41	19.30	14.50	15.32	17.59	12.19	15.37	4
4	Co 16010	18.46	15.91	11.48	13.94	12.95	13.89	13.52	13.70	15.23	18.19	17.98	13.12	17.31	13.69	6.18	15.03	
5	Co 16017	16.24	15.39	10.18	7.55	11.87	13.14	11.95	13.59	21.44	12.10	14.08	12.44	17.01	16.18	7.31	14.28	
6	Co 16018	14.00	14.38	13.66	17.11	12.52	12.07	11.23	16.32	15.83	15.54	19.65	14.28	10.22	14.26	6.33	14.15	
7	CoVC 16061	7.95	9.01	7.46	4.04	9.47	12.68	8.47	13.05	13.88	11.71	13.33	11.45	11.16	8.27	6.57	10.61	
8	CoVC 16062	13.16	12.58	12.13	2.95	12.24	18.21	14.25	15.56	18.47	11.86	13.14	12.25	15.04	13.46	6.16	14.03	
9	CoN 16071	14.92	8.89	9.59	6.72	12.41	16.52	15.26	20.54	16.26	11.90	14.67	14.26	13.04	15.13	7.27	13.57	
10	CoM 16081	14.53	17.49	12.55	7.96	15.02	16.50	15.37	11.03	20.69	8.87	16.61	11.89	16.48	15.39	6.65	14.80	
11	CoM 16082	19.56	13.54	12.41	9.12	15.15	17.31	14.87	10.34	18.85	10.80	18.94	13.93	12.64	17.41	7.20	15.06	
12	CoVSI 16121	11.97	13.66	10.84	5.21	11.97	14.67	12.69	16.08	15.05	11.06	18.37	13.64	14.94	10.74	6.24	13.51	
13	PI 16131	10.58	10.66	12.09	4.70	10.84	17.21	9.97	8.76	18.31	11.19	13.77	13.69	16.51	13.67	6.59	12.87	
14	CoR 16141	14.28	12.41	11.33	5.38	13.03	16.55	14.54	12.89	19.68	9.21	15.99	14.78	9.31	17.17	9.38	13.87	
15	CoR 16142	14.54	13.61	14.12	4.91	13.08	15.81	14.02	11.81	15.41	12.24	18.62	15.39	14.41	14.85	6.04	14.38	
	Standard																	
1	Co 86032	16.54	17.23	14.78	8.69	16.27	14.07	14.90	17.30	22.13	13.41	16.86	13.37	18.78	18.46	12.71	16.47	1
2	CoC 671	17.63	16.43	15.06	6.90	13.76	15.23	10.42	15.14	19.73	14.64	17.06	13.63	11.6	14.81	9.65	15.01	
3	Co 09004	20.50	15.81	12.76	7.24	14.56	16.06	14.34	12.39	16.21	17.49	19.35	13.80	16.51	18.47	8.39	16.02	3
	Mean	15.91	13.75	11.98	7.74	12.94	15.57	13.27	14.75	17.81	13.06	16.65	13.68	14.71	15.02	7.67		
	SE(m)	1.27	1.10	0.98	0.57	0.61	0.82	1.25	0.10	0.64	1.03	0.77	0.26	1.41	1.18	0.58		
	C.D.	3.67	3.15	2.80	1.63	1.75	2.36	3.60	0.28	1.85	2.94	2.21	0.76	4.08	3.38	1.66		
	C.V.	13.85	13.82	14.05	12.73	8.15	9.13	16.28	10.95	6.26	13.59	8.00	3.35	16.63	13.58	10.78		
Qualifying entries in each location																		
	1	Co 11015					CoVc 16062	Co 16006	CoN 16071					Co 11015				
	2						Co 11015		Co 16009					CoR 16142				
	3																	

#Data of Kolhapur and Thiruvalla were not considered as the mean cane yield of the trial was lower than state average

Number of locations where an entry recorded more than 10 percent improvement over the best standard: Co 11015 (3), Co 16006 (1), Co 16009 (1), CoN 16071(1), CoR 16142(1), CoVc 16062(1)

Performance across locations: Co 86032 was the best standard with mean CCS yield of 16.47 t/ha. None of the entries performed better than Co 86032 across the locations. However, among the test entries, Co 11015 was the top ranking entry with mean zonal yield of 16.29 t/ha followed by the entry Co 16009 which recorded the mean zonal yield of 15.37 t/ha. Co 11015 recorded >10% improvement over the best standard Co 09004 at Coimbatore (13.12 %), Navsari (12.39 %) and Rudrur (11.81 %).

Table 2.5.2 Cane yield at harvest (t/ha)

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean	Rank
1	Co 11015	144.57	104.65	98.28	78.83	80.00	115.19	87.84	132.09	113.04	135.74	123.94	116.18	142.36	85.35	55.46	113.79	5
2	Co 16006	136.30	110.98	99.10	60.30	86.11	109.24	125.01	135.51	132.10	107.96	89.25	102.14	110.76	107.55	48.03	111.69	
3	Co 16009	137.91	98.81	81.66	74.45	101.76	122.17	85.53	147.64	109.13	147.62	136.31	113.09	116.09	120.15	102.27	116.76	3
4	Co 16010	131.53	123.19	91.46	96.39	90.19	102.34	92.31	113.08	103.97	162.74	127.62	103.82	120.95	91.75	49.55	111.92	
5	Co 16017	119.30	118.15	75.67	62.89	86.57	98.31	85.96	110.39	141.21	108.42	95.45	105.59	124.19	114.97	63.19	106.48	
6	Co 16018	129.30	122.61	111.84	126.58	88.70	96.71	82.65	135.31	104.27	140.83	145.47	101.43	86.11	101.89	55.30	111.32	
7	CoVC 16061	62.00	78.57	64.45	34.45	71.39	93.09	65.15	101.60	100.29	97.85	104.11	94.86	86.00	61.65	54.40	83.15	
8	CoVC 16062	108.30	101.97	99.61	26.10	94.72	129.34	100.79	128.93	126.47	107.88	108.14	94.04	111.11	92.68	53.79	108.00	
9	CoN 16071	108.89	70.15	79.55	57.21	92.04	125.22	110.55	153.65	115.36	107.34	110.38	119.09	101.27	113.98	57.88	108.27	
10	CoM 16081	121.17	126.32	113.24	66.99	110.74	122.93	112.58	86.34	137.94	87.04	124.95	96.80	115.05	109.38	58.64	112.65	
11	CoM 16082	147.67	111.74	111.63	80.64	106.30	130.05	110.34	84.94	124.97	104.79	142.39	112.32	92.82	125.64	63.33	115.82	4
12	CoVSI 16121	76.20	109.24	72.41	41.01	79.26	102.93	82.33	111.61	103.22	89.90	118.47	93.79	98.38	63.16	51.52	92.38	
13	PI 16131	80.82	86.45	94.31	41.43	75.09	117.96	65.11	71.07	115.85	95.69	98.38	95.24	127.20	88.17	57.43	93.18	
14	CoR 16141	122.74	118.56	126.00	52.12	98.80	126.25	112.85	125.86	134.10	110.04	138.95	123.00	85.88	139.74	84.70	120.21	2
15	CoR 16142	122.03	105.14	112.83	46.76	90.93	120.05	99.82	118.82	102.83	123.39	131.89	123.23	115.05	106.41	56.67	113.26	
	Standard																	
1	Co 86032	118.87	127.50	109.60	71.41	124.17	98.39	104.57	133.69	152.46	116.14	124.06	98.62	132.41	129.6	95.31	120.78	1
2	CoC 671	118.81	120.45	103.10	54.13	90.19	101.88	69.10	104.61	125.42	141.99	112.47	96.09	85.65	97.58	68.79	105.18	
3	Co 09004	129.90	124.78	95.58	58.06	97.87	109.67	95.57	92.81	104.36	146.00	128.89	96.54	114.58	116.23	66.52	111.75	
	Mean	117.57	108.85	97.45	62.76	92.30	112.32	93.78	116.00	119.28	118.40	120.06	104.77	109.21	103.66	63.48		
	SE(m)	8.00	8.15	7.83	4.05	3.24	4.16	8.59	7.60	2.93	8.90	4.66	1.87	9.93	7.98	3.96	6.45	
	C.D.	23.08	23.42	22.39	11.64	9.32	11.95	24.80	21.94	8.42	25.50	13.39	5.37	28.66	22.92	11.25	18.55	
	C.V.	11.78	12.97	13.92	11.18	6.09	6.41	15.86	11.35	4.25	13.00	6.72	3.09	15.75	13.33	8.82	10.35	
Qualifying entries in each location																		
	1	CoM 16082		CoR 16141			CoM 16082	Co 16006	CoN 16071		Co 16010	Co 16018	CoR 16142					
	2	Co 11015					CoVC 16062		Co 16009				CoR 16141					
	3						CoR 16141						CoM 16082					

#Data of Kohlapur and Thiruvalla were not considered as the mean cane yield of the trial was lower than state average

Number of locations where an entry recorded more than 10 percent improvement over the best standard: CoR 16141(3), CoM 16082(3), Co 11015 (1), Co 16006(1), Co 16009(1), Co 16010(1), Co16018 (1), CoVC 16062(1), CoN 16071(1), CoR 16142(1)

Performance across locations: Among the standards, Co 86032 was the best standard with zonal mean yield of 120.78 t/ha and none of the entries was better than Co 86032. However, CoR 16141 recorded highest zonal mean yield of 120.21 t/ha followed by Co 16009 with zonal mean of 116.76 t/ha across the locations. The entries CoM 16082 (115.82 t/ha) and Co 11015 (113.79 t/ha) were in the third and fourth positions respectively in the zone. The entries CoR 16141 and CoM 16082 were the highest cane yielding entries with >10 % improvement over the best standards at three locations.

Table 2.5.3 CCS % at harvest

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permallapalle	Pravara-nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke-shwar	Thiruvalla	Mean	Rank
1	Co 11015	16.04	13.54	14.86	13.02	14.59	15.67	15.57	13.88	15.42	11.26	15.71	13.28	14.32	16.30	13.08	14.65	2
2	Co 16006	13.94	12.76	12.32	11.79	13.80	14.90	13.76	13.55	15.36	11.32	14.05	14.18	13.06	15.69	12.59	13.75	
3	Co 16009	14.07	12.25	12.36	12.69	14.37	13.13	14.31	13.75	14.45	11.78	14.13	12.82	13.11	14.61	11.93	13.47	
4	Co 16010	14.02	12.92	12.63	14.46	14.37	13.57	14.66	12.06	14.61	11.17	14.10	12.64	14.32	14.99	12.46	13.54	
5	Co 16017	13.60	13.03	13.43	12.00	13.69	13.38	13.96	12.39	15.17	11.18	14.76	11.78	13.68	14.08	11.59	13.40	
6	Co 16018	10.83	11.66	12.14	13.49	14.10	12.47	13.60	12.07	15.18	11.03	13.50	14.07	11.85	13.86	11.45	12.80	
7	CoVC 16061	12.82	11.49	11.58	11.72	13.27	13.63	13.07	12.84	13.82	11.97	12.83	12.07	12.94	13.41	12.08	12.75	
8	CoVC 16062	12.19	12.34	12.17	11.53	12.91	14.06	14.18	12.08	14.60	11.02	12.15	13.03	13.56	14.60	11.45	12.99	
9	CoN 16071	13.70	12.67	12.11	11.77	13.46	13.19	13.82	13.43	14.10	11.09	13.30	11.98	12.93	13.27	12.53	13.00	
10	CoM 16081	11.99	13.84	11.16	11.88	13.58	13.42	13.58	12.77	15.03	10.18	13.26	12.28	14.36	14.11	11.33	13.04	
11	CoM 16082	13.25	12.13	11.19	11.28	14.25	13.31	13.48	12.25	15.09	10.30	13.28	12.40	13.59	13.90	11.39	12.96	
12	CoVSI 16121	15.70	12.57	14.94	12.73	15.10	14.25	15.42	14.37	14.62	12.26	15.50	14.54	15.19	17.01	12.25	14.73	1
13	PI 16131	13.04	12.34	12.80	11.30	14.46	14.53	15.28	12.35	15.79	11.68	14.00	14.38	12.96	15.54	11.45	13.78	5
14	CoR 16141	11.57	10.43	8.98	10.32	13.14	13.13	12.91	10.23	14.68	8.34	11.49	12.01	10.85	12.29	11.06	11.54	
15	CoR 16142	11.86	13.00	12.53	10.48	14.37	13.17	14.07	9.95	14.97	9.93	14.13	12.49	12.45	14.02	10.73	12.84	
	Standard																	
1	Co 86032	13.90	13.50	13.30	12.15	13.10	14.31	14.22	12.90	14.51	11.55	13.61	13.56	14.31	14.26	13.32	13.62	
2	CoC 671	14.89	13.63	13.63	12.75	15.26	14.94	15.04	14.43	15.73	10.33	15.17	14.18	13.55	15.37	13.99	14.32	4
3	Co 09004	15.80	12.65	12.72	12.48	14.90	14.64	14.95	13.34	15.56	11.98	15.03	14.30	14.42	15.94	12.61	14.33	3
	Mean	13.51	12.60	12.49	12.10	14.04	13.87	14.22	12.70	14.93	11.02	13.89	13.11	13.41	14.63	12.07		
	SE(m)	0.43	0.33	0.43	0.31	0.36	0.39	0.40	0.40	0.40	0.19	0.25	0.10	0.39	0.58	0.49		
	C.D.	1.24	0.93	1.23	0.89	1.02	1.13	1.15	1.14	1.17	0.53	0.72	0.29	1.12	1.66	1.38		
	C.V.	5.49	4.47	5.95	4.44	4.39	4.92	4.85	5.40	4.73	2.91	3.12	1.32	5.03	6.83	5.70		
Qualifying entries in each location																		
	1			CoVSI 16121										CoVSI 16121	CoVSI 16121			
	2			Co 11015											Co 11015			
	3																	

#Data of Kolhapur and Thiruvalla were not considered as the mean cane yield of the trial was lower than state average

Number of locations where an entry recorded more than 5 % improvement over the best standard: CoVSI 16121(3), Co 11015 (2)

Performance across locations: The entry CoVSI 16121 recorded the highest mean CCS% of 14.73% followed by the entry Co 11015 (14.65%) while the best standard Co 09004 recorded 14.33%. The entries CoVSI 16121 and Co 11015 recorded more than 9.00% improvement over the best standard CoC 671 at Kawardha. Both the entries recorded more than 6 % improvement over the best standard Co 09004 at Sankeshwar.

Table 2.5.4 Sucrose % at harvest

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanakeshwar	Thiruvalla	Mean	Rank
1	Co 11015	22.58	19.42	21.22	18.33	20.48	21.76	21.95	19.89	21.81	16.24	21.72	19.57	20.38	23.08	18.72	20.78	2
2	Co 16006	19.73	18.37	17.90	16.61	19.32	20.92	19.75	19.07	21.64	16.23	19.45	19.70	18.86	22.11	18.05	19.47	
3	Co 16009	19.98	17.66	18.06	17.82	20.12	18.91	20.25	19.33	20.60	16.78	19.71	18.09	18.96	20.61	17.01	19.16	
4	Co 16010	19.89	18.59	18.34	20.25	20.11	19.35	20.74	17.11	20.68	16.28	19.51	18.10	20.38	21.23	17.84	19.25	
5	Co 16017	19.39	18.72	19.31	16.91	19.22	19.20	20.12	17.82	21.60	16.15	20.35	16.50	19.73	19.85	16.61	19.07	
6	Co 16018	16.01	16.60	17.77	18.94	19.77	18.18	19.18	17.25	21.42	15.87	18.71	19.87	17.16	19.40	16.39	18.24	
7	CoVC 16061	18.57	16.54	17.05	16.39	18.58	19.44	18.57	18.04	19.25	17.26	17.98	17.35	18.54	18.91	17.28	18.16	
8	CoVC 16062	18.02	17.74	17.65	16.16	18.07	19.94	20.29	17.57	20.39	16.05	17.27	18.63	19.40	20.80	16.39	18.60	
9	CoN 16071	19.43	18.41	17.71	16.53	18.83	18.56	19.55	18.76	20.30	15.98	18.41	17.35	18.58	18.78	17.95	18.51	
10	CoM 16081	17.29	19.97	16.42	16.69	19.05	19.17	19.34	17.90	21.12	14.56	18.45	17.81	20.50	19.79	16.26	18.57	
11	CoM 16082	18.91	17.48	16.56	15.92	19.93	18.91	19.21	17.34	21.57	15.04	18.54	17.82	19.53	19.58	16.28	18.49	
12	CoVSI 16121	22.10	18.19	21.23	17.95	21.24	20.65	21.73	20.21	20.52	17.62	21.41	20.34	21.66	23.97	17.50	20.84	1
13	PI 16131	18.67	17.81	18.56	15.79	20.27	20.74	21.51	17.30	22.19	16.74	19.37	20.30	18.74	21.81	16.39	19.54	5
14	CoR 16141	17.36	15.29	13.57	14.55	18.41	18.74	18.53	14.60	20.43	12.36	16.28	16.78	16.00	17.91	15.83	16.64	
15	CoR 16142	17.50	18.50	18.21	14.70	20.11	18.69	19.97	14.08	21.39	14.38	19.56	17.82	18.06	19.99	15.35	18.33	
	Standard																	
1	Co 86032	19.73	19.18	19.08	17.20	18.33	20.03	20.05	18.18	20.46	16.60	18.88	19.18	20.5	20.04	19.06	19.25	
2	CoC 671	21.01	19.62	19.60	17.90	21.40	21.27	21.27	20.58	22.15	15.14	21.00	20.25	19.43	21.60	19.80	20.33	3
3	Co 09004	22.29	18.25	18.40	17.52	20.82	20.59	20.92	18.75	22.34	17.08	20.72	20.31	20.61	22.35	18.06	20.26	4
	Mean	19.36	18.13	18.14	17.01	19.67	19.73	20.16	17.99	21.10	15.90	19.30	18.65	19.28	20.66	17.26		
	SE(m)	0.46	0.41	0.53	0.42	0.49	0.51	0.45	0.47	0.47	0.24	0.34	0.08	0.49	0.73	0.68		
	C.D.	1.32	1.19	1.52	1.22	1.42	1.45	1.30	1.35	1.37	0.68	0.96	0.23	1.42	2.11	1.94		
	C.V.	4.10	3.95	5.09	4.32	4.35	4.44	3.88	4.49	3.93	2.58	3.01	0.76	4.42	6.15	5.60		
Qualifying entries in each location																		
	1			CoVSI 16121										CoVSI 16121	CoVSI 16121			
	2			Co 11015											Co 11015			
	3																	

#Data of Kohlapur and Thiruvalla were not considered as the mean cane yield of the trial was lower than state average

Number of locations where an entry recorded more than 5 % improvement over the best standard: CoVSI 16121(3), Co 11015 (2)

Performance across location: For sucrose %, CoC 671 was the best standard with zonal mean of 20.33%. Among the test entries, CoVSI 16121 recorded the mean zonal sucrose of 20.84% followed by Co 11015 with zonal mean sucrose of 20.78%. None of the test entries recorded more than 5% improvement over the best standard across the locations. Both the entries recorded more than 5% improvement over the respective best standard at Kawardha and Sankeshwar.

Table 2.5.5 Brix % at harvest

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalapalle	Pravarannagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	24.09	22.24	23.37	19.58	21.73	23.61	23.51	22.10	23.08	18.28	22.97	23.00	21.27	24.96	20.80	22.63
2	Co 16006	21.29	21.19	20.46	17.75	20.40	22.22	22.00	20.40	22.98	18.04	20.61	20.40	22.32	23.63	20.10	21.22
3	Co 16009	21.76	20.41	20.87	18.91	21.27	21.23	21.85	20.60	21.58	18.39	21.25	19.40	21.46	22.12	18.70	20.93
4	Co 16010	21.60	21.41	20.93	21.41	21.20	21.27	22.39	18.60	21.68	18.73	20.63	20.07	22.32	22.96	19.80	21.06
5	Co 16017	21.31	21.48	21.58	18.08	20.40	21.37	22.60	19.90	23.07	18.23	21.37	17.40	22.21	21.28	18.50	20.94
6	Co 16018	18.92	18.71	20.6	20.08	20.93	20.93	20.54	19.00	22.28	17.77	19.87	21.33	19.47	20.45	18.20	20.06
7	CoVC 16061	21.08	19.08	20.01	17.25	19.60	21.37	20.24	19.20	20.61	19.41	19.59	19.40	20.61	20.28	19.10	20.03
8	CoVC 16062	21.35	20.39	20.10	17.08	19.07	21.67	22.47	20.10	21.45	18.44	19.38	20.60	21.47	22.79	18.20	20.72
9	CoN 16071	21.10	21.62	20.51	17.58	19.87	19.80	21.09	19.70	21.61	17.93	19.50	19.70	20.72	20.28	19.90	20.26
10	CoM 16081	19.45	23.15	19.25	17.75	20.20	21.13	21.18	18.90	22.38	16.11	19.79	20.27	22.57	20.95	18.10	20.41
11	CoM 16082	20.78	20.19	19.64	17.08	21.00	20.60	21.06	18.80	22.42	17.36	20.00	19.90	21.82	20.95	18.00	20.34
12	CoVSI 16121	23.59	21.21	23.17	19.25	22.67	23.48	23.27	21.50	22.08	19.69	22.57	21.40	23.79	25.63	19.30	22.62
13	PI 16131	20.69	20.66	21.13	16.58	21.47	22.83	22.95	18.30	23.14	18.59	20.49	21.80	21.21	23.12	18.20	21.26
14	CoR 16141	21.14	18.28	16.75	15.58	19.47	20.62	20.67	16.10	22.08	14.69	18.18	17.60	18.86	20.62	17.50	18.85
15	CoR 16142	20.64	20.85	20.81	15.58	21.20	20.32	21.71	15.20	22.08	16.34	20.71	19.60	20.61	21.95	17.00	20.15
	Standard																
1	Co 86032	21.43	21.54	21.25	18.58	19.33	21.10	21.50	19.50	21.74	18.55	20.11	20.70	22.76	21.28	21.10	20.83
2	CoC 671	22.54	22.65	21.91	18.91	22.67	23.27	22.92	22.60	23.48	17.60	22.26	22.30	21.61	22.96	21.40	22.21
3	Co 09004	23.96	21.14	20.85	18.58	22.00	21.92	22.04	20.00	23.41	18.75	21.73	22.13	22.76	23.62	20.10	21.87
	Mean	21.48	20.9	20.73	18.09	20.80	21.60	21.89	19.50	22.28	17.93	20.61	20.39	21.55	22.21	19.09	
	SE(m)	0.36	0.43	0.46	0.46	0.52	0.59	0.33	0.50	0.37	0.21	0.34	0.21	0.41	0.66	0.74	
	C.D.	1.05	1.24	1.31	1.32	1.50	1.69	0.94	1.40	1.07	0.60	0.98	0.61	1.18	1.90	2.10	
	C.V.	2.94	3.59	3.83	4.39	4.35	4.73	2.58	4.20	2.90	2.01	2.86	1.81	3.29	5.15	5.46	

Table 2.5.6 Purity % at harvest

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	93.73	87.32	90.83	93.63	94.40	93.61	93.38	90.02	94.23	88.84	94.56	85.07	91.32	92.43	90.22	91.52
2	Co 16006	92.63	86.69	87.57	93.60	94.90	94.19	89.85	93.66	93.88	89.96	94.38	96.58	88.63	93.58	90.02	92.04
3	Co 16009	91.83	86.53	86.51	94.26	94.82	89.53	92.64	94.05	92.36	91.23	92.77	93.23	88.26	93.20	90.97	91.30
4	Co 16010	92.09	86.83	87.49	94.03	95.03	91.02	92.63	91.88	92.24	86.95	94.55	90.22	91.32	92.46	90.31	91.13
5	Co 16017	91.04	87.15	89.43	93.59	94.41	89.90	88.92	89.63	93.97	88.60	95.26	94.86	88.51	93.34	90.02	91.16
6	Co 16018	84.66	88.72	86.18	94.34	94.63	86.86	93.38	90.68	93.58	89.30	94.14	93.14	88.01	94.91	90.27	90.63
7	CoVC 16061	88.09	86.69	85.17	95.09	94.96	91.00	91.72	94.14	90.03	88.92	91.78	89.45	89.99	93.25	90.46	90.35
8	CoVC 16062	84.32	87.00	87.83	94.61	94.95	92.05	90.31	87.28	92.18	87.07	89.12	90.47	90.35	91.24	90.27	89.55
9	CoN 16071	92.07	85.15	86.29	94.09	94.98	93.92	92.68	95.19	91.24	89.11	94.41	88.07	89.56	92.58	90.20	91.17
10	CoM 16081	88.90	86.26	85.24	94.07	94.50	90.74	91.30	94.57	92.29	90.37	93.25	87.93	90.80	94.41	89.83	90.81
11	CoM 16082	90.96	86.58	84.24	93.17	95.10	91.83	91.17	92.47	93.45	86.63	92.66	89.56	89.50	93.43	90.66	90.58
12	CoVSI 16121	93.68	85.76	91.65	93.32	93.90	88.03	93.38	93.90	92.11	89.50	94.84	95.07	91.05	93.55	90.62	92.03
13	PI 16131	90.24	86.21	87.87	95.18	94.63	90.79	93.73	94.73	94.94	90.08	94.50	93.13	88.38	94.31	90.28	91.81
14	CoR 16141	82.17	83.64	80.69	93.53	94.73	90.69	89.66	91.26	91.58	84.15	89.53	95.38	84.88	86.91	90.43	88.10
15	CoR 16142	85.11	88.73	87.55	94.45	95.03	92.05	91.96	92.79	91.76	87.97	94.47	90.95	87.45	91.17	90.27	90.54
	Standard																
1	Co 86032	92.05	89.04	89.05	92.59	95.02	94.93	93.30	93.42	91.98	89.52	93.90	92.66	90.04	94.23	90.34	92.24
2	CoC 671	93.18	86.62	89.53	94.66	94.58	91.40	92.79	90.99	93.99	86.00	94.35	90.82	89.93	94.02	92.54	91.40
3	Co 09004	93.03	86.33	88.27	94.34	94.84	94.00	94.94	93.94	94.07	91.04	95.32	91.80	90.58	94.59	90.08	92.52
	Mean	89.99	86.75	87.34	94.03	94.74	91.47	92.10	92.48	92.77	88.62	93.54	91.58	89.36	92.98	90.43	
	SE(m)	1.96		1.26	0.82	0.44	1.85	1.42		0.92	0.47	0.37	1.01	0.80	1.36	0.48	
	C.D.	5.65		3.59	2.34	NS	NS	NS	NS	2.64	1.35	1.05	2.90	2.33	3.91	NS	
	C.V.	3.77		2.49	1.50	0.80	3.50	2.67		1.72	0.92	0.68	1.91	1.56	2.54	0.76	

Table: 2.5.7 Pol % cane at harvest

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permallapalle	Pravaranaagar	Pugalur	Pune	Rud rur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	17.34	-	-	-	15.42	16.53	16.56	-	-	12.57	16.72	-	15.08	17.23	-	15.93
2	Co 16006	14.96	-	-	-	14.93	15.89	14.83	-	-	12.53	14.78	-	13.95	16.62	-	14.81
3	Co 16009	15.16	-	-	-	15.45	14.34	15.16	-	-	13.06	14.80	-	14.03	15.55	-	14.69
4	Co 16010	15.45	-	-	-	15.24	14.70	16.01	-	-	12.66	14.66	-	15.08	16.13	-	14.99
5	Co 16017	14.70	-	-	-	14.61	14.59	15.49	-	-	12.55	15.28	-	14.60	15.30	-	14.64
6	Co 16018	12.43	-	-	-	15.13	13.79	14.73	-	-	12.31	14.06	-	12.70	15.06	-	13.78
7	CoVC 16061	14.27	-	-	-	14.08	14.81	14.44	-	-	13.38	14.09	-	13.72	14.65	-	14.18
8	CoVC 16062	14.50	-	-	-	13.95	15.12	15.18	-	-	12.42	13.17	-	14.36	15.41	-	14.26
9	CoN 16071	15.09	-	-	-	14.59	14.12	15.29	-	-	12.42	13.94	-	13.75	14.73	-	14.24
10	CoM 16081	12.96	-	-	-	14.77	14.66	14.90	-	-	11.22	14.33	-	15.17	15.57	-	14.20
11	CoM 16082	14.19	-	-	-	15.46	14.43	14.68	-	-	11.62	14.12	-	14.45	15.31	-	14.28
12	CoVSI 16121	16.35	-	-	-	16.31	15.65	16.08	-	-	13.63	16.62	-	16.03	17.48	-	16.02
13	PI 16131	13.83	-	-	-	15.46	15.83	16.36	-	-	13.02	15.02	-	13.87	16.19	-	14.95
14	CoR 16141	13.35	-	-	-	13.88	14.23	13.66	-	-	9.56	12.65	-	11.84	13.77	-	12.87
15	CoR 16142	14.05	-	-	-	15.37	14.20	15.54	-	-	11.21	15.24	-	13.37	15.34	-	14.29
	Standard																
1	Co 86032	15.44	-	-	-	13.98	15.14	15.46	-	-	12.84	14.4	-	15.17	15.53	-	14.75
2	CoC 671	16.39	-	-	-	16.40	16.19	16.30	-	-	11.69	16.07	-	14.38	16.52	-	15.49
3	Co 09004	17.46	-	-	-	16.06	15.64	15.93	-	-	13.13	15.91	-	15.25	17.04	-	15.80
	Mean	14.88				15.06	14.99	15.37			12.32	14.77		14.27	15.75		
	SE(m)	0.35				0.41	0.38	0.36			0.18	0.17		0.37	0.55		
	C.D.	1.00				1.19	1.09	1.03			0.52	0.49		1.05	1.59		
	C.V.	4.08				4.76	4.40	4.04			2.56	2.01		4.43	6.09		

Table: 2.5.8 Fibre % at harvest

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla	Pravara	Pugalur	Pune	Rudrur	Sameerwadi	Sanke	Thiruvalla	Mean
1	Co 11015	13.73	-	-	-	13.30	14.00	14.57	-	-	12.61	13.02	-	-	15.38	-	13.80
2	Co 16006	13.91	-	-	-	12.75	14.07	14.96	-	-	12.79	14.02	-	-	14.82	-	13.90
3	Co 16009	13.82	-	-	-	13.24	14.18	15.12	-	-	12.12	14.89	-	-	14.60	-	14.00
4	Co 16010	13.00	-	-	-	14.18	14.04	12.81	-	-	12.26	14.83	-	-	14.04	-	13.59
5	Co 16017	13.27	-	-	-	13.95	14.01	12.98	-	-	12.27	14.95	-	-	13.01	-	13.49
6	Co 16018	13.55	-	-	-	13.44	14.12	13.19	-	-	12.43	14.86	-	-	12.39	-	13.43
7	CoVC 16061	13.09	-	-	-	14.28	13.79	12.27	-	-	12.52	11.66	-	-	12.53	-	12.88
8	CoVC 16062	15.00	-	-	-	12.48	14.18	15.17	-	-	12.61	13.74	-	-	15.88	-	14.15
9	CoN 16071	12.73	-	-	-	12.54	13.94	11.79	-	-	12.27	14.28	-	-	11.50	-	12.72
10	CoM 16081	14.27	-	-	-	12.45	13.51	12.98	-	-	12.94	12.34	-	-	11.26	-	12.82
11	CoM 16082	13.64	-	-	-	12.44	13.71	13.56	-	-	12.73	13.84	-	-	11.72	-	13.09
12	CoVSI 16121	15.91	-	-	-	13.20	14.22	16.02	-	-	12.65	12.39	-	-	17.05	-	14.49
13	PI 16131	15.36	-	-	-	13.78	13.64	13.96	-	-	12.22	12.41	-	-	15.70	-	13.87
14	CoR 16141	14.64	-	-	-	14.60	14.05	16.28	-	-	12.62	12.29	-	-	13.13	-	13.94
15	CoR 16142	12.64	-	-	-	13.55	14.03	12.20	-	-	12.06	12.1	-	-	13.25	-	12.83
	Standard																
1	Co 86032	13.00	-	-	-	13.76	14.4	12.91	-	-	12.69	13.73	-	-	12.49	-	13.28
2	CoC 671	13.64	-	-	-	13.37	13.87	13.36	-	-	12.8	13.51	-	-	13.38	-	13.42
3	Co 09004	13.73	-	-	-	12.87	14.02	13.89	-	-	13.11	13.21	-	-	13.82	-	13.52
	Mean	13.83				13.34	13.98	13.78			12.53	13.45			13.66		
	SE(m)	0.40				0.54	0.28	0.38			0.17	0.16			0.92		
	C.D.	1.20				NS	NS	1.11			0.49	0.47			2.64		
	C.V.	4.07				6.97	3.43	4.84			2.37	2.12			11.63		

Table 2.5.9 Extraction % at harvest

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	55.90	-	59.35	49.39	43.47	58.00	43.97	53.30	50.25	49.71	48.43	-	-	55.19	55.57	51.76
2	Co 16006	56.30	-	56.31	49.78	44.28	58.55	39.12	51.80	53.94	48.14	51.08	-	-	54.69	57.26	51.42
3	Co 16009	49.28	-	55.75	49.35	46.52	57.37	43.77	47.10	51.99	48.98	47.50	-	-	50.36	54.90	49.86
4	Co 16010	50.66	-	54.27	43.60	46.63	57.83	43.54	50.90	50.39	52.97	50.40	-	-	45.78	54.18	50.34
5	Co 16017	55.48	-	57.48	50.08	46.68	58.17	40.97	52.80	56.43	50.89	51.07	-	-	52.87	61.84	52.29
6	Co 16018	53.71	-	56.83	49.54	52.42	58.34	39.90	54.20	48.72	50.09	55.06	-	-	51.44	57.07	52.07
7	CoVC 16061	44.43	-	57.39	50.16	43.31	59.69	46.68	52.40	48.09	52.94	47.76	-	-	53.43	55.94	50.61
8	CoVC 16062	55.69	-	59.94	49.16	49.78	60.16	46.11	53.80	54.33	46.36	50.85	-	-	55.73	60.98	53.27
9	CoN 16071	52.36	-	58.68	48.94	50.16	58.15	43.78	40.60	50.45	53.35	43.79	-	-	57.14	58.86	50.85
10	CoM 16081	55.46	-	56.67	49.9	54.10	57.95	44.28	51.20	58.64	52.72	49.78	-	-	55.89	54.54	53.67
11	CoM 16082	54.58	-	63.29	49.66	52.87	57.67	42.20	53.70	53.90	52.19	50.83	-	-	55.85	60.21	53.71
12	CoVSI 16121	49.55	-	55.09	47.32	42.33	59.29	41.76	49.60	50.66	51.22	51.22	-	-	45.32	55.98	49.60
13	PI 16131	50.63	-	58.62	51.75	51.32	58.37	40.29	53.90	51.82	50.45	49.59	-	-	51.02	58.50	51.60
14	CoR 16141	52.59	-	59.78	49.58	47.59	56.21	42.04	58.30	53.24	51.87	55.66	-	-	54.09	58.38	53.14
15	CoR 16142	60.23	-	57.87	47.89	53.37	57.72	42.47	61.40	49.43	53.82	57.64	-	-	57.65	61.82	55.16
	Standard																
1	Co 86032	54.53	-	60.79	49.87	50.50	58.98	44.33	55.40	55.87	48.93	48.82	-	-	56.72	56.90	53.48
2	CoC 671	56.19	-	58.06	50.69	55.15	58.01	48.30	52.30	51.77	50.06	50.91	-	-	51.13	56.93	53.19
3	Co 09004	55.58	-	58.76	51.00	59.38	56.7	37.69	50.50	49.41	50.01	47.22	-	-	59.50	61.06	52.47
	Mean	53.51		58.17	49.32	49.44	58.17	42.85	52.40	52.18	50.81	50.42			53.54	57.83	
	SE(m)	1.29		1.53	1.33	3.08	1.17	4.91	2.00	0.79	1.99	2.14			1.49	1.30	
	C.D.	3.72		4.39	3.83	8.85	NS	NS	5.70	2.27	5.72	6.16			4.30	3.70	
	C.V.	4.17		4.57	4.68	10.78	3.49	19.87	6.60	2.63	6.78	7.36			4.84	3.19	

Table 2.5.10 NMC at harvest ('000/ha)

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permalla palle	Pravara nagar	Pugalur	Pune	Rud rur	Sameer wadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	77.08	65.46	82.00	68.90	68.15	102.83	73.77	63.00	109.71	75.66	85.40	99.30	109.80	-	68.17	84.38
2	Co 16006	72.50	65.49	79.00	64.58	59.63	97.45	76.93	65.00	103.83	119.02	66.53	76.85	109.50	-	59.15	82.62
3	Co 16009	92.92	69.33	96.00	63.58	76.67	107.79	78.16	72.00	116.17	107.32	87.92	95.43	108.80	-	108.34	92.38
4	Co 16010	82.78	68.38	104.00	79.86	70.37	97.00	79.71	52.00	108.8	138.33	90.97	89.27	111.10	-	52.55	91.07
5	Co 16017	67.36	65.49	77.00	53.39	66.76	94.97	68.13	47.00	109.88	75.96	69.03	90.50	96.20	-	71.99	77.40
6	Co 16018	74.86	69.33	97.00	78.55	67.50	95.38	70.83	59.00	118.24	121.68	88.89	87.65	89.90	-	62.62	86.72
7	CoVC 16061	53.19	71.27	77.00	45.83	67.59	89.60	64.74	62.00	120.49	113.33	78.33	84.20	90.60	-	59.95	81.04
8	CoVC 16062	79.17	76.06	112.00	34.26	77.31	114.89	75.69	64.00	98.16	80.38	82.22	83.21	86.80	-	63.77	85.85
9	CoN 16071	81.67	64.51	101.00	75.46	86.57	117.75	91.51	70.00	91.86	92.97	89.03	94.03	103.00	-	62.62	90.31
10	CoM 16081	79.03	66.44	103.00	57.64	70.93	111.52	84.18	38.00	112.67	61.24	80.89	85.25	107.30	-	72.57	83.37
11	CoM 16082	81.53	62.57	96.00	62.81	64.81	118.33	79.55	51.00	109.77	83.62	82.61	84.25	88.70	-	70.49	83.54
12	CoVSI 16121	59.72	67.40	97.00	58.64	60.37	97.75	64.43	43.00	113.09	66.12	84.17	86.42	91.60	-	60.53	77.60
13	PI 16131	72.92	63.56	92.00	49.85	57.59	110.28	66.44	51.00	118.33	72.93	74.44	76.69	115.10	-	65.39	80.92
14	CoR 16141	81.67	62.60	111.00	61.11	73.33	116.80	78.47	63.00	119.86	78.91	88.81	87.97	105.40	-	94.79	89.01
15	CoR 16142	68.06	73.18	104.00	47.76	81.85	103.40	81.40	60.00	129.1	90.32	94.72	91.29	117.10	-	65.05	91.21
	Standard																
1	Co 86032	85.00	79.94	114.00	63.50	97.69	95.72	81.87	80.00	129.23	85.03	94.31	85.51	125.40	-	106.72	96.12
2	CoC 671	77.78	67.43	95.00	51.50	71.94	93.38	66.74	59.00	89.78	98.65	71.42	86.57	111.00	-	78.94	82.42
3	Co 09004	98.89	75.11	111.0	61.16	70.09	95.10	77.55	58.00	125.5	123.55	81.11	84.24	114.60	-	75.58	92.92
	Mean	77.01	68.53	97.16	59.91	71.62	103.33	75.56	59.00	112.47	93.61	82.82	87.15	104.55		72.17	
	SE(m)	4.77	3.39	6.60	2.95	3.26	3.68	2.88	3.50	2.59	5.40	3.33	1.43	2.86		3.77	
	C.D.	13.77	9.75	18.88	8.48	9.38	10.59	8.30	10.10	7.46	15.52	9.56	4.12	8.26		10.72	
	C.V.	10.73	8.57	11.77	8.53	7.89	6.17	6.59	10.30	4.00	9.99	6.96	2.85	4.74		7.39	

Table 2.5.11 Stalk length at harvest (cm)

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permalla palle	Pravara nagar	Pugalur	Pune	Rud rur	Sameer wadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	265.00	231.33	274.60	171.33	190.00	275.27	221.00	269.00	197.33	275.80	225.67	261.47	253.00	222.67	243.85	243.23
2	Co 16006	231.67	231.67	294.13	123.00	206.67	272.31	241.00	256.00	227.00	275.93	220.67	234.60	234.00	246.10	202.15	243.99
3	Co 16009	270.00	209.00	289.60	194.50	241.33	260.28	248.33	295.00	233.00	258.80	253.55	228.10	249.00	249.00	251.15	252.69
4	Co 16010	281.67	256.67	280.87	195.67	206.67	253.44	240.33	322.00	201.33	264.93	235.39	199.07	227.00	248.67	236.50	247.56
5	Co 16017	226.67	216.67	272.20	186.33	197.33	254.86	216.00	272.00	220.00	295.33	221.22	258.07	224.00	247.67	241.80	240.17
6	Co 16018	261.67	206.00	342.67	219.28	198.00	240.70	222.00	344.00	194.66	273.73	264.00	217.00	180.00	232.00	236.80	244.33
7	CoVC 16061	208.33	169.33	230.13	134.03	176.67	264.89	175.67	240.00	199.00	256.00	221.33	209.40	195.00	218.33	239.65	212.62
8	CoVC 16062	231.67	174.67	275.07	125.55	204.67	242.29	228.00	227.00	202.66	250.13	211.67	202.67	189.00	214.33	220.20	219.54
9	CoN 16071	241.67	146.67	264.53	133.55	191.33	262.07	239.33	229.00	184.33	258.33	201.11	210.27	187.00	232.33	199.00	219.07
10	CoM 16081	261.67	256.67	295.60	185.00	214.67	268.11	230.00	238.00	241.33	224.87	233.11	165.07	212.00	244.87	225.50	237.37
11	CoM 16082	261.67	238.00	345.73	180.55	193.33	256.72	230.33	253.00	225.66	292.67	245.44	252.00	233.00	225.00	235.80	250.22
12	CoVSI 16121	231.67	185.00	271.40	124.83	168.67	231.09	204.33	244.00	210.66	265.53	208.45	249.87	217.00	206.77	216.15	222.68
13	PI 16131	245.00	174.00	334.60	108.78	188.00	253.23	219.00	213.00	234.00	276.80	225.22	240.80	267.00	237.33	218.30	239.10
14	CoR 16141	256.67	286.67	310.93	143.00	182.67	254.72	248.33	257.00	218.33	245.07	241.78	227.80	224.00	269.00	252.15	247.94
15	CoR 16142	245.00	189.67	311.47	140.39	181.33	252.94	249.00	240.00	187.00	257.20	229.78	229.20	217.00	216.63	212.50	231.25
	Standard																
1	Co 86032	251.67	173.33	298.20	186.00	244.00	238.78	223.67	242.00	236.00	321.13	211.22	202.40	229.00	250.00	222.00	240.08
2	CoC 671	255.00	206.33	328.47	184.33	195.33	227.62	207.67	241.00	205.33	309.2	214.44	227.07	194.00	232.67	208.70	234.19
3	Co 09004	253.33	229.67	326.47	157.11	215.33	225.09	242.00	242.00	211.33	284.53	254.44	224.87	239.00	285.53	232.00	248.76
	Mean	248.89	210.07	297.03	160.74	199.78	251.91	227.00	257.00	212.72	271.44	228.81	224.43	220.56	237.72	227.46	
	SE(m)	11.39	14.27	12.26	7.23	5.08	10.01	8.82	15.40	5.48	6.29	7.24	16.25	14.34	9.33	14.39	
	C.D.	32.89	41.01	35.03	20.79	14.61	28.77	25.47	44.60	15.76	18.08	20.81	46.72	41.41	26.83	NS	
	C.V.	7.93	11.76	7.15	7.79	4.41	6.88		10.40	4.46	4.01	5.48	12.54	11.27	6.80	8.94	

Table 2.5.12 Stalk diameter at harvest (cm)

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	3.17	3.56	2.74	3.02	2.89	2.43	3.02	2.8	2.47	2.68	2.85	2.73	3.00	2.52	2.55	2.78
2	Co 16006	3.14	3.34	2.92	3.33	3.04	2.50	3.02	2.7	2.62	3.00	2.98	3.05	2.70	2.63	2.65	2.85
3	Co 16009	2.93	3.18	2.77	2.95	3.13	2.46	2.86	2.6	2.42	3.09	2.95	3.01	2.90	2.60	2.30	2.80
4	Co 16010	2.94	3.24	2.85	2.71	2.96	2.45	2.87	2.8	2.51	2.8	2.91	2.54	2.70	2.30	2.75	2.70
5	Co 16017	3.27	3.56	2.95	2.83	3.12	2.44	3.01	2.8	2.65	3.09	3.02	2.93	2.90	2.71	2.70	2.92
6	Co 16018	3.15	3.93	2.91	3.46	3.39	2.48	3.12	2.9	2.73	2.83	3.11	3.25	2.90	2.73	2.85	2.97
7	CoVC 16061	2.78	2.87	2.56	2.87	2.87	2.42	2.39	2.5	2.63	2.55	2.87	2.65	2.80	2.62	2.70	2.61
8	CoVC 16062	3.07	2.92	3.24	2.73	2.98	2.46	3.03	3.0	2.67	3.19	2.94	3.31	3.10	2.68	2.80	2.90
9	CoN 16071	3.09	2.71	3.01	2.69	2.85	2.45	2.94	2.7	2.51	2.97	2.87	2.70	2.80	2.61	2.65	2.73
10	CoM 16081	3.19	3.45	3.23	2.73	3.39	2.36	2.97	2.9	2.75	2.77	3.04	2.94	2.90	2.72	2.85	2.91
11	CoM 16082	3.09	3.29	3.02	3.15	3.31	2.42	3.01	2.8	2.60	2.89	3.19	2.97	2.90	2.90	2.55	2.91
12	CoVSI 16121	3.09	3.40	2.86	2.70	3.19	2.39	2.97	3.1	2.46	3.15	2.90	2.91	2.90	2.32	2.95	2.85
13	PI 16131	3.28	2.97	2.85	3.23	3.05	2.37	2.71	3.0	2.62	2.99	2.81	2.92	3.00	2.40	2.70	2.82
14	CoR 16141	3.03	3.82	3.02	2.94	3.22	2.43	3.16	2.8	2.58	2.78	3.17	2.95	2.50	2.72	3.05	2.90
15	CoR 16142	3.44	3.39	2.94	3.22	3.02	2.65	2.94	3.1	2.53	2.83	2.97	3.14	3.00	2.53	3.05	2.90
	Standard																
1	Co 86032	3.15	3.03	2.95	3.08	3.01	2.25	3.00	2.7	2.53	2.79	2.99	2.75	2.80	2.61	2.85	2.73
2	CoC 671	3.17	3.24	2.92	3.06	3.41	2.61	2.95	2.5	2.47	2.9	2.94	2.63	2.80	2.55	2.70	2.82
3	Co 09004	3.10	3.34	2.48	3.01	2.90	2.3	2.89	2.6	2.43	2.99	2.99	2.79	2.90	2.52	2.50	2.71
	Mean	3.14	3.29	2.90	2.98	3.10	2.44	2.94	2.8	2.56	2.90	2.97	2.90	2.86	2.59	2.73	
	SE(m)	2.81	0.48	0.09	0.10	0.07	0.04	0.11	0.1	0.04	0.6	0.05	0.07	0.04	0.09	0.12	
	C.D.	0.14	1.37	0.26	0.30	0.21	0.13	0.33	0.3	0.13	0.17	0.15	0.21	0.12	0.25	0.33	
	C.V.	3.17	7.99	5.55	5.98	4.00	3.11	6.70	5.4	3.22	3.59	2.95	4.37	2.51	5.72	6.08	

Table 2.5.13 Single cane weight at harvest (kg)

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permallapalle	Pravarannagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	1.88	1.60	1.69	1.14	0.92	1.20	1.19	1.70	1.36	1.44	1.49	1.17	1.08	1.27	1.40	1.39
2	Co 16006	1.85	1.72	1.84	0.94	1.30	1.23	1.63	1.60	1.85	1.78	1.40	1.33	0.72	1.52	1.10	1.52
3	Co 16009	1.49	1.41	1.68	1.17	1.63	1.20	1.10	1.60	1.40	1.74	1.57	1.19	1.21	1.50	1.19	1.44
4	Co 16010	1.59	1.80	1.76	1.21	0.71	1.07	1.16	1.80	1.27	1.50	1.45	1.16	0.92	1.13	1.27	1.33
5	Co 16017	1.77	1.80	2.42	1.18	1.12	1.08	1.26	1.70	1.54	1.93	1.62	1.17	1.51	1.56	1.42	1.58
6	Co 16018	1.73	1.76	1.65	1.61	1.34	1.07	1.16	1.90	1.24	1.53	1.66	1.16	1.01	1.56	1.26	1.45
7	CoVC 16061	1.17	1.11	1.36	0.76	0.85	1.00	1.00	1.40	1.56	1.10	1.39	1.13	0.92	1.27	1.48	1.17
8	CoVC 16062	1.37	1.34	2.14	0.75	1.10	1.18	1.34	1.50	1.70	1.67	1.35	1.13	1.02	1.27	1.13	1.40
9	CoN 16071	1.34	1.09	1.68	0.76	1.03	1.04	1.21	1.70	1.35	1.50	1.25	1.27	0.78	1.28	1.04	1.27
10	CoM 16081	1.54	1.91	1.83	1.16	1.49	1.19	1.34	1.50	1.67	1.87	1.56	1.14	1.01	1.48	1.32	1.50
11	CoM 16082	1.81	1.79	1.93	1.29	1.42	1.20	1.39	1.40	1.79	1.68	1.75	1.33	1.28	1.62	1.28	1.57
12	CoVSI 16121	1.28	1.60	1.85	0.70	0.94	1.08	1.27	1.90	1.23	1.72	1.45	1.09	1.68	0.89	1.27	1.38
13	PI 16131	1.10	1.37	1.85	0.83	1.00	1.03	0.98	1.10	1.63	1.77	1.36	1.24	1.00	1.08	1.13	1.27
14	CoR 16141	1.50	1.89	2.06	0.85	1.08	1.18	1.44	1.70	1.51	1.84	1.63	1.40	1.05	1.71	1.53	1.54
15	CoR 16142	1.80	1.43	1.86	1.00	1.00	1.24	1.22	1.60	1.27	1.71	1.45	1.35	0.75	1.15	1.58	1.37
	Standard																
1	Co 86032	1.40	1.59	1.85	1.13	1.61	1.07	1.27	1.20	1.74	1.76	1.38	1.15	0.94	1.49	1.34	1.42
2	CoC 671	1.52	1.79	2.17	1.06	1.38	1.22	1.03	1.20	1.47	1.87	1.39	1.11	0.92	1.32	1.22	1.42
3	Co 09004	1.31	1.66	1.65	0.95	1.34	1.14	1.22	1.20	1.40	1.46	1.62	1.15	1.29	1.71	1.18	1.40
	Mean	1.53	1.59	1.87	1.03	1.18	1.14	1.23	1.60	1.50	1.66	1.49	1.20	1.06	1.38	1.29	
	SE(m)	0.05	0.09	0.15	0.06	0.10	0.03	0.10		0.04	0.72	0.04	0.01	0.07	0.11	0.06	
	C.D.	0.13	0.24	0.44	0.17	0.28	0.10	0.28	NS	0.13	0.21	0.12	0.03	0.22	0.31	0.18	
	C.V.	5.20	9.26	14.38	9.96	14.47	5.14	13.63		5.30	7.53	4.99	1.44	12.57	13.49	6.97	

Table 2.5.14 CCS % at 300 days

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla	Pravara	Pugalur	Pune	Rudrur	Sameerwadi	Sanke	Thiruvalla	Mean
1	Co 11015	13.68	-	-	13.25	13.88	11.79	14.75	12.40	14.37	12.32	-	13.78	12.2	12.61	10.86	13.18
2	Co 16006	13.54	-	-	11.06	12.54	11.02	13.07	12.70	13.60	11.32	-	10.69	11.33	11.09	9.60	12.09
3	Co 16009	11.82	-	-	12.34	12.48	10.60	13.02	12.00	13.21	10.38	-	9.77	7.48	12.36	9.53	11.31
4	Co 16010	13.10	-	-	12.90	12.61	10.56	13.61	12.20	13.37	10.39	-	11.29	11.80	12.12	10.49	12.11
5	Co 16017	12.15	-	-	11.95	12.45	10.12	12.25	10.60	14.52	10.19	-	10.54	9.93	11.98	9.51	11.47
6	Co 16018	11.50	-	-	11.96	12.64	10.54	12.39	11.60	13.55	10.60	-	11.17	7.50	12.13	8.44	11.36
7	CoVC 16061	12.17	-	-	10.67	11.75	11.07	12.84	12.90	13.00	11.41	-	11.00	10.16	10.71	10.40	11.70
8	CoVC 16062	11.83	-	-	10.65	11.37	10.87	12.8	13.00	13.23	9.89	-	9.21	9.24	11.41	9.46	11.28
9	CoN 16071	11.84	-	-	11.56	11.17	10.69	12.68	11.90	13.36	10.53	-	10.96	9.68	11.10	7.26	11.39
10	CoM 16081	10.40	-	-	11.42	11.71	9.63	11.03	11.20	13.99	8.21	-	10.02	10.04	10.86	8.75	10.71
11	CoM 16082	12.04	-	-	11.25	12.50	10.20	12.04	12.30	14.38	9.87	-	9.14	10.00	11.39	9.82	11.39
12	CoVSI 16121	14.14	-	-	12.46	13.57	11.56	14.43	15.10	12.54	14.20	-	10.23	13.48	12.44	10.22	13.17
13	PI 16131	13.16	-	-	10.13	12.68	11.12	14.19	11.80	13.98	11.32	-	11.30	11.28	10.74	9.66	12.16
14	CoR 16141	9.97	-	-	9.00	10.90	9.26	11.36	7.70	12.47	8.17	-	8.76	8.00	8.16	9.38	9.47
15	CoR 16142	11.99	-	-	9.95	12.07	8.88	13.23	10.20	13.86	8.88	-	9.28	10.11	11.55	8.74	11.01
	Standard																
1	Co 86032	12.22	-	-	12.13	12.09	10.82	13.36	13.60	13.07	11.96	-	11.34	9.42	10.74	10.79	11.86
2	CoC 671	13.58	-	-	12.34	13.45	10.90	13.83	13.50	14.43	9.32	-	9.44	12.16	11.51	11.59	12.21
3	Co 09004	13.79	-	-	11.88	13.11	12.41	14.23	12.80	13.29	12.06	-	11.47	10.52	12.59	10.17	12.62
	Mean	12.38			11.49	12.39	10.67	13.06	12.1	13.57	10.61		10.52	10.24	11.42	9.70	
	SE(m)	0.37			0.33	0.33	0.34	0.24	0.40	0.39	0.19		0.04	1.06	0.49	0.59	
	C.D.	1.07			0.96	0.94	0.97	0.69	1.00	1.14	0.54		0.13	3.07	1.41	1.68	
	C.V.	5.18			5.02	4.55	5.46	3.18	5.10	5.10	3.07		0.73	17.97	7.46	8.61	

Table 2.5.15 Sucrose % at 300 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	19.41	-	-	18.32	19.40	17.11	20.83	17.50	20.24	17.58	-	19.60	17.56	18.40	15.89	18.76
2	Co 16006	19.13	-	-	15.55	17.58	15.80	18.87	18.10	19.44	16.25	-	15.57	16.31	15.58	14.06	17.26
3	Co 16009	17.06	-	-	17.23	17.52	15.33	18.98	17.20	18.85	15.24	-	14.60	11.58	17.25	13.95	16.36
4	Co 16010	18.60	-	-	18.12	17.69	15.59	19.31	17.30	18.86	15.08	-	16.47	17.10	16.78	15.33	17.28
5	Co 16017	17.42	-	-	16.57	17.47	14.72	17.89	15.10	20.38	14.75	-	15.51	14.54	16.84	13.93	16.47
6	Co 16018	16.47	-	-	16.77	17.68	15.23	17.77	16.50	19.27	15.34	-	16.26	11.36	16.89	12.34	16.28
7	CoVC 16061	17.59	-	-	15.08	16.46	15.92	18.20	18.50	18.75	16.39	-	16.22	14.97	15.11	15.20	16.81
8	CoVC 16062	17.03	-	-	15.01	16.09	15.53	18.46	18.70	18.84	14.60	-	13.89	13.88	15.99	13.91	16.30
9	CoN 16071	16.91	-	-	16.04	15.72	15.39	18.13	17.10	19.01	15.31	-	15.85	14.38	15.31	11.74	16.32
10	CoM 16081	15.17	-	-	15.94	16.4	14.13	16.31	16.10	19.79	12.26	-	14.85	14.80	15.45	12.79	15.53
11	CoM 16082	17.29	-	-	15.65	17.48	14.70	17.59	17.50	20.14	14.38	-	13.25	14.68	15.88	14.40	16.29
12	CoVSI 16121	19.94	-	-	17.45	18.99	16.52	20.45	21.20	18.32	20.33	-	14.61	19.33	17.76	14.95	18.74
13	PI 16131	18.81	-	-	14.31	17.83	16.05	20.13	17.00	19.47	16.24	-	16.47	16.35	15.33	14.16	17.37
14	CoR 16141	14.66	-	-	12.96	15.41	13.45	16.7	11.50	18.12	12.27	-	12.73	12.53	11.86	13.72	13.92
15	CoR 16142	17.05	-	-	13.79	16.91	13.24	18.86	14.50	19.38	12.77	-	13.93	14.66	16.03	12.79	15.73
	Standard																
1	Co 86032	17.44	-	-	16.93	16.93	15.57	18.99	19.00	18.77	17.11	-	16.42	13.87	15.01	15.77	16.91
2	CoC 671	19.32	-	-	17.23	18.87	15.53	19.74	18.90	20.44	13.53	-	14.17	17.46	16.09	16.99	17.41
3	Co 09004	19.52	-	-	16.69	18.37	17.58	20.15	17.80	19.74	17.28	-	16.86	15.51	17.43	14.87	18.03
	Mean	17.71			16.09	17.38	15.41	18.74	17.20	19.32	15.37		15.40	15.05	16.06	14.26	
	SE(m)	0.48			0.42	0.44	0.43	0.28	0.40	0.46	0.25		0.03	1.36	0.59	0.67	
	C.D.	1.39			1.21	1.26	1.24	0.80	1.30	1.33	0.72		0.10	3.93	1.69	1.91	
	C.V.	4.70			4.52	4.38	4.85	2.55	4.40	4.17	2.80		0.39	15.7	6.33	6.69	

Table 2.5.16 Brix % at 300 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	21.06	-	-	18.73	20.47	19.5	22.39	18.80	21.34	19.36	-	21.40	19.76	21.23	18.40	20.53
2	Co 16006	20.56	-	-	16.56	18.67	17.57	21.29	19.80	21.16	18.13	-	17.90	18.29	16.56	16.35	18.99
3	Co 16009	19.23	-	-	18.06	18.67	17.33	21.83	19.00	19.82	17.78	-	17.63	14.91	18.06	16.20	18.43
4	Co 16010	20.24	-	-	19.24	18.80	18.4	20.98	18.60	20.13	17.20	-	18.97	19.45	17.23	17.70	19.00
5	Co 16017	19.37	-	-	17.06	18.60	16.87	20.66	16.70	22.02	16.72	-	18.17	16.87	17.89	16.20	18.39
6	Co 16018	18.27	-	-	17.73	18.67	17.20	19.79	18.10	20.53	17.37	-	18.63	14.08	17.56	14.30	18.02
7	CoVC 16061	19.90	-	-	16.23	17.47	17.80	19.75	20.40	20.09	18.27	-	19.10	17.60	16.23	17.60	18.66
8	CoVC 16062	19.11	-	-	16.06	17.47	17.13	20.79	20.80	19.83	17.21	-	17.07	16.94	16.89	16.30	18.32
9	CoN 16071	18.65	-	-	16.56	16.87	17.27	20.04	19.20	19.97	17.52	-	17.97	17.17	15.56	16.25	18.02
10	CoM 16081	17.49	-	-	16.73	17.40	16.47	19.29	18.10	20.79	14.77	-	17.67	17.40	16.89	14.80	17.62
11	CoM 16082	19.28	-	-	16.23	18.47	16.53	20.32	19.10	21.14	16.51	-	15.10	17.14	16.56	16.75	18.01
12	CoVSI 16121	21.36	-	-	18.40	20.07	18.23	22.14	22.40	20.30	22.54	-	16.10	21.49	19.56	17.30	20.42
13	PI 16131	20.79	-	-	15.40	19.07	18.10	21.86	19.10	21.10	18.08	-	18.93	18.53	16.89	16.50	19.25
14	CoR 16141	17.17	-	-	14.56	16.67	15.37	19.55	14.00	20.10	14.99	-	14.57	16.45	13.56	15.90	16.25
15	CoR 16142	18.63	-	-	14.23	17.93	15.93	20.69	15.80	20.29	14.30	-	16.97	16.70	16.56	14.85	17.38
	Standard																
1	Co 86032	19.19	-	-	17.73	17.93	17.43	20.72	20.10	19.76	18.91	-	18.63	16.31	15.73	18.25	18.47
2	CoC 671	21.12	-	-	18.06	20.07	17.03	21.73	20.20	21.86	15.44	-	17.27	19.48	16.89	19.80	19.11
3	Co 09004	21.09	-	-	17.73	19.47	19.03	21.77	18.70	21.43	19.16	-	19.73	18.20	17.89	17.20	19.65
	Mean	19.58			16.96	18.49	17.4	20.87	18.8	20.65	17.45		17.88	17.60	17.10	16.70	
	SE(m)	0.43			0.48	0.44	0.49	0.29	0.40	0.40	0.25		0.07	1.16	0.54	0.60	
	C.D.	1.24			1.37	1.26	1.42	0.84	1.20	1.16	0.72		0.20	3.36	1.56	1.70	
	C.V.	3.80			4.88	4.10	4.92	2.42	3.90	3.40	2.49		0.69	11.46	5.49	5.08	

Table 2.5.17 Purity % at 300 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permallapalle	Pravarana nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	92.13	-	-	97.80	95.19	87.88	93.05	93.30	90.27	90.82	-	91.59	88.47	86.76	86.33	90.95
2	Co 16006	93.04	-	-	93.71	94.61	89.94	88.67	91.50	90.76	89.63	-	87.00	89.15	93.99	86.00	90.83
3	Co 16009	88.73	-	-	95.45	94.34	88.42	86.95	90.20	89.98	85.71	-	82.80	77.55	95.61	86.11	88.03
4	Co 16010	91.87	-	-	94.33	94.47	84.77	92.15	92.90	91.14	87.68	-	86.82	87.82	97.46	86.58	90.71
5	Co 16017	89.88	-	-	97.10	94.36	87.26	86.64	90.70	90.65	88.19	-	85.36	85.99	94.03	86.02	89.30
6	Co 16018	90.13	-	-	94.59	95.14	88.55	89.81	91.30	90.85	88.29	-	87.25	81.14	96.24	86.30	89.87
7	CoVC 16061	88.39	-	-	92.93	94.73	89.40	92.23	90.50	90.69	89.67	-	84.92	84.01	93.47	86.34	89.81
8	CoVC 16062	89.12	-	-	93.65	92.48	90.62	88.86	89.80	90.05	84.91	-	81.39	81.46	94.63	85.33	88.33
9	CoN 16071	90.68	-	-	96.86	93.69	89.16	90.47	89.60	89.22	87.37	-	88.24	83.29	98.41	72.21	90.01
10	CoM 16081	86.73	-	-	95.28	94.76	85.87	84.56	89.20	91.74	82.98	-	84.08	84.93	91.60	86.42	87.64
11	CoM 16082	89.65	-	-	96.46	95.10	88.94	86.51	91.80	92.54	87.05	-	87.78	85.47	95.88	85.95	90.07
12	CoVSI 16121	93.33	-	-	95.03	95.03	90.60	92.37	94.50	92.26	90.20	-	90.77	89.88	91.10	86.41	92.00
13	PI 16131	90.47	-	-	92.98	93.95	88.63	92.06	88.90	92.77	89.82	-	86.97	87.46	90.91	85.82	90.20
14	CoR 16141	85.33	-	-	89.33	92.90	87.64	85.41	81.70	86.98	81.86	-	87.41	75.51	87.03	86.29	85.18
15	CoR 16142	91.51	-	-	96.75	94.73	83.06	91.13	92.00	91.63	89.31	-	82.11	83.35	96.82	86.13	89.57
	Standard																
1	Co 86032	90.86	-	-	95.49	94.85	89.32	91.66	94.50	89.96	90.46	-	88.13	84.95	95.43	86.38	91.01
2	CoC 671	91.45	-	-	95.37	94.46	91.18	90.82	93.80	91.33	87.64	-	82.07	89.51	95.25	85.81	90.75
3	Co 09004	92.54	-	-	94.14	94.77	92.68	92.56	95.30	88.92	90.17	-	85.44	84.09	97.38	86.44	91.38
	Mean	90.32			94.85	94.42	88.55	89.77	91.20	90.76	87.86		86.12	84.67	94.00	85.38	
	SE(m)	0.74			1.69	0.56	1.56	1.16	1.40	1.21	0.52		0.44	2.66	2.45	3.18	
	C.D.	2.14			4.87	NS	4.50	3.35	4.20	3.48	1.50		1.26	7.70	7.04	NS	
	C.V.	1.42			3.09	1.03	3.06	2.24	2.80	2.31	1.03		0.88	5.45	4.51	5.27	

Table 2.5.18 Pol % cane at 300 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	-	-	-	-	-	13.05	16.21	-	-	13.71	-	-	13.00	13.63	-	13.92
2	Co 16006	-	-	-	-	-	12.18	14.61	-	-	12.68	-	-	12.07	11.83	-	12.67
3	Co 16009	-	-	-	-	-	11.71	14.67	-	-	11.92	-	-	8.57	12.97	-	11.97
4	Co 16010	-	-	-	-	-	11.90	15.27	-	-	11.80	-	-	12.66	12.73	-	12.87
5	Co 16017	-	-	-	-	-	11.18	14.16	-	-	11.51	-	-	10.76	12.76	-	12.07
6	Co 16018	-	-	-	-	-	11.63	14.08	-	-	11.95	-	-	8.41	12.73	-	11.76
7	CoVC 16061	-	-	-	-	-	12.19	14.39	-	-	12.79	-	-	11.08	11.52	-	12.39
8	CoVC 16062	-	-	-	-	-	11.89	14.26	-	-	11.37	-	-	10.27	11.87	-	11.93
9	CoN 16071	-	-	-	-	-	11.74	14.35	-	-	11.96	-	-	10.64	11.94	-	12.13
10	CoM 16081	-	-	-	-	-	10.84	12.95	-	-	9.51	-	-	10.95	11.88	-	11.23
11	CoM 16082	-	-	-	-	-	11.24	13.87	-	-	11.17	-	-	10.86	12.27	-	11.88
12	CoVSI 16121	-	-	-	-	-	12.59	15.61	-	-	15.85	-	-	14.30	13.15	-	14.30
13	PI 16131	-	-	-	-	-	12.32	15.79	-	-	12.68	-	-	12.10	11.45	-	12.87
14	CoR 16141	-	-	-	-	-	10.29	12.71	-	-	9.55	-	-	9.27	9.10	-	10.18
15	CoR 16142	-	-	-	-	-	10.09	14.82	-	-	10.02	-	-	10.85	12.35	-	11.63
	Standard																
1	Co 86032	-	-	-	-	-	11.87	14.80	-	-	13.29	-	-	10.26	11.63	-	12.37
2	CoC 671	-	-	-	-	-	11.83	15.50	-	-	10.49	-	-	12.93	12.28	-	12.61
3	Co 09004	-	-	-	-	-	13.55	15.82	-	-	13.35	-	-	11.48	13.27	-	13.49
	Mean						11.78	14.66			11.97			11.14	12.19		
	SE(m)						0.33	0.25			0.21			1.01	0.48		
	C.D.						0.95	0.72			0.59			2.91	1.39		
	C.V.						4.84	2.93			2.97			15.7	6.86		

Table 2.5.19 Fibre % at 300 days

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla	Pravara	Pugalur	Pune	Rudrur	Sameerwadi	Sanke	Thiruvalla	Mean
1	Co 11015	-	-	-	-	-	13.71	12.17	-	-	12.03	-	-	-	15.98	-	13.47
2	Co 16006	-	-	-	-	-	12.95	12.56	-	-	11.97	-	-	-	14.18	-	12.92
3	Co 16009	-	-	-	-	-	13.62	12.72	-	-	11.78	-	-	-	14.83	-	13.24
4	Co 16010	-	-	-	-	-	13.70	10.89	-	-	11.79	-	-	-	14.12	-	12.63
5	Co 16017	-	-	-	-	-	14.06	10.86	-	-	11.98	-	-	-	14.27	-	12.79
6	Co 16018	-	-	-	-	-	13.68	10.79	-	-	12.12	-	-	-	14.63	-	12.81
7	CoVC 16061	-	-	-	-	-	13.42	10.95	-	-	11.94	-	-	-	13.74	-	12.51
8	CoVC 16062	-	-	-	-	-	13.40	12.77	-	-	12.12	-	-	-	15.85	-	13.54
9	CoN 16071	-	-	-	-	-	13.75	10.88	-	-	11.88	-	-	-	12.01	-	12.13
10	CoM 16081	-	-	-	-	-	13.26	10.58	-	-	12.38	-	-	-	13.13	-	12.34
11	CoM 16082	-	-	-	-	-	13.58	11.16	-	-	12.33	-	-	-	12.72	-	12.45
12	CoVSI 16121	-	-	-	-	-	13.81	13.62	-	-	12.03	-	-	-	15.99	-	13.86
13	PI 16131	-	-	-	-	-	13.25	11.56	-	-	11.94	-	-	-	15.33	-	13.02
14	CoR 16141	-	-	-	-	-	13.48	13.88	-	-	12.22	-	-	-	13.39	-	13.24
15	CoR 16142	-	-	-	-	-	13.81	11.40	-	-	11.59	-	-	-	12.93	-	12.43
	Standard																
1	Co 86032	-	-	-	-	-	13.79	12.05	-	-	12.33	-	-	-	12.43	-	12.65
2	CoC 671	-	-	-	-	-	13.85	11.47	-	-	12.46	-	-	-	13.71	-	12.87
3	Co 09004	-	-	-	-	-	12.89	11.49	-	-	12.75	-	-	-	13.82	-	12.74
	Mean						13.56	11.77			12.09				14.06		
	SE(m)						0.32	0.49			0.18				0.84		
	C.D.						NS	1.40			0.53				2.41		
	C.V.						4.09	7.15			2.62				10.32		

Table 2.5.20 Extraction % at 300 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permalla palle	Pravara nagar	Pugalur	Pune	Rud rur	Sameer wadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	56.48	-	-	47.78	-	55.55	48.03	50.70	41.34	54.71	-	-	-	55.96	58.72	51.82
2	Co 16006	56.44	-	-	45.70	-	53.66	41.70	46.90	43.61	47.62	-	-	-	55.86	59.90	49.40
3	Co 16009	45.67	-	-	41.26	-	52.54	48.38	45.30	42.02	48.89	-	-	-	51.79	51.97	47.79
4	Co 16010	51.79	-	-	44.83	-	53.64	47.67	53.20	41.13	49.54	-	-	-	51.93	56.06	49.85
5	Co 16017	55.77	-	-	49.92	-	53.88	44.51	51.60	45.43	51.43	-	-	-	56.74	55.07	51.34
6	Co 16018	56.39	-	-	45.53	-	54.81	43.68	51.20	41.46	48.17	-	-	-	55.31	60.72	50.15
7	CoVC 16061	50.64	-	-	48.96	-	52.72	53.74	53.00	39.84	50.85	-	-	-	55.82	57.80	50.94
8	CoVC 16062	51.59	-	-	48.53	-	54.56	50.39	55.90	42.56	57.03	-	-	-	58.89	57.37	52.98
9	CoN 16071	59.11	-	-	42.02	-	54.35	47.82	51.90	41.54	49.77	-	-	-	60.32	55.48	52.12
10	CoM 16081	57.68	-	-	47.18	-	53.71	48.02	55.00	46.71	48.69	-	-	-	57.31	60.56	52.45
11	CoM 16082	50.55	-	-	46.91	-	56.21	45.48	50.00	42.61	51.44	-	-	-	57.00	57.29	50.47
12	CoVSI 16121	50.46	-	-	39.66	-	53.56	45.34	49.90	41.73	48.27	-	-	-	48.22	56.96	48.21
13	PI 16131	60.05	-	-	45.11	-	53.38	44.87	51.70	42.92	55.22	-	-	-	57.74	57.45	52.28
14	CoR 16141	57.45	-	-	46.16	-	52.67	45.34	52.80	42.85	52.94	-	-	-	59.00	58.00	51.86
15	CoR 16142	63.31	-	-	50.65	-	53.37	46.29	56.00	40.42	50.78	-	-	-	58.61	62.11	52.69
	Standard																
1	Co 86032	55.94	-	-	43.89	-	55.04	48.15	51.30	45.46	50.48	-	-	-	58.56	60.56	52.13
2	CoC 671	56.26	-	-	44.20	-	54.40	54.01	46.30	42.26	48.45	-	-	-	55.98	58.69	51.09
3	Co 09004	53.83	-	-	43.57	-	52.77	41.06	52.60	40.73	51.08	-	-	-	59.07	58.51	50.16
	Mean	54.97			45.66		53.93	46.91	51.40	42.48	50.85				56.34	57.95	
	SE(m)	2.83			2.33		1.08	5.66	2.10	0.78	1.53				2.26	1.87	
	C.D.	8.16			6.71		NS	NS	6.10	2.25	4.40				6.51	NS	
	C.V.	8.91			8.86		3.48	20.9	7.10	3.20	5.21				6.96	4.55	

Table 2.5.21 NMC at 300 days (‘000/ha)

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permallapalle	Pravarannagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	-	-	-	-	-	128.58	77.77	95.00	112.95	85.14	-	-	111.46	60.17	70.61	95.86
2	Co 16006	-	-	-	-	-	126.23	78.93	89.00	106.87	127.14	-	-	112.50	64.48	64.47	100.73
3	Co 16009	-	-	-	-	-	132.80	81.90	111.00	116.71	116.12	-	-	110.76	73.28	115.40	106.07
4	Co 16010	-	-	-	-	-	128.28	85.09	79.00	112.79	148.71	-	-	112.96	73.91	59.03	105.81
5	Co 16017	-	-	-	-	-	126.95	72.68	70.00	111.96	86.88	-	-	98.15	67.25	78.94	90.56
6	Co 16018	-	-	-	-	-	125.60	74.83	95.00	121.69	131.43	-	-	92.25	58.53	67.13	99.86
7	CoVC 16061	-	-	-	-	-	121.23	68.74	98.00	123.33	122.61	-	-	92.59	45.25	63.78	96.02
8	CoVC 16062	-	-	-	-	-	129.21	79.69	104.00	102.89	91.06	-	-	93.52	65.45	67.13	95.14
9	CoN 16071	-	-	-	-	-	132.13	94.75	133.00	96.44	103.82	-	-	105.67	82.62	67.71	106.99
10	CoM 16081	-	-	-	-	-	124.66	90.85	62.00	116.19	69.95	-	-	104.17	66.73	77.55	90.70
11	CoM 16082	-	-	-	-	-	127.50	83.55	69.00	114.02	95.00	-	-	92.01	70.37	73.73	93.08
12	CoVSI 16121	-	-	-	-	-	122.68	68.78	62.00	118.82	75.86	-	-	101.97	63.38	67.37	87.58
13	PI 16131	-	-	-	-	-	129.90	71.48	64.00	123.61	83.64	-	-	106.02	74.49	70.14	93.33
14	CoR 16141	-	-	-	-	-	131.95	82.47	93.00	125.72	89.67	-	-	118.28	75.24	100.70	102.39
15	CoR 16142	-	-	-	-	-	129.32	85.40	94.00	132.52	99.64	-	-	120.95	87.67	70.14	107.12
	Standard																
1	Co 86032	-	-	-	-	-	113.67	91.78	122.00	133.14	93.15	-	-	122.46	79.85	109.26	108.07
2	CoC 671	-	-	-	-	-	118.08	70.74	99.00	94.31	110.78	-	-	114.01	67.21	84.73	96.27
3	Co 09004	-	-	-	-	-	120.34	81.55	92.00	129.35	134.33	-	-	115.51	60.62	80.79	104.75
	Mean						126.06	80.05	91.00	116.29	103.6			106.96	68.69	77.14	
	SE(m)						3.24	2.41	7.30	2.58	5.74			4.30	4.82	4.68	
	C.D.						9.31	6.96	21.00	7.38	16.5			12.42	13.84	13.29	
	C.V.						4.45	5.22	13.90	3.84	9.60			6.97	12.15	8.57	

Table 2.5.22 Stalk length (cm) at 300 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permalla palle	Pravara nagar	Pugalur	Pune	Rud rur	Sameer wadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	220.00	-	-	154.55	162.00	240.20	190.00	283.00	175.00	271.53	-	-	244.00	180.00	241.85	218.44
2	Co 16006	233.33	-	-	151.22	178.67	247.91	210.33	278.00	203.33	267.93	-	-	257.30	222.33	192.65	233.27
3	Co 16009	231.67	-	-	189.44	186.67	242.23	216.00	252.00	210.33	255.90	-	-	213.30	208.00	239.00	223.97
4	Co 16010	246.67	-	-	160.78	192.67	231.90	207.67	299.00	183.33	258.60	-	-	219.60	180.00	223.20	224.42
5	Co 16017	253.33	-	-	147.89	167.33	235.88	184.00	239.00	200.00	287.67	-	-	212.00	220.00	223.00	222.17
6	Co 16018	223.33	-	-	177.22	166.00	222.28	191.00	292.00	176.33	262.53	-	-	178.60	181.67	236.30	210.45
7	CoVC 16061	188.33	-	-	121.16	163.33	240.41	146.33	227.00	184.00	249.17	-	-	196.00	177.33	237.00	196.88
8	CoVC 16062	191.67	-	-	131.44	188.00	224.91	199.33	199.00	187.66	242.67	-	-	228.60	149.33	218.35	201.24
9	CoN 16071	223.33	-	-	136.44	176.00	240.53	209.67	231.00	171.66	245.60	-	-	186.00	183.67	189.30	207.50
10	CoM 16081	236.67	-	-	157.55	182.67	247.74	196.67	237.00	215.00	214.87	-	-	203.60	206.67	218.65	215.65
11	CoM 16082	223.33	-	-	167.44	171.33	231.22	199.67	273.00	208.00	280.20	-	-	202.30	190.00	222.35	219.86
12	CoVSI 16121	188.33	-	-	124.94	157.33	220.22	178.33	261.00	191.66	255.97	-	-	212.30	176.67	208.20	204.68
13	PI 16131	206.67	-	-	138.88	176.00	238.89	190.00	226.00	215.33	266.50	-	-	227.60	188.67	210.85	215.11
14	CoR 16141	233.33	-	-	143.44	170.67	240.35	219.33	264.00	192.66	237.03	-	-	166.60	198.00	228.80	213.59
15	CoR 16142	206.67	-	-	122.89	162.67	236.46	215.67	240.00	169.00	249.90	-	-	206.30	185.00	210.00	208.00
	Standard																
1	Co 86032	230.00	-	-	156.44	196.67	224.42	193.67	260.00	205.00	308.07	-	-	218.30	200.67	210.65	226.35
2	CoC 671	226.67	-	-	155.11	180.67	213.69	176.67	255.00	186.00	294.57	-	-	211.00	194.00	198.30	215.36
3	Co 09004	250.00	-	-	164.88	194.67	209.33	210.67	259.00	186.00	273.50	-	-	208.00	220.67	216.35	223.50
	Mean	222.96			150.10	176.30	232.70	196.39	254.00	192.31	262.34			210.63	192.37	218.04	
	SE(m)	10.09			6.88	5.55	7.85	9.19	13.10	6.13	6.10			12.46	7.23	13.06	
	C.D.	29.11			19.77	15.96	22.56	26.53	37.90	17.61	17.55			35.90	20.77	NS	
	C.V.	7.84			7.94	5.46	5.84	8.10	8.90	5.52	4.03			10.20	7.05	8.47	

Table 2.5.23 Stalk diameter (cm) at 300 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permalla palle	Pravara nagar	Pugalur	Pune	Rud rur	Sameer wadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	3.13	-	-	3.04	2.75	2.30	2.83	2.80	2.24	2.45	-	-	2.60	2.70	2.30	2.65
2	Co 16006	3.12	-	-	2.80	2.95	2.33	3.26	2.80	2.44	2.84	-	-	2.70	2.85	2.40	2.81
3	Co 16009	2.90	-	-	3.17	2.93	2.35	2.91	2.60	2.27	2.88	-	-	2.90	2.70	2.15	2.72
4	Co 16010	2.92	-	-	2.85	2.88	2.28	2.97	2.90	2.37	2.47	-	-	2.60	2.62	2.50	2.67
5	Co 16017	3.19	-	-	3.02	2.90	2.32	3.24	2.90	2.53	2.89	-	-	2.90	2.88	2.45	2.86
6	Co 16018	3.10	-	-	2.90	3.19	2.28	3.34	2.90	2.51	2.56	-	-	3.00	2.73	2.40	2.85
7	CoVC 16061	2.70	-	-	2.67	2.65	2.32	2.85	2.60	2.53	2.29	-	-	2.60	2.67	2.45	2.57
8	CoVC 16062	3.07	-	-	2.97	2.89	2.27	3.14	3.00	2.51	2.95	-	-	2.90	2.92	2.75	2.85
9	CoN 16071	3.07	-	-	2.57	2.59	2.28	2.90	2.80	2.41	2.79	-	-	2.50	2.97	2.35	2.70
10	CoM 16081	3.15	-	-	3.01	3.09	2.28	3.18	3.20	2.56	2.47	-	-	2.90	2.91	2.65	2.86
11	CoM 16082	3.03	-	-	3.04	3.22	2.31	3.21	2.90	2.43	2.61	-	-	2.90	2.81	2.35	2.83
12	CoVSI 16121	3.00	-	-	2.39	2.85	2.23	3.05	3.00	2.22	2.88	-	-	2.70	2.36	2.75	2.70
13	PI 16131	3.16	-	-	2.78	2.88	2.26	3.31	3.30	2.45	2.75	-	-	3.00	2.65	2.35	2.86
14	CoR 16141	2.88	-	-	3.01	3.07	2.30	3.39	3.00	2.45	2.50	-	-	3.00	2.74	2.40	2.82
15	CoR 16142	3.34	-	-	2.79	2.95	2.31	3.18	3.30	2.34	2.66	-	-	3.30	2.78	2.95	2.90
	Standard																
1	Co 86032	2.87	-	-	2.88	2.94	2.20	3.20	2.90	2.52	2.58	-	-	2.70	2.78	2.55	2.74
2	CoC 671	3.13	-	-	2.88	3.14	2.22	3.07	2.80	2.37	2.63	-	-	2.70	2.68	2.35	2.75
3	Co 09004	3.05	-	-	2.63	2.83	2.15	3.15	2.60	2.42	2.85	-	-	2.60	2.69	2.35	2.71
	Mean	3.04			2.86	2.93	2.28	3.15	2.90	2.42	2.66			2.81	2.75	2.47	
	SE(m)	3.27			0.12	0.07	0.05	0.08	0.10	0.03	0.60			0.10	0.12	0.11	
	C.D.	0.17			0.36	0.19	NS	0.23	0.20	0.10	0.17			0.27	0.34	0.32	
	C.V.	3.13			7.50	3.88	3.44	4.38	4.80	2.63	3.89			5.93	7.55	6.50	

Table 2.5. 24 Single cane weight (kg) at 300 days

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla	Pravarana	Pugalur	Pune	Rudrur	Sameerwadi	Sanke	Thiruvalla	Mean
1	Co 11015	1.40	-	-	0.93	0.86	1.12	0.89	1.50	0.94	1.33	-	-	1.09	1.07	1.24	1.13
2	Co 16006	1.77	-	-	0.82	1.14	1.11	1.33	1.65	1.60	1.40	-	-	1.07	1.46	0.90	1.39
3	Co 16009	1.32	-	-	1.16	1.12	1.08	0.80	1.37	1.05	1.46	-	-	0.88	1.32	0.96	1.16
4	Co 16010	1.43	-	-	0.83	1.07	0.98	0.86	1.82	0.87	1.29	-	-	0.83	0.91	1.21	1.12
5	Co 16017	1.75	-	-	0.92	1.01	1.00	0.96	1.43	1.30	1.60	-	-	1.14	1.59	1.17	1.31
6	Co 16018	1.54	-	-	1.10	1.18	0.92	0.86	1.74	0.88	1.40	-	-	0.72	1.29	1.09	1.17
7	CoVC 16061	0.94	-	-	0.66	0.77	0.89	0.90	1.23	1.24	0.95	-	-	0.71	1.07	1.31	0.97
8	CoVC 16062	1.14	-	-	0.85	1.01	1.11	1.04	1.16	1.28	1.34	-	-	1.03	1.09	1.12	1.13
9	CoN 16071	1.27	-	-	0.72	0.90	0.94	0.91	1.22	0.82	1.09	-	-	0.68	1.14	0.93	1.00
10	CoM 16081	1.53	-	-	0.96	1.27	1.10	1.19	1.75	2.02	1.57	-	-	1.00	1.38	1.18	1.42
11	CoM 16082	1.59	-	-	1.06	1.10	1.11	1.09	1.67	1.25	1.42	-	-	0.98	1.33	1.16	1.28
12	CoVSI 16121	1.27	-	-	0.58	0.89	0.99	0.97	1.78	0.83	1.27	-	-	0.99	0.80	1.22	1.09
13	PI 16131	1.07	-	-	0.74	0.98	0.90	0.68	1.44	1.21	1.40	-	-	1.08	0.95	0.91	1.08
14	CoR 16141	1.47	-	-	0.93	1.07	1.08	1.14	1.61	1.21	1.51	-	-	0.76	1.19	1.11	1.23
15	CoR 16142	1.56	-	-	0.74	0.94	1.12	0.92	1.57	0.89	1.51	-	-	0.85	1.26	1.34	1.18
	Standard																
1	Co 86032	1.35	-	-	0.93	1.20	0.95	0.97	1.50	1.33	1.48	-	-	0.99	1.33	1.30	1.23
2	CoC 671	1.51	-	-	0.87	1.25	1.09	0.73	1.07	1.20	1.44	-	-	0.85	1.25	1.02	1.15
3	Co 09004	1.31	-	-	0.82	1.12	1.06	0.92	1.31	1.10	1.36	-	-	1.02	1.38	0.95	1.18
	Mean	1.40			0.87	1.05	1.03	0.95	1.49	1.17	1.38			0.93	1.21	1.12	
	SE(m)	0.28			0.08	0.08	0.03	0.10	0.10	0.06	0.47			0.18	0.12	0.08	
	C.D.	0.10			0.024	0.23	0.09	0.28	0.28	0.18	0.13			NS	0.33	0.22	
	C.V.	0.14			16.35	13.4	5.08	17.64	11.33	9.54	5.87			21.85	16.54	9.98	

Table 2.5.25 Stalk Length (cm) at 240 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permallapalle	Pravara nagar	Pugalur	Pune	Rud rur	Sameer wadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	225.00	-	-	-	150.67	218.36	145.00	221.00	151.00	255.10	-	-	170.00	132.67	-	185.39
2	Co 16006	233.33	-	-	-	167.33	233.86	150.33	228.00	180.66	250.23	-	-	193.33	157.00	-	199.38
3	Co 16009	216.67	-	-	-	173.33	220.40	156.00	241.00	181.66	240.80	-	-	180.67	146.67	-	195.21
4	Co 16010	216.67	-	-	-	174.00	213.78	143.00	244.00	156.33	240.90	-	-	171.00	144.67	-	189.34
5	Co 16017	216.67	-	-	-	160.00	215.16	127.67	223.00	171.00	268.80	-	-	181.00	155.33	-	191.00
6	Co 16018	233.33	-	-	-	158.00	211.05	126.00	248.00	152.33	243.83	-	-	155.33	149.33	-	186.39
7	CoVC 16061	168.33	-	-	-	141.33	217.77	100.33	191.00	173.33	231.40	-	-	164.33	120.33	-	167.54
8	CoVC 16062	181.67	-	-	-	159.33	201.29	128.67	178.00	176.00	224.20	-	-	163.67	109.33	-	169.13
9	CoN 16071	183.33	-	-	-	144.00	212.57	127.00	222.00	160.66	226.97	-	-	160.33	114.67	-	172.43
10	CoM 16081	205.00	-	-	-	161.33	226.03	147.00	186.00	182.66	194.83	-	-	176.67	142.67	-	180.28
11	CoM 16082	196.67	-	-	-	166.67	209.94	130.33	220.00	176.00	261.60	-	-	165.00	128.67	-	183.84
12	CoVSI 16121	185.00	-	-	-	134.00	200.75	110.67	204.00	162.33	238.10	-	-	165.00	126.67	-	169.58
13	PI 16131	205.00	-	-	-	147.33	218.64	120.00	195.00	173.33	246.57	-	-	183.33	122.67	-	179.10
14	CoR 16141	201.67	-	-	-	160.00	224.05	139.00	236.00	156.66	218.87	-	-	172.33	134.33	-	182.55
15	CoR 16142	190.00	-	-	-	146.67	215.74	119.00	168.00	138.66	231.77	-	-	174.00	102.67	-	165.13
	Standard																
1	Co 86032	176.67	-	-	-	162.67	202.29	135.00	232.00	156.66	289.00	-	-	172.33	125.67	-	183.62
2	CoC 671	205.00	-	-	-	154.00	189.7	142.67	239.00	135.00	275.63	-	-	153.00	123.67	-	179.74
3	Co 09004	205.00	-	-	-	168.67	189.17	151.33	232.00	163.00	255.43	-	-	196.67	150.33	-	190.14
	Mean	202.50				157.19	212.25	133.28	216.00	163.75	244.11			172.11	132.63		
	SE(m)	12.52				4.30	7.73	6.13	11.00	2.88	6.25			6.62	7.82		
	C.D.	36.13				12.36	22.21	17.71	31.60	8.24	17.98			19.10	22.46		
	C.V.	10.71				4.74	6.31	7.97	8.70	3.04	4.44			6.66	10.21		

Table 2.5.26 Stalk Diameter (cm) at 240 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Navsari	Padegaon	Permallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	2.96	-	-	-	2.48	2.09	3.02	2.80	2.12	2.34	-	-	2.87	2.76	-	2.61
2	Co 16006	3.20	-	-	-	2.77	2.19	3.21	2.70	2.3	2.63	-	-	3.03	2.91	-	2.78
3	Co 16009	2.76	-	-	-	2.73	2.21	2.84	2.60	2.14	2.54	-	-	2.70	2.77	-	2.59
4	Co 16010	2.97	-	-	-	2.79	2.12	2.92	2.80	2.23	2.35	-	-	2.73	2.68	-	2.62
5	Co 16017	3.18	-	-	-	2.75	2.11	3.18	2.80	2.42	2.58	-	-	2.97	3.13	-	2.80
6	Co 16018	3.10	-	-	-	2.99	2.14	3.29	2.90	2.39	2.38	-	-	2.93	3.13	-	2.81
7	CoVC 16061	2.74	-	-	-	2.45	2.15	2.76	2.50	2.41	2.18	-	-	2.70	2.86	-	2.53
8	CoVC 16062	3.15	-	-	-	2.79	2.14	3.02	3.00	2.39	2.63	-	-	3.03	3.17	-	2.81
9	CoN 16071	2.96	-	-	-	2.51	2.12	2.94	2.70	2.29	2.63	-	-	2.47	2.73	-	2.59
10	CoM 16081	3.05	-	-	-	2.86	2.16	3.13	2.90	2.44	2.31	-	-	2.77	3.18	-	2.76
11	CoM 16082	2.92	-	-	-	2.81	2.11	3.16	2.80	2.33	2.36	-	-	2.93	3.16	-	2.73
12	CoVSI 16121	2.97	-	-	-	2.78	2.07	3.05	3.10	2.09	2.73	-	-	2.90	2.59	-	2.70
13	PI 16131	2.95	-	-	-	2.81	2.12	2.92	3.00	2.35	2.54	-	-	2.77	2.95	-	2.71
14	CoR 16141	2.85	-	-	-	2.85	2.17	3.45	2.80	2.29	2.33	-	-	2.93	3.09	-	2.75
15	CoR 16142	3.20	-	-	-	2.71	2.15	3.23	3.10	2.23	2.45	-	-	3.20	3.19	-	2.83
	Standard																
1	Co 86032	2.94	-	-	-	2.81	2.09	3.18	2.70	2.42	2.42	-	-	2.93	3.06	-	2.72
2	CoC 671	2.87	-	-	-	3.08	2.12	3.02	2.50	2.25	2.39	-	-	2.60	2.81	-	2.63
3	Co 09004	2.85	-	-	-	2.65	1.97	3.08	2.60	2.26	2.60	-	-	2.70	2.95	-	2.63
	Mean	2.98				2.76	2.12	3.08	2.80	2.30	2.46			2.84	2.95		
	SE(m)	0.09				0.09	0.03	0.13	0.10	0.03	0.49			0.12	0.11		
	C.D.	0.26				0.24	0.09	0.36	0.30	0.10	0.14			0.33	0.32		
	C.V.	5.32				5.35	2.47	7.10	5.40	2.84	3.48			7.01	6.52		

Table 2.5.27 Single cane weight (kg) at 240 days

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla	Pravara	Pugalur	Pune	Rudrur	Sameerwadi	Sanke	Thiruvalla	Mean
1	Co 11015	1.40	-	-	-	0.83	0.97	0.76	1.30	0.72	1.04	-	-	0.75	0.88	-	0.96
2	Co 16006	1.74	-	-	-	1.01	0.98	1.09	1.40	1.27	1.22	-	-	1.09	1.14	-	1.22
3	Co 16009	1.20	-	-	-	0.99	0.94	0.67	1.30	0.79	1.22	-	-	0.67	0.96	-	0.97
4	Co 16010	1.14	-	-	-	0.95	0.87	0.69	1.40	0.61	1.07	-	-	0.74	0.83	-	0.92
5	Co 16017	1.49	-	-	-	0.88	0.85	0.89	1.50	1.09	1.38	-	-	0.78	1.29	-	1.12
6	Co 16018	1.53	-	-	-	0.98	0.84	0.85	1.50	0.69	1.27	-	-	0.78	1.25	-	1.08
7	CoVC 16061	0.92	-	-	-	0.70	0.86	0.56	0.90	1.05	0.87	-	-	0.72	0.93	-	0.83
8	CoVC 16062	1.25	-	-	-	0.83	0.92	0.81	1.10	1.09	1.01	-	-	0.55	0.98	-	0.95
9	CoN 16071	1.07	-	-	-	0.68	0.85	0.70	1.20	0.63	0.90	-	-	0.52	0.89	-	0.82
10	CoM 16081	1.40	-	-	-	1.16	0.98	0.97	1.20	1.77	1.29	-	-	0.81	1.26	-	1.21
11	CoM 16082	1.17	-	-	-	1.07	0.94	1.07	1.30	1.03	1.29	-	-	0.63	1.16	-	1.07
12	CoVSI 16121	1.16	-	-	-	0.80	0.87	0.58	1.30	0.63	1.06	-	-	0.58	0.78	-	0.86
13	PI 16131	1.07	-	-	-	0.86	0.82	0.75	1.20	1.02	1.19	-	-	0.6	0.99	-	0.94
14	CoR 16141	1.23	-	-	-	0.93	0.94	0.95	1.30	0.98	1.39	-	-	0.52	1.25	-	1.05
15	CoR 16142	1.27	-	-	-	0.86	0.98	0.77	1.40	0.68	1.36	-	-	0.79	0.97	-	1.01
	Standard																
1	Co 86032	1.02	-	-	-	0.98	0.84	0.78	1.10	1.08	1.25	-	-	0.74	1.08	-	0.98
2	CoC 671	1.21	-	-	-	1.19	0.92	0.81	1.10	0.97	1.13	-	-	0.53	1.01	-	0.99
3	Co 09004	1.13	-	-	-	1.05	0.88	0.69	1.10	0.85	1.32	-	-	0.66	1.32	-	1.00
	Mean	1.24				0.93	0.90	0.80	1.20	0.94	1.18			0.69	1.05		
	SE(m)	0.12				0.05	0.03	0.07	0.10	0.05	0.47			0.05	0.08		
	C.D.	0.34				0.15	0.09	0.20	0.20	0.14	0.14			0.14	0.24		
	C.V.	16.54				9.88	6.34	15.1	10.5	9.56	6.90			12.23	13.93		

Table 2.5.28 CCS % at 240 days

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla	Pravara	Pugalur	Pune	Rudrur	Sameerwadi	Sanke	Thiruvalla	Mean
1	Co 11015	11.91	-	-	-	8.75	8.13	12.20	10.90	12.72	12.04	-	9.36	12.82	9.43	-	10.82
2	Co 16006	9.78	-	-	-	7.27	9.14	8.75	10.10	12.67	10.06	-	7.19	10.01	6.61	-	9.16
3	Co 16009	9.80	-	-	-	8.64	8.62	10.11	10.60	12.15	10.00	-	9.87	10.58	8.69	-	9.91
4	Co 16010	11.22	-	-	-	10.13	9.14	11.24	10.30	12.47	10.03	-	9.71	12.02	9.07	-	10.53
5	Co 16017	10.07	-	-	-	7.70	7.81	10.31	8.10	13.84	10.13	-	9.24	11.73	8.49	-	9.74
6	Co 16018	10.50	-	-	-	6.89	8.93	9.41	9.00	12.90	10.59	-	6.04	10.93	8.94	-	9.41
7	CoVC 16061	9.11	-	-	-	7.90	8.81	7.57	11.60	12.34	11.56	-	9.06	11.72	6.62	-	9.63
8	CoVC 16062	8.91	-	-	-	5.88	7.50	7.63	9.40	12.60	7.92	-	7.12	11.20	6.97	-	8.52
9	CoN 16071	10.43	-	-	-	7.27	7.96	10.05	11.70	12.54	10.4	-	9.11	10.66	5.72	-	9.58
10	CoM 16081	8.75	-	-	-	7.83	8.00	7.88	9.40	12.73	8.02	-	7.72	11.53	7.74	-	8.96
11	CoM 16082	9.02	-	-	-	8.28	7.62	9.68	7.70	13.11	8.44	-	8.95	11.15	7.98	-	9.19
12	CoVSI 16121	12.10	-	-	-	8.52	9.30	10.64	11.50	12.49	14.61	-	9.28	12.34	9.73	-	11.05
13	PI 16131	10.02	-	-	-	8.32	8.77	8.61	10.00	12.63	10.93	-	7.49	12.41	7.97	-	9.71
14	CoR 16141	7.64	-	-	-	5.38	5.83	5.72	6.80	11.99	7.40	-	6.53	8.88	4.57	-	7.07
15	CoR 16142	8.56	-	-	-	6.05	6.55	8.24	8.40	12.48	7.21	-	7.29	9.40	6.69	-	8.08
	Standard																
1	Co 86032	10.98	-	-	-	7.39	8.83	10.23	11.30	12.29	10.54	-	8.75	10.97	7.55	-	9.88
2	CoC 671	10.97	-	-	-	9.44	8.31	9.87	11.20	12.87	9.18	-	6.98	13.59	7.86	-	10.02
3	Co 09004	12.24	-	-	-	8.99	9.09	11.45	11.50	12.34	11.27	-	9.71	12.22	9.74	-	10.85
	Mean	10.11				7.81	8.24	9.42	10.0	12.62	10.01		8.30	11.34	7.80		
	SE(m)	0.44				0.43	0.24	0.79	0.40	0.36	0.19		0.06	0.65	0.95		
	C.D.	1.27				1.24	0.68	2.27	1.30	1.04	0.55		0.17	1.87	2.73		
	C.V.	7.55				9.57	4.97	14.46	7.60	4.99	3.20		1.26	9.87	21.07		

Table 2.5.29 Sucrose % at 240 days

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla	Pravarana	Pugalur	Pune	Rudrur	Sameerwadi	Sanke	Thiruvalla	Mean
1	Co 11015	17.26	-	-	-	13.09	11.77	17.71	15.80	18.31	17.29	-	13.89	18.53	14.05	-	15.77
2	Co 16006	14.47	-	-	-	10.91	13.28	13.11	14.50	18.07	14.73	-	11.37	14.79	10.09	-	13.53
3	Co 16009	14.59	-	-	-	12.86	12.67	14.96	15.30	17.19	14.51	-	14.45	15.63	12.66	-	14.48
4	Co 16010	16.40	-	-	-	14.42	13.40	16.39	14.70	17.83	14.59	-	14.38	17.51	13.08	-	15.27
5	Co 16017	14.89	-	-	-	11.59	11.24	15.09	12.10	19.76	14.67	-	13.72	16.92	12.27	-	14.23
6	Co 16018	15.44	-	-	-	10.50	13.07	14.14	13.20	17.94	15.28	-	9.93	16.07	12.90	-	13.84
7	CoVC 16061	13.80	-	-	-	11.70	12.94	12.06	16.70	17.29	16.72	-	13.68	17.12	10.20	-	14.22
8	CoVC 16062	13.40	-	-	-	9.28	10.96	11.90	14.00	17.88	12.17	-	11.36	16.24	10.59	-	12.77
9	CoN 16071	15.20	-	-	-	10.84	11.84	14.44	16.50	17.16	14.98	-	13.68	15.71	9.08	-	13.94
10	CoM 16081	13.05	-	-	-	11.69	11.85	12.36	13.60	18.16	11.87	-	12.03	16.78	11.49	-	13.29
11	CoM 16082	13.43	-	-	-	12.13	11.05	13.99	11.30	18.47	12.64	-	13.34	16.29	11.78	-	13.45
12	CoVSI 16121	17.41	-	-	-	12.55	13.68	15.69	16.40	18.04	20.70	-	14.05	17.89	14.29	-	16.07
13	PI 16131	14.89	-	-	-	12.22	12.76	13.54	14.50	17.81	15.92	-	11.78	17.85	11.52	-	14.28
14	CoR 16141	11.92	-	-	-	8.79	8.64	9.55	10.50	16.75	11.41	-	10.23	13.55	7.53	-	10.88
15	CoR 16142	12.80	-	-	-	9.45	9.46	12.31	12.30	17.69	11.00	-	11.05	14.01	9.98	-	12.01
	Standard																
1	Co 86032	15.93	-	-	-	11.07	13.07	14.93	16.10	17.48	15.20	-	13.20	16.05	11.11	-	14.42
2	CoC 671	16.16	-	-	-	13.53	12.13	14.66	16.10	18.15	13.40	-	11.04	19.19	11.66	-	14.60
3	Co 09004	17.64	-	-	-	13.03	13.20	16.63	16.30	17.45	16.10	-	14.32	17.72	13.78	-	15.62
	Mean	14.93				11.65	12.06	14.08	14.4	17.85	14.62		12.64	16.55	11.56		
	SE(m)	0.56				0.50	0.28	0.81	0.60	0.51	0.26		0.05	0.82	1.04		
	C.D.	1.61				1.43	0.79	2.35	1.60	1.47	0.75		0.15	2.35	3.00		
	C.V.	6.48				7.38	3.97	10.00	6.80	4.96	3.11		0.73	8.52	15.62		

Table 2.5.30 Brix % at 240 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permalla palle	Pravara nagar	Pugalur	Pune	Rud rur	Sameer wadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	19.63	-	-	-	15.93	13.36	20.19	18.10	19.58	19.31	-	16.53	20.96	16.86	-	18.04
2	Co 16006	17.17	-	-	-	13.40	15.20	15.94	16.20	19.38	17.12	-	15.17	17.51	12.71	-	15.98
3	Co 16009	17.51	-	-	-	15.53	14.80	17.73	17.20	18.17	16.54	-	16.77	18.47	14.54	-	16.72
4	Co 16010	18.96	-	-	-	15.87	15.59	18.85	16.20	18.48	16.73	-	17.10	20.15	14.71	-	17.27
5	Co 16017	17.63	-	-	-	14.33	12.60	17.48	14.50	20.68	16.66	-	16.37	19.02	13.87	-	16.32
6	Co 16018	18.09	-	-	-	13.27	15.19	17.26	15.20	19.54	17.21	-	14.07	18.84	14.54	-	16.32
7	CoVC 16061	17.13	-	-	-	14.00	15.09	16.28	18.80	18.24	18.93	-	16.83	19.81	13.04	-	16.82
8	CoVC 16062	16.39	-	-	-	12.47	12.67	15.53	16.50	18.84	15.47	-	15.37	18.49	13.21	-	15.50
9	CoN 16071	17.47	-	-	-	13.13	14.19	16.13	17.50	18.64	16.81	-	16.67	18.46	12.19	-	16.12
10	CoM 16081	15.72	-	-	-	14.20	14.08	16.26	15.60	18.81	14.11	-	15.67	19.25	13.71	-	15.74
11	CoM 16082	16.13	-	-	-	14.20	12.61	15.79	13.40	19.45	15.33	-	16.03	18.81	13.87	-	15.56
12	CoVSI 16121	19.48	-	-	-	14.87	16.03	18.45	18.20	18.98	22.41	-	17.37	20.35	16.70	-	18.29
13	PI 16131	17.80	-	-	-	14.40	14.61	17.89	16.70	19.11	18.29	-	15.57	19.98	13.04	-	16.74
14	CoR 16141	15.53	-	-	-	12.47	10.30	13.83	13.50	18.41	14.60	-	13.47	16.99	10.69	-	13.98
15	CoR 16142	15.49	-	-	-	12.47	10.69	14.86	14.40	18.94	13.80	-	13.70	16.86	12.02	-	14.33
	Standard																
1	Co 86032	18.16	-	-	-	13.53	15.52	17.24	17.80	18.44	17.10	-	16.23	18.63	13.04	-	16.57
2	CoC 671	18.98	-	-	-	15.13	14.00	17.52	18.10	19.78	15.47	-	14.73	21.67	13.87	-	16.93
3	Co 09004	19.84	-	-	-	14.93	15.07	18.99	17.70	19.44	17.77	-	16.87	20.15	14.87	-	17.56
	Mean	17.62				14.12	13.98	17.01	16.4	19.05	16.87		15.81	19.13	13.75		
	SE(m)	0.47				0.34	0.32	0.55	0.60	0.56	0.27		0.07	0.67	0.61		
	C.D.	1.35				0.98	0.91	1.59	1.60	1.60	0.79		0.20	1.93	1.75		
	C.V.	4.61				4.18	3.94	5.61	6.00	5.09	2.82		0.78	6.04	7.69		

Table 2.5.31 Purity % at 240 days

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permalla	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke	Thiruvalla	Mean
1	Co 11015	87.91	-	-	-	82.71	88.07	87.70	87.30	91.96	89.57	-	83.99	88.32	84.03	-	87.15
2	Co 16006	84.27	-	-	-	82.11	87.42	82.26	89.30	91.16	86.03	-	74.95	84.47	79.32	-	84.13
3	Co 16009	83.31	-	-	-	83.38	85.66	84.23	89.00	92.30	87.71	-	86.18	84.41	87.17	-	86.33
4	Co 16010	86.51	-	-	-	91.52	85.97	86.87	90.60	93.90	87.22	-	84.12	86.79	89.49	-	88.29
5	Co 16017	84.36	-	-	-	81.03	89.22	86.30	83.20	91.74	88.06	-	83.83	88.91	88.21	-	86.49
6	Co 16018	85.33	-	-	-	79.79	86.12	81.89	86.60	91.23	88.79	-	70.57	85.27	88.47	-	84.40
7	CoVC 16061	80.57	-	-	-	84.13	85.78	74.18	88.80	95.52	88.29	-	81.25	86.37	78.65	-	84.36
8	CoVC 16062	81.75	-	-	-	75.15	86.51	76.54	84.60	92.68	78.67	-	73.91	87.78	80.17	-	81.77
9	CoN 16071	86.82	-	-	-	83.21	83.45	89.81	93.90	91.97	89.10	-	82.06	85.03	73.90	-	85.92
10	CoM 16081	82.99	-	-	-	82.98	84.68	76.45	87.30	90.59	84.16	-	76.79	87.17	84.17	-	83.73
11	CoM 16082	83.25	-	-	-	85.88	87.78	89.39	84.70	92.20	82.41	-	83.18	86.26	84.99	-	86.00
12	CoVSI 16121	89.35	-	-	-	85.05	85.28	84.96	90.10	92.08	92.34	-	80.89	87.90	85.68	-	87.36
13	PI 16131	83.62	-	-	-	85.46	87.30	75.85	87.00	90.97	87.08	-	75.65	89.31	88.11	-	85.03
14	CoR 16141	76.60	-	-	-	70.88	83.91	68.91	77.60	91.71	78.17	-	75.99	79.77	70.73	-	77.43
15	CoR 16142	82.59	-	-	-	76.36	88.46	82.79	85.40	91.41	79.68	-	80.63	82.98	82.80	-	83.31
	Standard																
1	Co 86032	87.54	-	-	-	82.44	84.30	86.67	90.70	91.24	88.89	-	81.30	86.2	84.83	-	86.41
2	CoC 671	85.16	-	-	-	90.09	86.65	83.60	88.90	89.94	86.62	-	74.96	89.81	83.98	-	85.97
3	Co 09004	88.91	-	-	-	88.04	87.63	87.56	92.00	91.90	90.60	-	84.93	87.82	92.64	-	89.21
	Mean	84.49				82.79	86.34	82.55	87.60	91.75	86.29		79.73	86.37	83.74		
	SE(m)	1.19				2.25	1.63	4.64	1.50	0.93	0.38		0.51	1.60	5.13		
	C.D.	3.43				6.48	NS	13.41	4.30	2.68	1.09		1.47	4.61	14.74		
	C.V.	2.44				4.71	3.27	9.74	3.00	1.76	0.76		1.11	3.20	10.61		

Table 2.5.32 Number of shoots ('000/ha) at 240 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permalla palle	Pravara nagar	Pugalur	Pune	Rud rur	Sameer wadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	81.81	-	75.00	119.98	72.69	136.45	78.33	128.00	117.37	149.99	86.53	120.93	125.35	78.21	-	104.22
2	Co 16006	73.06	-	72.00	121.45	67.59	138.83	70.46	133.00	110.54	130.50	70.33	87.73	120.14	74.86	-	95.75
3	Co 16009	93.19	-	88.00	180.17	82.69	143.33	80.46	140.00	121.12	134.21	91.66	107.21	126.04	75.64	-	106.95
4	Co 16010	84.86	-	95.00	134.03	78.52	147.04	82.31	103.00	115.31	153.58	95.11	104.50	115.74	92.29	-	105.61
5	Co 16017	70.28	-	70.00	130.17	72.04	136.94	68.70	107.00	115.10	142.10	73.14	105.54	101.16	74.88	-	94.78
6	Co 16018	83.19	-	88.00	135.42	71.20	140.42	71.94	140.00	125.72	142.22	92.61	76.23	104.75	75.89	-	100.98
7	CoVC 16061	53.33	-	70.00	138.81	77.31	130.22	61.67	136.00	127.58	125.05	82.09	105.25	107.87	71.24	-	95.66
8	CoVC 16062	81.94	-	102.00	148.38	86.48	147.15	77.78	155.00	106.85	151.03	87.58	83.18	98.38	71.76	-	104.10
9	CoN 16071	84.31	-	92.00	153.47	90.83	148.98	96.76	141.00	101.24	140.01	92.05	116.28	117.94	91.33	-	109.38
10	CoM 16081	80.83	-	94.00	129.01	82.04	137.39	85.65	94.00	120.40	121.45	91.50	101.89	116.43	75.20	-	100.07
11	CoM 16082	82.92	-	88.00	138.58	68.80	145.02	80.00	90.00	119.49	129.46	85.78	100.42	115.39	73.63	-	98.28
12	CoVSI 16121	63.61	-	88.00	144.75	71.20	139.57	64.26	78.00	123.18	130.04	88.23	101.69	99.19	87.50	-	94.55
13	PI 16131	71.67	-	84.00	117.51	71.30	134.92	53.70	90.00	128.68	109.39	76.92	105.28	122.11	75.76	-	93.63
14	CoR 16141	78.75	-	101.00	180.40	80.09	142.43	81.39	139.00	130.30	134.33	90.74	109.55	117.13	86.34	-	107.62
15	CoR 16142	68.61	-	95.00	138.27	94.26	138.06	84.91	144.00	137.13	131.66	96.39	107.87	118.29	87.30	-	108.59
	Standard																
1	Co 86032	100.69	-	103.00	160.26	98.70	125.07	85.46	166.00	136.57	159.62	96.53	110.21	139.47	93.18	-	117.89
2	CoC 671	87.92	-	86.00	128.93	82.13	130.97	67.31	120.00	99.29	161.94	76.56	104.46	129.28	80.26	-	102.19
3	Co 09004	78.89	-	101.00	133.80	79.17	134.34	80.28	121.00	131.03	137.46	84.22	75.69	118.05	78.08	-	101.58
	Mean	78.88		88.33	140.74	79.28	138.73	76.19	124.00	120.38	138.01	86.55	101.33	116.26	80.19		
	SE(m)	3.83		6.00	3.95	2.99	4.21	3.06	7.10	2.27	6.94	3.20	4.44	4.86	3.50		
	C.D.	11.05		17.16	11.35	8.61	12.11	8.84	20.40	6.54	19.97	9.20	12.75	14.02	10.06		
	C.V.	8.93		11.77	4.86	6.54	5.26	6.96	9.90	3.27	8.72	6.41	7.58	7.23	7.56		

Table 2.5.33 Number of tillers ('000/ha) at 120 days

S.No.	Entries	Coimbatore	Basmath nagar	Kawardha	Kolhapur	Man dya	Nav sari	Padegaon	Permallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	102.92	-	65.00	-	96.85	156.98	95.60	117.00	120.17	200.33	152.05	110.26	156.67	96.83	73.265	122.55
2	Co 16006	103.47	-	66.00	-	84.70	158.75	96.76	127.00	113.54	170.87	153.59	106.71	139.72	100.18	71.41	118.46
3	Co 16009	120.00	-	77.00	-	104.17	160.81	84.03	160.00	123.94	170.40	176.73	106.54	126.94	105.23	121.18	126.28
4	Co 16010	98.33	-	89.00	-	86.09	165.78	111.81	87.00	118.37	181.89	179.99	98.55	150.69	107.90	64.12	122.91
5	Co 16017	99.86	-	68.00	-	112.03	156.38	94.21	105.00	117.54	182.00	151.53	95.23	121.25	101.54	85.76	117.07
6	Co 16018	107.78	-	83.00	-	84.26	158.10	107.41	115.00	129.21	186.30	216.41	103.74	137.5	123.14	75.81	129.35
7	CoVC 16061	70.42	-	68.00	-	97.57	149.57	91.90	118.00	130.44	194.53	157.37	112.90	153.75	79.88	69.56	118.72
8	CoVC 16062	112.5	-	96.00	-	118.33	168.62	92.59	129.00	110.23	219.24	208.68	107.42	180.83	84.94	70.25	135.69
9	CoN 16071	125.56	-	87.00	-	108.15	162.40	99.31	127.00	104.51	207.52	173.55	121.19	154.03	130.93	74.07	133.41
10	CoM 16081	104.17	-	90.00	-	110.37	161.02	100.93	81.00	124.23	174.58	225.13	103.65	158.89	121.63	86.80	129.60
11	CoM 16082	103.89	-	83.00	-	99.34	159.20	98.61	69.00	123.21	168.78	160.63	96.75	143.06	102.23	82.64	117.33
12	CoVSI 16121	85.69	-	83.00	-	90.65	163.40	83.10	68.00	125.20	177.48	158.07	93.67	137.36	101.82	72.57	113.99
13	PI 16131	73.75	-	78.00	-	88.06	156.99	65.74	74.00	132.51	131.31	148.52	81.48	121.81	78.72	74.65	102.61
14	CoR 16141	132.36	-	96.00	-	112.87	164.34	113.89	157.00	133.59	207.29	249.38	130.68	142.22	138.99	106.59	148.22
15	CoR 16142	99.58	-	92.00	-	139.01	165.39	100.93	131.00	140.73	163.21	256.02	113.69	180.28	140.49	78.01	143.49
	Standard																
1	Co 86032	128.33	-	99.00	-	122.69	140.13	113.66	144.00	139.31	236.64	188.78	130.56	183.06	153.48	114.01	148.30
2	CoC 671	99.86	-	81.00	-	95.83	152.96	90.51	113.00	102.72	227.94	161.60	90.66	151.94	112.75	89.70	123.43
3	Co 09004	112.08	-	95.00	-	105.74	151.6	102.08	122.00	134.28	179.57	154.61	89.58	129.86	122.25	84.83	124.93
	Mean	104.48		83.08		103.15	158.47	96.84	114.00	123.54	187.77	181.81	105.18	148.33	111.27	83.07	
	SE(m)	8.23		5.55		4.65	4.62	5.40	8.10	2.03	12.66	6.41	4.01	12.82	8.29	4.91	
	C.D.	23.76		15.86		13.36	13.28	15.61	23.40	5.83	36.4	18.43	11.53	37.01	23.83	13.94	
	C.V.	13.65		11.57		7.81	5.05	9.67	12.40	2.84	11.68	6.11	6.61	14.98	12.90	8.35	

Table 2.5.34 Germination % (30 days)

S.No.	Entries	Coimbatore	Basmathnagar	Kawardha	Kolhapur	Mandya	Navsari	Padegaon	Permallapalle	Pravaranagar	Pugalur	Pune	Rudrur	Sameerwadi	Sanke shwar	Thiruvalla	Mean
1	Co 11015	49.69	-	52.00	65.74	54.59	51.43	42.36	50.50	25.36	72.45	51.11	47.33	53.01	33.96	49.30	48.65
2	Co 16006	50.85	-	76.00	54.78	55.82	48.24	40.63	65.00	29.38	68.75	64.01	46.96	56.83	41.12	59.35	53.63
3	Co 16009	40.28	-	77.00	49.69	62.16	49.97	40.97	75.00	26.97	81.13	49.35	46.26	51.97	33.50	36.69	52.88
4	Co 16010	36.73	-	64.00	63.89	57.16	51.61	53.13	38.90	29.62	68.29	59.38	45.15	39.35	32.26	63.75	47.96
5	Co 16017	56.48	-	81.00	56.17	57.60	55.93	40.28	53.20	28.40	74.07	47.86	52.30	52.66	45.35	34.37	53.76
6	Co 16018	43.06	-	60.00	63.81	56.38	55.03	41.32	50.10	31.68	72.11	58.81	44.59	54.75	49.36	52.66	51.43
7	CoVC 16061	37.27	-	83.00	75.62	54.84	50.98	48.26	57.20	29.96	65.86	45.06	45.89	54.98	35.42	48.38	50.73
8	CoVC 16062	31.56	-	84.00	62.04	57.11	56.18	52.43	48.10	25.27	62.62	62.22	45.96	47.46	43.51	48.26	51.37
9	CoN 16071	40.12	-	73.00	57.18	47.59	50.99	44.44	51.90	19.65	66.78	59.98	54.22	46.53	42.27	61.8	49.79
10	CoM 16081	40.12	-	87.00	72.92	56.34	53.35	50.69	40.80	33.94	68.17	63.67	49.85	59.95	52.98	52.20	54.73
11	CoM 16082	29.63	-	48.00	51.85	50.29	51.10	44.10	34.80	30.05	67.48	45.38	43.63	45.14	34.27	45.83	43.66
12	CoVSI 16121	47.30	-	60.00	74.61	59.23	51.25	43.75	42.80	31.63	72.45	53.27	41.78	39.00	41.12	36.46	48.63
13	PI 16131	35.88	-	95.00	55.79	59.28	50.54	36.46	47.20	24.27	78.13	60.27	40.52	52.89	34.19	47.80	51.22
14	CoR 16141	58.56	-	98.00	72.84	60.26	53.13	61.81	64.30	29.11	67.48	62.88	51.52	55.67	54.36	57.17	59.76
15	CoR 16142	37.65	-	76.00	72.07	56.18	51.12	54.17	54.70	26.44	68.63	58.34	42.71	54.75	56.44	46.18	53.09
	Standard																
1	Co 86032	38.04	-	81.00	64.66	56.32	49.83	43.75	55.10	27.86	71.3	54.04	40.70	51.04	52.75	64.37	51.81
2	CoC 671	46.22	-	66.00	62.27	57.48	50.65	47.57	51.70	23.17	70.6	47.92	40.67	51.04	45.43	63.15	49.87
3	Co 09004	50.62	-	93.00	68.36	60.1	49.07	53.13	51.30	29.86	69.91	62.36	41.89	63.31	60.37	44.79	57.07
	Mean	42.78		79.77	63.57	56.6	51.69	46.62	51.80	27.92	70.34	55.88	45.66	51.69	43.81	50.70	
	SE(m)	3.05		6.75	3.67	3.17	1.57	3.87	3.40	2.04	4.07	1.90	2.20	3.76	3.80	3.26	
	C.D.	8.80		19.29	10.54	NS	4.52	11.18	9.70	5.86	11.70	5.45	6.33	10.84	10.92	9.28	
	C.V.	12.34		14.65	9.99	9.69	5.27	14.39	11.20	12.65	10.02	5.87	8.36	12.59	15.02	9.11	

Table 2.5.35. Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entries	Perumala palle	Pugalur	Coimba tore	Thiru valla	Mandya	Sankesh war	Sameer wadi	Kolha pur
Co 16006	Better	Better	Average	Better	Better	On par	Better	Average
Co 11015	Better	Better	Better	On par	Better	Better	Better	Better
Co 16009	On par	On par	On par	On par	On par	On par	Better	Better
Co 16010	Better	On par	On par	On par	On par	On par	On par	On par
Co 16017	Better	Better	Better	Better	Better	Better	Better	Better
Co 16018	On par	Better	On par	On par	Better	Better	Average	On par
CoVC 16061	Poor	Poor	Poor	Better	Average	Average	Poor	Average
CoVC 16062	Better	On par	Better	Better	Better	Better	Better	Average
CoN 16071	Better	Better	Better	Better	Better	Better	Better	Average
CoM 16081	Poor	Poor	Better	On par	Better	On par	Better	Better
CoM 16082	Better	On par	On par	On par	Better	Better	Better	Better
CoVSI 16121	Poor	Better	Better	Better	Poor	Average	Better	Average
PI 16131	Poor	Average	Better	Poor	Poor	Better	Better	Better
CoR 16141	Better	Better	Better	Better	Better	On par	Better	Average
CoR 16142	On par	On par	Average	On par	Better	Better	On par	Average
Standards								
Co 86032	-	Best	-	-	Best	Best	-	-
CoC 671	Best	-	-	Best	-	-	-	-
Co 09004	-	-	Best	-	-	-	Best	Best

	Entries	Rudrur	Pade gaon	Pune	Pravara nagar	Power kheda	Navsari
1	Co 11015	On Par	On Par	On Par	Poor	Poor	Better
2	Co 16006	On Par	On Par	On Par	On Par	Better	On Par
3	Co 16009	Better	On Par	Better	On Par	Poor	On Par
4	Co 16010	Poor	On Par	Poor	Poor	Poor	On Par
5	Co 16017	Better	On Par	On Par	On Par	Better	On Par
6	Co 16018	On Par	On Par	Better	On Par	On Par	Poor
7	CoVC 16061	Poor	Poor	Poor	Poor	On Par	Poor
8	CoVC 16062	Better	Better	Better	On Par	On Par	Better
9	CoN 16071	Poor	On Par	On Par	Poor	Poor	On Par
10	CoM 16081	Better	Better	Better	Better	Better	Better
11	CoM 16082	Better	Better	Better	On Par	Poor	Better
12	CoVSI 16121	On Par	Poor	Poor	Poor	Poor	Poor
13	PI 16131	On Par	Poor	On Par	Poor	Poor	Poor
14	CoR 16141	Better	Better	On Par	On Par	Better	Better
15	CoR 16142	On Par	On Par	On Par	On Par	Better	Better
Standards							
1	Co 86032			Best	Best	Best	Best
2	CoC 671						
3	Co 09004	Best	Best				

3. EAST COAST ZONE

East Coast Zone comprises the states of Andhra Pradesh, Odisha and Tamil Nadu. There are five AICRP (Sugarcane) centres in the zone and the details are given below.

State	AICRP(S) centres
Andhra Pradesh	Anakapalle, Vuyyuru
Odisha	Nayagarh
Tamil Nadu	Cuddalore, Nellikuppam

List of trials conducted

Six AICRP(S) trials were planned in the zone during 2019-20. The number of trials conducted at each centre during 2019-20 is given below.

Sl. No	Location	AVT Early II Plant	AVT Early Ratoon	AVT Early I Plant	IVT Early	AVT Midlate I Plant	IVT Midlate
1	Anakapalle	C	*	C	C	C	C
2	Cuddalore	C	C	C	C	C	C
3	Nayagarh	C	C	C	C	C	C
4	Nellikuppam	C	C	C	C	C	C
5	Vuyyuru	C	*	C	C	C	C

C = Conducted

* = Ratoon trial conducted, but data not received due to poor cane yield recorded in the respective centres.

3.1 ADVANCED VARIETAL TRIAL (EARLY) – II PLANT

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (3)	CoC 15336, CoC 15338 and CoV 15356
Standards (3)	CoA 92081, CoC 01061 and CoOr 03151
Design	Randomized Block Design
Replications	Four
Plot size	Gross : 6.0 m x 0.90 m x 8 R Net : 5.0 m x 0.90 m x 6 R
Bud rate	12 buds/ metre
Planting time	1 st fortnight of January
Crop duration	10 months

Results of the previous year

The entry CoV 15356 was the best performer that recorded a CCS yield of 14.14 t/ha followed by CoC 15338 (13.67 t/ha) while the best standard CoOr 03151 recorded 13.09 t/ha. The best entry CoV 15356 recorded 8.02 % improvement over the best standard CoOr 03151 across the locations. None of the entries was found to be superior for cane yield over the best standard CoOr 03151 (115.29 t/ha) across the locations. For juice quality, CoV 15356 was the best entry across locations with CCS % of 12.62 and 18.04 % sucrose while the best standard CoC 01061 recorded CCS % of 12.34 and 17.73 % sucrose. No qualifying entry was identified from this trial for cane yield and juice quality across locations.

Results of the current year

Second plant crop of AVT (Early) was conducted with three entries and three standards in all the five centres of east coast zone. CoV 15356 (13.08 t/ha) was the best entry for CCS yield while the best standard CoA 92081 recorded 12.95 t/ha. The standard CoOr 13151 was the best in this trial that recorded the highest cane yield of 112.55 t/ha. None of the entries was found to be superior for cane yield over the best standard CoOr 03151 across locations. The standard CoA 92081 was the best in this trial that recorded the highest CCS of 12.08%. None of the entries was found to be superior for CCS% over the best standard CoA 92081 across locations. The entry CoV 15356 recorded the maximum juice sucrose of 17.47% across locations while the best standard CoA 92081 recorded 17.44 %. No qualifying entry was identified from this trial. Further details are presented in tables **3.1.1 to 3.1.20**.

Table 3.1.1 CCS (t/ha) at harvest

S. No	Entry	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru	Mean	Rank
1	CoC 15336	10.53	16.55	10.84	8.13	11.89	11.59	
2	CoC 15338	10.71	16.16	11.52	11.06	9.76	11.84	
3	CoV 15356	13.06	15.69	11.54	9.28	15.85	13.08	1
	Standards							
1	CoA 92081	12.58	15.38	11.00	11.82	13.99	12.95	2
2	CoC 01061	9.98	14.38	9.98	8.13	14.81	11.46	
3	CoOr 03151	10.47	15.53	10.15	13.97	12.85	12.59	
	GM	11.22	15.61	10.84	10.60	13.19		
	SE	0.48	0.50	0.29	0.63	0.81		
	CD (0.05)	1.44	1.06	0.87	1.90	2.43		
	CV	8.50	1.46	5.32	11.92	12.20		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

No. of locations where an entry recorded 10 % improvement over the best standard: Nil

Performance of the entries across locations: CoV 15356 (13.08 t/ha) was the best entry for CCS yield while the best standard CoA 92081 recorded 12.95 t/ha. The best entry CoV 15356 recorded a marginal improvement of 1.03 % over the best standard CoA 92081 across the locations. No qualifying entry could be identified for CCS yield across locations.

Table 3.1 .2 Cane yield (t/ha) at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean	Rank
1	CoC 15336	90.34	128.39	91.04	82.82	101.23	98.76	
2	CoC 15338	92.96	126.48	97.81	120.15	98.53	107.19	
3	CoV 15356	100.55	124.82	94.79	93.12	121.68	106.99	
	Standards							
1	CoA 92081	96.30	121.11	93.47	110.77	109.88	106.31	
2	CoC 01061	89.17	115.02	86.36	79.64	118.98	97.83	
3	CoOr 03151	94.82	123.61	88.83	137.74	117.75	112.55	1
	GM	94.02	123.24	92.05	104.40	111.34		
	SE	4.03	3.77	2.37	6.60	5.42		
	CD (0.05)	12.15	8.04	7.16	20.00	16.34		
	CV	8.58	11.11	5.16	12.70	9.70		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

No. of locations where an entry recorded 10 % improvement over the best standard: Nil

Performance of the entries across locations: The standard CoOr 13151 was the best in this trial that recorded the highest cane yield of 112.55 t/ha. None of the entries was found to be superior for cane yield over the best standard CoOr 03151 across locations.

Table 3.1.3 CCS % at 10th month

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean	Rank
1	CoC 15336	11.35	12.89	11.90	9.85	11.71	11.54	
2	CoC 15338	11.21	12.78	11.79	9.21	11.06	11.21	
3	CoV 15356	12.63	12.57	12.19	9.96	13.02	12.07	
	Standards							
1	CoA 92081	12.57	12.69	11.78	10.68	12.70	12.08	1
2	CoC 01061	10.99	12.49	11.57	10.22	12.44	11.54	
3	CoOr 03151	10.60	12.57	11.42	9.99	10.92	11.10	
	GM	11.56	12.67	11.77	10.12	11.97		
	SE	0.07	0.16	0.18	0.88	0.27		
	CD (0.05)	0.20	0.33	NS	0.27	0.82		
	CV	1.16	0.46	3.03	1.74	4.60		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

No. of locations where an entry recorded 5 % improvement over the best standard: Nil

Performance of the entries across locations: The standard CoA 92081 was the best in this trial that recorded the highest CCS of 12.08%. None of the entries was found to be superior for CCS% over the best standard CoA 92081 across locations.

Table 3.1.4 Sucrose % at 10th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean	Rank
1	CoC 15336	16.43	18.67*	17.32	14.38	16.84	16.73	
2	CoC 15338	16.21	18.41	17.14	13.64	16.20	16.32	
3	CoV 15356	18.18	18.16	17.61	14.69	18.72	17.47	1
	Standards							
1	CoA 92081	18.10	18.21	17.10	15.66	18.14	17.44	2
2	CoC 01061	15.93	17.98	16.80	15.04	17.94	16.74	
3	CoOr 03151	15.40	18.01	16.65	14.68	15.99	16.15	
	GM	16.71	18.24	17.10	14.68	17.30		
	SE	0.09	0.12	0.21	0.99	0.34		
	CD (0.05)	0.26	0.26	NS	0.30	1.04		
	CV	1.04	0.36	2.43	1.34	4.00		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

No. of locations where an entry recorded 5 % improvement over the best standard: Nil

Performance of the entries across locations: The entry CoV 15356 was the best that recorded the maximum juice sucrose of 17.47% across locations. No entry recorded more than 5% improvement over the better standard CoA 92081 across locations.

Table 3.1.5 Brix % at 10th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15336	20.98	21.18	19.86	16.61	18.83	19.49
2	CoC 15338	21.13	20.66	19.62	16.18	18.79	19.28
3	CoV 15356	22.34	20.52	19.90	17.29	20.76	20.16
	Standards						
1	CoA 92081	19.00	20.26	19.52	18.22	19.99	19.40
2	CoC 01061	20.60	20.15	19.17	17.66	20.14	19.54
3	CoOr 03151	18.12	19.99	19.19	17.18	18.55	18.61
	GM	20.36	20.46	19.50	17.19	19.51	
	SE	0.09	0.27	0.18	0.67	0.28	
	CD (0.05)	0.27	0.58	0.53	0.20	0.84	
	CV	0.95	0.81	1.81	0.78	2.90	

Table 3.1 .6 Purity % at 10th month

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15336	88.19	88.15	87.21	86.58	89.40	87.91
2	CoC 15338	88.43	89.11	87.35	84.31	86.15	87.07
3	CoV 15356	89.20	88.55	88.51	84.96	89.96	88.24
	Standards						
1	CoA 92081	89.16	89.87	87.63	85.94	90.71	88.66
2	CoC 01061	87.88	89.28	87.65	85.19	89.06	87.81
3	CoOr 03151	87.50	90.11	86.78	85.47	86.12	87.20
	GM	88.39	89.18	87.52	85.41	88.57	
	SE	0.23	1.40	0.72	0.39	0.67	
	CD (0.05)	0.69	2.99	NS	1.16	2.03	
	CV	0.52	4.14	1.65	0.91	1.50	

Table 3.1.7 Pol % cane at harvest

S. No	Entry	Anaka palle	Cudda lore	Nayagarh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15336	12.35	14.40	13.22	11.16	-	12.78
2	CoC 15338	12.06	14.17	13.16	10.60	-	12.50
3	CoV 15356	13.68	14.02	13.52	11.35	-	13.14
	Standards						
1	CoA 92081	13.68	13.90	13.23	12.09	-	13.23
2	CoC 01061	11.73	14.06	12.88	11.65	-	12.58
3	CoOr 03151	11.50	13.85	12.85	11.38	-	12.40
	GM	12.50	14.07	13.14	11.52	-	
	SE	0.06	0.06	0.17	0.81	-	
	CD (0.05)	0.18	0.20	NS	0.24	-	
	CV	0.94	0.92	2.51	1.40	-	

Table 3.1 .8 Extraction % at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15336	59.70	58.61	52.85	50.41	-	55.39
2	CoC 15338	60.12	58.68	51.09	54.87	-	56.19
3	CoV 15356	60.41	55.71	51.56	51.53	-	54.80
	Standards						
1	CoA 92081	59.95	58.86	53.50	53.98	-	56.57
2	CoC 01061	59.92	53.23	50.21	53.42	-	54.20
3	CoOr 03151	59.30	59.01	51.76	55.22	-	56.32
	GM	59.90	57.35	51.83	52.18	-	
	SE	0.74	2.29	0.62	1.57	-	
	CD (0.05)	2.23	4.89	1.86	4.75	-	
	CV	2.47	6.76	2.38	6.04	-	

Table 3.1.9 Fiber % at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15336	12.73	12.87	13.68	12.36	-	12.91
2	CoC 15338	12.68	12.99	13.25	12.26	-	12.80
3	CoV 15356	12.86	12.80	13.26	12.71	-	12.91
	Standards						
1	CoA 92081	13.09	12.79	12.65	12.74	-	12.82
2	CoC 01061	15.52	12.69	13.29	12.57	-	13.52
3	CoOr 03151	12.56	13.11	12.84	12.46	-	12.74
	GM	13.24	12.87	13.16	12.51	-	
	SE	0.37	0.10	0.19	0.21	-	
	CD (0.05)	1.13	0.21	0.56	0.62	-	
	CV	5.64	0.29	2.81	3.28	-	

Table 3.1.10 NMC ('000/ha) at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15336	88.80	132.22	99.58	147.55	70.45	107.72
2	CoC 15338	89.72	130.24	100.60	131.74	62.73	103.01
3	CoV 15356	96.94	125.16	100.92	133.39	73.53	105.99
	Standards						
1	CoA 92081	93.80	119.36	103.40	139.81	75.93	106.46
2	CoC 01061	108.33	128.51	98.50	103.88	105.86	109.02
3	CoOr 03151	93.70	115.08	107.55	139.55	77.86	106.75
	GM	95.22	125.09	101.76	132.60	77.73	
	SE	2.45	3.60	1.90	5.10	3.77	
	CD (0.05)	7.38	7.68	5.73	15.30	11.37	
	CV	5.14	10.61	3.73	7.70	9.70	

Table 3.1.11 Stalk length (cm) at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	233.50	233.00	299.50	248.50	235.30	249.96
2	CoC 15338	219.75	229.00	294.00	264.25	239.40	249.28
3	CoV 15356	227.00	220.00	282.00	255.00	255.40	247.88
	Standards						
1	CoA 92081	233.40	217.00	281.50	243.75	220.40	239.21
2	CoC 01061	244.50	222.00	275.50	244.50	218.30	240.96
3	CoOr 03151	260.00	225.00	294.80	274.25	260.40	262.89
	GM	236.36	224.00	287.88	255.04	238.20	
	SE	4.82	4.21	4.38	6.50	8.63	
	CD (0.05)	14.51	8.98	13.20	19.70	26.00	
	CV	4.08	12.42	3.40	5.10	7.20	

Table 3.1.12 Stalk diameter (cm) at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	2.27	3.04	2.76	2.47	2.61	2.63
2	CoC 15338	2.52	2.96	2.90	2.73	2.70	2.76
3	CoV 15356	2.37	2.84	2.44	2.81	2.93	2.68
	Standards						
1	CoA 92081	2.22	2.61	2.94	2.65	2.82	2.65
2	CoC 01061	1.82	2.74	2.72	2.01	2.21	2.30
3	CoOr 03151	2.35	2.92	2.83	3.00	2.76	2.77
	GM	2.26	2.85	2.76	2.60	2.67	
	SE	0.13	0.06	0.05	0.40	0.08	
	CD (0.05)	0.39	0.13	0.16	0.10	0.25	
	CV	11.31	0.18	3.83	3.10	6.20	

Table 3.1.13 Single cane weight (kg) at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	1.02	1.35	1.40	0.73	1.23	1.15
2	CoC 15338	1.04	1.33	1.41	1.24	1.25	1.25
3	CoV 15356	1.04	1.26	1.39	0.86	1.54	1.22
	Standards						
1	CoA 92081	1.03	1.23	1.20	1.02	1.36	1.17
2	CoC 01061	0.82	1.11	1.45	0.69	0.76	0.97
3	CoOr 03151	1.01	1.24	1.45	1.31	1.27	1.26
	GM	0.99	1.25	1.38	1.00	1.24	
	SE	0.03	0.04	0.05	0.30	0.04	
	CD (0.05)	0.10	0.09	0.16	0.10	0.11	
	CV	6.95	0.12	7.71	6.80	5.70	

Table 3.1.14 CCS % at 8 months

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	9.73	11.47	10.05	9.34	9.12	9.94
2	CoC 15338	8.93	11.32	9.89	8.51	8.45	9.42
3	CoV 15356	11.10	11.21	10.11	9.64	10.31	10.47
	Standards						
1	CoA 92081	11.00	11.11	9.46	10.26	10.83	10.53
2	CoC 01061	9.29	10.49	9.24	9.89	10.25	9.83
3	CoOr 03151	9.14	10.81	9.90	10.36	8.27	9.70
	GM	9.87	11.07	9.79	9.67	9.54	
	SE	0.14	0.23	0.26	0.52	0.14	
	CD (0.05)	0.41	0.50	NS	0.16	0.41	
	CV	2.75	0.69	5.31	1.08	2.90	

Table 3.1.15 Sucrose % at 8 months

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	14.18	16.94	14.89	13.77	13.29	14.61
2	CoC 15338	13.15	16.77	14.68	12.73	12.66	14.00
3	CoV 15356	16.05	16.59	14.84	14.14	15.01	15.33
	Standards						
1	CoA 92081	15.93	16.30	14.24	15.05	15.53	15.41
2	CoC 01061	13.70	15.82	13.80	14.61	14.77	14.54
3	CoOr 03151	13.48	15.99	14.57	15.17	12.38	14.32
	GM	14.42	16.40	14.50	14.24	13.94	
	SE	0.15	0.21	0.24	0.55	0.19	
	CD (0.05)	0.46	0.44	0.72	0.16	0.57	
	CV	2.10	0.60	3.28	0.77	2.70	

Table 3.1.16 Brix % at 8 months

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	16.28	20.01	17.69	16.22	15.28	17.10
2	CoC 15338	15.45	19.92	17.51	15.40	15.35	16.73
3	CoV 15356	18.15	19.67	17.33	16.48	17.38	17.80
	Standards						
1	CoA 92081	18.05	18.98	17.44	17.52	17.25	17.85
2	CoC 01061	16.13	19.43	16.65	17.25	16.63	17.22
3	CoOr 03151	15.88	18.94	16.80	17.61	14.60	16.77
	GM	16.66	19.49	17.24	16.70	16.08	
	SE	0.15	0.26	0.31	0.50	0.20	
	CD (0.05)	0.46	0.55	NS	0.20	0.60	
	CV	2.10	0.76	3.63	0.60	2.50	

Table 3.1.17 Purity % at 8 months

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	87.10	84.69	89.30	84.91	87.00	86.60
2	CoC 15338	85.10	84.22	83.82	82.63	82.45	83.64
3	CoV 15356	88.45	84.36	85.73	85.80	87.16	86.30
	Standards						
1	CoA 92081	88.23	85.87	81.75	85.90	90.00	86.35
2	CoC 01061	84.98	81.43	82.90	84.69	88.88	84.58
3	CoOr 03151	84.91	84.45	86.79	86.16	83.47	85.16
	GM	86.46	84.17	84.21	85.01	86.49	
	SE	0.78	1.65	2.05	0.34	0.69	
	CD (0.05)	2.36	3.52	NS	1.04	2.08	
	CV	1.81	4.86	4.88	0.80	1.60	

Table 3.1.18 Number of shoots ('000/ha) at 240 days

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	90.46	141.36	103.47	157.30	75.62	113.64
2	CoC 15338	91.48	138.24	106.80	147.81	69.68	110.80
3	CoV 15356	98.61	132.89	107.71	152.60	78.47	114.06
	Standards						
1	CoA 92081	94.63	125.43	108.86	156.51	84.57	114.00
2	CoC 01061	123.89	132.91	102.61	142.33	115.90	123.53
3	CoOr 03151	98.15	123.98	112.17	149.73	82.79	113.36
	GM	99.54	132.47	106.93	151.10	83.01	
	SE	4.83	4.24	1.96	5.90	3.39	
	CD (0.05)	14.55	9.05	5.89	17.80	10.23	
	CV	9.70	12.51	3.66	7.80	8.00	

Table 3.1.19 Number of tillers ('000/ha) at 120 days

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	96.02	152.91	110.58	176.61	112.58	129.74
2	CoC 15338	96.30	147.58	119.88	179.74	112.58	131.22
3	CoV 15356	108.70	143.70	114.02	182.96	127.16	135.31
	Standards						
1	CoA 92081	102.31	136.34	116.16	185.05	127.16	133.40
2	CoC 01061	145.28	146.60	116.60	168.69	165.82	148.60
3	CoOr 03151	107.13	135.42	121.33	173.13	127.08	132.82
	GM	109.29	143.76	116.43	177.70	115.63	
	SE	3.46	3.96	2.15	6.50	6.27	
	CD (0.05)	10.43	8.45	6.48	19.60	18.95	
	CV	6.33	11.68	3.69	7.30	9.80	

Table 3.1.20 Germination % at 30 days

S. No	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoC 15336	67.29	67.33	52.15	88.45	52.49	65.54
2	CoC 15338	69.10	68.72	51.83	76.48	53.65	63.96
3	CoV 15356	73.89	71.21	53.53	84.03	51.44	66.82
	Standards						
1	CoA 92081	87.15	63.99	52.75	84.38	52.66	68.19
2	CoC 01061	70.97	64.74	49.15	85.24	62.15	66.45
3	CoOr 03151	74.72	62.97	50.55	85.33	53.70	65.45
	GM	73.85	66.49	51.66	84.00	54.35	
	SE	2.84	1.68	0.77	3.20	3.74	
	CD (0.05)	8.56	3.59	2.32	9.50	NS	
	CV	7.69	4.96	2.98	7.50	13.80	

Table 3.1.21. Assessment of the performance of entries compared to the best standard by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
CoC 15336	Poor	Better	Better	Better	On par
CoC 15338	Better	On par	On par	On par	On par
CoV 15356	Poor	On par	Poor	Poor	Poor
Standards					
CoA 92081					
CoC 01061					
CoOr 03151	Best	Best	Best	Best	Best

3.2 ADVANCED VARIETAL TRIAL (EARLY – RATOON)

Centres (3)	Cuddalore, Nayagarh and Nellikuppam
Entries (3)	CoC 15336, CoC 15338 and CoV 15356
Standards (3)	CoA 92081 , CoC 01061 and CoOr 03151
Design	Randomized Block Design
Replications	Four
Plot size	Gross : 6m x 0.9 m x 8 R Net : 5m x 0.9 m x 6 R
Ratooning time	Immediately after the harvest of first plant crop
Crop duration	9 months

Results of the previous year

The entry CoV 15356 was the best performer that recorded a CCS yield of 14.14 t/ha followed by CoC 15338 (13.67 t/ha) while the best standard CoOr 03151 recorded 13.09 t/ha. The best entry CoV 15356 recorded 8.02 % improvement over the best standard CoOr 03151 across the locations. None of the entries was found to be superior for cane yield over the best standard CoOr 03151 (115.29 t/ha) across the locations. For juice quality, CoV 15356 was the best entry across locations with CCS % of 12.62 and 18.04 % sucrose while the best standard CoC 01061 recorded CCS % of 12.34 and 17.73 % sucrose. No qualifying entry was identified from this trial for cane yield and juice quality across locations.

Results of the current year

At Anakapalle centre, failure of ratoon crop has been reported due to severe yellow leaf disease and no data has been received. First plant trial conducted during 2018-19 at Vuyyuru centre was damaged due to severe incidence of termite and wilt and the following ratoon crop recorded very poor yields and data was not provided. Therefore, the data received from the remaining three centres (Cuddalore, Nayagarh and Nellikuppam) were compiled. The entry CoV 15356 was the best in the trial for CCS yield (12.67 t/ha) and cane yield (104.48 t/ha) while the best standard CoOr 03151 recorded 11.53 t/ha and 102.41 t/ha respectively. For juice quality, the entry CoV 15356 was the best in the trial for CCS% (12.12) and sucrose content (17.29 %), while the best standard CoA 92081 recorded 11.79 % and 16.84 % respectively. However, no qualifying entry was identified from this zone across locations. Further details are presented in tables **3.2.1 to 3.2.15**.

Table 3.2.1 CCS (t/ha) at harvest

S. No	Entry	Anakapalle**	Cuddalore	Naya garh	Nellikuppam	Vuyyuru**	Mean	Rank
1	CoC 15336	-	15.12*	8.73	10.88	-	11.58	3
2	CoC 15338	-	14.31	9.38*	12.16	-	11.95	2
3	CoV 15356	-	14.08	9.21	14.73*	-	12.67	1
	Standards							
1	CoA 92081	-	13.35	7.92	11.60	-	10.96	
2	CoC 01061	-	12.54	8.22	10.42	-	10.39	
3	CoOr 03151	-	13.77	8.23	12.59	-	11.53	4
	GM	-	13.86	8.61	12.06	-		
	SE	-	0.49	0.33	0.66	-		
	CD (0.05)	-	1.04	0.99	1.98	-		
	CV	-	4.96	7.63	10.90	-		
	Qualifying entries at each location							
	1	-	-	CoC 15338	CoV 15356	-		
	2	-	-	CoV 15356	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Ratoon data not provided due to poor yield recorded at Anakapalle and Vuyyuru centres.

No. of locations where an entry recorded >10 % improvement over the best standard:
CoV 15356 (2) and CoC 15338 (1)

Performance of the entries across locations: The entry CoV 15356 (12.67 t/ha) was the best in the trial for CCS yield followed by CoC 15338 (11.95 t/ha) while the best standard CoOr 03151 recorded 11.53 t/ha. The best entry CoV 15356 recorded 9.92 % improvement for CCS yield over the best standard CoOr 03151 across locations.

Table 3.2.2 Cane yield (t/ha) at harvest

S. No.	Entry	Anaka palle**	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru**	Mean	Rank
1	CoC 15336	-	118.63*	70.44	102.03	-	97.03	
2	CoC 15338	-	112.61	78.26	121.61	-	104.16	2
3	CoV 15356	-	111.20	76.00	126.24	-	104.48	1
	Standards							
1	CoA 92081	-	106.00	66.67	111.51	-	94.73	
2	CoC 01061	-	101.50	69.03	103.63	-	91.39	
3	CoOr 03151	-	110.44	71.54	125.24	-	102.41	3
	GM	-	110.06	71.99	111.89	-		
	SE	-	3.40	2.51	5.60	-		
	CD (0.05)	-	7.25	7.55	17.06	-		
	CV	-	4.37	6.96	10.12	-		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Ratoon data not provided due to poor yield recorded at Anakapalle and Vuyyuru centres.

No. of locations where an entry recorded >10 % improvement over the best standard: Nil

Performance of the entries across locations: The entry CoV 15356 (104.48 t/ha) was the best in the trial for cane yield followed by CoC 15338 (104.16 t/ha) while the best standard CoOr 03151 recorded 102.41 t/ha. No qualifying entry was identified for cane yield from this zone across locations.

Table 3.2.3 CCS % at 9th month

S. No.	Entry	Anaka palle**	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru**	Mean	Rank
1	CoC 15336	-	12.74	12.39*	10.66	-	11.93	2
2	CoC 15338	-	12.71	11.99	10.54	-	11.75	
3	CoV 15356	-	12.66	12.12	11.57*	-	12.12	1
	Standards							
1	CoA 92081	-	12.59	11.88	10.89	-	11.79	3
2	CoC 01061	-	12.34	11.89	10.58	-	11.60	
3	CoOr 03151	-	12.47	11.51	10.35	-	11.44	
	GM	-	12.59	11.96	10.76	-		
	SE	-	0.12	0.13	0.13	-		
	CD (0.05)	-	0.26	0.38	0.39	-		
	CV	-	1.37	2.09	2.38	-		
	Qualifying entries at each location							
	1	-	-	-	CoV 15356	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Ratoon data not provided due to poor yield recorded at Anakapalle and Vuyyuru centres.

No. of locations where an entry recorded > 5 % improvement over the best standard:

CoV 15356 (1)

Performance of the entries across locations: The entry CoV 15356 (12.12 %) was the best in the trial for CCS% followed by CoC 15336 (11.93 %) while the best standard CoA 92081 recorded 11.79 %. No qualifying entry was identified for CCS% from this trial.

Table 3.2.4 Sucrose % at 9th month

S. No.	Entry	Anakapalle**	Cuddalore	Naya garh	Nellikuppam	Vuyyuru**	Mean	Rank
1	CoC 15336	-	18.20*	17.65*	15.48	-	17.11	2
2	CoC 15338	-	18.02*	16.98	15.30	-	16.77	
3	CoV 15356	-	17.93	17.38	16.57*	-	17.29	1
	Standards							
1	CoA 92081	-	17.79	17.00	15.73	-	16.84	3
2	CoC 01061	-	17.51	16.96	15.36	-	16.61	
3	CoOr 03151	-	17.59	16.79	15.04	-	16.47	
	GM	-	17.84	17.13	15.57	-		
	SE	-	0.11	0.17	0.18	-		
	CD (0.05)	-	0.22	0.50	0.55	-		
	CV	-	0.84	1.95	2.32	-		
	Qualifying entries at each location							
	1	-	-	-	CoV 15356	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Ratoon data not provided due to poor yield recorded at Anakapalle and Vuyyuru centres.

No. of locations where an entry recorded > 5 % improvement over the best standard:

CoV 15356 (1)

Performance of the entries across locations: The entry CoV 15356 (17.29 %) was the best in the trial for CCS% followed by CoC 15336 (17.11 %) while the best standard CoA 92081 recorded 16.84 %. No qualifying entry was identified for sucrose % from this trial.

Table 3.2.5 Brix % at 9th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15336	-	20.05	19.34	17.66	-	19.02
2	CoC 15338	-	19.53	18.34	17.44	-	18.44
3	CoV 15356	-	19.39	19.34	18.38	-	19.04
	Standards						
1	CoA 92081	-	19.13	18.84	17.73	-	18.57
2	CoC 01061	-	19.02	18.65	17.52	-	18.40
3	CoOr 03151	-	18.85	19.37	17.20	-	18.47
	GM	-	19.33	18.98	17.65	-	
	SE	-	0.27	0.22	0.20	-	
	CD (0.05)	-	0.58	0.67	0.60	-	
	CV	-	2.01	2.34	2.27	-	

Table 3.2.6 Purity % at 9th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15336	-	90.78	91.26	87.60	-	89.88
2	CoC 15338	-	92.30	92.60	87.70	-	90.87
3	CoV 15356	-	92.51	89.91	90.18	-	90.87
	Standards						
1	CoA 92081	-	92.99	90.26	88.70	-	90.65
2	CoC 01061	-	92.14	90.98	87.68	-	90.27
3	CoOr 03151	-	93.28	86.71	87.44	-	89.14
	GM	-	92.33	90.29	88.21	-	
	SE	-	1.33	0.63	0.22	-	
	CD (0.05)	-	2.83	1.91	0.65	-	
	CV	-	2.04	1.40	0.49	-	

Table 3.2.7 Pol % cane at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15336	-	14.89	13.52	12.08	-	13.50
2	CoC 15338	-	14.75	13.09	11.91	-	13.25
3	CoV 15356	-	14.71	13.40	12.91	-	13.67
	Standards						
1	CoA 92081	-	14.60	13.09	12.26	-	13.32
2	CoC 01061	-	14.36	12.97	11.99	-	13.11
3	CoOr 03151	-	14.41	12.91	11.72	-	13.01
	GM	-	14.62	13.17	12.14	-	
	SE	-	0.10	0.14	0.14	-	
	CD (0.05)	-	0.21	0.42	0.41	-	
	CV	-	0.84	2.09	2.23	-	

Table 3.2.8 Extraction % at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	-	55.83	52.47	51.12	-	53.14
2	CoC 15338	-	61.75	50.97	49.63	-	54.12
3	CoV 15356	-	59.50	52.09	50.46	-	54.02
	Standards						
1	CoA 92081	-	61.11	52.97	50.69	-	54.92
2	CoC 01061	-	52.81	50.55	49.46	-	50.94
3	CoOr 03151	-	56.45	52.20	51.63	-	53.43
	GM	-	57.91	51.87	50.49	-	
	SE	-	3.22	0.46	1.24	-	
	CD (0.05)	-	6.86	1.39	3.75	-	
	CV	-	7.83	1.78	4.93	-	

Table 3.2.9 Fibre % at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	-	13.20	13.40	11.96	-	12.85
2	CoC 15338	-	13.12	12.89	12.13	-	12.71
3	CoV 15356	-	12.99	12.90	12.08	-	12.66
	Standards						
1	CoA 92081	-	12.89	13.01	12.06	-	12.65
2	CoC 01061	-	12.98	13.55	11.94	-	12.82
3	CoOr 03151	-	13.07	13.09	12.11	-	12.76
	GM	-	13.04	13.14	12.05	-	
	SE	-	0.14	0.16	0.12	-	
	CD (0.05)	-	0.30	0.17	0.35	-	
	CV	-	1.53	2.38	1.93	-	

Table 3.2.10 NMC ('000/ha) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	-	124.61	79.35	106.42	-	103.46
2	CoC 15338	-	120.21	85.12	90.13	-	98.49
3	CoV 15356	-	121.36	89.54	77.89	-	96.26
	Standards						
1	CoA 92081	-	107.32	80.74	67.77	-	85.28
2	CoC 01061	-	121.15	77.59	62.50	-	87.08
3	CoOr 03151	-	109.40	76.47	55.91	-	80.59
	GM	-	117.34	81.47	76.66	-	
	SE	-	4.57	2.84	4.89	-	
	CD (0.05)	-	9.73	8.57	20.39	-	
	CV	-	5.50	6.98	12.77	-	

Table 3.2.11 Stalk length (cm) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	-	213.00	236.50	233.50	-	227.67
2	CoC 15338	-	211.00	199.50	256.00	-	222.17
3	CoV 15356	-	209.00	242.00	250.00	-	233.67
	Standards						
1	CoA 92081	-	208.00	209.00	210.50	-	209.17
2	CoC 01061	-	200.00	264.50	240.50	-	235.00
3	CoOr 03151	-	196.00	297.50	259.50	-	251.00
	GM	-	206.00	241.50	241.70	-	
	SE	-	2.67	4.90	6.20	-	
	CD (0.05)	-	8.05	14.76	18.80	-	
	CV	-	2.59	4.06	5.20	-	

Table 3.2.12 Stalk diameter (cm) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	-	3.08	2.61	2.49	-	2.73
2	CoC 15338	-	2.98	2.88	2.61	-	2.82
3	CoV 15356	-	2.99	2.21	2.80	-	2.67
	Standards						
1	CoA 92081	-	2.97	2.89	2.42	-	2.76
2	CoC 01061	-	2.70	2.49	2.36	-	2.52
3	CoOr 03151	-	2.93	2.68	2.74	-	2.78
	GM	-	2.94	2.62	2.56	-	
	SE	-	0.11	0.06	0.63	-	
	CD (0.05)	-	0.24	0.19	0.19	-	
	CV	-	5.38	4.75	4.88	-	

Table 3.2.13 Single cane weight (kg) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	-	1.38	1.05	1.22	-	1.22
2	CoC 15338	-	1.15	1.20	1.75	-	1.37
3	CoV 15356	-	1.08	1.05	2.11	-	1.41
	Standards						
1	CoA 92081	-	1.05	1.10	2.12	-	1.42
2	CoC 01061	-	0.90	1.15	1.98	-	1.34
3	CoOr 03151	-	1.06	1.30	3.05	-	1.80
	GM	-	1.10	1.14	2.04	-	
	SE	-	0.09	0.05	0.54	-	
	CD (0.05)	-	0.19	0.15	0.16	-	
	CV	-	11.17	8.50	5.33	-	

Table 3.2.14 Number of shoots ('000/ha) at 180 days

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	-	142.95	86.69	149.03	-	126.22
2	CoC 15338	-	138.98	93.05	143.38	-	125.14
3	CoV 15356	-	140.33	97.18	127.46	-	121.66
	Standards						
1	CoA 92081	-	126.77	86.73	115.01	-	109.50
2	CoC 01061	-	136.63	85.01	119.45	-	113.70
3	CoOr 03151	-	128.36	83.85	106.05	-	106.09
	GM	-	135.67	88.75	126.66	-	
	SE	-	4.27	3.06	6.24	-	
	CD (0.05)	-	9.09	9.21	26.01	-	
	CV	-	4.45	6.89	9.85	-	

Table 3.2.15 Number of tillers ('000/ha) at 90 days

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	-	155.56	95.62	190.01	-	147.06
2	CoC 15338	-	150.17	103.16	189.83	-	147.72
3	CoV 15356	-	153.26	105.66	179.48	-	146.13
	Standards						
1	CoA 92081	-	139.33	92.01	180.18	-	137.17
2	CoC 01061	-	149.08	92.70	187.83	-	143.20
3	CoOr 03151	-	141.36	90.18	180.09	-	137.21
	GM	-	148.13	96.55	184.57	-	
	SE	-	5.21	3.60	7.66	-	
	CD (0.05)	-	11.10	10.86	23.08	-	
	CV	-	4.97	7.46	8.30	-	

Table 3.2.16: Assessment of the performance of entries compared to the best standard by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
CoC 15336	On par	This trial was Abandoned	This trial was Abandoned	This trial was Abandoned	This trial was Abandoned
CoC 15338	On par				
CoV 15356	Better				
Standards					
CoA 92081	Poor				
CoC 01061	Better				
CoOr 03151	Best				

3.3 ADVANCED VARIETAL TRIAL (EARLY) Pooled data of 2 Plant + 1Ratoon

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (3)	CoC 15336, CoC 15338 and CoV 15356
Standards (3)	CoA 92081, CoC 01061 and CoOr 03151
Design	Randomized Block Design
Replications	Four
Plot size	Gross : 6.0 m x 0.9 m x 8 R Net : 5.0 m x 0.9 m x 6 R

Three early maturing clones and three standards were evaluated under AVT I Plant during 2018-19 and AVT II Plant and AVT Ratoon during 2019-20 at five locations. Two centres viz., Anakapalle and Vuyyuru have reported poor cane yield in the ratoon crop and data have not been received from these centres. The pooled mean of CCS yield, cane yield, CCS % and sucrose % at harvest of two plant crops and one ratoon crop are given in tables 3.3.1 to 3.3.4 and figures 3.3.1 to 3.3.4. The salient results pertaining to CCS (t/ha), cane yield (t/ha), CCS % and sucrose % are given below.

Commercial Cane Sugar (t/ha):

The entry CoV 15356 (13.33 t/ha) ranked first in the zone for CCS yield and it recorded 6.72 % improvement over the best standard CoOr 03151 (12.49 t/ha). The entry CoV 15356 recorded higher pooled mean CCS yield at Cuddalore and Nellikuppam centres than the best standard.

Cane Yield (t/ha):

For cane yield, the standard CoOr 03151 was the best with an overall mean of 110.93 t/ha. No entry surpassed the standard for cane yield across locations.

Commercial Cane Sugar (%):

The entry CoV 15356 ranked first with a mean CCS % of 12.27 while the standard CoA 92081 (12.00 %) was the second best in the zone. The best entry CoV 15356 recorded 2.22 % improvement for CCS % over the standard CoA 92081.

Sucrose (%):

The entry CoV 15356 was the top ranking entry with a mean sucrose % of 17.62 and it recorded 1.96 % improvement over the best standard CoA 92081 (17.28 %).

Overall performance:

Based on the pooled mean of two plant and one ratoon crops at five centres, no entry recorded 10 % improvement either for CCS yield/ cane yield or 5 % improvement for CCS % / sucrose % over the best standard across locations. Therefore, no qualifying entry could be identified under early maturing group in this zone.

Table 3.3.1 CCS at harvest (t/ha) - Pooled data of two plant and one ratoon crops

S. No.	Clone	Anakapalle				Cuddalore				Nayagarh			
		I P	II P	R	Mean	I P	II P	R	Mean	I P	II P	R	Mean
1	CoC 15336	10.12	10.53	-	10.33	16.80	16.55	15.12	16.16	9.21	10.84	8.73	9.59
2	CoC 15338	10.06	10.71	-	10.39	17.22	16.16	14.31	15.90	11.61	11.52	9.38	10.84
3	CoV 15356	12.81	13.06	-	12.94	16.06	15.69	14.08	15.28	10.05	11.54	9.21	10.27
	Standards												
1	CoA 92081	11.54	12.58	-	12.06	15.35	15.38	13.35	14.69	9.90	11.00	7.92	9.61
2	CoC 01061	13.71	9.98	-	11.85	14.30	14.38	12.54	13.74	11.42	9.98	8.22	9.87
3	CoOr 03151	10.46	10.47	-	10.47	15.53	15.53	13.77	14.94	10.61	10.15	8.23	9.66
	GM	11.45	11.22	-		15.88	15.62	13.86		10.47	10.84	8.62	
S. No.	Clone	Nellikuppam				Vuyyuru				GM (Wt. Avg.)	Rank		
		I P	II P	R	Mean	I P	II P	R	Mean				
1	CoC 15336	14.03	8.13	10.88	11.01	-	11.89	-	11.89	11.90			
2	CoC 15338	15.80	11.06	12.16	13.01	-	9.76	-	9.76	12.48			
3	CoV 15356	17.63	9.28	14.73	13.88	-	15.85	-	15.85	13.33	1		
	Standards												
1	CoA 92081	14.94	11.82	11.60	12.79	-	13.99	-	13.99	12.45			
2	CoC 01061	11.50	8.13	10.42	10.02	-	14.81	-	14.81	11.62			
3	CoOr 03151	15.76	13.97	12.59	14.11	-	12.85	-	12.85	12.49	2		
	GM	14.94	10.40	12.06		-	13.19	-	13.19				

Table 3.3.2 Cane yield at harvest (t/ha) - Pooled data of two plant and one ratoon crops

S. No.	Clone	Anakapalle				Cuddalore				Nayagarh			
		IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean
1	CoC 15336	74.11	90.34	-	82.23	130.24	128.39	118.63	125.75	79.08	91.04	70.44	80.19
2	CoC 15338	82.73	92.96	-	87.85	130.69	126.48	112.61	123.26	95.25	97.81	78.26	90.44
3	CoV 15356	86.89	100.55	-	93.72	124.56	124.82	111.20	120.19	87.09	94.79	76.00	85.96
	Standards												
1	CoA 92081	89.19	96.30	-	92.75	120.69	121.11	106.00	115.93	84.15	93.47	66.67	81.43
2	CoC 01061	96.40	89.17	-	92.79	115.25	115.02	101.50	110.59	95.68	86.36	69.03	83.69
3	CoOr 03151	87.56	94.82	-	91.19	122.52	123.61	110.44	118.86	91.07	88.83	71.54	83.81
	GM	86.15	94.02	-		123.99	123.24	110.06		88.72	92.05	71.99	
S. No.	Clone	Nellikuppam				Vuyyuru				GM (Wt. Avg.)	Rank		
		IP	IIP	R	Mean	IP	IIP	R	Mean				
1	CoC 15336	129.93	82.82	102.03	104.93	-	101.23	-	101.23	99.86			
2	CoC 15338	150.76	120.15	121.61	130.84	-	98.53	-	98.53	108.99			
3	CoV 15356	155.11	93.12	126.24	124.82	-	121.68	-	121.68	108.50			
	Standards												
1	CoA 92081	136.01	110.77	111.51	119.43	-	109.88	-	109.88	103.81			
2	CoC 01061	106.78	79.64	103.63	96.68	-	118.98	-	118.98	98.12			
3	CoOr 03151	160.02	137.74	125.24	141.00	-	117.75	-	117.75	110.93	1		
	GM	139.77	104.04	115.04		-	111.34	-	111.34				

Table 3.3.3 CCS (%) at harvest - Pooled data of two plant and one ratoon crops

S. No.	Clone	Anakapalle				Cuddalore				Nayagarh			
		I P	II P	R	Mean	I P	II P	R	Mean	I P	II P	R	Mean
1	CoC 15336	13.66	11.35	-	12.51	12.98	12.89	12.74	12.87	11.64	11.90	12.39	11.98
2	CoC 15338	12.17	11.21	-	11.69	13.02	12.78	12.71	12.84	12.19	11.79	11.99	11.99
3	CoV 15356	14.75	12.63	-	13.69	12.82	12.57	12.66	12.68	11.52	12.19	12.12	11.94
	Standards												
1	CoA 92081	12.89	12.57	-	12.73	12.65	12.69	12.59	12.64	11.70	11.78	11.88	11.79
2	CoC 01061	14.22	10.99	-	12.61	12.41	12.49	12.34	12.41	11.94	11.57	11.89	11.80
3	CoOr 03151	11.94	10.60	-	11.27	12.68	12.57	12.47	12.57	11.65	11.42	11.51	11.53
	GM	13.27	11.56	-		12.76	12.67	12.59		11.77	11.78	11.96	
S. No.	Clone	Nellikuppam				Vuyyuru				GM (Wt. Avg.)	Rank		
		I P	II P	R	Mean	I P	II P	R	Mean				
1	CoC 15336	10.81	9.85	10.66	10.44	-	11.71	-	11.71	11.88			
2	CoC 15338	10.48	9.21	10.54	10.08	-	11.06	-	11.06	11.60			
3	CoV 15356	11.37	9.96	11.57	10.97	-	13.02	-	13.02	12.27	1		
	Standards												
1	CoA 92081	10.97	10.68	10.89	10.85	-	12.70	-	12.70	12.00	2		
2	CoC 01061	10.77	10.22	10.58	10.52	-	12.44	-	12.44	11.82			
3	CoOr 03151	9.84	9.99	10.35	10.06	-	10.92	-	10.92	11.33			
	GM	10.71	9.99	10.77		-	11.98	-	11.98				

Table 3.3.4 Sucrose (%) at harvest - Pooled data of two plant and one ratoon crops

S. No.	Clone	Anakapalle				Cuddalore				Nayagarh			
		I P	II P	R	Mean	I P	II P	R	Mean	I P	II P	R	Mean
1	CoC 15336	19.52	16.43	-	17.98	18.70	18.67	18.20	18.52	16.85	17.32	17.65	17.27
2	CoC 15338	17.67	16.21	-	16.94	18.69	18.41	18.02	18.37	17.52	17.14	16.98	17.21
3	CoV 15356	20.74	18.18	-	19.46	18.32	18.16	17.93	18.14	16.82	17.61	17.38	17.27
	Standards												
1	CoA 92081	18.65	18.10	-	18.38	18.25	18.21	17.79	18.08	16.92	17.10	17.00	17.01
2	CoC 01061	20.06	15.93	-	18.00	18.15	17.98	17.51	17.88	17.22	16.80	16.96	16.99
3	CoOr 03151	17.23	15.40	-	16.32	18.33	18.01	17.59	17.98	16.81	16.65	16.79	16.75
	GM	18.98	16.71	-		18.41	18.24	17.84		17.02	17.10	17.13	
S. No.	Clone	Nellikuppam				Vuyyuru				GM (Wt. Avg.)	Rank		
		I P	II P	R	Mean	I P	II P	R	Mean				
1	CoC 15336	15.55	14.38	15.48	15.14	-	16.84	-	16.84	17.13			
2	CoC 15338	15.11	13.64	15.30	14.68	-	16.20	-	16.20	16.74			
3	CoV 15356	16.26	14.69	16.57	15.84	-	18.72	-	18.72	17.62	1		
	Standards												
1	CoA 92081	15.77	15.66	15.73	15.72	-	18.14	-	18.14	17.28	2		
2	CoC 01061	15.49	15.04	15.36	15.30	-	17.94	-	17.94	17.04			
3	CoOr 03151	14.34	14.68	15.04	14.69	-	15.99	-	15.99	16.41			
	GM	15.42	14.68	15.58		-	17.31	-	17.31				

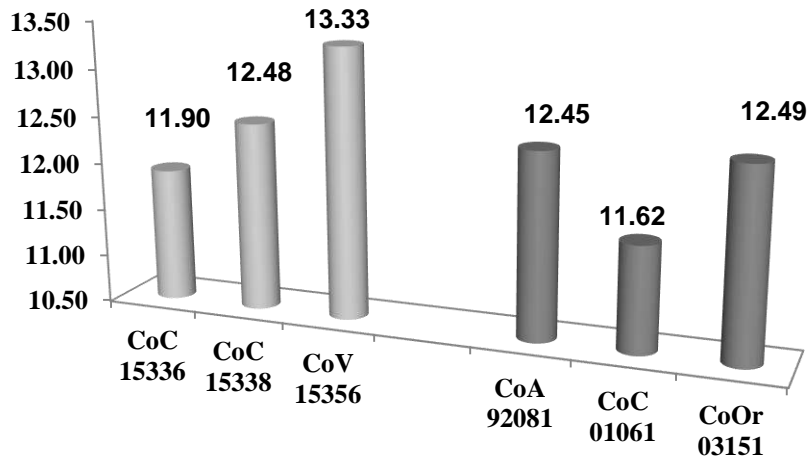


Fig.3.3.1. Mean performance of (2P+1R) of AVT early clones for CCS (t/ha)

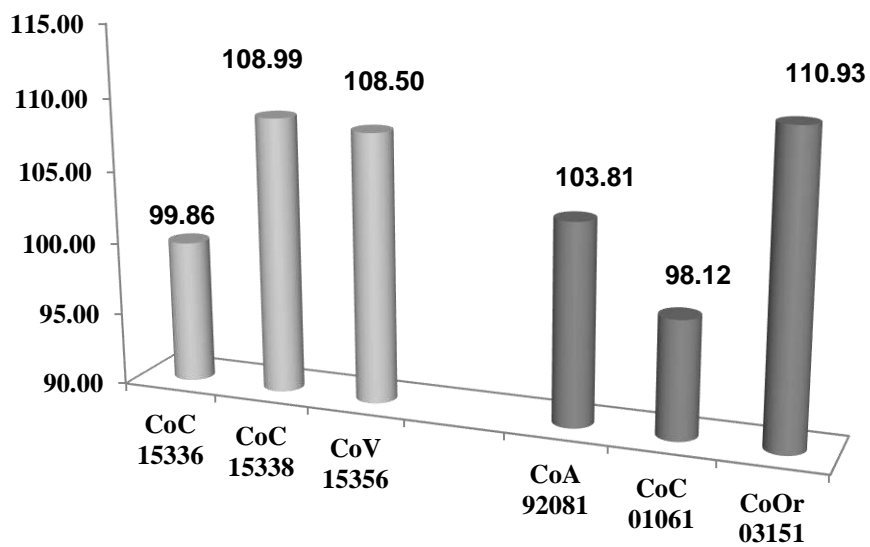


Fig.3.3.2 Mean performance of (2P+1R) of AVT early clones for Cane Yield (t/ha)

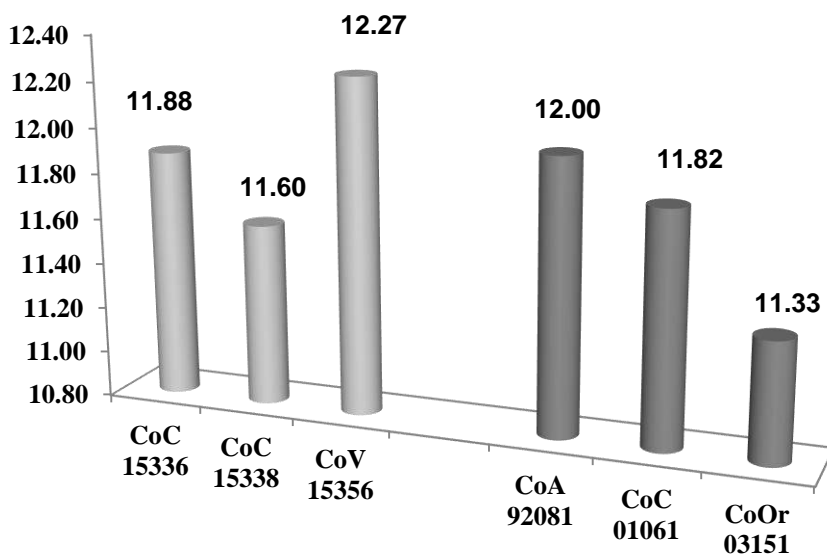


Fig.3.3.3. Mean performance of (2P+1R) of AVT early clones for CCS (%)

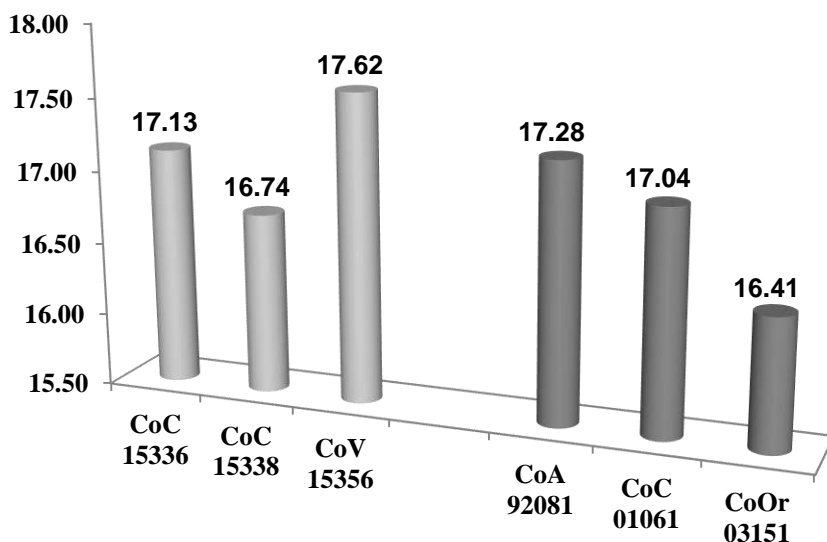


Fig.3.3.4 Mean performance of (2P+1R) of AVT early clones for Sucrose (%)

3.4. ADVANCED VARIETAL TRIAL (EARLY) – I PLANT

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (4)	CoA 16321, CoC 16336, CoC 16337, CoV 16356
Standards (3)	CoA 92081, CoC 01061 and CoOr 03151
Design	Randomized Block Design
Replications	Three
Plot size	Gross : 6.0 m x 0.90 m x 8 R Net : 5.0 m x 0.90 m x 6 R
Bud rate	12 buds/ metre
Planting time	1 st fortnight of January
Crop duration	10 months

Results of the previous year

The IVT trial was conducted by five centres with four entries. CoV 16356 was the top ranking entry across the locations for CCS yield (15.75 t/ha) and cane yield (123.29 t/ha). None of the entries recorded more than 10 % improvement over the best standard CoOr 03151 for cane yield across the locations. For juice quality, CoV 16356 was the top ranking entry that recorded the highest mean CCS % of 12.76 and sucrose of 18.20 %. No entry recorded more than 5 % improvement over the best standard CoC 01061 for CCS % and sucrose % across the locations. CoV 16356 was identified as the qualifying entry that recorded more than 10.0 % improvement of CCS yield with numerically superior values for cane yield and more than 5.0 % improvement for sucrose content over the best standard CoOr 03151.

Results of the current year

First plant crop of AVT was conducted in all five centres in the zone. Three test entries (CoV 16356, CoA 16321, CoC 16337) recorded higher CCS yield over the best standard CoA 92081 (12.76 t/ha) across locations. Out of the three entries, CoV 16356 (13.75 t/ha) was the best in the trial that recorded 7.74 % improvement over the standard CoA 92081. However, no entry recorded more than 10% improvement for CCS yield over the best standard CoA 92081 across the locations. CoC 16337 was the best entry for cane yield (115.28 t/ha) which recorded 3.27 % improvement over the better standard CoOr 03151 (111.62 t/ha). None of the entries recorded more than 10 % improvement for cane yield over the best standard CoOr 03151 across locations. CoV 16356 recorded the highest mean CCS % of 12.40 and 17.70 % juice sucrose while the best standard CoA 92081 recorded 12.17 % and 17.41 % sucrose respectively. However, no entry recorded more than 5 % improvement for CCS % and juice sucrose % over the best standard CoA 92081 across the locations. No qualifying entry for cane yield and juice quality could be identified from this trial. Further details are presented in tables **3.4.1 to 3.4.20**.

Table 3.4.1 CCS (t/ha) at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean	Rank
1	CoA 16321	15.22*	15.90	11.43	13.28	10.64	13.29	2
2	CoC 16336	10.99	16.71*	11.33	11.16	10.34	12.11	
3	CoC 16337	12.60	16.87*	11.29	12.94	12.50	13.24	3
4	CoV 16356	11.27	16.00	11.65	12.35	17.47*	13.75	1
	Standards							
1	CoA 92081	12.22	14.81	9.87	12.14	14.74	12.76	4
2	CoC 01061	9.95	14.66	10.93	9.54	13.23	11.66	
3	CoOr 03151	10.08	15.58	11.24	11.56	14.46	12.58	
	GM	11.76	15.79	11.11	11.85	13.34		
	SE	0.80	0.51	0.32	0.76	0.71		
	CD (0.05)	2.40	1.11	0.99	2.34	2.20		
	CV	11.73	3.96	5.05	11.13	9.30		
	Qualifying entries at each location							
	1	CoA 16321	-	-	-	CoV 16356		
	2	-	-	-	-			
	3	-	-	-	-			

*Significant over the best standard

No. of locations where an entry recorded 10 % improvement over the best standard: CoA 16321 (1) and CoV 16356 (1)

Performance of the entries across locations: Three test entries (CoV 16356, CoA 16321, CoC 16337) recorded higher CCS yield over the better standard CoA 92081 (12.76 t/ha) across locations. Of the three entries, CoV 16356 (13.75 t/ha) was the best in the trial that recorded 7.74 % improvement over the standard CoA 92081. However, no entry recorded more than 10% improvement for CCS yield over the best standard CoA 92081 across the locations.

Table 3.4.2 Cane yield (t/ha) at harvest

S. No	Entry	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru	Mean	Rank
1	CoA 16321	117.05*	125.26	95.86	122.31	93.21	110.74	
2	CoC 16336	88.33	128.10	98.13	96.84	95.06	101.29	
3	CoC 16337	108.63	131.93*	94.84	111.97	129.01	115.28	1
4	CoV 16356	89.38	127.61	98.18	107.65	128.70	110.30	
	Standards							
1	CoA 92081	97.23	119.10	84.21	105.72	116.46	104.54	
2	CoC 01061	75.68	118.89	95.79	87.58	117.80	99.15	
3	CoOr 03151	89.14	123.95	99.28	124.24	121.50	111.62	2
	GM	95.06	124.98	95.18	108.00	114.54		
	SE	4.78	3.58	2.93	7.30	5.79		
	CD (0.05)	14.41	7.80	9.10	22.40	17.83		
	CV	8.71	3.51	5.32	11.70	8.80		
	Qualifying entries at each location							
	1	CoA 16321	-	-	-	-		
	2	CoC 16337	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded 10 % improvement over the best standard:

CoA 16321(1), CoC 16337 (1)

Performance of the entries across locations: CoC 16337 was the best entry for cane yield (115.28 t/ha) which recorded 3.27 % improvement over the best standard CoOr 03151 (111.62 t/ha). None of the entries recorded more than 10 % improvement over the best standard CoOr 03151 across locations.

Table 3.4.3 CCS % at 10th month

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean	Rank
1	CoA 16321	13.02	12.70	11.93	10.87	11.42	11.99	
2	CoC 16336	12.42	13.04*	11.55	11.53	10.93	11.89	
3	CoC 16337	11.59	12.78	11.91	11.56	9.70	11.51	
4	CoV 16356	12.55	12.53	11.86	11.48	13.57*	12.40	1
	Standards							
1	CoA 92081	12.58	12.44	11.72	11.47	12.66	12.17	2
2	CoC 01061	13.15	12.33	11.41	10.90	11.21	11.80	
3	CoOr 03151	11.32	12.57	11.32	9.32	11.92	11.29	
	GM	12.38	12.63	11.67	11.01	11.63		
	SE	0.44	0.13	0.09	0.13	0.25		
	CD (0.05)	1.34	0.27	0.26	0.41	0.77		
	CV	6.22	1.22	1.27	2.11	3.70		
	Qualifying entries at each location							
	1	-	-	-	-	CoV 16356		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded 5 % improvement over the best standard:

CoV 16356 (1)

Performance of the entries across locations: The entry CoV 16356 recorded the highest mean CCS % of 12.40 while the best standard CoA 92081 recorded 12.17 %. However, no entry recorded more than 5 % improvement for CCS % over the best standard CoA 92081 across the locations.

Table 3.4.4 Sucrose % at 10th month

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean	Rank
1	CoA 16321	18.50	17.97	17.36	15.66	16.58	17.21	
2	CoC 16336	17.76	18.67*	17.01	16.50	15.82	17.15	
3	CoC 16337	16.55	18.06	17.36	16.67	15.31	16.79	
4	CoV 16356	17.48	17.83	17.31	16.74	19.18	17.71	1
	Standards							
1	CoA 92081	17.83	17.69	17.14	16.35	18.02	17.41	2
2	CoC 01061	17.97	17.45	16.88	15.61	16.30	16.84	
3	CoOr 03151	16.23	17.90	16.75	13.58	17.27	16.35	
	GM	17.47	17.94	17.12	15.87	16.93		
	SE	0.43	0.19	0.09	0.18	0.40		
	CD (0.05)	1.29	0.41	0.28	0.55	1.23		
	CV	4.23	1.30	0.91	1.94	4.10		
	Qualifying entries at each location							
	1	-	-	-	-	CoV 16356		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded 5 % improvement over the best standard:

CoV 16356 (1)

Performance of the entries across locations: The entry CoV 16356 recorded the highest sucrose content of 17.71 % across locations while the best standard CoA 92081 recorded 17.41 %. No entry recorded more than 5 % improvement over the best standard CoA 92081 for sucrose % across the locations.

Table 3.4.5 Brix % at 10th month

S. No	Entry	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru	Mean
1	CoA 16321	20.14	19.41	19.90	17.60	18.72	19.15
2	CoC 16336	19.62	20.69	19.97	18.29	17.91	19.30
3	CoC 16337	18.24	19.42	19.95	18.77	18.03	18.88
4	CoV 16356	18.22	19.49	19.97	19.26	20.62	19.51
	Standards						
1	CoA 92081	19.32	19.32	19.84	17.95	19.65	19.22
2	CoC 01061	19.53	18.85	20.00	17.30	18.62	18.86
3	CoOr 03151	18.05	19.59	19.85	15.62	19.61	18.54
	GM	19.02	19.54	19.93	17.82	19.02	
	SE	0.35	0.45	0.14	0.19	0.35	
	CD (0.05)	1.04	0.97	0.44	0.60	1.07	
	CV	3.16	2.80	1.23	1.89	3.20	

Table 3.4.6 Purity % at 10th month

S. No	Entry	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru	Mean
1	CoA 16321	91.48	92.60	87.24	88.98	87.67	89.59
2	CoC 16336	88.17	90.25	85.15	90.25	88.32	88.43
3	CoC 16337	90.35	93.02	87.02	88.83	81.32	88.11
4	CoV 16356	93.17	91.53	86.69	86.91	93.02	90.26
	Standards						
1	CoA 92081	92.47	91.66	86.42	91.08	91.43	90.61
2	CoC 01061	92.82	92.61	84.40	90.21	90.54	90.12
3	CoOr 03151	93.46	91.39	84.38	86.94	88.02	88.84
	GM	91.70	91.86	85.90	89.25	88.62	
	SE	2.79	1.50	0.61	0.47	2.01	
	CD (0.05)	8.42	3.27	1.87	1.43	6.20	
	CV	5.27	2.00	1.22	0.91	3.90	

Table 3.4.7 Pol % cane at harvest

S. No	Entry	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru	Mean
1	CoA 16321	13.93	13.83	13.18	12.08	-	13.26
2	CoC 16336	13.17	14.36	12.95	12.76	-	13.31
3	CoC 16337	12.45	13.90	13.41	12.93	-	13.17
4	CoV 16356	13.24	13.75	13.24	12.91	-	13.29
	Standards						
1	CoA 92081	13.18	13.48	13.15	12.87	-	13.17
2	CoC 01061	13.43	13.65	13	12.09	-	13.04
3	CoOr 03151	12.17	13.78	12.86	10.56	-	12.34
	GM	13.08	13.82	13.11	12.31	-	
	SE	0.32	0.11	0.07	0.15	-	
	CD (0.05)	0.96	0.31	0.22	0.47	-	
	CV	4.24	1.32	0.94	2.15	-	

Table 3.4.8 Extraction % at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	55.88	56.78	52.11	49.72	-	53.62
2	CoC 16336	56.49	63.79	53.12	51.08	-	56.12
3	CoC 16337	63.68	59.00	52.27	52.20	-	56.79
4	CoV 16356	55.83	54.97	51.54	52.81	-	53.79
	Standards						
1	CoA 92081	53.47	59.84	51.58	50.30	-	53.80
2	CoC 01061	60.51	52.94	50.36	53.42	-	54.31
3	CoOr 03151	56.67	56.72	51.88	50.56	-	53.96
	GM	57.50	57.72	51.84	51.44	-	
	SE	1.46	3.09	0.43	1.95	-	
	CD (0.05)	4.40	6.72	1.31	6.01	-	
	CV	4.40	6.55	1.42	6.57	-	

Table 3.4.9 Fiber % at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	13.47	13.00	14.08	12.83	-	13.35
2	CoC 16336	11.87	13.09	13.75	12.71	-	12.86
3	CoC 16337	15.71	13.02	12.77	12.42	-	13.48
4	CoV 16356	16.20	12.91	13.50	12.88	-	13.87
	Standards						
1	CoA 92081	16.59	12.85	13.30	11.25	-	13.50
2	CoC 01061	18.92	12.75	12.97	12.52	-	14.29
3	CoOr 03151	17.76	13.03	13.21	12.25	-	14.06
	GM	15.79	12.95	13.37	12.40	-	
	SE	0.50	0.13	0.23	0.22	-	
	CD (0.05)	1.50	0.29	0.72	0.67	-	
	CV	5.45	1.25	3.02	3.04	-	

Table 3.4.10 NMC ('000/ha) at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	101.11	122.90	98.38	150.15	71.81	108.87
2	CoC 16336	92.22	127.13	109.91	145.43	80.86	111.11
3	CoC 16337	96.11	128.59	104.13	137.19	78.40	108.88
4	CoV 16356	80.42	123.21	119.35	154.44	79.73	111.43
	Standards						
1	CoA 92081	90.56	113.15	103.36	120.88	96.19	104.83
2	CoC 01061	89.72	118.87	99.22	140.02	100.72	109.71
3	CoOr 03151	87.36	113.28	101.33	109.70	82.51	98.84
	GM	91.07	121.02	105.10	136.80	84.32	
	SE	4.26	4.10	4.12	6.30	6.11	
	CD (0.05)	12.83	8.92	12.70	19.50	NS	
	CV	8.10	4.14	6.79	8.00	12.60	

Table 3.4.11 Stalk length (cm) at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	226.67	234.00	289.33	260.33	237.50	249.57
2	CoC 16336	255.00	245.00	262.00	216.00	292.20	254.04
3	CoC 16337	243.33	251.00	298.00	247.00	238.30	255.53
4	CoV 16356	218.33	231.00	278.00	267.67	293.30	257.66
	Standards						
1	CoA 92081	281.67	222.00	269.67	268.33	283.90	265.11
2	CoC 01061	238.33	225.00	293.33	264.67	229.20	250.11
3	CoOr 03151	251.67	231.00	270.67	286.33	252.80	258.49
	GM	245.00	234.00	280.14	258.62	261.00	
	SE	8.94	6.65	6.99	9.30	13.99	
	CD (0.05)	26.95	14.48	21.56	28.80	43.13	
	CV	6.32	3.48	4.33	6.30	9.30	

Table 3.4.12 Stalk diameter (cm) at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	2.27	2.84	2.80	2.67	2.78	2.67
2	CoC 16336	1.80	3.25	2.49	2.20	2.52	2.45
3	CoC 16337	1.77	3.30	2.46	2.80	3.04	2.67
4	CoV 16356	2.20	3.07	2.51	2.87	2.91	2.71
	Standards						
1	CoA 92081	1.60	2.80	2.47	2.58	2.55	2.40
2	CoC 01061	1.97	2.66	2.27	1.95	2.10	2.19
3	CoOr 03151	2.53	2.91	2.60	3.00	2.86	2.78
	GM	2.02	2.97	2.51	2.60	2.68	
	SE	0.11	0.06	0.07	0.60	0.11	
	CD (0.05)	0.33	0.13	0.23	0.20	0.33	
	CV	9.48	2.46	5.12	3.90	6.90	

Table 3.4.13 Single cane weight (kg) at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	1.15	1.22	1.30	1.04	1.22	1.19
2	CoC 16336	0.93	1.45	1.38	0.84	1.01	1.12
3	CoC 16337	1.16	1.35	1.34	1.01	1.81	1.33
4	CoV 16356	1.11	1.28	1.26	0.86	1.60	1.22
	Standards						
1	CoA 92081	1.09	1.20	1.09	1.18	1.28	1.17
2	CoC 01061	0.89	1.11	1.34	0.77	0.99	1.02
3	CoOr 03151	1.07	1.29	1.27	1.41	1.40	1.29
	GM	1.06	1.27	1.28	1.00	1.33	
	SE	0.03	0.05	0.05	0.40	0.05	
	CD (0.05)	0.09	0.12	0.17	0.10	0.16	
	CV	4.81	5.30	7.30	6.40	6.80	

Table 3.4.14 CCS % at 8 months

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	11.36	11.49	11.41	9.91	9.65	11.04
2	CoC 16336	11.50	11.63	10.76	9.69	9.22	10.90
3	CoC 16337	10.38	11.60	11.41	9.63	7.90	10.76
4	CoV 16356	11.23	11.27	11.23	11.02	11.32	11.19
	Standards						
1	CoA 92081	11.19	11.22	11.26	9.75	10.48	10.86
2	CoC 01061	11.22	10.96	10.58	10.38	9.91	10.79
3	CoOr 03151	10.33	11.23	11.17	8.97	9.70	10.43
	GM	11.03	11.34	11.12	9.90	9.74	
	SE	0.38	0.16	0.12	0.59	0.18	
	CD (0.05)	1.13	0.34	0.38	0.18	0.54	
	CV	5.89	1.69	1.92	1.04	3.10	

Table 3.4.15 Sucrose % at 8 months

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	16.31	16.47	16.78	14.40	14.02	15.60
2	CoC 16336	16.40	16.81	16.15	14.21	13.47	15.41
3	CoC 16337	14.88	16.50	16.78	14.12	12.10	14.88
4	CoV 16356	15.67	16.13	16.55	15.83	16.01	16.04
	Standards						
1	CoA 92081	15.92	15.94	16.44	14.34	15.09	15.55
2	CoC 01061	15.99	15.66	16.12	15.11	14.29	15.43
3	CoOr 03151	14.70	16.12	16.40	13.30	14.14	14.93
	GM	15.70	16.23	16.46	14.47	14.16	
	SE	0.37	0.17	0.10	0.74	0.23	
	CD (0.05)	1.11	0.36	0.30	0.23	0.69	
	CV	4.06	1.25	1.04	0.88	2.70	

Table 3.4.16 Brix % at 8 months

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	18.16	18.29	19.65	16.46	16.03	17.72
2	CoC 16336	18.00	19.03	19.65	16.56	15.57	17.76
3	CoC 16337	16.53	18.03	19.64	16.46	15.20	17.17
4	CoV 16356	16.40	17.84	19.46	17.64	17.23	17.71
	Standards						
1	CoA 92081	17.40	17.35	18.97	16.79	16.90	17.48
2	CoC 01061	17.54	17.30	19.45	17.35	16.07	17.54
3	CoOr 03151	16.08	17.98	19.16	15.80	16.23	17.05
	GM	17.16	17.97	19.43	16.70	16.18	
	SE	0.37	0.16	0.14	0.70	0.19	
	CD (0.05)	1.12	0.34	0.45	0.20	0.57	
	CV	3.74	1.06	1.29	0.70	2.00	

Table 3.4.17 Purity % at 8 months

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	89.81	90.05	85.39	87.50	87.46	88.04
2	CoC 16336	91.20	88.36	82.17	85.81	86.55	86.82
3	CoC 16337	89.98	91.55	85.43	85.79	79.43	86.44
4	CoV 16356	95.94	90.39	85.03	89.70	92.88	90.79
	Standards						
1	CoA 92081	91.52	91.84	86.65	85.37	89.29	88.93
2	CoC 01061	91.22	90.56	82.86	87.13	88.91	88.14
3	CoOr 03151	91.39	89.66	85.61	84.14	87.09	87.58
	GM	91.58	90.34	84.73	86.49	87.37	
	SE	2.81	0.92	0.71	0.23	0.49	
	CD (0.05)	8.47	2.01	2.18	0.71	1.52	
	CV	5.31	1.25	1.44	0.46	1.00	

Table 3.4.18 Number of shoots ('000/ha) at 240 days

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	108.09	127.67	105.50	167.16	76.03	116.89
2	CoC 16336	103.46	136.10	117.41	166.23	87.14	122.07
3	CoC 16337	102.84	137.45	109.57	151.96	82.41	116.85
4	CoV 16356	93.21	128.48	128.00	169.01	87.04	121.15
	Standards						
1	CoA 92081	123.84	119.10	114.08	151.50	98.66	121.44
2	CoC 01061	111.37	127.65	107.13	160.20	103.50	121.97
3	CoOr 03151	102.10	120.75	107.81	140.48	86.32	111.49
	GM	106.42	128.17	112.78	158.00	88.73	
	SE	6.38	3.76	4.02	7.00	6.19	
	CD (0.05)	19.24	8.19	12.40	21.50	NS	
	CV	10.39	3.59	6.18	7.60	12.10	

Table 3.4.19 Number of tillers ('000/ha) at 120 days

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	115.73	134.46	112.83	177.36	105.66	129.21
2	CoC 16336	122.50	143.30	127.10	181.66	100.00	134.91
3	CoC 16337	115.28	146.70	118.54	185.25	97.74	132.70
4	CoV 16356	122.36	137.72	139.24	184.67	121.09	141.02
	Standards						
1	CoA 92081	136.34	127.02	123.57	185.48	108.13	136.11
2	CoC 01061	108.19	139.26	118.56	175.04	113.99	131.01
3	CoOr 03151	110.56	130.87	115.84	169.71	95.68	124.53
	GM	118.71	137.05	123.24	179.90	106.04	
	SE	4.24	4.77	4.68	8.20	7.61	
	CD (0.05)	12.78	10.40	14.43	25.40	NS	
	CV	6.19	4.27	6.64	7.90	12.40	

Table 3.4.20 Germination % at 30 days

S. No	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16321	62.27	65.14	48.60	86.69	52.01	62.94
2	CoC 16336	62.19	70.46	49.95	82.06	47.22	62.38
3	CoC 16337	59.80	71.18	51.30	84.61	48.07	62.99
4	CoV 16356	60.26	67.11	52.10	84.61	63.43	65.50
	Standards						
1	CoA 92081	70.14	63.42	48.23	86.57	50.93	63.86
2	CoC 01061	57.48	68.76	50.60	83.80	57.49	63.63
3	CoOr 03151	63.66	74.06	57.05	84.03	49.46	65.65
	GM	62.26	68.59	51.12	84.60	52.66	
	SE	2.00	2.01	1.48	3.60	3.55	
	CD (0.05)	6.02	4.37	4.55	11.10	NS	
	CV	5.56	3.58	5.00	7.40	11.7	

Table 3.4.21. Assessment of the performance of entries compared to the best standard by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
CoA 16321	Better	Better	On par	Better	Poor
CoC 16336	Poor	On par	Poor	Poor	Better
CoC 16337	Better	Better	On par	On par	On par
CoV 16356	On par	On par	Better	On par	On par
Standards					
CoC 92081					
CoC 01061					
CoOr 03151	Best	Best	Best	Best	Best

3.5. INITIAL VARIETAL TRIAL (EARLY)

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (4)	CoA 17321 (CoA 92082 GC) CoA 17322 (Co 6304 x CoA 7602) CoA 17323 (CoA 92081 x Co 94008) CoC 17336 (Co 85002 x ISH 229)
Standards (3)	CoA 92081 , CoC 01061 and CoOr 03151
Design	Randomized Block Design
Replications	Three
Plot size	Gross : 6.0 m x 0.90 m x 6 R Net : 5.0 m x 0.90 m x 4 R
Bud rate	12 buds/ metre
Planting time	1 st fortnight of January
Crop duration	10 months

Results of the previous year

The entries were under multiplication in the respective centres.

Results of the current year

The entry CoC 17336 (13.23 t/ha) was the top ranking entry across the locations for CCS yield followed by CoA 17321 (13.20 t/ha) while the best standard CoOr 03151 recorded 13.12 t/ha. For cane yield, the standard CoOr 03151 recorded the highest cane yield of 120.85 t/ha. None of the entries recorded more than 10 % improvement over the best standard CoOr 03151 for cane yield and CCS yield across locations. The entry CoA 17321 recorded the highest mean CCS % and juice sucrose % of 12.02 and 17.21 respectively. No entry recorded more than 5 % improvement for CCS % and sucrose % over the best standard cross the locations. Further details are presented in tables 3.5.1 to 3.5.20.

Table 3.5.1 CCS (t/ha) at harvest

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	CoA 17321	13.52*	15.66	12.45	11.32	13.04	13.20	2
2	CoA 17322	10.97	15.64	11.18	11.69	11.59	12.21	
3	CoA 17323	10.33	15.52	11.24	10.01	11.50	11.72	
4	CoC 17336	10.39	16.56*	13.52	15.67	10.03	13.23	1
	Standards							
1	CoA 92081	10.53	15.18	10.81	12.89	13.22	12.53	
2	CoC 01061	10.70	14.34	10.86	11.26	12.63	11.96	
3	CoOr 03151	10.49	15.04	12.02	15.52	12.52	13.12	3
	GM	10.99	15.42	11.73	12.60	12.08		
	SE	0.69	0.46	0.57	0.50	0.75		
	CD (0.05)	2.07	1.01	1.75	1.60	NS		
	CV	10.81	3.68	8.37	7.20	10.80		
Qualifying entries at each location								
	1	CoA 17321	-	CoC 17336	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded 10 % improvement over the best standard: CoA 17321 (1), CoC 17336 (1)

Performance of the entries across locations: The entry CoC 17336 (13.23 t/ha) was the best in the trial for CCS yield followed by CoA 17321 (13.20 t/ha) while the best standard CoOr 03151 recorded 13.12 t/ha. The top ranking entries CoC 17336 and CoA 17321 recorded a meagre improvement of 0.84 % and 0.61 % over the best standard CoOr 03151 across the locations respectively.

Table 3.5.2 Cane yield (t/ha) at harvest

S. No	Entry	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru	Mean	Rank
1	CoA 17321	123.15	130.70	105.73	108.42	110.80	115.76	
2	CoA 17322	96.48	129.23	97.22	111.35	104.01	107.66	
3	CoA 17323	90.37	127.63	93.69	99.55	95.83	101.41	
4	CoC 17336	90.74	135.10	114.78	125.40	117.59	116.72	
	Standards							
1	CoA 92081	88.52	126.96	93.77	124.24	104.63	107.62	
2	CoC 01061	87.59	124.05	93.61	103.02	104.78	102.61	
3	CoOr 03151	105.56	126.09	102.93	159.35	110.34	120.85	1
	GM	97.49	128.54	100.25	118.76	106.86		
	SE	6.03	4.50	4.56	5.00	6.62		
	CD (0.05)	18.18	9.80	14.04	15.30	NS		
	CV	10.72	4.29	7.87	7.20	10.70		
	Qualifying entries at each location							
	1	CoA 17321	-	CoC 17336	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded 10 % improvement over the best standard: CoA 17321 (1), CoC 17336 (1)

Performance of the entries across locations: The standard CoOr 03151 recorded the highest cane yield of 120.85 t/ha. None of the entries was found to be superior over the best standard CoOr 03151 for cane yield across locations.

Table 3.5.3 CCS % at 10th month

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	CoA 17321	14.22*	11.99	11.67	10.44	11.76	12.02	1
2	CoA 17322	12.94	12.10	11.61	10.51	11.14	11.66	
3	CoA 17323	13.77*	12.17	12.00	10.05	12.02	12.00	2
4	CoC 17336	12.89	12.26	11.76	10.89	8.53	11.27	
	Standards							
1	CoA 92081	12.49	11.96	11.54	10.37	12.61	11.79	
2	CoC 01061	12.97	11.56	11.60	10.91	12.06	11.82	3
3	CoOr 03151	12.79	11.93	11.68	9.74	11.36	11.50	
	GM	13.15	11.99	11.71	10.40	11.35		
	SE	0.08	0.30	0.10	0.50	0.13		
	CD (0.05)	0.24	0.66	NS	0.20	0.41		
	CV	1.07	3.10	1.47	0.80	2.00		
	Qualifying entries at each location							
	1	CoA 17321	-	-	-	-		
	2	CoA 17323	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded 5 % improvement over the best standard:

CoA 17321 (1) and CoA 17323 (1)

Performance of the entries across locations: The entry CoA 17321 recorded the highest mean CCS % of 12.02 followed by the entry CoA 17323 (12.00%) while the best standard CoC 01061 recorded 11.82 %. No entry recorded more than 5 % improvement for CCS % over the best standard CoC 01061 across the locations.

Table 3.5.4 Sucrose % at 10th month

S. No	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	CoA 17321	19.80*	16.88	17.10	15.22	17.20	17.24	1
2	CoA 17322	18.10	17.19	16.85	15.24	16.32	16.74	
3	CoA 17323	19.17*	17.37	17.25*	14.66	17.38	17.17	2
4	CoC 17336	18.07	17.66	17.26*	15.79	13.17	16.39	
	Standards							
1	CoA 92081	17.53	17.12	16.85	15.10	18.16	16.95	3
2	CoC 01061	18.17	16.39	16.75	15.82	17.52	16.93	
3	CoOr 03151	17.90	17.16	16.85	14.33	16.54	16.56	
	GM	18.39	17.11	16.99	15.20	16.61		
	SE	0.11	0.31	0.10	0.50	0.17		
	CD (0.05)	0.32	0.67	0.30	0.20	0.52		
	CV	0.99	2.20	0.98	0.60	1.70		
Qualifying entries at each location								
	1	CoA 17321	-	-	-	-		
	2	CoA 17323	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded 5 % improvement over the best standard:

CoA 17321 (1) and CoA 17323 (1)

Performance of the entries across locations: The entry CoA 17321 recorded the highest mean sucrose % of 17.24 followed by the entry CoA 17323 (17.17%) while the best standard CoA 92081 recorded 16.95% only. No entry recorded more than 5 % improvement for sucrose % over the best standard CoA 92081 across locations.

Table 3.5.5 Brix % at 10th month

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	21.90	18.04	19.54	17.50	19.89	19.37
2	CoA 17322	20.23	18.71	19.22	17.36	18.94	18.89
3	CoA 17323	21.17	19.12	19.29	16.89	19.66	19.23
4	CoC 17336	20.27	19.82	20.11	17.96	16.81	18.99
	Standards						
1	CoA 92081	19.73	18.98	19.45	17.33	20.30	19.16
2	CoC 01061	20.34	17.78	18.89	18.00	19.97	19.00
3	CoOr 03151	19.70	19.20	18.97	16.80	18.97	18.73
	GM	20.48	18.81	19.35	17.40	19.22	
	SE	0.16	0.49	0.20	0.40	0.18	
	CD (0.05)	0.49	1.08	0.61	0.10	0.54	
	CV	1.37	3.22	1.77	0.40	1.60	

Table 3.5.6 Purity % at 10th month

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	90.41	93.61	87.53	86.96	86.49	89.00
2	CoA 17322	89.47	91.92	87.69	87.77	86.15	88.60
3	CoA 17323	90.55	90.86	89.47	86.80	88.38	89.21
4	CoC 17336	89.14	89.15	85.84	87.91	78.36	86.08
	Standards						
1	CoA 92081	88.85	90.32	86.67	87.09	89.45	88.48
2	CoC 01061	89.33	92.18	88.71	87.89	87.71	89.16
3	CoOr 03151	90.91	89.43	88.84	85.30	87.19	88.33
	GM	89.81	91.07	87.82	87.10	86.25	
	SE	0.55	2.38	0.90	0.30	0.47	
	CD (0.05)	1.65	5.19	NS	0.90	1.44	
	CV	1.06	3.20	1.77	0.60	0.90	

Table 3.5.7 Pol % cane at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	14.91	12.99	13.11	11.73	-	13.19
2	CoA 17322	13.43	13.26	12.9	11.79	-	12.85
3	CoA 17323	14.41	13.34	13.26	11.29	-	13.08
4	CoC 17336	13.68	13.56	13.28	12.19	-	13.18
	Standards						
1	CoA 92081	13.1	12.61	12.77	11.64	-	12.53
2	CoC 01061	13.43	13.2	12.71	12.23	-	12.89
3	CoOr 03151	13.42	13.24	12.89	11.07	-	12.66
	GM	13.77	13.17	12.99	11.7	-	
	SE	0.45	0.16	0.77	0.50	-	
	CD (0.05)	1.40	0.51	0.24	0.10	-	
	CV	5.89	2.17	1.03	0.70	-	

Table 3.5.8 Extraction % at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	61.66	62.67	51.79	51.22	-	56.84
2	CoA 17322	62.49	60.62	53.21	52.03	-	57.09
3	CoA 17323	62.87	59.46	52.64	54.09	-	57.27
4	CoC 17336	61.11	60.34	53.1	52.96	-	56.88
	Standards						
1	CoA 92081	56.27	57.08	51.28	51.67	-	54.08
2	CoC 01061	61.85	58.56	51.67	53.18	-	56.32
3	CoOr 03151	60.45	56.51	52.18	52.33	-	55.37
	GM	60.96	59.32	52.27	52.50	-	
	SE	0.43	3.25	0.38	2.40	-	
	CD (0.05)	1.31	7.08	1.16	7.38	-	
	CV	1.23	6.71	1.25	7.91	-	

Table 3.5.9 Fiber % at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	15.74	13.05	13.33	12.91	-	13.76
2	CoA 17322	14.50	12.87	13.42	12.61	-	13.35
3	CoA 17323	15.68	13.17	13.09	12.98	-	13.73
4	CoC 17336	14.66	13.21	13.03	12.83	-	13.43
	Standards						
1	CoA 92081	16.12	12.89	14.18	12.92	-	14.03
2	CoC 01061	12.94	13.07	14.13	12.69	-	13.21
3	CoOr 03151	13.25	12.86	13.50	12.77	-	13.10
	GM	14.70	13.02	13.53	12.80	-	
	SE	0.10	0.15	0.07	0.10	-	
	CD (0.05)	0.30	0.34	0.22	0.40	-	
	CV	1.18	1.45	0.90	1.70	-	

Table 3.5.10 NMC ('000/ha) at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	120.00	132.05	106.06	107.60	78.70	108.88
2	CoA 17322	94.44	132.11	113.26	98.86	61.73	100.08
3	CoA 17323	86.30	124.22	117.85	103.29	60.49	98.43
4	CoC 17336	89.26	136.85	112.38	89.02	83.49	102.20
	Standards						
1	CoA 92081	102.41	132.54	110.25	98.83	63.89	101.58
2	CoC 01061	85.19	134.88	108.28	108.41	90.43	105.44
3	CoOr 03151	103.33	122.98	112.16	95.82	72.38	101.33
	GM	97.28	130.80	111.47	100.10	73.02	
	SE	3.80	4.30	2.15	4.20	5.57	
	CD (0.05)	11.44	9.36	6.61	13.00	17.15	
	CV	6.76	4.02	3.33	7.30	13.20	

Table 3.5.11 Stalk length (cm) at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	231.33	236.00	273.33	226.33	228.60	239.12
2	CoA 17322	225.33	240.00	258.67	233.67	238.20	239.17
3	CoA 17323	229.00	232.00	246.00	223.33	214.40	228.95
4	CoC 17336	218.67	254.00	278.33	283.67	269.90	260.91
	Standards						
1	CoA 92081	229.33	232.00	269.33	264.00	230.60	245.05
2	CoC 01061	226.00	241.00	252.67	286.33	243.90	249.98
3	CoOr 03151	225.00	232.00	277.67	296.67	322.80	270.83
	GM	226.38	238.00	265.14	259.14	249.80	
	SE	5.15	5.10	4.71	5.50	15.42	
	CD (0.05)	15.53	11.10	14.51	17.00	47.52	
	CV	3.94	2.62	3.08	3.70	10.70	

Table 3.5.12 Stalk diameter (cm) at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	2.29	3.05	2.30	2.61	2.45	2.54
2	CoA 17322	2.76	2.99	2.19	2.49	3.03	2.69
3	CoA 17323	2.74	3.04	2.15	2.29	3.01	2.65
4	CoC 17336	2.48	3.07	2.09	2.91	2.70	2.65
	Standards						
1	CoA 92081	2.37	2.89	2.12	2.79	2.88	2.61
2	CoC 01061	2.07	2.72	2.48	1.98	2.32	2.31
3	CoOr 03151	2.52	2.90	2.46	3.09	2.77	2.75
	GM	2.46	2.95	2.26	2.60	2.74	
	SE	0.14	0.14	0.08	0.60	0.13	
	CD (0.05)	0.41	0.31	0.25	0.20	0.39	
	CV	9.48	5.93	6.38	4.10	8.00	

Table 3.5.13 Single cane weight (kg) at harvest

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	1.03	1.28	1.45	1.35	1.08	1.24
2	CoA 17322	1.02	1.23	1.43	1.49	1.28	1.29
3	CoA 17323	1.04	1.19	1.53	1.26	1.25	1.25
4	CoC 17336	1.02	1.36	1.45	1.82	1.33	1.40
	Standards						
1	CoA 92081	1.03	1.25	1.35	1.64	1.35	1.32
2	CoC 01061	0.87	1.06	1.27	1.18	1.10	1.10
3	CoOr 03151	1.02	1.21	1.57	2.00	1.53	1.47
	GM	1.00	1.23	1.43	1.50	1.27	
	SE	0.05	0.10	0.56	0.50	0.04	
	CD (0.05)	0.15	0.21	0.18	0.20	0.11	
	CV	8.36	9.79	6.96	5.60	4.80	

Table 3.5.14 CCS % at 8 months

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	12.68	10.28	11.48	10.05	13.30	11.56
2	CoA 17322	11.74	10.64	11.32	10.01	12.72	11.29
3	CoA 17323	12.04	10.75	11.45	9.41	12.70	11.27
4	CoC 17336	12.19	10.87	11.62	10.63	10.70	11.20
	Standards						
1	CoA 92081	10.85	10.74	11.08	9.79	13.08	11.11
2	CoC 01061	11.34	10.27	10.83	10.54	13.07	11.21
3	CoOr 03151	9.26	10.63	11.35	9.13	12.30	10.53
	GM	11.56	10.60	11.30	9.90	12.55	
	SE	0.08	0.41	0.14	0.50	0.21	
	CD (0.05)	0.23	0.90	0.43	0.20	0.65	
	CV	1.09	4.76	2.14	1.00	2.90	

Table 3.5.15 Sucrose % at 8 months

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	18.21	14.75	16.70	14.64	13.86	15.63
2	CoA 17322	16.97	15.28	16.50	14.61	13.38	15.35
3	CoA 17323	17.39	15.49	16.65	13.84	14.01	15.48
4	CoC 17336	17.57	15.44	17.00	15.43	10.11	15.11
	Standards						
1	CoA 92081	15.73	15.25	16.25	14.41	15.08	15.34
2	CoC 01061	16.41	14.59	15.92	15.32	14.39	15.33
3	CoOr 03151	13.88	15.30	16.45	13.50	13.90	14.61
	GM	16.76	15.16	16.50	14.50	13.53	
	SE	0.10	0.42	0.13	0.60	0.17	
	CD (0.05)	0.32	0.92	0.42	0.20	0.52	
	CV	1.05	3.43	1.42	0.80	2.10	

Table 3.5.16 Brix % at 8 months

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	20.30	16.41	19.15	16.81	16.97	17.93
2	CoA 17322	19.20	17.06	18.98	16.87	16.27	17.68
3	CoA 17323	19.63	17.38	19.06	16.22	16.43	17.74
4	CoC 17336	19.73	16.80	19.73	17.58	13.37	17.44
	Standards						
1	CoA 92081	20.10	16.60	18.94	16.90	17.10	17.93
2	CoC 01061	17.90	15.91	18.61	17.50	16.90	17.36
3	CoOr 03151	18.60	17.15	18.71	16.00	16.00	17.29
	GM	19.35	16.76	19.03	16.80	16.15	
	SE	0.12	0.25	0.17	0.30	0.25	
	CD (0.05)	0.36	0.54	0.52	0.90	0.76	
	CV	1.05	1.82	1.52	0.30	2.60	

Table 3.5.17 Purity % at 8 months

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	89.71	89.89	87.23	87.09	80.99	86.98
2	CoA 17322	88.39	89.59	86.98	86.62	82.27	86.77
3	CoA 17323	88.59	89.11	87.41	85.33	85.28	87.14
4	CoC 17336	89.05	91.94	86.18	87.75	75.60	86.10
	Standards						
1	CoA 92081	89.00	91.87	85.79	85.27	88.18	88.02
2	CoC 01061	87.88	91.79	85.55	87.52	85.18	87.58
3	CoOr 03151	88.23	89.23	87.94	84.40	86.88	87.34
	GM	88.69	90.49	86.72	86.30	83.48	
	SE	0.16	2.37	0.96	0.20	0.66	
	CD (0.05)	0.48	5.17	NS	0.70	2.04	
	CV	0.31	3.21	1.91	0.50	1.40	

Table 3.5.18 Number of shoots ('000/ha) at 240 days

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	122.04	142.66	114.49	140.82	91.98	122.40
2	CoA 17322	95.37	144.74	126.36	136.07	79.48	116.40
3	CoA 17323	87.59	132.25	134.83	143.03	74.07	114.35
4	CoC 17336	92.04	152.28	123.78	109.97	84.26	112.47
	Standards						
1	CoA 92081	86.67	147.39	123.40	144.65	82.10	116.84
2	CoC 01061	116.67	148.20	124.82	140.82	111.11	128.32
3	CoOr 03151	108.33	135.83	119.99	139.78	78.70	116.53
	GM	101.24	143.34	123.95	136.38	85.96	
	SE	6.68	4.99	3.48	5.54	6.90	
	CD (0.05)	20.12	10.87	10.73	17.09	21.27	
	CV	11.42	4.26	4.87	7.10	13.90	

Table 3.5.19 Number of tillers ('000/ha) at 120 days

S. No	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17321	124.45	156.48	119.16	177.60	165.74	148.69
2	CoA 17322	96.49	159.41	131.15	175.97	142.59	141.12
3	CoA 17323	89.08	142.86	138.60	165.53	126.39	132.49
4	CoC 17336	94.08	169.62	126.48	186.18	132.25	141.72
	Standards						
1	CoA 92081	119.27	165.28	127.78	169.01	125.62	141.39
2	CoC 01061	88.16	169.14	127.43	178.99	172.84	147.31
3	CoOr 03151	112.60	152.18	124.09	172.26	128.86	138.00
	GM	103.45	159.28	127.81	175.10	142.04	
	SE	6.74	7.12	2.73	7.00	5.97	
	CD (0.05)	20.30	15.52	8.40	21.50	18.54	
	CV	11.28	5.48	3.70	6.90	7.30	

Table 3.5.20 Germination % at 30 days

S. No	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 17321	66.20	65.05	52.74	84.84	59.72	65.71
2	CoA 17322	64.93	66.39	52.80	85.30	55.09	64.90
3	CoA 17323	64.35	62.38	64.97	86.34	53.94	66.40
4	CoC 17336	63.89	69.42	52.88	86.34	50.58	64.62
	Standards						
1	CoA 92081	69.56	64.23	55.02	89.93	51.51	66.05
2	CoC 01061	62.15	67.15	51.09	85.07	54.17	63.93
3	CoOr 03151	66.30	61.43	66.06	85.07	50.00	65.77
	GM	65.69	65.15	56.51	86.10	53.57	
	SE	1.52	2.23	3.43	4.30	3.26	
	CD (0.05)	4.58	4.86	10.58	13.30	NS	
	CV	4.01	4.20	10.53	8.70	10.50	

Table 3.5.21. Assessment of the performance of entries compared to the best standard by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
CoA 17321	Poor	Poor	Better	Better	Better
CoA 17322	Poor	On par	On par	Better	Very Poor
CoA 17323	On par	On par	Poor	On par	On par
CoC 17336	Better	Poor	On par	Poor	On par
Standards					
CoA 92081					
CoC 01061					
CoOr 03151	Best	Best	Best	Best	Best

3.6 ADVANCED VARIETAL TRIAL (MIDLATE) – I PLANT

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (5)	CoC 15339, CoOr 15346, CoC 16338, CoC 16339 and CoV 16357
Standards (3)	CoV 92102, Co 86249, Co 06030
Design	Randomized Block Design
Replications	Three
Plot size	Gross : 6.0 m x 0.90 m x 8 R Net : 5.0 m x 0.90 m x 6 R
Bud rate	12 buds/ metre
Planting time	2 nd fortnight of November to end of December
Crop duration	12 months

Results of the previous year

In the initial varietal trial conducted during 2018-19, CoC 16339 was the top ranking entry for CCS yield (15.75 t/ha) and cane yield (129.66 t/ha). The best entry CoC 16339 recorded 6.49 % and 9.68 % improvement over the best standard CoV 92102 across locations for CCS yield and cane yield respectively. For juice quality, the standard CoV 92102 recorded the highest overall mean CCS % of 12.50 and sucrose of 17.95 %. None of the entries performed better than the standard CoV 92102 for CCS % and sucrose %.

Results of the current year

First plant crop of AVT midlate was conducted with five test entries and three standards in all five centres. Out of five test entries, CoC 16339 (14.13 t/ha) was the best for CCS yield while the best standard CoV 92102 recorded 13.45 t/ha across the locations. The best entry CoC 16339 registered 5.09 % improvement over the best standard CoV 92102. Among the five entries, CoV 16357 (116.42 t/ha) was the best entry in the trial that recorded 4.10 % improvement for cane yield over the best standard CoV 92102 (111.83 t/ha) across locations. For juice quality, the standard CoV 92102 recorded the highest mean CCS % and juice sucrose of 12.28 and 17.72 % across locations respectively. No qualifying entry has been identified for cane yield or juice quality from this trial. Further details are presented in tables **3.6.1 to 3.6.20**.

Table 3.6.1 CCS (t/ha) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	CoC 15339	11.62	17.10	11.88*	13.78	15.72	14.02	2
2	CoOr 15346	11.89	15.84	13.35*	11.17	15.23	13.50	5
3	CoC 16338	11.73	15.92	10.79	14.92	14.94	13.66	4
4	CoC 16339	12.20	16.94	10.67	16.02	14.84	14.13	1
5	CoV 16357	12.73	15.70	9.14	15.12	17.10	13.96	3
	Standards							
1	CoV 92102	11.72	14.94	10.71	14.01	15.89	13.45	6
2	Co 86249	11.55	13.74	10.66	12.36	13.64	12.39	
3	Co 06030	12.01	15.29	9.35	13.62	12.40	12.53	
	GM	11.93	15.68	10.82	13.87	14.97		
	SE	0.51	0.91	0.36	0.82	0.84		
	CD (0.05)	1.53	1.96	1.10	2.45	2.53		
	CV	5.65	7.13	5.78	10.27	9.70		
	Qualifying entries at each location							
	1	-	CoC 15339	CoOr 15346	CoC 16339	-		
	2	-	CoC 16339	CoC 15339	-	-		
	3	-	-		-	-		

* Significant over the best standard

No. of locations where an entry recorded >10 % improvement over the best standard:
CoC 16339 (2), CoC 15339 (2), CoOr 15346 (1)

Performance of the entries across locations: CoC 16339 (14.13 t/ha) was the best entry for CCS yield while the best standard CoV 92102 recorded 13.45 t/ha across the locations. The best entry CoC 16339 registered 5.09 % improvement over the best standard CoV 92102. None of the entries recorded more than 10 % improvement for CCS yield over the best standard CoV 92102 across locations.

Table 3.6.2 Cane yield (t/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean	Rank
1	CoC 15339	103.33	135.12	99.96	118.99	121.40	115.76	2
2	CoOr 15346	112.84	127.20	109.47*	101.24	112.55	112.66	5
3	CoC 16338	117.41	128.81	92.49	116.60	119.24	114.91	3
4	CoC 16339	114.44	133.41	91.83	119.30	111.93	114.18	4
5	CoV 16357	113.19	127.49	80.05	135.74	125.62	116.42	1
	Standards							
1	CoV 92102	108.64	121.75	89.45	122.15	117.18	111.83	6
2	Co 86249	115.31	112.95	91.93	116.98	114.51	110.34	
3	Co 06030	116.54	123.28	81.41	118.84	98.25	107.66	
	GM	112.71	126.25	92.07	120.17	115.08		
	SE	3.68	7.41	3.43	6.98	5.92		
	CD (0.05)	11.10	15.89	10.40	21.17	NS		
	CV	4.80	7.19	6.45	10.06	8.90		
Qualifying entries at each location								
	1	-	-	CoOr 15346	CoV 16357	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

No. of locations where an entry recorded >10 % improvement over the best standard:

CoOr 15346 (1), CoV 16357 (1)

Performance of the entries across locations: CoV 16357 (116.42 t/ha) was the best entry in the trial that recorded 4.10 % improvement for cane yield over the best standard CoV 92102 (111.83 t/ha) across locations. None of the entries recorded more than 10 % improvement for cane yield over the best standard CoV 92102 across locations.

Table 3.6.3 CCS % at 12th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean	Rank
1	CoC 15339	11.89	12.65	11.89	11.59	12.94	12.19	
2	CoOr 15346	11.72	12.45	12.20	11.02	13.54	12.19	
3	CoC 16338	11.26	12.37	11.68	11.65	12.54	11.90	
4	CoC 16339	11.62	12.69	11.63	10.87	12.90	11.94	
5	CoV 16357	12.21	12.33	11.41	11.14	13.62	12.14	
	Standards							
1	CoV 92102	12.13	12.27	11.98	11.47	13.55	12.28	1
2	Co 86249	11.35	12.16	11.59	10.56	11.90	11.51	
3	Co 06030	11.86	12.41	11.48	11.47	12.63	11.97	
	GM	11.76	12.42	11.73	11.22	12.95		
	SE	0.07	0.20	0.11	0.96	0.17		
	CD (0.05)	0.20	0.42	NS	0.29	0.50		
	CV	3.42	1.93	1.59	1.48	2.20		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

No. of locations where an entry recorded >5 % improvement over the best standard: Nil

Performance of the entries across locations: The standard CoV 92102 recorded the highest mean CCS % of 12.28 across locations.

Table 3.6.4 Sucrose % at 12th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	CoC 15339	17.17	18.61	17.20	16.59	18.67	17.65	
2	CoOr 15346	16.93	18.14	17.72	16.02	19.21	17.60	
3	CoC 16338	16.30	18.24	17.07	16.57	17.78	17.19	
4	CoC 16339	16.80	18.44	17.04	15.67	18.31	17.25	
5	CoV 16357	17.60	18.22	16.56	16.10	19.86	17.67	
	Standards							
1	CoV 92102	17.50	17.63	17.38	16.71	19.36	17.72	1
2	Co 86249	16.43	17.89	17.01	15.29	16.88	16.70	
3	Co 06030	17.13	18.22	16.80	16.43	17.78	17.27	
	GM	16.98	18.17	17.10	16.17	18.48		
	SE	0.09	0.21	0.17	0.13	0.19		
	CD (0.05)	0.28	0.44	NS	0.40	0.59		
	CV	2.77	1.39	1.67	1.40	1.80		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

No. of locations where an entry recorded >5 % improvement over the best standard: Nil

Performance of the entries across locations: The standard CoV 92102 recorded the highest mean juice sucrose of 17.72 % across locations.

Table 3.6.5 Brix % at 12th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	19.33	21.80	19.49	18.37	21.03	20.00
2	CoOr 15346	19.30	20.84	20.24	18.33	20.87	19.92
3	CoC 16338	18.57	21.48	19.76	18.10	19.26	19.43
4	CoC 16339	19.03	21.08	19.81	17.61	19.90	19.49
5	CoV 16357	19.77	21.55	18.89	18.20	22.83	20.25
	Standards						
1	CoV 92102	19.60	19.68	19.8	19.20	21.34	19.92
2	Co 86249	18.67	20.98	19.86	17.34	18.32	19.03
3	Co 06030	19.50	21.27	19.47	18.24	18.98	19.49
	GM	19.22	21.09	19.67	18.17	20.32	
	SE	0.17	0.13	0.25	0.17	0.26	
	CD (0.05)	0.50	0.28	0.77	0.50	0.77	
	CV	2.24	0.76	2.23	1.58	2.20	

Table 3.6.6 Purity % at 12th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	88.79	85.35	88.30	90.29	88.81	88.31
2	CoOr 15346	87.74	87.02	87.53	87.40	92.08	88.35
3	CoC 16338	87.80	84.90	86.40	91.53	92.28	88.58
4	CoC 16339	88.27	87.49	85.98	88.98	92.01	88.55
5	CoV 16357	89.04	84.55	87.66	88.46	86.98	87.34
	Standards						
1	CoV 92102	89.30	89.59	87.83	87.03	90.75	88.90
2	Co 86249	88.02	85.26	85.64	88.19	92.17	87.86
3	Co 06030	87.88	85.68	86.31	90.09	93.68	88.73
	GM	88.36	86.23	86.96	89.00	91.09	
	SE	0.62	0.86	0.54	0.45	0.95	
	CD (0.05)	1.86	1.85	NS	1.36	2.89	
	CV	1.97	1.23	1.08	0.87	1.80	

Table 3.6.7 Pol % cane at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	12.92	14.32	13.24	12.78	-	13.32
2	CoOr 15346	12.56	13.96	13.75	12.33	-	13.15
3	CoC 16338	12.25	14.04	13.03	12.83	-	13.04
4	CoC 16339	12.72	14.15	12.85	12.17	-	12.97
5	CoV 16357	13.01	14.05	12.59	12.44	-	13.02
	Standards						
1	CoV 92102	13.07	13.60	13.42	12.89	-	13.25
2	Co 86249	12.32	13.82	13.40	11.82	-	12.84
3	Co 06030	12.84	14.04	12.89	12.75	-	13.13
	GM	12.71	14.00	13.10	12.50	-	
	SE	0.09	0.11	0.13	0.10	-	
	CD (0.05)	0.27	0.34	0.41	0.31	-	
	CV	2.73	1.38	1.78	1.43	-	

Table 3.6 .8 Extraction % at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	61.32	62.11	52.02	49.58	-	56.26
2	CoOr 15346	60.28	61.89	53.24	48.82	-	56.06
3	CoC 16338	61.23	59.64	51.78	52.62	-	56.32
4	CoC 16339	60.81	62.55	50.2	51.78	-	56.34
5	CoV 16357	61.47	56.60	53.05	52.42	-	55.89
	Standards						
1	CoV 92102	61.00	56.91	52.65	49.21	-	54.94
2	Co 86249	60.33	54.97	50.24	50.55	-	54.02
3	Co 06030	61.25	59.63	51.32	50.46	-	55.67
	GM	60.96	59.29	51.81	50.67	-	
	SE	0.29	2.58	0.72	2.16	-	
	CD (0.05)	0.87	5.53	NS	6.57	-	
	CV	0.82	5.33	2.39	7.40	-	

Table 3.6.9 Fiber % at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	17.67	13.02	13.06	12.96	-	14.18
2	CoOr 15346	14.62	13.01	12.39	13.04	-	13.27
3	CoC 16338	19.14	13.00	13.59	12.55	-	14.57
4	CoC 16339	16.39	13.27	14.59	12.36	-	14.15
5	CoV 16357	14.56	12.89	13.96	12.75	-	13.54
	Standards						
1	CoV 92102	14.85	12.86	12.76	12.84	-	13.33
2	Co 86249	17.96	12.77	13.32	12.67	-	14.18
3	Co 06030	15.55	12.93	13.25	12.37	-	13.53
	GM	16.34	12.97	13.37	12.69	-	
	SE	0.62	0.12	0.26	0.17	-	
	CD (0.05)	1.88	0.25	0.79	0.51	-	
	CV	0.99	1.11	3.38	2.31	-	

Table 3.6.10 NMC ('000/ha) at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	93.09	122.49	104.37	119.12	85.60	104.93
2	CoOr 15346	100.87	118.92	113.67	131.07	76.03	108.11
3	CoC 16338	106.42	119.85	102.11	85.14	73.87	97.48
4	CoC 16339	101.85	124.76	98.26	81.84	75.31	96.40
5	CoV 16357	102.72	114.46	92.62	120.18	84.36	102.87
	Standards						
1	CoV 92102	96.30	107.66	95.36	114.14	88.48	100.39
2	Co 86249	103.70	108.61	103.45	129.40	97.53	108.54
3	Co 06030	103.83	114.84	93.90	94.37	58.03	92.99
	GM	101.10	116.45	100.47	109.37	79.90	
	SE	3.79	4.23	3.32	5.32	5.35	
	CD (0.05)	11.42	9.06	10.06	16.14	16.24	
	CV	5.04	4.44	5.72	8.43	11.60	

Table 3.6.11 Stalk length (cm) at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	255.00	249.00	278.00	242.33	288.30	262.53
2	CoOr 15346	265.00	232.00	307.00	232.00	273.30	261.86
3	CoC 16338	231.70	235.00	278.67	289.67	295.60	266.13
4	CoC 16339	235.00	242.00	274.67	309.00	269.90	266.11
5	CoV 16357	295.00	222.00	270.67	257.67	225.00	254.07
	Standards						
1	CoV 92102	216.70	222.00	268.33	270.67	312.80	258.10
2	Co 86249	228.30	215.00	280.33	222.33	295.00	248.19
3	Co 06030	216.70	227.00	296.67	238.67	300.00	255.81
	GM	242.93	230.00	281.67	257.80	282.50	
	SE	6.34	9.38	6.57	7.10	16.45	
	CD (0.05)	19.12	20.12	19.92	21.40	NS	
	CV	4.52	4.99	4.04	4.70	10.10	

Table 3.6.12 Stalk diameter (cm) at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	2.24	3.26	2.64	2.39	2.89	2.68
2	CoOr 15346	1.71	3.13	3.00	2.09	2.79	2.54
3	CoC 16338	2.29	3.15	2.57	2.60	2.69	2.66
4	CoC 16339	2.06	3.29	2.81	2.64	2.72	2.70
5	CoV 16357	2.53	3.06	2.54	2.85	2.92	2.78
	Standards						
1	CoV 92102	2.49	2.98	2.61	2.45	2.67	2.64
2	Co 86249	2.24	2.71	2.76	2.36	2.68	2.55
3	Co 06030	2.62	3.06	2.80	2.84	3.03	2.87
	GM	2.27	3.08	2.72	2.52	2.80	
	SE	0.05	0.12	0.08	0.61	0.07	
	CD (0.05)	0.14	0.25	0.25	0.18	0.21	
	CV	3.52	4.72	5.34	4.17	4.20	

Table 3.6.13 Single cane weight (kg) at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	1.11	1.41	1.23	1.21	1.53	1.30
2	CoOr 15346	1.12	1.23	1.48	1.00	1.32	1.23
3	CoC 16338	1.11	1.26	1.09	1.82	1.53	1.36
4	CoC 16339	1.12	1.32	1.34	1.96	1.49	1.45
5	CoV 16357	1.10	1.17	0.95	1.40	1.61	1.25
	Standards						
1	CoV 92102	1.13	1.14	1.10	1.44	1.32	1.23
2	Co 86249	1.11	1.04	1.18	1.12	1.20	1.13
3	Co 06030	1.13	1.14	1.08	1.59	1.36	1.26
	GM	1.12	1.22	1.18	1.44	1.42	
	SE	0.03	0.10	0.05	0.38	0.04	
	CD (0.05)	0.10	0.22	0.17	0.12	0.12	
	CV	5.05	10.29	7.97	4.57	5.00	

Table 3.6.14 CCS % at 10 months

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	11.31	11.81	9.64	10.33	11.80	10.98
2	CoOr 15346	11.28	11.62	10.07	9.86	12.31	11.03
3	CoC 16338	10.98	11.51	10.14	10.14	11.53	10.86
4	CoC 16339	11.32	11.81	9.90	9.25	11.62	10.78
5	CoV 16357	12.03	11.75	9.62	9.93	13.22	11.31
	Standards						
1	CoV 92102	12.00	11.46	9.65	10.86	12.64	11.32
2	Co 86249	11.18	11.33	9.67	9.69	11.32	10.64
3	Co 06030	11.18	11.57	9.80	10.68	10.87	10.82
	GM	11.41	11.61	9.83	10.09	11.91	
	SE	0.20	0.24	0.15	0.12	0.05	
	CD (0.05)	0.61	0.51	0.44	0.38	0.15	
	CV	3.07	2.52	2.55	2.13	0.70	

Table 3.6.15 Sucrose % at 10 months

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	16.50	17.30	14.50	15.04	17.40	16.15
2	CoOr 15346	16.43	16.82	15.21	14.51	17.78	16.15
3	CoC 16338	15.93	16.88	14.99	14.79	16.68	15.85
4	CoC 16339	16.37	17.09	14.66	13.67	17.00	15.76
5	CoV 16357	17.33	17.12	14.27	14.67	19.12	16.50
	Standards						
1	CoV 92102	17.33	16.32	14.70	15.80	18.24	16.48
2	Co 86249	16.20	16.54	14.49	14.19	16.12	15.51
3	Co 06030	16.43	16.86	14.75	15.57	16.81	16.08
	GM	16.57	16.87	14.70	14.78	17.39	
	SE	0.19	0.24	0.16	0.18	0.07	
	CD (0.05)	0.59	0.51	0.47	0.54	0.21	
	CV	2.03	1.74	1.84	2.10	0.70	

Table 3.6.16 Brix % at 10 months

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	19.03	20.12	16.91	17.27	20.47	18.76
2	CoOr 15346	18.90	19.06	17.99	17.03	20.09	18.61
3	CoC 16338	18.17	19.65	17.74	17.04	18.88	18.30
4	CoC 16339	18.53	19.37	16.73	16.16	19.70	18.10
5	CoV 16357	19.47	19.67	16.85	17.33	21.62	18.99
	Standards						
1	CoV 92102	19.57	17.86	17.95	18.10	20.57	18.81
2	Co 86249	18.40	19.12	17.59	16.49	17.65	17.85
3	Co 06030	19.23	19.40	17.06	17.93	21.59	19.04
	GM	18.91	19.28	17.35	17.16	20.07	
	SE	0.17	0.18	0.23	0.22	0.32	
	CD (0.05)	0.50	0.38	NS	0.68	0.97	
	CV	1.53	1.12	2.33	2.24	2.80	

Table 3.6.17 Purity % at 10 months

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	86.72	86.01	84.37	87.09	85.11	85.86
2	CoOr 15346	86.97	88.25	83.36	85.22	88.58	86.48
3	CoC 16338	87.71	85.90	84.51	86.77	88.37	86.65
4	CoC 16339	88.31	88.21	86.48	84.59	86.30	86.78
5	CoV 16357	89.02	87.04	84.45	84.65	88.45	86.72
	Standards						
1	CoV 92102	88.61	91.36	81.21	87.29	88.70	87.43
2	Co 86249	88.05	86.54	82.46	86.07	91.35	86.89
3	Co 06030	85.43	86.90	85.81	86.87	77.86	84.57
	GM	87.60	87.53	84.08	86.06	86.84	
	SE	1.25	1.31	1.29	0.36	1.08	
	CD (0.05)	3.76	2.81	NS	1.08	3.27	
	CV	2.47	1.83	2.66	0.72	2.10	

Table 3.6.18 Number of shoots ('000/ha) at 240 days

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	96.05	135.10	111.02	140.13	91.56	114.77
2	CoOr 15346	105.43	131.71	118.65	147.44	82.10	117.07
3	CoC 16338	111.97	131.15	109.49	141.52	78.40	114.51
4	CoC 16339	106.42	136.94	107.13	133.05	80.25	112.76
5	CoV 16357	108.15	127.03	103.59	150.80	89.10	115.73
	Standards						
1	CoV 92102	106.91	120.77	105.80	140.82	92.18	113.30
2	Co 86249	113.08	121.54	111.69	141.75	103.19	118.25
3	Co 06030	111.36	128.43	100.94	148.13	61.83	110.14
	GM	107.42	129.08	108.54	142.91	84.83	
	SE	3.38	4.08	3.19	6.20	5.37	
	CD (0.05)	10.18	8.79	9.66	18.83	16.27	
	CV	5.45	3.88	5.08	7.52	10.40	

Table 3.6.19 Number of tillers ('000/ha) at 120 days

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	101.55	145.48	126.33	170.98	124.59	133.79
2	CoOr 15346	111.07	142.36	136.32	172.26	122.63	136.93
3	CoC 16338	117.23	141.44	127.15	173.30	112.55	134.33
4	CoC 16339	115.28	148.18	124.8	174.00	109.05	134.26
5	CoV 16357	117.77	137.37	120.79	175.28	105.04	131.25
	Standards						
1	CoV 92102	110.11	132.67	130.24	176.32	117.28	133.32
2	Co 86249	118.97	134.33	126.75	165.42	123.56	133.81
3	Co 06030	115.42	141.74	128.47	168.55	72.74	125.38
	GM	113.43	140.45	127.61	172.01	110.93	
	SE	3.91	3.32	3.01	9.34	6.67	
	CD (0.05)	11.77	7.11	9.14	28.33	20.24	
	CV	5.96	2.89	4.09	9.40	11.00	

Table 3.6.20 Germination % at 30 days

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoC 15339	66.71	61.25	51.05	85.07	60.18	64.85
2	CoOr 15346	75.43	59.99	59.98	87.5	58.64	68.31
3	CoC 16338	79.36	64.34	52.75	87.73	46.83	66.20
4	CoC 16339	76.66	62.67	50.92	87.96	47.07	65.06
5	CoV 16357	77.05	65.71	49.90	85.3	49.00	65.39
	Standards						
1	CoV 92102	78.05	69.24	49.05	88.31	56.02	68.13
2	Co 86249	82.98	61.01	52.74	86.69	54.55	67.59
3	Co 06030	82.29	57.95	48.39	82.06	41.05	62.35
	GM	77.32	62.77	51.85	86.32	51.67	
	SE	2.31	2.17	2.30	3.57	3.32	
	CD (0.05)	6.97	4.65	6.97	10.83	10.08	
	CV	5.18	4.23	9.68	7.16	11.10	

Table 3.6.21. Assessment of the performance of entries compared to the best standard by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
CoC 15339	On par	Better	On par	Better	Better
CoOr 15346	Poor	Better	On par	Poor	On par
CoC 16338	On par	On par	On par	On par	On par
CoC 16339	Better	On par	Better	Better	On par
CoV 16357	On par	Better	On par	On par	Poor
Standards					
CoV 92102					
Co 86249				Best	Best
Co 06030	Best	Best	Best		

3.7 INITIAL VARIETAL TRIAL (MIDLATE)

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (5)	CoA 17324 (Co 85002 PC) CoC 17337 (Co 86032 x Co 86249) CoOr 17346 (CoC 671 x Co 95021) PI 17376 (Co 0323 PC) PI 17377 (Co 0323 PC)
Standards (3)	CoV 92102 ,Co 86249, Co 06030
Design	Randomized Block Design
Replications	Three
Plot size	Gross : 6.0 m x 0.90 m x 6 R Net : 5.0 m x 0.90 m x 4 R
Bud rate	12 buds/ metre
Planting time	2 nd fortnight of November to end of December
Crop duration	12 months

Results of the previous year

The entries were under multiplication in the respective centres.

Results of the current year

Initial varietal trial was conducted with five test entries and three standards at five locations in this zone. The standard CoV 92102 recorded the highest CCS yield of 13.02 t/ha. None of the test entries performed better than the standard CoV 92102 for CCS yield. The entry CoOr 17346 (110.06 t/ha) was the best yielder in the trial followed by PI 17376 (109.30 t/ha) and CoC 17337 (109.28 t/ha) while the best standard CoV 92102 recorded 106.87 t/ha of cane yield across locations. No entry recorded 10 % improvement for cane yield over the best standard CoV 92102. For juice quality, the standard CoV 92102 registered the highest overall mean CCS % of 12.23 and juice sucrose of 17.70 % across locations. None of entries performed better than the standard CoV 92102 for CCS % and sucrose % across locations. No qualifying entry could be identified for cane yield and juice quality from this trial. Further details are presented in tables 3.7.1 to 3.7.20.

Table 3.7.1 CCS (t/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean	Rank
1	CoA 17324	11.80	15.89	11.86	7.92	7.03	10.90	
2	CoC 17337	10.08	17.05	12.08	12.20	11.09	12.50	
3	CoOr 17346	9.20	16.12	13.59*	11.35	12.62	12.58	
4	PI 17376	10.31	16.86	11.87	11.88	11.06	12.40	
5	PI 17377	7.43	16.93	11.35	10.52	9.81	11.21	
	Standards							
1	CoV 92102	10.72	14.92	11.70	13.23	14.53	13.02	1
2	Co 86249	9.15	13.97	11.78	10.17	12.18	11.45	
3	Co 06030	9.97	15.89	11.08	13.43	14.11	12.90	
	GM	9.83	15.95	11.92	11.28	11.55		
	SE	0.48	0.89	0.38	0.69	0.93		
	CD (0.05)	1.44	1.90	1.14	2.09	2.83		
	CV	8.40	6.82	5.47	10.58	14.00		
	Qualifying entries at each location							
	1	-	-	CoOr 17346	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded >10 % improvement over the best standard:
CoOr 17346 (1)

Performance of the entries across locations: The standard CoV 92102 recorded the highest CCS yield of 13.02 t/ha. No entry outperformed the standard CoV 92102 for CCS yield.

Table 3.7.2 Cane yield (t/ha) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	CoA 17324	92.59	126.60	101.07	93.37	67.44	96.21	
2	CoC 17337	88.33	134.02	102.44	124.24	97.38	109.28	3
3	CoOr 17346	86.48	130.69	112.04*	112.28	108.80	110.06	1
4	PI 17376	86.30	132.99	102.60	126.32	98.30	109.30	2
5	PI 17377	66.30	136.56	97.46	94.92	93.06	97.66	
	Standards							
1	CoV 92102	84.81	122.69	100.35	120.46	106.02	106.87	4
2	Co 86249	74.26	114.98	100.23	105.02	105.56	100.01	
3	Co 06030	81.48	128.06	96.63	124.93	102.93	106.81	
	GM	82.57	128.32	101.60	112.70	97.43		
	SE	3.81	7.11	3.11	7.10	7.22		
	CD (0.05)	11.47	15.24	9.44	21.40	21.89		
	CV	7.98	6.78	5.30	10.90	12.80		
Qualifying entries at each location								
	1	-	-	CoOr 17346	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded >10% improvement over the best standard:

CoOr 17346 (1)

Performance of the entries across locations: The entry CoOr 17346 (110.06 t/ha) was the best yielder in the trial followed by PI 17376 (109.30 t/ha) and CoC 17337 (109.28 t/ha). The best entry CoOr 17346 recorded 2.98 % improvement over the best standard CoV 92102 (106.87 t/ha) across locations.

Table 3.7.3 CCS % at 12th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean	Rank
1	CoA 17324	12.74	12.54	11.74	8.48	10.43	11.19	
2	CoC 17337	11.40	12.72	11.80	9.83	11.40	11.43	
3	CoOr 17346	10.62	12.34	12.13	10.11	11.62	11.36	
4	PI 17376	11.95	12.67	11.57	9.41	11.24	11.37	
5	PI 17377	11.22	12.40	11.65	11.13	10.51	11.38	
	Standards							
1	CoV 92102	12.64	12.16	11.67	10.98	13.71	12.23	1
2	Co 86249	12.32	12.14	11.75	9.69	11.52	11.48	
3	Co 06030	12.24	12.41	11.46	10.76	13.71	12.12	
	GM	11.89	12.42	11.72	10.05	11.77		
	SE	0.07	0.16	0.05	0.17	0.42		
	CD (0.05)	0.22	0.35	NS	0.51	0.91		
	CV	1.06	1.61	0.79	2.91	4.40		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded >5 % improvement over the best standard: Nil

Performance of the entries across locations: The standard CoV 92102 recorded the highest overall mean CCS % of 12.23. None of the entries performed better than the best standard CoV 92102 for CCS % across locations.

Table3.7.4 Sucrose % at 12th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean	Rank
1	CoA 17324	18.33	17.78	17.37	12.81	15.28	16.31	
2	CoC 17337	16.50	18.20	17.37	14.29	17.07	16.69	
3	CoOr 17346	15.43	17.72	17.74*	15.02	17.01	16.58	
4	PI 17376	17.23	18.09	17.24	13.88	16.41	16.57	
5	PI 17377	16.23	17.87	17.18	16.11	15.63	16.60	
	Standards							
1	CoV 92102	18.20	17.85	17.18	15.93	19.35	17.70	1
2	Co 86249	17.77	18.02	17.24	14.39	17.19	16.92	
3	Co 06030	17.67	17.90	16.98	15.77	19.39	17.54	2
	GM	17.17	17.93	17.29	14.77	17.17		
	SE	0.10	0.19	0.50	0.24	0.33		
	CD (0.05)	0.31	0.40	0.15	0.74	1.00		
	CV	1.02	1.28	0.49	2.84	3.30		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

No. of locations where an entry recorded >5 % improvement over the best standard: Nil

Performance of the entries across locations: The standard CoV 92102 recorded the highest overall mean juice sucrose of 17.70 %. None of the entries performed better than the best standard CoV 92102 for sucrose content across locations.

Table 3.7.5 Brix % at 12th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	20.53	19.27	20.61	15.81	17.75	18.79
2	CoC 17337	18.70	20.15	20.37	16.35	20.68	19.25
3	CoOr 17346	17.63	19.73	20.55	17.96	19.75	19.12
4	PI 17376	19.40	19.91	20.71	16.37	18.92	19.06
5	PI 17377	18.40	20.08	20.23	18.27	18.70	19.14
	Standards						
1	CoV 92102	20.40	20.80	20.19	18.15	20.72	20.05
2	Co 86249	20.00	21.50	20.24	17.16	20.71	19.92
3	Co 06030	19.90	20.15	20.16	18.34	21.10	19.93
	GM	19.37	20.20	20.38	17.29	19.79	
	SE	0.11	0.25	0.11	0.30	0.30	
	CD (0.05)	0.34	0.54	NS	0.92	0.91	
	CV	1.02	1.54	0.96	3.03	2.60	

Table 3.7.6 Purity % at 12th month

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	89.28	92.26	84.30	81.05	86.15	86.61
2	CoC 17337	88.24	90.32	85.26	87.39	82.55	86.75
3	CoOr 17346	87.52	89.83	86.34	83.69	86.07	86.69
4	PI 17376	88.83	90.84	83.23	84.80	86.78	86.90
5	PI 17377	88.22	89.01	84.92	88.24	83.62	86.80
	Standards						
1	CoV 92102	89.22	85.80	85.11	87.79	93.36	88.26
2	Co 86249	88.84	83.85	85.20	83.86	83.01	84.95
3	Co 06030	88.78	88.84	84.20	85.97	91.88	87.93
	GM	88.62	88.84	84.82	85.35	86.68	
	SE	0.16	0.97	0.46	0.58	1.50	
	CD (0.05)	0.50	2.07	NS	1.74	4.56	
	CV	0.32	1.33	0.94	1.17	3.00	

Table 3.7.7 Pol % cane at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 17324	13.80	13.70	13.23	9.85	-	12.65
2	CoC 17337	12.24	13.98	13.20	11.02	-	12.61
3	CoOr 17346	11.60	13.65	13.72	11.63	-	12.65
4	PI 17376	13.05	13.88	13.15	10.72	-	12.70
5	PI 17377	12.00	13.73	13.22	12.45	-	12.85
	Standards						
1	CoV 92102	13.60	13.75	13.25	12.29	-	13.22
2	Co 86249	13.32	13.91	13.07	11.12	-	12.86
3	Co 06030	13.24	13.79	12.89	12.14	-	13.02
	GM	12.86	13.80	13.22	11.40	-	
	SE	0.07	0.10	0.04	0.18	-	
	CD (0.05)	0.22	0.32	NS	0.57	-	
	CV	0.99	1.31	0.54	2.86	-	

Table 3.7.8 Extraction % at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 17324	61.83	60.84	52.08	50.85	-	56.40
2	CoC 17337	60.56	62.91	52.28	49.44	-	56.30
3	CoOr 17346	60.09	56.37	52.99	50.97	-	55.11
4	PI 17376	60.72	61.95	51.58	49.12	-	55.84
5	PI 17377	60.47	60.01	52.12	51.03	-	55.91
	Standards						
1	CoV 92102	61.44	57.15	51.60	49.81	-	55.00
2	Co 86249	59.73	55.13	51.43	51.01	-	54.33
3	Co 06030	61.20	58.83	52.89	49.90	-	55.71
	GM	60.76	59.15	52.12	50.26	-	
	SE	0.70	3.50	0.63	0.84	-	
	CD (0.05)	2.10	7.50	1.89	2.54	-	
	CV	1.98	7.24	2.08	2.89	-	

Table 3.7.9 Fiber % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 17324	11.65	12.95	13.83	13.12	-	12.89
2	CoC 17337	13.66	13.20	14.00	12.90	-	13.44
3	CoOr 17346	15.28	12.97	12.67	12.62	-	13.39
4	PI 17376	18.12	13.30	13.73	12.73	-	14.47
5	PI 17377	12.13	13.14	13.05	12.76	-	12.77
	Standards						
1	CoV 92102	13.42	12.94	12.87	12.86	-	13.02
2	Co 86249	14.32	12.78	14.21	12.75	-	13.52
3	Co 06030	12.28	12.98	14.04	13.02	-	13.08
	GM	13.86	13.03	13.55	12.84	-	
	SE	0.43	0.12	0.18	0.19	-	
	CD (0.05)	1.30	0.26	NS	0.57	-	
	CV	5.40	1.15	2.25	2.53	-	

Table 3.7.10 NMC ('000/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 17324	85.15	121.39	120.29	106.93	46.91	96.13
2	CoC 17337	79.17	129.75	117.23	105.33	62.04	98.70
3	CoOr 17346	78.89	125.74	118.56	107.88	73.30	100.87
4	PI 17376	80.92	124.15	116.57	106.71	68.06	99.28
5	PI 17377	57.78	114.57	109.21	91.72	57.87	86.23
	Standards						
1	CoV 92102	76.67	110.5	111.96	104.40	80.09	96.72
2	Co 86249	71.67	117.14	108.76	112.89	69.14	95.92
3	Co 06030	75.93	118.58	110.19	89.81	62.04	91.31
	GM	75.77	120.23	114.10	103.20	64.93	
	SE	3.13	4.95	1.69	5.40	4.68	
	CD (0.05)	9.44	10.61	5.12	16.50	14.18	
	CV	7.16	5.04	2.56	9.10	12.50	

Table 3.7.11 Stalk length (cm) at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	282.97	224.00	302.67	257.67	214.20	256.30
2	CoC 17337	273.33	245.00	288.00	309.67	256.70	274.54
3	CoOr 17346	275.33	236.00	283.67	339.00	273.30	281.46
4	PI 17376	265.63	254.00	246.00	272.33	238.30	255.25
5	PI 17377	263.40	246.00	266.00	300.00	248.90	264.86
	Standards						
1	CoV 92102	289.53	226.00	332.00	263.33	273.10	276.79
2	Co 86249	278.53	214.00	306.67	257.00	273.30	265.90
3	Co 06030	267.97	225.00	293.33	261.67	286.70	266.93
	GM	274.59	234.00	289.79	282.50	258.10	
	SE	4.28	10.01	13.22	8.90	10.72	
	CD (0.05)	12.88	21.47	40.10	27.10	32.52	
	CV	2.70	5.24	7.90	5.50	7.20	

Table 3.7.12 Stalk diameter (cm) at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	2.26	3.04	2.13	2.52	2.92	2.57
2	CoC 17337	2.31	3.32	2.19	3.07	2.68	2.71
3	CoOr 17346	2.33	3.05	3.00	2.49	2.43	2.66
4	PI 17376	2.34	3.17	2.56	2.55	2.84	2.69
5	PI 17377	2.34	3.40	2.35	2.65	2.89	2.73
	Standards						
1	CoV 92102	2.36	2.95	2.50	2.39	2.57	2.55
2	Co 86249	2.25	2.85	2.43	2.76	2.44	2.55
3	Co 06030	2.48	3.10	2.45	3.20	2.79	2.80
	GM	2.33	3.11	2.45	2.70	2.69	
	SE	0.07	0.11	0.07	0.70	0.07	
	CD (0.05)	0.20	0.23	0.20	0.20	0.22	
	CV	5.03	4.18	4.73	4.80	4.70	

Table 3.7.13 Single cane weight (kg) at harvest

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	1.09	1.17	1.33	1.13	1.04	1.15
2	CoC 17337	1.12	1.41	1.31	1.97	1.29	1.42
3	CoOr 17346	1.10	1.24	1.54	1.30	1.11	1.26
4	PI 17376	1.07	1.24	1.08	1.60	0.79	1.16
5	PI 17377	1.15	1.47	1.35	1.25	1.01	1.25
	Standards						
1	CoV 92102	1.11	1.07	1.35	1.45	0.92	1.18
2	Co 86249	1.04	0.96	1.30	1.15	1.09	1.11
3	Co 06030	1.07	1.18	1.08	1.73	0.99	1.21
	GM	1.09	1.22	1.29	1.40	1.03	
	SE	0.04	0.08	0.05	0.40	0.04	
	CD (0.05)	0.13	0.17	0.16	0.10	0.13	
	CV	6.56	7.90	6.96	5.40	7.30	

Table3.7.14 CCS % at 10 months

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	12.25	9.50	11.64	7.62	9.37	10.08
2	CoC 17337	10.58	10.43	11.75	7.33	10.64	10.15
3	CoOr 17346	9.40	10.00	11.70	8.96	11.25	10.26
4	PI 17376	10.53	10.66	11.45	8.77	8.80	10.04
5	PI 17377	9.85	9.62	11.49	8.95	10.15	10.01
	Standards						
1	CoV 92102	11.10	9.56	11.37	9.64	12.61	10.86
2	Co 86249	10.97	9.69	11.50	7.73	9.70	9.92
3	Co 06030	10.49	10.32	11.33	9.09	13.03	10.85
	GM	10.65	9.97	11.53	8.51	10.69	
	SE	0.15	0.27	0.08	0.13	0.13	
	CD (0.05)	0.44	0.58	NS	0.40	0.38	
	CV	2.37	3.31	1.12	2.68	2.10	

Table3.7.15 Sucrose % at 10 months

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	17.60	14.01	17.25	11.61	14.04	14.90
2	CoC 17337	15.37	15.07	17.25	11.15	15.64	14.90
3	CoOr 17346	13.83	14.34	17.30	13.27	16.60	15.07
4	PI 17376	15.27	15.20	17.12	12.94	13.46	14.80
5	PI 17377	14.40	13.77	16.98	13.25	15.04	14.69
	Standards						
1	CoV 92102	16.10	13.88	16.85	14.17	18.08	15.82
2	Co 86249	15.90	13.82	17.02	11.61	14.36	14.54
3	Co 06030	15.27	15.03	16.82	13.44	18.74	15.86
	GM	15.47	14.39	17.07	12.68	15.75	
	SE	0.16	0.25	0.07	0.19	0.18	
	CD (0.05)	0.49	0.55	0.21	0.59	0.53	
	CV	1.82	2.16	0.68	2.64	1.90	

Table 3.7.16 Brix % at 10 months

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	19.63	16.49	20.52	14.55	16.83	17.60
2	CoC 17337	17.57	17.05	20.15	13.92	18.33	17.40
3	CoOr 17346	16.23	15.95	20.47	15.78	19.56	17.60
4	PI 17376	17.37	16.70	20.69	15.24	16.97	17.39
5	PI 17377	16.67	15.24	20.10	15.71	17.85	17.11
	Standards						
1	CoV 92102	18.33	15.81	20.03	16.60	20.12	18.18
2	Co 86249	18.07	15.21	20.16	14.14	17.02	16.92
3	Co 06030	17.50	17.25	20.06	15.89	20.96	18.33
	GM	17.67	16.21	20.27	15.20	18.46	
	SE	0.15	0.40	0.11	0.20	0.21	
	CD (0.05)	0.45	0.85	NS	0.70	0.65	
	CV	1.45	2.99	0.98	2.60	2.00	

Table 3.7.17 Purity % at 10 months

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	89.65	84.98	84.08	79.79	83.41	84.38
2	CoC 17337	87.48	88.44	85.63	80.08	85.41	85.41
3	CoOr 17346	85.22	89.90	84.53	84.11	84.85	85.72
4	PI 17376	87.91	91.08	82.76	84.89	79.31	85.19
5	PI 17377	86.41	90.36	84.50	84.35	84.24	85.97
	Standards						
1	CoV 92102	87.82	87.80	84.11	85.36	89.89	87.00
2	Co 86249	88.00	91.00	84.11	82.10	84.38	85.92
3	Co 06030	87.25	87.13	83.82	84.56	89.43	86.44
	GM	87.47	88.84	84.23	83.15	85.12	
	SE	0.79	2.49	0.56	0.24	0.42	
	CD (0.05)	2.39	5.34	NS	0.73	1.27	
	CV	1.57	3.43	1.15	0.50	0.90	

Table 3.7.18 Number of shoots ('000/ha) at 240 days

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	89.02	134.98	124.67	146.86	54.17	109.94
2	CoC 17337	81.45	140.67	124.12	150.57	69.44	113.25
3	CoOr 17346	85.75	137.80	127.08	142.68	80.71	114.80
4	PI 17376	86.64	131.74	123.09	133.63	75.77	110.17
5	PI 17377	66.00	126.49	115.56	123.89	62.65	98.92
	Standards						
1	CoV 92102	84.83	122.84	119.09	138.62	84.41	109.96
2	Co 86249	79.48	128.50	117.12	146.04	85.65	111.36
3	Co 06030	80.19	130.61	116.81	133.52	82.25	108.68
	GM	81.67	131.70	120.94	137.50	74.38	
	SE	3.93	4.63	1.96	6.80	5.23	
	CD (0.05)	11.84	9.94	5.95	20.60	15.93	
	CV	8.33	4.31	2.81	8.40	12.20	

Table 3.7.19 Number of tillers ('000/ha) at 120 days

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	95.17	145.87	132.22	175.97	87.50	127.35
2	CoC 17337	87.37	149.25	128.35	180.26	61.88	121.42
3	CoOr 17346	92.90	148.48	133.11	175.97	96.30	129.35
4	PI 17376	94.57	141.22	129.63	174.46	87.04	125.38
5	PI 17377	68.96	135.76	121.47	178.76	72.69	115.53
	Standards						
1	CoV 92102	92.05	132.46	127.75	182.00	99.07	126.67
2	Co 86249	82.94	138.20	124.49	173.30	109.57	125.70
3	Co 06030	92.94	143.22	123.22	178.18	102.47	128.01
	GM	88.36	141.81	127.53	177.40	89.56	
	SE	3.69	4.26	1.99	7.80	6.62	
	CD (0.05)	11.11	9.13	6.05	23.50	20.21	
	CV	7.23	3.68	2.71	7.60	14.20	

Table 3.7.20 Germination % at 30 days

S. No.	Entry	Anaka palle	Cudda lore	Naya garh	Nelli kuppam	Vuyyu ru	Mean
1	CoA 17324	59.07	62.34	54.47	87.50	45.49	61.77
2	CoC 17337	56.53	70.58	54.51	89.12	43.29	62.81
3	CoOr 17346	60.23	65.52	58.62	87.27	51.85	64.70
4	PI 17376	59.65	60.42	51.79	90.63	48.84	62.27
5	PI 17377	33.04	59.98	49.22	84.95	42.71	53.98
	Standards						
1	CoV 92102	63.24	67.08	51.40	89.70	50.46	64.38
2	Co 86249	58.15	67.22	48.50	87.04	46.88	61.56
3	Co 06030	63.59	61.71	52.26	86.81	56.71	64.22
	GM	56.69	64.36	52.60	87.90	48.28	
	SE	1.69	1.89	1.59	3.60	2.51	
	CD (0.05)	5.09	4.06	4.82	11.00	7.61	
	CV	5.16	3.60	5.23	7.20	9.00	

Table 3.7.21. Assessment of the performance of entries compared to the best standard by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
CoA 17324	V Poor	On Par	Poor	On par	V Poor
CoC 17337	Better	Poor	Better	Better	Poor
CoOr 17346	On par	On par	On par	On par	On par
PI 17376	Better	Better	Better	Better	Poor
PI 17377	Poor	Better	Better	On par	On par
Standards					
CoV 92102			Best	Best	
Co 86249					Best
Co 06030	Best	Best			

4. NORTH WEST ZONE

North West Zone of India comprises the states of Haryana, Punjab, Western and Central Uttar Pradesh, Uttarakhand and Rajasthan. There are 10 AICRP (Sugarcane) centres in the zone and their locations are given below.

State	AICRP(S) centres
Haryana	Karnal, Uchani
Punjab	Faridkot, Kapurthala
Rajasthan	Kota, Sriganganagar
Uttarakhand	Pantnagar
Uttar Pradesh	Lucknow, Shahjahanpur, Muzaffarnagar

List of trials conducted

Eight AICRP(S) trials were planned in NWZ during 2019-20. The number of trials conducted at each centre are given below.

Sl No.	Location	IVT Early	AVT Early I Plant	AVT Early II Plant	AVT Early Ratoon	IVT Midlate	AVT Midlate I Plant	AVT Midlate II Plant	AVT Midlate Ratoon
1	Faridkot	C	C	C	C	C	C	C	C
2	Kapurthala	C	C	C	C	C	C	C	C
3	Karnal*	C	C	C	C	C	-	-	-
4	Kota	C	C	C	C	C	C	C	C
5	Lucknow	C	C	C	C	C	C	C	C
6	Muzaffarnagar	C	C	C	C	C	C	C	C
7	Pantnagar	C	C	C	C	C	C	C	C
8	Shahjahanpur	C	C	C	C	C	C	C	C
9	Sriganganagar	C	C	C	C	C	C	C	C
10	Uchani*	C	-	-	-	-	C	C	C

C= Conducted, NC= Not Conducted

* : Trials are shared between Karnal and Uchani centres

4.1 ADVANCED VARIETAL TRIAL (EARLY) - II PLANT

Centres (9)	Faridkot, Kapurthala, Karnal, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur and Sriganaganagar.
Entries (4)	Co 14034, CoLk 14201, CoPb 14181 and CoPb 14211
Standards (3)	CoJ 64, Co 0238 and Co 05009
Design	RBD
Replications	3
Plot size	Gross : 8 Rows x 6 m x 0.9 m Net : 6 Rows x 5 m x 0.9 m
Bud rate	12 buds per metre
Planting time	February / March, 2019
Crop duration	10 months

Results of the previous year: In the AVT (E) I Plant, Co 0238 was the best standard for CCS yield (10.73 t/ha) and cane yield (84.78 t/ha). Test entries that recorded higher CCS yield than Co 0238 were: Co 14034 (11.71 t/ha), CoPb 14211 (11.63 t/ha), CoPb 14181 (11.24 t/ha) and CoLk 14201 (11.00 t/ha). Four entries *viz.* CoPb 14211 (91.83 t/ha), Co 14034 (89.70 t/ha), CoLk 14201 (89.47 t/ha) and CoPb 14181 (88.17 t/ha) recorded higher cane yield than Co 0238. However, improvement in CCS yield or cane yield of these entries over the best standard were < 10 %. For juice quality parameters, the standards (CoJ 64 and Co 0238) were at par. CoJ 64 was the best standard in the zone for CCS % (12.66) and Co 0238 was the best standard for sucrose % (18.32). Test entries Co 14034 (13.04), CoPb 14181 (12.77) and CoPb 14211 (12.69) have recorded higher CCS % than CoJ 64. Test entries that recorded higher sucrose % than Co 0238 were: Co 14034 (18.76) and CoPb 14181 (18.43). However, per cent improvement over the best standards for CCS % or sucrose % in these clones were less than 5%.

Results of the current year: For CCS yield, Co 0238 was the best among standards in the zone (11.66 t/ha). Two test entries recorded numerically higher CCS yield over Co 0238. They were: Co 14034 (11.96 t/ha) and CoPb 14211 (11.94 t/ha). However, their per cent improvement were lesser than 10 %. For cane yield Co 0238 was the best among the standards with zonal mean of 95.31 t/ha. Test entries that recorded higher cane yield over Co 0238 were: CoPb 14211 (96.16 t/ha) and Co 14034 (95.61 t/ha). However, their per cent improvement were < 10 %. For CCS %, Co 05009 and CoJ 64 were the best among standards (they were on par) with zonal mean of 12.35. Three test entries that recorded higher CCS % than the best standard were: CoPb 14181 (12.53), Co 14034 (12.52) and CoPb 14211 (12.49). However, their per cent improvement over the best standard were < 5 %. For sucrose %, Co 0238 was the best standard with zonal mean of 18.07. Two test entries recorded numerically higher sucrose % than Co 0238. They were: CoPb 14181 (18.20) and Co 14034 (18.08). However, their per cent improvement over the best standard were less than 5 %. On the basis of criteria set for cane yield and juice quality, no entry in this trial could be identified as qualifying entry. Further details are presented in Tables 4.1.1 to 4.1.19.

Table 4.1.1 CCS yield (t/ha) at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 14034	10.81	10.78	17.80	10.75	7.72	10.12	17.19	11.19	11.32	11.96	1
2	CoLk 14201	8.78	8.40	13.09	10.26	10.91	12.51	16.69	12.48	9.84	11.44	
3	CoPb 14181	11.70	10.17	12.44	10.57	10.06	12.35	14.13	12.04	10.44	11.54	
4	CoPb 14211	9.48	11.39	13.78	10.90	9.16	10.29	20.38	11.57	10.52	11.94	2
	Standards											
1	CoJ 64	10.43	8.54	15.28	8.81	8.18	8.23	14.78	10.03	10.60	10.54	
2	Co 0238	10.75	10.71	17.71	9.91	10.58	11.11	14.31	12.08	7.80	11.66	3
3	Co 05009	11.40	9.78	16.38	8.70	6.74	8.88	14.37	9.45	9.68	10.60	
	Mean	10.55	9.97	15.21	9.98	9.05	10.51	15.98	11.21	10.03	11.39	
	SE (m)	0.67		0.84	0.31	0.52	0.22	1.05	0.32	0.30		
	CD at 5%	2.03	1.22	2.62	0.73	1.14	0.48	3.28	0.69	0.63		
	CV	10.97	6.90	9.45	5.31	7.09	6.98	11.42	4.84	3.68		
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank 1						CoLk 14201	CoPb 14211				
	Rank 2							Co 14034				
	Rank 3							CoLk 14201				

No. of locations where an entry recorded >10 % improvement over the best standard: CoLk 14201 (2) and CoPb 14211 (1).

Performance across locations: Co 0238 was the best among standards for CCS yield (11.66 t/ha). Two test entries that recorded numerically higher CCS yield over Co 0238 were: Co 14034 (11.96 t/ha) and CoPb 14211 (11.94 t/ha). However, their per cent improvement were < 10 %.

Table 4.1.2 Cane yield (t/ha) at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 14034	85.49	83.97	130.43	81.33	62.02	80.61	137.50	90.49	108.64	95.61	2
2	CoLk 14201	70.37	73.14	120.72	78.47	85.49	95.30	128.00	98.77	90.74	93.44	
3	CoPb 14181	89.81	79.08	96.10	81.08	77.57	99.50	113.06	94.57	101.85	92.51	
4	CoPb 14211	75.00	87.59	104.09	81.88	70.64	82.59	164.78	93.83	105.06	96.16	1
	Standards											
1	CoJ 64	81.48	66.68	119.62	72.49	67.92	65.55	116.88	80.37	97.28	85.36	
2	Co 0238	85.49	86.02	132.45	75.26	85.15	86.29	112.06	94.07	100.99	95.31	3
3	Co 05009	89.20	76.93	127.15	71.08	55.01	68.64	110.72	77.28	95.68	85.74	
	Mean	82.91	79.06	119.94	77.37	71.97	82.64	126.14	89.26	100.03	92.00	
	SE (m)	5.20		6.72	1.67	4.61	1.74	8.69	2.80	3.36		
	CD at 5%	15.78	9.73	20.95	4.01	10.04	3.78	27.07	6.10	7.02		
	CV	10.87	6.92	9.71	3.75	7.84	6.92	11.93	5.39	4.11		
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank 1						CoPb 14181	CoPb 14211				
	Rank 2							Co 14034				
	Rank 3											

No. of locations where an entry recorded >10 % improvement over the best standard: CoPb 14211 (1), CoPb 14181 (1) and Co 14034 (1).

Performance across locations: Among the standards Co 0238 was the best for cane yield (95.31 t/ha). Test entries that recorded higher cane yield over Co 0238 were: CoPb 14211 (96.16 t/ha) and Co 14034 (95.61 t/ha) and. However, their per cent improvement were lesser than 10 %.

Table 4.1.3 CCS % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 14034	12.66	12.85	13.65	13.22	12.45	12.54	12.53	12.37	10.42	12.52	2
2	CoLk 14201	12.45	11.48	10.85	13.06	12.77	13.14	13.02	12.63	10.84	12.25	
3	CoPb 14181	13.03	12.86	12.94	13.04	12.98	12.39	12.51	12.73	10.25	12.53	1
4	CoPb 14211	12.64	13.01	13.23	13.32	12.96	12.48	12.39	12.33	10.01	12.49	3
	Standards											
1	CoJ 64	12.81	12.82	12.77	12.15	12.05	12.55	12.66	12.48	10.90	12.35	
2	Co 0238	12.57	12.46	13.38	13.17	12.45	12.89	12.76	12.71	7.72	12.23	
3	Co 05009	12.78	12.71	12.87	12.23	12.24	12.96	12.99	12.23	10.12	12.35	
	Mean	12.71	12.60	12.81	12.88	12.56	12.66	12.69	12.52	10.04	12.39	
	SE (m)	0.07		0.21	0.18	0.44	0.20	0.20	0.11	0.14		
	CD at 5%	0.21	0.60	0.65	0.42	NS	0.43	NS	0.23	0.29		
	CV	0.96	2.70	2.82	2.37	4.28	1.89	2.76	1.47	1.74		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1											
	Rank 2											
	Rank 3											

No. of locations where an entry recorded >5 % improvement over the best standard: Nil

Performance across locations: Co 05009 and CoJ 64 were the best among standards for CCS % with zonal mean of 12.35. Three test entries that recorded higher CCS % than Co 05009 / CoJ 64 were: CoPb 14181 (12.53), Co 14034 (12.52) and CoPb 14211 (12.49). However, their per cent improvement over the best standard were <5 %.

Table 4.1.4 Sucrose % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 14034	18.07	18.36	19.39	19.10	18.08	18.17	18.15	17.96	15.40	18.08	2
2	CoLk 14201	17.76	16.48	15.67	18.90	18.49	18.96	18.87	18.29	15.14	17.62	
3	CoPb 14181	18.65	18.41	18.76	18.86	18.86	17.99	18.21	18.41	15.61	18.20	1
4	CoPb 14211	17.99	18.57	18.63	19.24	18.79	18.11	18.00	17.90	15.23	18.05	
	Standards											
1	CoJ 64	18.29	18.33	18.25	17.66	17.70	18.13	18.30	18.09	15.95	17.86	
2	Co 0238	17.89	17.80	19.12	19.03	18.16	18.62	18.52	18.37	15.14	18.07	3
3	Co 05009	18.10	18.15	18.31	17.76	17.74	18.77	18.80	17.77	15.23	17.85	
	Mean	18.12	18.01	18.31	18.65	18.26	18.39	18.41	18.15	15.39	17.97	
	SE (m)	0.10		0.27	0.24	0.56	0.28	0.25	0.13	0.19		
	CD at 5%	0.30	0.82	0.84	0.57	NS	0.61	NS	0.29	0.39		
	CV	0.95	2.56	2.56	2.22	3.76	1.87	2.36	1.28	1.53		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1											
	Rank 2											
	Rank 3											

No. of locations where an entry recorded >5 % improvement over the best standard: Nil

Performance across locations: Among the standards, Co 0238 was the best in the zone for sucrose % with zonal mean of 18.07. Two test entries recorded numerically higher sucrose % than Co 0238. They were: CoPb 14181 (18.20) and Co 14034 (18.08). However, their per cent improvement over the best standard were less than 5 %.

Table 4.1.5 Brix % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	19.90	20.23	21.12	21.60	20.65	20.62	20.60	20.47	18.23	20.38
2	CoLk 14201	19.53	18.37	17.67	21.40	20.99	21.35	21.47	20.75	18.27	19.98
3	CoPb 14181	20.67	20.37	21.35	21.37	21.56	20.52	20.90	20.84	19.53	20.79
4	CoPb 14211	19.67	20.43	19.91	21.73	21.37	20.62	20.57	20.42	19.01	20.41
	Standards										
1	CoJ 64	20.13	20.23	20.14	20.20	20.67	20.45	20.70	20.58	18.50	20.18
2	Co 0238	19.57	19.60	21.11	21.53	20.90	21.05	21.13	20.79	19.53	20.58
3	Co 05009	19.57	20.00	20.01	20.30	20.17	21.29	21.30	20.33	18.67	20.18
	Mean	19.88	19.89	20.19	21.16	20.90	20.84	20.95	20.63	18.82	20.36
	SE (m)	0.16		0.33	0.23	0.55	0.34	0.22	0.10	0.51	
	CD at 5%	0.47	0.93	1.03	0.56	NS	NS	NS	0.23	1.06	
	CV	1.36	2.66	2.84	1.90	3.20	1.98	1.83	0.88	3.31	

Table 4.1.6 Purity % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	90.80	90.75	91.78	88.44	87.56	88.10	88.07	87.70	84.48	88.63
2	CoLk 14201	90.93	89.73	88.64	88.30	88.15	88.79	87.90	88.11	82.87	88.16
3	CoPb 14181	90.24	90.39	87.87	88.28	86.84	87.67	87.15	88.32	79.93	87.41
4	CoPb 14211	91.49	90.86	93.71	88.52	87.95	87.83	87.52	87.64	80.12	88.40
	Standards										
1	CoJ 64	90.84	90.57	90.61	87.42	85.66	88.63	88.40	87.90	86.22	88.47
2	Co 0238	91.45	90.78	90.59	88.39	86.89	88.46	87.64	88.35	77.52	87.79
3	Co 05009	92.49	90.73	91.51	87.49	87.95	88.16	88.27	87.44	81.57	88.40
	Mean	91.17	90.55	90.67	88.12	87.29	88.23	87.85	87.97	81.81	88.18
	SE (m)	0.43		0.97	0.17	1.21	0.13	0.61	0.21	1.63	
	CD at 5%	1.32	NS	3.03	0.40	NS	0.29	NS	NS	3.41	
	CV	0.83	1.19	1.86	0.33	1.70	0.19	1.19	0.41	2.47	

Table 4.1.7 Pol % in cane and Fibre % at harvest

Sl No.	Entries	Pol % in cane						Fibre %					
		Kapur thala	Karnal	Lucknow	Muzafar nagar	Shahja hanpur	Mean	Kapur thala	Karnal	Lucknow	Muzafar nagar	Shahja hanpur	Mean
1	Co 14034	15.45	15.02	13.82	13.92	13.50	14.34	13.19	12.53	13.53	13.35	14.82	13.48
2	CoLk 14201	12.96	11.31	14.07	14.55	13.71	13.32	12.13	17.78	13.91	13.28	15.00	14.42
3	CoPb 14181	15.23	13.82	14.12	13.73	13.76	14.13	14.16	16.36	15.15	13.66	15.25	14.92
4	CoPb 14211	15.61	14.39	14.47	13.89	13.38	14.35	14.69	12.77	13.02	13.32	15.22	13.80
	Standards												
1	CoJ 64	15.39	14.18	13.39	13.91	13.52	14.08	12.13	12.31	14.38	13.29	15.25	13.47
2	Co 0238	14.64	14.70	13.85	14.26	13.81	14.25	13.93	13.14	13.72	13.44	14.82	13.81
3	Co 05009	14.55	13.84	13.36	14.36	13.30	13.88	13.67	14.45	14.73	13.51	15.55	14.38
	Mean	14.83	13.89	13.87	14.03	13.60	14.04	13.41	14.19	14.06	13.41	15.05	14.02
	SE (m)		0.18	0.49	-	0.11			0.17	0.59	-	0.11	
	CD at 5%	0.45	0.59	NS	-	0.23		0.85	0.52	1.28	-	0.24	
	CV	1.73	2.37	4.36	-	1.34		3.58	2.03	5.10	-	1.25	

Table 4.1.8 Juice extraction % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	54.32	51.76	52.72	46.29	44.88	52.41		57.61	55.22	51.90
2	CoLk 14201	57.81	52.13	48.35	46.53	48.34	50.52		55.78	51.64	51.39
3	CoPb 14181	50.00	51.73	46.32	43.33	37.36	49.14		53.05	50.06	47.62
4	CoPb 14211	51.11	51.05	44.59	46.09	45.38	53.31		53.54	56.52	50.20
	Standards										
1	CoJ 64	54.29	52.14	52.95	47.32	38.49	57.14		52.74	56.00	51.38
2	Co 0238	55.02	51.38	54.00	44.71	48.68	56.21		57.52	53.70	52.65
3	Co 05009	54.40	51.16	57.27	43.32	45.58	56.82		53.47	55.63	52.21
	Mean	53.38	51.62	50.89	45.37	44.10	53.65		55.03	54.25	51.04
	SE (m)	0.71		0.60	1.12	2.88	-		1.33	1.99	
	CD at 5%	2.15	NS	1.86	2.68	6.27	-		NS	4.15	
	CV	2.30	1.44	2.27	4.27	8.00	-		4.21	4.41	

Table 4.1.9 Brix % at 8th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	17.13	17.97	19.82	18.38	18.32	18.95	19.73	19.61	17.07	18.55
2	CoLk 14201	18.53	17.07	17.59	18.57	19.78	19.45	20.90	20.69	16.43	18.78
3	CoPb 14181	18.53	19.43	20.46	18.67	20.31	19.05	20.00	20.77	17.80	19.45
4	CoPb 14211	17.30	19.47	18.93	19.49	18.98	19.25	19.50	20.23	17.20	18.93
	Standards										
1	CoJ 64	18.67	19.33	19.09	18.47	19.47	19.25	19.77	20.19	17.73	19.11
2	Co 0238	17.67	17.97	20.52	18.17	19.32	18.65	20.27	20.46	17.70	18.97
3	Co 05009	17.90	18.73	19.36	18.11	18.91	19.88	20.73	19.67	16.93	18.91
	Mean	17.97	18.57	19.40	18.55	19.30	19.21	20.13	20.23	17.27	18.96
	SE (m)	0.24		0.40	0.25	0.42	0.43	0.23	0.19	0.31	
	CD at 5%	0.74	1.06	1.23	0.60	0.91	NS	0.71	0.42	0.65	
	CV	2.34	3.23	3.55	2.34	2.65	2.75	1.95	1.64	2.23	

Table 4.1.10 Sucrose % at 8th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	14.48	15.53	17.41	15.78	16.00	16.34	16.29	16.80	14.13	15.86
2	CoLk 14201	15.12	14.70	15.29	15.98	17.32	16.68	17.98	18.03	13.28	16.04
3	CoPb 14181	15.59	17.38	17.83	16.08	17.75	16.17	16.60	18.11	14.06	16.62
4	CoPb 14211	14.72	17.66	16.74	16.93	16.73	16.17	16.15	17.51	13.65	16.25
	Standards										
1	CoJ 64	15.73	17.05	16.56	15.88	16.94	16.51	16.78	17.47	15.12	16.45
2	Co 0238	14.89	15.61	18.08	15.57	16.50	15.72	17.13	17.77	13.25	16.06
3	Co 05009	14.74	16.46	17.80	15.51	17.16	17.15	17.35	16.88	13.67	16.30
	Mean	15.00	16.34	17.10	15.96	16.91	16.39	16.90	17.51	13.87	16.22
	SE (m)	0.20		0.40	2.80	0.46	0.37	0.29	0.22	0.41	
	CD at 5%	0.62	1.43	1.24	2.80	1.00	0.80	0.90	0.47	0.84	
	CV	2.37	4.93	4.04	2.80	3.33	2.76	2.96	2.15	3.53	

Table 4.1.11 Purity % at 8th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	84.55	86.36	87.84	85.86	87.35	86.00	82.55	85.67	82.78	85.44
2	CoLk 14201	81.58	86.16	86.91	86.05	87.58	85.76	86.11	87.13	80.83	85.35
3	CoPb 14181	84.13	89.42	87.19	86.13	87.45	84.91	82.98	87.19	78.99	85.38
4	CoPb 14211	85.07	90.74	88.42	86.84	88.15	83.98	82.79	86.54	79.36	85.77
	Standards										
1	CoJ 64	84.29	88.16	86.72	85.95	86.95	85.73	84.91	85.67	85.28	85.96
2	Co 0238	84.27	86.82	88.11	85.67	85.43	84.28	84.53	87.13	74.86	84.57
3	Co 05009	82.33	87.85	91.94	85.62	90.73	86.26	83.66	87.19	80.74	86.26
	Mean	83.49	87.93	88.16	86.01	87.66	85.27	83.93	86.66	80.41	85.50
	SE (m)	0.46		0.58	0.22	1.07	0.64	1.22	0.23	2.13	
	CD at 5%	1.39	NS	1.83	0.54	2.32	1.40	NS	0.50	4.45	
	CV	0.95	2.55	1.15	0.45	1.49	0.92	2.52	0.45	3.23	

Table 4.1.12 CCS % at 10th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	9.80	10.63	12.00	10.76	11.01	11.16	10.89	11.45	9.45	10.79
2	CoLk 14201	10.04	10.04	10.49	10.91	11.93	11.65	12.27	12.39	9.72	11.05
3	CoPb 14181	10.52	12.08	12.25	10.98	12.21	10.97	11.12	12.44	9.11	11.30
4	CoPb 14211	9.99	12.37	11.58	11.61	11.56	10.90	10.81	11.99	8.92	11.08
	Standards										
1	CoJ 64	10.63	11.80	11.35	10.83	11.62	11.25	11.38	11.96	10.27	11.23
2	Co 0238	10.06	10.69	12.49	10.60	11.23	10.62	11.59	12.19	7.96	10.83
3	Co 05009	9.84	11.35	12.53	10.56	12.01	11.72	11.68	11.51	9.03	11.14
	Mean	10.08	11.28	11.82	10.89	11.65	11.17	11.39	11.99	9.21	11.05
	SE (m)	0.15		0.38	0.19	0.36	0.26	0.26	0.17	0.38	
	CD at 5%	0.45	1.17	0.93	0.46	NS	0.58	0.82	0.36	0.79	
	CV	2.52	5.88	4.37	3.03	3.83	2.86	4.01	2.39	5.07	

Table 4.1.13 NMC at harvest ('000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	71.91	87.77	91.20	87.41	69.29	100.61	64.44	86.79	88.77	83.13
2	CoLk 14201	76.39	94.30	121.50	85.93	98.61	107.40	84.91	95.93	97.28	95.81
3	CoPb 14181	90.28	90.08	103.60	87.16	105.25	103.16	75.37	97.28	113.70	96.21
4	CoPb 14211	72.53	91.31	99.20	87.41	81.64	114.19	92.87	89.14	105.93	92.69
	Standards										
1	CoJ 64	89.81	94.64	108.70	82.72	103.78	80.49	89.90	92.59	106.54	94.35
2	Co 0238	87.50	88.76	94.80	83.95	79.78	93.83	68.71	84.81	109.26	87.93
3	Co 05009	85.03	82.99	106.30	77.78	80.86	94.82	67.13	79.88	98.02	85.87
	Mean	82.83	89.98	103.60	84.76	88.46	99.27	77.62	89.55	102.79	90.98
	SE (m)	4.17		1.73	1.14	4.21	2.73	3.67	3.58	4.10	
	CD at 5%	12.64	7.09	5.38	2.72	9.18	5.94	11.43	7.81	8.58	
	CV	8.71	4.42	2.88	2.32	5.83	9.09	8.18	6.94	4.89	

Table 4.1.14 Stalk length (cm)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	260.55	203.89	295.00	262.00	192.13	214.00	279.00	223.00	218.90	238.72
2	CoLk 14201	219.55	208.33	218.00	203.00	155.10	223.00	217.00	215.67	222.67	209.15
3	CoPb 14181	225.33	216.11	257.00	225.00	184.87	244.00	263.00	240.00	229.90	231.69
4	CoPb 14211	205.33	217.78	228.00	188.00	169.91	170.00	269.00	199.33	195.30	204.74
	Standards										
1	CoJ 64	214.44	215.00	227.00	215.00	153.41	166.00	234.00	210.00	177.60	201.38
2	Co 0238	212.33	248.89	248.00	232.00	200.27	222.00	233.00	241.33	178.07	223.99
3	Co 05009	258.66	240.56	303.00	215.00	154.22	196.00	272.00	199.33	165.47	222.69
	Mean	228.04	221.51	254.00	220.00	172.85	205.00	253.00	221.56	198.27	219.36
	SE (m)	6.69		10.20	6.00	11.34	22.00	5.00	8.57	4.51	
	CD at 5%	20.28	20.92	32.00	15.00	25.00	48.00	14.00	12.14	9.42	
	CV	5.08	5.31	6.94	4.99	8.03	13.25	3.13	4.42	2.78	

Table 4.1.15 Stalk diameter (cm)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	2.42	2.69	2.74	2.30	2.29	2.42	2.71	2.38	2.47	2.49
2	CoLk 14201	2.51	2.54	2.31	2.03	2.54	2.38	2.56	2.30	2.63	2.42
3	CoPb 14181	2.45	2.54	2.24	2.27	2.22	2.30	2.30	2.35	2.40	2.34
4	CoPb 14211	2.56	2.48	2.53	2.53	2.44	2.14	2.39	2.24	2.20	2.39
	Standards										
1	CoJ 64	2.45	2.30	2.53	2.03	2.17	2.35	2.37	2.25	2.57	2.34
2	Co 0238	2.72	2.70	2.82	2.30	2.59	2.32	2.59	2.68	2.70	2.60
3	Co 05009	2.40	2.49	2.37	2.03	2.26	2.24	2.43	2.30	2.67	2.35
	Mean	2.47	2.53	2.51	2.21	2.36	2.31	2.48	2.38	2.52	2.42
	SE (m)	0.05		0.05	0.09	0.14	0.05	0.08	0.04	0.12	
	CD at 5%	0.16	NS	0.17	0.22	NS	0.11	0.25	0.08	0.26	
	CV	3.64	6.66	3.72	7.06	7.04	2.76	5.60	2.60	5.94	

Table 4.1.16 Single cane weight (kg)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	1.33	0.95	1.53	0.92	0.90	0.94	2.13	1.07	1.05	1.20
2	CoLk 14201	1.12	0.77	0.99	0.91	0.87	0.98	1.50	0.94	0.90	1.00
3	CoPb 14181	1.13	0.89	0.93	0.93	0.74	1.00	1.50	0.99	1.10	1.02
4	CoPb 14211	1.13	0.95	1.05	0.94	0.87	0.85	1.78	0.79	1.05	1.04
	Standards										
1	CoJ 64	1.03	0.71	1.10	0.88	0.65	0.69	1.30	0.82	0.82	0.89
2	Co 0238	1.18	0.97	1.39	0.90	1.07	1.08	1.63	1.14	0.86	1.14
3	Co 05009	1.23	0.90	1.20	0.91	0.68	0.91	1.65	0.93	0.84	1.03
	Mean	1.15	0.88	1.17	0.91	0.82	0.92	1.64	0.98	0.95	1.05
	SE (m)	0.05		0.06	0.01	0.04	0.08	0.10	0.06	0.04	
	CD at 5%	0.16	0.08	0.18	0.03	0.08	0.18	0.30	0.13	0.08	
	CV	7.75	5.40	8.56	2.45	5.35	10.69	9.97	10.73	5.14	

Table 4.1.17 Number of Shoots at 240 days ('000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	75.62	93.33	91.20	238.67	74.61					114.69
2	CoLk 14201	80.09	100.91	121.50	232.00	108.64					128.63
3	CoPb 14181	92.90	92.92	103.60	235.33	111.50					127.25
4	CoPb 14211	79.32	97.75	99.20	236.00	87.96					120.05
	Standards										
1	CoJ 64	91.98	99.53	108.70	223.33	114.35					127.58
2	Co 0238	94.75	94.01	94.80	226.67	100.08					122.06
3	Co 05009	90.12	86.85	106.30	210.00	89.04					116.46
	Mean	88.45	95.04	103.60	228.85	98.03					122.79
	SE (m)	4.06		1.73	3.07	3.72					
	CD at 5%	12.33	7.06	5.38	7.35	8.11					
	CV	7.96	4.18	2.88	2.32	4.65					

Table 4.1.18 Number of tillers at 120 days (*000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	106.17	99.74	111.10	198.89	78.47	154.94		182.10	129.55	132.62
2	CoLk 14201	104.78	107.87	149.40	193.33	114.27	191.23		215.06	141.93	152.23
3	CoPb 14181	113.58	99.31	123.70	196.11	114.74	170.62		192.84	165.45	147.04
4	CoPb 14211	103.70	104.46	121.80	196.67	95.29	171.24		182.10	154.94	141.28
	Standards										
1	CoJ 64	112.50	106.36	131.50	186.11	119.98	164.44		197.16	155.97	146.75
2	Co 0238	125.62	100.46	127.80	188.89	104.17	155.43		170.25	159.49	141.51
3	Co 05009	129.94	92.82	140.60	175.00	92.21	149.01		159.38	143.04	135.25
	Mean	115.35	101.57	129.41	190.71	102.73	165.27		186.13	150.01	142.65
	SE (m)	5.36		4.49	2.56	3.66	2.57		7.77	11.08	
	CD at 5%	16.26	7.54	14.00	6.13	7.98	5.60		16.92	23.16	
	CV	8.05	4.17	6.01	2.32	4.36	5.14		7.25	4.89	

Table 4.1.19 Germination % at 45 days

Sl. No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	32.80	55.61	47.90	44.35	26.61	35.18	28.13	42.87	37.63	39.01
2	CoLk 14201	33.60	51.91	60.82	44.69	37.58	45.56	28.82	57.78	44.92	45.08
3	CoPb 14181	32.36	55.67	56.71	45.63	32.12	42.22	26.81	54.17	38.44	42.68
4	CoPb 14211	28.57	57.35	47.28	43.15	31.15	33.80	26.46	52.87	40.93	40.17
	Standards										
1	CoJ 64	30.95	52.60	64.00	45.44	34.67	35.28	29.38	56.85	42.36	43.50
2	Co 0238	29.72	51.39	59.66	43.52	33.15	38.61	29.65	49.54	42.32	41.95
3	Co 05009	39.59	47.92	54.80	42.97	30.67	36.94	27.85	42.22	42.01	40.55
	Mean	32.41	53.21	55.88	44.24	32.28	38.23	28.16	50.57	41.23	41.80
	SE (m)	1.53		1.65	1.81	1.64	0.91	1.92	2.62	0.33	
	CD at 5%	4.65	NS	5.13	4.34	3.57	1.98	NS	5.71	0.69	
	CV	8.20	7.10	5.10	7.09	6.22	10.46	11.80	8.92	0.98	

Table 4.1.20. Assessment of the performance of entries compared to the best standard by monitoring team

S. No	Genotype	Lucknow	Shahjah anpur	Pant nagar	Muzzaff arnagar	Karnal	Uchani	Kapur thala	Faridkot	Sriganga nagar	Kota
1	Co 14034	On par	On par	On par	On par	On par	NA	Poor	On par	On par	On par
2	CoLk 14201	Better	On par	On par	Better	Better	NA	Better	Better	Better	Better
3	CoPb 14181	Better	Better	Better	Better	Better	NA	Better	Better	Better	Better
4	CoPb 14211	On par	Better	On par	Poor	Poor	NA	Better	Better	Better	On par
Standards											
1	CoJ 64										
2	Co 0238	Best	Best		Best	Best		Best		Best	
3	Co 05009			Best					Best		Best

In place of CoLk 14201, a different clone was planted at three locations *i.e.*, Karnal, Kapurthala and Sriganganagar

4.2 ADVANCED VARIETAL TRIAL (EARLY) - RATOON

Centres (9)	Faridkot, Kapurthala, Karnal, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur and Sriganaganagar.
Entries (4)	Co 14034, CoLk 14201, CoPb 14181 and CoPb 14211
Standards (3)	CoJ 64, Co 0238 and Co 05009
Design	RBD
Replications	3
Plot size	Gross : 8 Rows x 6 m x 0.9 m Net : 6 Rows x 5 m x 0.9 m
Month Ratooned	February / March, 2019
Crop duration	9 months

Results of the previous year: In the AVT (E) I Plant, Co 0238 was the best standard for CCS yield (10.73 t/ha) and cane yield (84.78 t/ha). Test entries that recorded higher CCS yield than Co 0238 were: Co 14034 (11.71 t/ha), CoPb 14211 (11.63 t/ha), CoPb 14181 (11.24 t/ha) and CoLk 14201 (11.00 t/ha). Four entries *viz.* CoPb 14211 (91.83 t/ha), Co 14034 (89.70 t/ha), CoLk 14201 (89.47 t/ha) and CoPb 14181 (88.17 t/ha) recorded higher cane yield than Co 0238. However, improvement in CCS yield or cane yield of these entries over the best standard were < 10 %. For juice quality parameters, the standards (CoJ 64 and Co 0238) were at par. CoJ 64 was the best standard in the zone for CCS % (12.66) and Co 0238 was the best standard for sucrose % (18.32). Test entries Co 14034 (13.04), CoPb 14181 (12.77), and CoPb 14211 (12.69) have recorded higher CCS % than CoJ 64. Test entries that recorded higher sucrose % than Co 0238 were: Co 14034 (18.76) and CoPb 14181 (18.43). However, per cent improvement over the best standards for CCS % or sucrose % in these clones were less than 5%.

Results of the current year: The standard Co 0238 was the best in the zone for CCS yield (9.41 t/ha). No test entry was superior to the best standard although the test entries CoLk 14201 (9.34 t/ha) and Co 14034 (8.65 t/ha) ranked second and third positions, respectively in the zone for CCS yield. For cane yield, Co 0238 was the best standard in the zone (77.09 t/ha). Only one entry *viz.* CoLk 14201 in the zone recorded higher cane yield than the best standard (78.31 t/ha). However, the per cent improvement in the entry for cane yield was < 10 % in comparison to the standard. CoJ 64 was the best standard for CCS % in the zone (12.16). Two test entries recorded higher CCS % than CoJ 64. They were: CoPb 14181 (12.34) and Co 14034 (12.23). Nonetheless, per cent improvement of CCS % in these entries over the best standard were lesser than 5 %. Co 0238 was the best among the standards for sucrose % (17.53). Two test entries that recorded higher sucrose % than the best standard were: CoPb 14181 (17.88) and Co 14034 (17.66). However, their per cent improvement over the best standard were < 5 %. On the basis of criteria set for cane yield and juice quality, no entry in this trial could be identified as qualifying entry. Further details are presented in Tables 4.2.1 to 4.2.14.

Table 4.2.1 CCS yield (t/ha) at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 14034	8.59	9.09	16.68	8.38	5.40	6.58	6.99	9.87	6.25	8.65	3
2	CoLk 14201	8.67	6.57	12.80	8.10	10.96	9.23	11.26	10.30	6.17	9.34	2
3	CoPb 14181	10.25	8.72	10.32	8.80	8.01	8.15	6.52	10.21	6.50	8.61	
4	CoPb 14211	9.17	9.05	13.21	9.04	5.62	6.37	6.51	9.38	6.80	8.35	
	Standards											
1	CoJ 64	8.87	6.01	11.74	6.81	7.59	5.79	7.08	8.67	7.71	7.81	
2	Co 0238	8.37	9.15	15.89	7.71	10.53	7.23	8.93	10.78	6.09	9.41	1
3	Co 05009	9.47	7.25	13.63	6.96	4.44	5.66	11.55	8.61	6.59	8.24	
	Mean	9.12	7.98	13.47	7.96	7.51	7.01	8.41	9.69	6.59	8.64	
	SE (m)	0.55		1.05	0.38	0.39	0.28	0.36	0.30	0.42		
	CD at 5%	1.65	0.91	3.27	0.92	0.85	0.61	1.11	0.65	0.87		
	CV	10.46	6.42	13.50	8.30	6.36	13.20	7.35	5.29	7.65		
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank 1				CoPb 14211		CoLk 14201					
	Rank 2				CoPb 14181		CoPb 14181					
	Rank 3											

No. of locations where an entry recorded >10 % improvement over the best standard: CoPb 14181 (2), CoPb 14211 (1), CoLk 14201 (1).

Performance across locations: The standard Co 0238 was the best in the zone for CCS yield (9.41 t/ha). No test entry was superior to the best standard although CoLk 14201 (9.34 t/ha) and Co 14034 (8.65 t/ha) ranked second and third positions, respectively in the zone for CCS yield.

Table 4.2.2 Cane yield (t/ha) at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 14034	68.59	76.58	117.84	74.27	42.43	55.30	53.59	77.04	64.28	69.99	3
2	CoLk 14201	68.93	58.97	112.88	69.30	79.43	77.53	83.94	79.88	73.95	78.31	1
3	CoPb 14181	79.56	68.61	77.33	72.18	61.12	69.88	50.60	78.64	70.47	69.82	
4	CoPb 14211	75.79	76.25	95.21	70.22	43.59	57.90	53.15	77.78	67.46	68.59	
	Standards											
1	CoJ 64	68.59	50.60	86.24	63.25	56.96	47.90	55.72	72.72	76.15	64.24	
2	Co 0238	69.27	78.06	115.43	68.48	79.04	61.97	70.74	80.37	70.44	77.09	2
3	Co 05009	78.19	59.84	99.46	67.41	34.38	52.97	91.17	66.79	75.19	69.49	
	Mean	73.77	66.99	100.63	69.30	56.71	60.49	65.56	76.17	71.13	71.19	
	SE (m)	4.34		6.78	2.71	2.54	2.48	2.53	2.20	2.43		
	CD at 5%	13.00	7.71	21.12	6.49	5.53	5.41	7.88	4.80	5.09		
	CV	10.18	6.47	11.67	6.77	5.49	13.56	6.69	5.01	4.12		
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank 1						CoLk 14201					
	Rank 2						CoPb 14181					
	Rank 3											

No. of locations where an entry recorded >10 % improvement over the best standard: CoPb 14181 (1) and CoPb 14181 (1)

Performance across locations: Among the standards, Co 0238 was the best in the zone for cane yield (77.09 t/ha). Only one entry viz. CoLk 14201 in the zone recorded higher cane yield than the best standard (78.31 t/ha). However, its per cent improvement was lesser than 10 %.

Table 4.2.3 CCS % at harvest /9th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 14034	12.52	11.87	14.15	11.27	12.76	11.90	13.04	12.80	9.72	12.23	2
2	CoLk 14201	12.57	11.14	11.30	11.67	13.79	12.08	13.42	13.24	8.34	11.95	
3	CoPb 14181	12.89	12.72	13.36	12.20	13.11	11.68	12.90	12.98	9.23	12.34	1
4	CoPb 14211	12.10	11.87	13.86	12.91	12.89	10.99	12.28	12.06	10.08	12.12	
	Standards											
1	CoJ 64	12.94	11.86	13.64	10.75	13.36	12.11	12.70	11.92	10.13	12.16	3
2	Co 0238	12.07	11.71	13.79	11.26	13.32	11.66	12.62	13.21	8.64	12.03	
3	Co 05009	12.11	12.16	13.67	10.29	12.92	10.73	12.67	12.89	8.81	11.81	
	Mean	12.36	11.91	13.40	11.47	13.16	11.59	12.80	12.73	9.28	12.08	
	SE (m)	0.08		0.35	0.47	0.31	0.26	0.14	0.13	0.37		
	CD at 5%	0.24	0.48	1.09	1.12	NS	0.57	0.44	0.29	0.76		
	CV	1.14	2.29	4.53	7.06	2.89	2.74	1.91	1.82	4.82		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1				CoPb 14211				CoLk 14201			
	Rank 2				CoPb 14181							
	Rank 3											

No. of locations where an entry recorded >5 % improvement over the best standard: CoLk 14201 (1), CoPb 14181 (1) and CoPb 14211 (1).

Performance across locations: CoJ 64 was the best among the standards for CCS % in the zone (12.16). Two test entries recorded higher CCS % than CoJ 64. They were: CoPb 14181 (12.34) and Co 14034 (12.23). However, their per cent improvement over the best standard were < 5 %.

Table 4.2.4 Sucrose % at harvest /9th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 14034	18.07	17.03	20.03	16.47	18.21	17.37	18.88	18.59	14.26	17.66	2
2	CoLk 14201	18.11	15.93	16.21	17.01	19.62	17.63	19.65	19.08	12.71	17.33	
3	CoPb 14181	18.57	18.18	19.19	17.73	18.84	17.16	18.74	18.74	13.81	17.88	1
4	CoPb 14211	17.43	17.03	19.74	18.69	18.38	16.39	17.78	17.67	14.52	17.51	
	Standards											
1	CoJ 64	18.45	17.00	19.37	15.77	19.06	17.71	18.44	17.43	14.57	17.53	3
2	Co 0238	17.33	16.85	19.76	16.45	19.12	17.13	18.30	19.03	13.13	17.46	
3	Co 05009	17.38	17.31	19.37	15.14	18.37	15.99	18.36	18.66	13.06	17.07	
	Mean	17.77	17.05	19.10	16.75	18.80	17.05	18.59	18.45	13.72	17.48	
	SE (m)	0.12		0.47	0.63	0.42	0.29	0.19	0.15	0.39		
	CD at 5%	0.37	0.71	1.46	1.52	NS	0.63	0.60	0.33	0.81		
	CV	1.21	2.34	4.24	6.55	2.76	2.08	1.78	1.42	3.47		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1				CoPb 14211				CoLk 14201			
	Rank 2				CoPb 14181							
	Rank 3											

No. of locations where an entry recorded >5 % improvement over the best standard: CoLk 14201 (1), CoPb 14181 (1) and CoPb 14211 (1).

Performance across locations: Among the standards, CoJ 64 was the best in the zone for sucrose % (17.53). Two test entries that recorded higher sucrose % than the best standard were: CoPb 14181 (17.88) and Co 14034 (17.66). However, their per cent improvement over the best standard were < 5 %.

Table 4.2.5 Brix % at harvest /9th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	20.37	18.97	21.63	19.05	20.05	20.06	21.43	21.24	16.60	19.93
2	CoLk 14201	20.33	17.60	18.03	19.57	21.46	20.33	22.83	21.42	15.93	19.72
3	CoPb 14181	20.87	20.07	21.39	20.27	21.02	20.06	21.40	21.12	16.70	20.32
4	CoPb 14211	19.57	18.93	21.64	21.20	20.17	19.73	20.17	20.44	16.30	19.79
	Standards										
1	CoJ 64	20.23	18.87	21.10	18.37	20.96	20.53	21.07	20.21	16.30	19.74
2	Co 0238	19.30	18.87	21.95	19.03	21.30	20.06	20.83	21.44	16.37	19.91
3	Co 05009	19.33	18.93	20.97	17.75	20.05	19.20	20.87	21.14	15.53	19.31
	Mean	19.87	18.89	20.96	19.31	20.72	20.00	21.23	20.99	16.25	19.80
	SE (m)	0.20		0.44	0.61	0.46	0.18	0.21	0.10	0.38	
	CD at 5%	0.60	0.87	1.37	1.47	1.00	0.38	0.64	0.22	0.79	
	CV	1.74	2.61	3.63	5.51	2.71	1.07	1.68	0.85	2.87	

Table 4.2.6 Purity % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	88.74	89.81	92.59	86.47	90.57	86.57	88.08	87.54	85.90	88.47
2	CoLk 14201	89.09	90.55	89.89	86.90	91.45	86.72	86.08	89.06	79.79	87.73
3	CoPb 14181	88.99	90.59	89.69	87.46	89.71	85.55	87.54	88.70	82.69	87.88
4	CoPb 14211	89.08	89.93	91.21	88.15	91.14	83.08	88.17	86.30	89.08	88.46
	Standards										
1	CoJ 64	91.18	90.11	91.83	85.78	90.92	86.29	87.55	86.27	89.39	88.81
2	Co 0238	89.80	89.29	90.05	86.40	89.71	85.35	87.82	88.96	80.21	87.51
3	Co 05009	89.90	91.45	92.35	85.24	91.66	83.27	88.00	88.25	84.10	88.25
	Mean	89.45	90.25	91.09	86.62	90.74	85.26	87.61	87.87	84.45	88.15
	SE (m)	0.47		0.41	0.54	0.72	0.99	0.34	0.48	2.37	
	CD at 5%	1.40	NS	1.28	1.28	NS	2.17	1.04	1.05	4.95	
	CV	0.90	0.79	0.78	1.07	0.97	1.43	0.66	0.95	3.44	

Table 4.2.7 Pol % in cane and Fibre % at harvest

Sl No.	Entries	Pol % in cane						Fibre %					
		Kapur thala	Karnal	Lucknow	Muzafar nagar	Shahja hanpur	Mean	Kapur thala	Karnal	Lucknow	Muzafar nagar	Shahja hanpur	Mean
1	Co 14034	12.42	15.50	13.92	13.28	13.88	13.80	13.54	12.62	13.60	13.34	15.36	13.69
2	CoLk 14201	11.89	11.74	14.87	13.45	14.27	13.24	14.48	17.56	14.23	13.42	14.95	14.93
3	CoPb 14181	13.53	14.17	14.40	13.06	14.01	13.83	14.44	16.12	13.55	13.52	15.21	14.57
4	CoPb 14211	13.37	15.27	14.06	12.58	13.17	13.69	14.82	12.66	13.51	13.38	15.37	13.95
	Standards												
1	CoJ 64	13.04	15.03	14.52	13.67	13.04	13.86	12.04	12.41	13.77	13.32	15.22	13.35
2	Co 0238	13.06	15.28	14.54	13.37	14.23	14.10	14.23	12.69	13.97	13.46	15.21	13.91
3	Co 05009	12.56	14.64	13.90	12.37	13.94	13.48	14.08	14.42	14.33	13.52	15.30	14.33
	Mean	12.84	14.52	14.32	13.11	13.79	13.72	13.95	14.07	13.85	13.42	15.17	14.09
	SE (m)		0.35	0.36	-	0.12			0.11	0.63	-	0.14	
	CD at 5%	0.59	1.09	NS	-	0.25		0.98	0.33	NS	-	0.31	
	CV	2.62	4.15	3.06	-	1.46		3.97	1.29	5.55	-	1.62	

Table 4.2.8 Juice extraction % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	49.25	50.46	51.02	40.83	48.25	48.26		53.58	45.61	48.41
2	CoLk 14201	55.30	50.58	43.15	43.27	45.82	50.78		86.87	47.75	52.94
3	CoPb 14181	49.54	50.79	44.09	41.23	49.43	49.37		55.48	45.19	48.14
4	CoPb 14211	51.11	50.60	51.00	41.72	51.85	45.14		52.86	44.85	48.64
	Standards										
1	CoJ 64	53.13	51.18	49.75	39.87	51.18	51.77		56.22	47.65	50.09
2	Co 0238	55.12	50.36	50.92	40.34	49.69	51.53		57.59	41.05	49.58
3	Co 05009	54.56	50.89	45.64	40.63	46.72	50.63		55.08	45.93	48.76
	Mean	52.74	50.69	47.94	41.12	48.99	49.63		55.38	45.43	48.99
	SE (m)	0.72		0.32	0.96	3.13	-		1.53	3.78	
	CD at 5%	2.15	NS	1.01	2.31	NS	-		NS	7.90	
	CV	2.35	1.13	1.17	4.06	7.81	-		4.78	10.19	

Table 4.2.9 NMC at harvest / 9th month ('000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	73.90	91.21	81.93	89.02	75.23	84.19	37.41	90.62	110.67	81.58
2	CoLk 14201	99.62	89.65	121.40	88.49	122.22	111.36	66.20	100.25	113.67	101.43
3	CoPb 14181	80.76	88.60	81.60	84.81	94.06	93.58	41.20	93.70	128.00	87.37
4	CoPb 14211	79.56	91.07	81.75	84.28	76.93	108.64	44.35	94.81	127.00	87.60
	Standards										
1	CoJ 64	103.74	84.64	78.92	82.17	95.68	95.18	56.11	100.49	128.67	91.73
2	Co 0238	77.50	90.79	91.03	80.59	93.75	71.85	45.56	92.10	116.00	84.35
3	Co 05009	84.36	75.99	87.70	83.49	60.34	79.63	61.29	81.60	115.67	81.12
	Mean	88.67	87.42	89.19	84.69	88.32	92.06	50.30	93.37	119.95	88.22
	SE (m)	6.31		5.31	1.87	1.64	2.25	1.57	3.04	11.08	
	CD at 5%	18.92	8.10	16.55	4.48	3.57	4.91	4.88	6.63	23.16	
	CV	12.32	5.21	10.32	3.82	2.27	8.09	5.39	5.64	9.14	

Table 4.2.10 Stalk length (cm) at 9th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	171.19	216.25	265.00	193.00	119.80	218.00	216.00	209.67	159.90	196.53
2	CoLk 14201	195.89	225.33	265.00	175.00	136.13	205.00	188.00	185.00	163.67	193.22
3	CoPb 14181	210.00	222.50	253.00	197.00	174.67	212.00	206.00	211.67	170.90	206.42
4	CoPb 14211	210.44	229.17	233.00	191.00	128.33	190.00	205.00	202.00	136.30	191.69
	Standards										
1	CoJ 64	160.33	192.92	233.00	197.00	127.00	164.00	171.00	185.33	151.93	175.83
2	Co 0238	194.55	233.75	257.00	193.00	176.00	217.00	219.00	222.67	152.40	207.26
3	Co 05009	244.44	205.00	293.00	184.00	126.67	188.00	263.00	179.00	153.13	204.03
	Mean	200.94	217.85	257.00	190.00	141.23	199.00	210.00	200.76	155.46	196.92
	SE (m)	6.75		3.00	6.00	5.56	8.00	7.00	5.23	5.89	
	CD at 5%	20.23	NS	10.00	14.00	12.11	17.00	21.00	11.39	12.30	
	CV	5.81	7.52	2.16	5.28	4.82	4.89	5.59	4.51	4.64	

Table 4.2.11 Stalk diameter (cm) at 9th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	2.60	2.30	2.80	1.90	2.13	2.24	2.55	2.60	2.16	2.36
2	CoLk 14201	2.36	2.33	2.20	2.03	1.92	2.35	2.53	2.23	2.22	2.24
3	CoPb 14181	2.39	2.14	2.30	2.00	2.06	2.26	2.37	2.33	2.16	2.22
4	CoPb 14211	2.48	2.29	2.50	1.93	2.45	2.22	2.42	2.20	2.12	2.29
	Standards										
1	CoJ 64	2.50	2.11	2.30	2.03	1.99	2.31	2.43	2.27	2.29	2.25
2	Co 0238	2.54	2.54	2.70	2.10	2.42	2.43	2.79	2.67	2.43	2.51
3	Co 05009	2.20	2.19	2.50	1.97	1.99	2.10	2.40	2.30	2.44	2.23
	Mean	2.39	2.27	2.46	1.99	2.14	2.27	2.50	2.37	2.26	2.29
	SE (m)	0.06		0.01	0.06	0.11	0.05	0.09	0.08	0.14	
	CD at 5%	0.19	0.18	0.15	0.15	0.24	0.12	NS	0.18	0.30	
	CV	4.70	4.51	3.39	5.54	6.31	0.84	6.51	6.15	7.80	

Table 4.2.12 Single cane weight (kg) at 9th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	1.04	0.84	1.44	0.83	0.56	0.72	1.43	1.05	0.81	0.97
2	CoLk 14201	0.83	0.66	0.93	0.78	0.65	0.77	1.27	0.90	0.74	0.84
3	CoPb 14181	1.04	0.78	0.95	0.85	0.65	0.75	1.23	1.03	0.69	0.88
4	CoPb 14211	1.07	0.84	1.16	0.83	0.57	0.57	1.20	0.88	0.69	0.87
	Standards										
1	CoJ 64	0.77	0.60	1.09	0.77	0.60	0.54	0.99	0.83	0.67	0.76
2	Co 0238	1.05	0.86	1.27	0.85	0.84	1.01	1.55	1.15	0.79	1.04
3	Co 05009	1.03	0.79	1.13	0.81	0.57	0.75	1.49	0.95	0.65	0.91
	Mean	0.93	0.77	1.14	0.81	0.63	0.73	1.31	0.97	0.72	0.89
	SE (m)	0.05		0.03	0.03	0.03	0.03	0.03	0.04	0.04	
	CD at 5%	0.14	0.08	0.09	0.07	0.06	0.07	0.10	0.08	0.08	
	CV	8.92	6.18	4.34	5.81	5.51	5.32	4.32	6.77	6.75	

Table 4.2.13 Number of tillers at 180 days (*000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	80.59	95.11	113.07	210.31	83.64					116.54
2	CoLk 14201	124.31	94.18	193.51	209.07	175.15					159.24
3	CoPb 14181	100.14	92.05	134.06	200.36	131.10					131.54
4	CoPb 14211	88.48	94.62	110.33	199.11	86.19					115.75
	Standards										
1	CoJ 64	124.14	89.18	137.94	194.13	129.24					134.93
2	Co 0238	90.02	93.99	136.47	190.40	126.39					127.45
3	Co 05009	94.65	78.95	137.09	197.24	88.12					119.21
	Mean	102.79	91.15	137.49	200.02	117.12					129.71
	SE (m)	6.02		6.72	4.41	3.33					
	CD at 5%	18.04	9.23	20.95	10.58	7.26					
	CV	10.14	5.70	8.47	3.82	3.48					

Table 4.2.14 Number of tillers at 90 days or Before earthing up ('000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	129.80	103.00	108.56	200.30	94.83	185.93		180.25	187.73	148.80
2	CoLk 14201	169.92	105.20	177.54	199.11	204.24	205.19		217.04	176.73	181.87
3	CoPb 14181	120.54	101.40	124.38	190.81	157.41	187.41		196.42	158.94	154.66
4	CoPb 14211	125.34	103.50	100.08	189.63	94.37	194.94		201.36	166.33	146.94
	Standards										
1	CoJ 64	171.12	95.30	137.50	184.89	155.71	178.02		206.79	169.14	162.31
2	Co 0238	146.60	104.30	127.55	181.33	141.13	166.17		189.88	181.58	154.82
3	Co 05009	160.49	85.50	130.48	187.85	110.03	170.12		169.63	170.12	148.03
	Mean	150.76	99.80	129.44	190.56	136.82	183.97		194.48	173.19	157.38
	SE (m)	11.17		6.90	4.20	3.86	3.66		7.85	8.21	
	CD at 5%	33.50	8.00	21.48	10.07	8.41	7.98		17.11	27.15	
	CV	12.84	4.51	9.23	3.82	3.45	6.59		6.99	12.29	

Table 4.2.15. Assessment of the performance of entries compared to the best standard by monitoring team

S. No	Genotype	Lucknow	Shahjah anpur	Pant nagar	Muzzaff arnagar	Karnal	Uchani	Kapur thala	Faridkot	Sriganga nagar	Kota
1	Co 14034	Poor	On par	Poor	Better	On par	NA	Poor	Better	Poor	Poor
2	CoLk 14201	On par	Better	On par	Better	Better	NA	Better	Better	Better	On par
3	CoPb 14181	Better	Better	On par	Better	On par	NA	On par	Better	On par	Poor
4	CoPb 14211	Poor	On par	On par	Poor	On par	NA	On par	Better	Better	On Par
Standards											
1	CoJ 64										
2	Co 0238	Best	Best			Best		Best			
3	Co 05009			Best	Best				Best	Best	Best

In place of CoLk 14201, a different clone was planted at three locations *i.e.*, Karnal, Kapurthala and Sriganganagar

4.3 ADVANCED VARIETAL TRIAL (EARLY) Pooled data of 2 Plant crops + 1 Ratoon

Centres (9)	Faridkot, Kapurthala, Karnal, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur and Sriganaganagar.
Entries (4)	Co 14034, CoLk 14201, CoPb 14181 and CoPb 14211
Standards (3)	CoJ 64, Co 0238 and Co 05009
Design	RBD
Replications	4
Plot size	Gross : 8 Rows x 6 m x 0.9 m Net : 6 Rows x 5 m x 0.9 m
Month of Planting / Ratooning	AVT I Plant : February /March, 2018 AVT II Plant & Ratoon : February / March, 2019

Four early maturing entries were evaluated along with three standards during 2018-19 in AVT-I Plant crop trial and during 2019-20 in AVT-II Plant as well as in AVT-Ratoon trials at 9 locations in North West Zone. The weighted mean of two plant crops and one ratoon for four important traits namely, CCS yield, cane yield, CCS % and sucrose % are presented in Tables 4.3.1 to 4.3.4 as well as in Fig. 4.3.1 to 4.3.4.

Commercial cane sugar yield (CCS yield t/ha): Co 0238 was the best among the standards in the zone for CCS yield. Its zonal mean was 10.60 t/ha (Table 4.8.1 & Fig. 4.8.1). Two test entries were numerically superior to the best standard in the zone. They were: Co 14034 (10.77 t/ha) and CoPb 14211 (10.64 t/ha). However, the per cent improvement of CCS yield in these entries were less than 10 %.

Cane yield (t/ha): Among the standards, Co 0238 was the best in the zone with zonal mean of 85.73 t/ha. Only one test entry viz. CoLk 14201 recorded higher cane yield (87.07 t/ha) than Co 0238 (Table 4.3.2 & Fig. 4. 3.2), although the per cent improvement over Co 0238 was less than 10 %.

CCS % at harvest: CoJ 64 was the best standard for CCS % (Table 4.3.3 & Fig. 4.3.3). Its zonal mean was 12.39 %. Three test entries recorded numerically higher CCS % than CoJ 64. They were: Co 14034 (12.60), CoPb 14181 (12.55) and CoPb 14211 (12.43). Nonetheless, the per cent improvement of CCS % in these entries over CoJ 64 were lesser than 5 %.

Sucrose % at harvest: Among the standards, Co 0238 recorded the highest sucrose % in the zone (18.79) (Table 4.3.3 & Fig. 4.3.3). Two test entries recorded numerically higher sucrose % than Co 0238. They were: CoPb 14181 (19.03) and Co 14034 (18.93). However, the per cent improvement of sucrose % in these entries over Co 0238 were lesser than 5 %.

Thus, on the basis of criteria set for identifying qualifying entry *i.e.* 10 % improvement in cane yield with numerically superior sucrose content or 5 % improvement in sucrose % with numerically superior cane yield, none of the entries could be selected as qualifying entry.

Varietal Improvement Programme-AICRP (Sugarcane)
 Principal Investigator's Report (2019-20)
 North West Zone: AVT (Early)
 Pooled Mean of 2 Plant +1 Ratoon trials

Table 4.3.1 CCS yield (t/ha) at harvest

Sl No.	Entries	Faridkot	Kapur-thala	Karnal	Kota	Lucknow	Muzaffar-nagar	Pant-nagar	Shahja-hanpur	Sriganga-nagar	Weighted Mean	Rank
1	Co 14034	10.80	10.14	16.72	10.54	7.41	9.35	12.22	10.34	9.44	10.77	1
2	CoLk 14201	8.83	8.18	12.73	9.67	11.27	11.75	12.72	10.87	9.34	10.59	
3	CoPb 14181	11.58	9.87	11.73	10.12	9.37	10.89	10.78	10.72	9.10	10.46	
4	CoPb 14211	10.17	10.95	12.92	10.16	8.56	9.88	13.05	10.06	10.01	10.64	2
	Standards											
1	CoJ 64	9.92	8.02	13.09	8.42	7.79	7.59	10.44	9.15	9.50	9.32	
2	Co 0238	9.80	10.54	15.78	9.23	10.58	9.74	11.33	11.13	7.27	10.60	3
3	Co 05009	10.71	9.17	14.17	8.45	5.50	7.88	12.52	8.79	8.25	9.49	
	Mean	10.44	9.56	13.88	9.51	9.04	9.59	11.87	10.15	8.99	10.34	
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1				Co 14034		CoLk 14201					
	Rank 2				CoPb 14211							
	Rank 3											

Varietal Improvement Programme-AICRP (Sugarcane)
 Principal Investigator's Report (2019-20)
 North West Zone: AVT (Early)
 Pooled Mean of 2 Plant +1 Ratoon trials

Table 4.3.2 Cane yield (t/ha) at harvest

Sl No.	Entries	Faridkot	Kapur-thala	Karnal	Kota	Lucknow	Muzaffar-nagar	Pant-nagar	Shahja-hanpur	Sriganga-nagar	Weighted Mean	Rank
1	Co 14034	84.51	82.30	119.76	81.26	57.05	74.03	95.44	82.92	88.63	85.10	
2	CoLk 14201	71.81	74.31	114.57	74.98	84.20	91.44	96.22	86.46	89.69	87.07	1
3	CoPb 14181	90.98	77.55	88.91	77.95	71.34	87.74	84.60	85.60	86.85	83.50	
4	CoPb 14211	82.96	87.18	96.33	76.74	65.21	79.55	104.83	83.71	93.27	85.53	3
	Standards											
1	CoJ 64	78.14	64.61	98.79	70.08	61.09	59.92	82.86	76.38	84.90	75.20	
2	Co 0238	80.28	87.78	117.16	73.54	81.09	76.50	89.04	86.83	79.32	85.73	2
3	Co 05009	86.55	75.09	108.20	71.24	43.67	63.79	97.53	71.23	82.35	77.74	
	Mean	83.84	78.40	106.68	75.11	66.24	76.13	92.93	81.80	86.43	83.01	
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank 1				Co 14034		CoLk 14201					
	Rank 2						CoPb 14181					
	Rank 3											

Varietal Improvement Programme-AICRP (Sugarcane)
 Principal Investigator's Report (2019-20)
 North West Zone: AVT (Early)
 Pooled Mean of 2 Plant +1 Ratoon trials

Table 4.3.3 CCS % at harvest

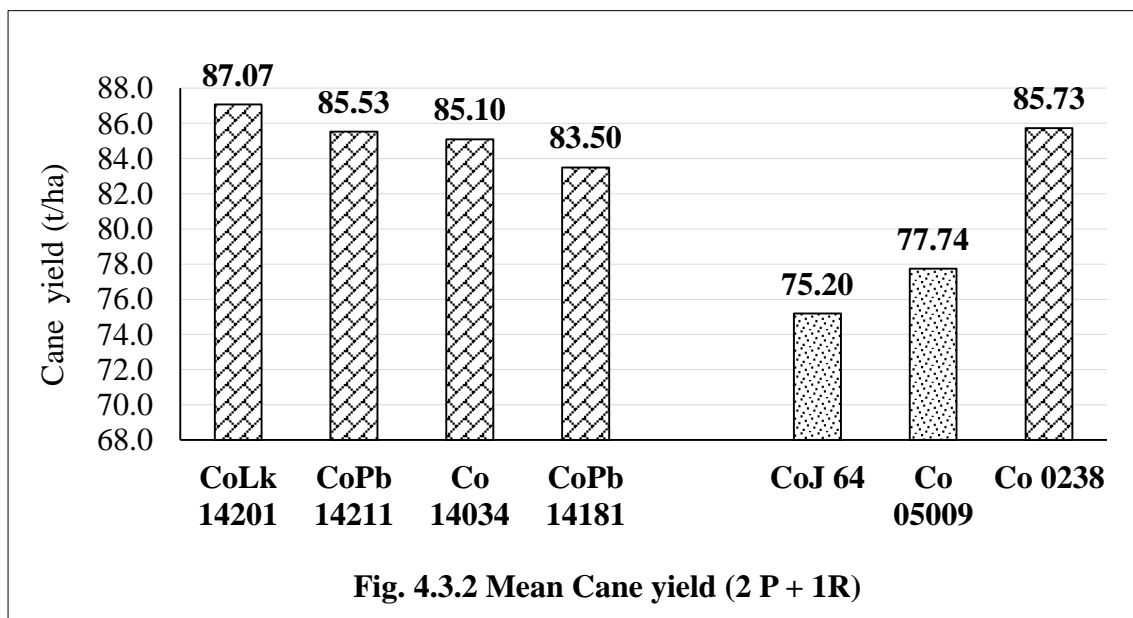
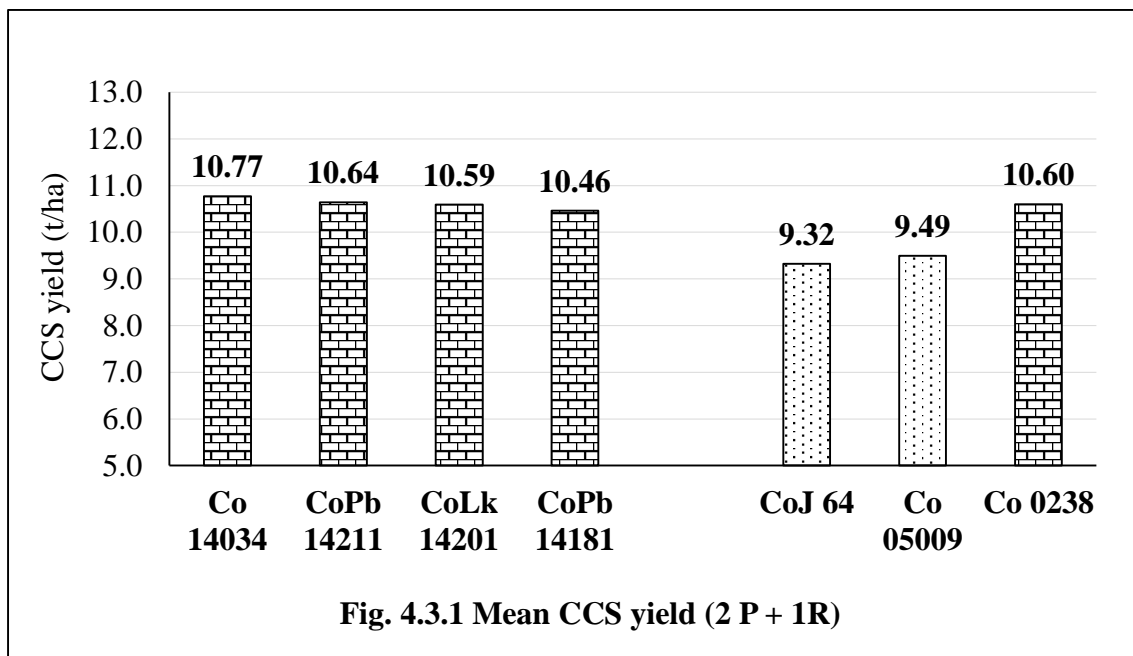
Sl No.	Entries	Faridkot	Kapur-thala	Karnal	Kota	Lucknow	Muzaffar-nagar	Pant-nagar	Shahja-hanpur	Sriganga-nagar	Weighted Mean	Rank
1	Co 14034	12.75	12.31	13.97	12.89	12.96	12.55	12.90	12.48	10.57	12.60	1
2	CoLk 14201	12.29	11.07	11.11	12.84	13.40	12.85	13.24	12.68	10.23	12.19	
3	CoPb 14181	12.75	12.74	13.23	12.95	13.14	12.35	12.80	12.52	10.41	12.55	2
4	CoPb 14211	12.27	12.53	13.40	13.26	13.07	12.23	12.45	12.00	10.65	12.43	3
	Standards											
1	CoJ 64	12.72	12.37	13.32	11.93	12.82	12.61	12.60	11.97	11.19	12.39	
2	Co 0238	12.20	12.00	13.47	12.51	13.07	12.64	12.71	12.71	9.42	12.30	
3	Co 05009	12.37	12.24	13.10	11.79	12.64	12.25	12.83	12.36	10.01	12.18	
	Mean	12.44	12.18	13.08	12.59	13.01	12.48	12.79	12.42	10.35	12.37	
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1				CoPb 14211							
	Rank 2											
	Rank 3											

Varietal Improvement Programme-AICRP (Sugarcane)
 Principal Investigator's Report (2019-20)
 North West Zone: AVT (Early)
 Pooled Mean of 2 Plant +1 Ratoon trials

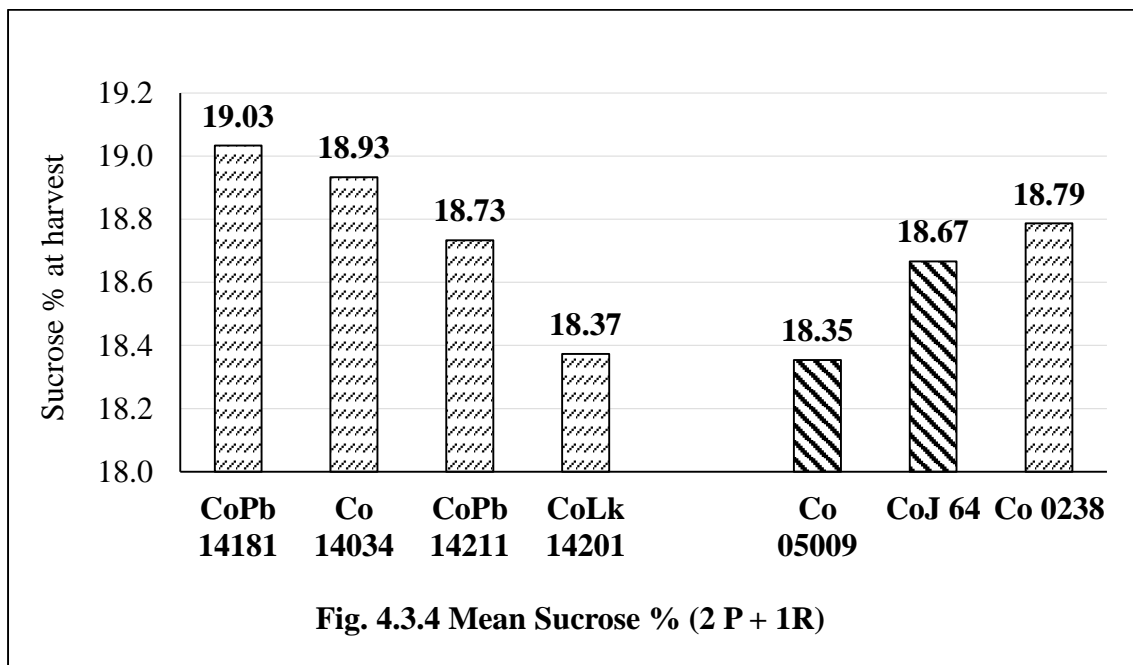
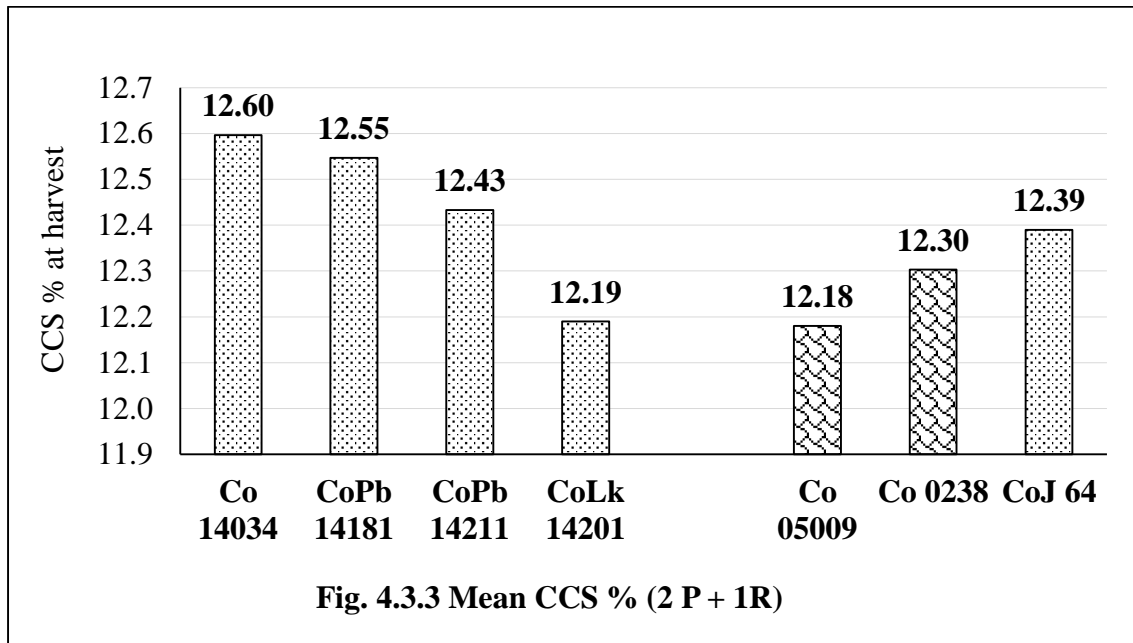
Table 4.3.4 Sucrose % at harvest

Sl No.	Entries	Faridkot	Kapur-thala	Karnal	Kota	Lucknow	Muzaffar-nagar	Pant-nagar	Shahja-hanpur	Sriganga-nagar	Weighted Mean	Rank
1	Co 14034	18.91	18.24	20.39	19.49	19.43	19.02	19.48	18.95	16.48	18.93	2
2	CoLk 14201	18.21	16.50	16.65	19.43	20.01	19.41	20.10	19.16	15.86	18.37	
3	CoPb 14181	18.99	18.89	19.91	19.59	19.88	18.84	19.46	18.94	16.82	19.03	1
4	CoPb 14211	18.12	18.56	19.47	19.99	19.62	18.73	18.93	18.34	16.87	18.73	
	Standards											
1	CoJ 64	18.79	18.33	19.63	18.21	19.45	19.19	19.05	18.25	17.09	18.67	
2	Co 0238	18.04	17.84	19.96	18.98	19.73	19.18	19.29	19.35	16.67	18.79	3
3	Co 05009	18.15	18.15	19.19	18.01	18.96	18.73	19.40	18.64	15.97	18.35	
	Mean	18.41	18.07	19.32	19.10	19.58	19.01	19.39	18.84	16.54	18.70	
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1				CoPb 14211							
	Rank 2											
	Rank 3											

Pooled mean of 2 Plant crops and 1 Ratoon trials conducted with early entries in NWZ



Pooled mean of 2 Plant crops and 1 Ratoon trials conducted with early entries in NWZ



4.4 ADVANCED VARIETAL TRIAL (EARLY) - I PLANT

Centres (9)	Faridkot, Kapurthala, Karnal, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur and Sriganaganagar.
Entries (6)	Co 15023, Co 15024, Co 15027, CoLk 15201, CoLk 15205 and CoPb 15212
Standards (3)	CoJ 64, Co 0238 and Co 05009
Design	RBD
Replications	3
Plot size	Gross : 8 Rows x 6 m x 0.9 m Net : 6 Rows x 5 m x 0.9 m
Bud rate	12 buds per metre
Planting time	February / March, 2019
Crop duration	10 months

Results of the previous year: In the IVT (Early) trial, Co 0238 was the best among standards for CCS yield with zonal mean of 10.98 t/ha. Among the test entries, Co 15027 (11.54 t/ha) and Co 15023 (11.08 t/ha) recorded higher CCS yield than Co 0238 and occupied first and second ranks, respectively. Co 0238 was also the best standard for cane yield with zonal mean of 87.58 t/ha. Among test entries, two entries recorded numerically higher cane yield than the best standard. They were: Co 15027 (94.53 t/ha) and CoLk 15201 (92.18 t/ha). For juice quality, CoJ 64 was the best standard for CCS % (12.87) as well as for sucrose % (18.56). Among the test entries, Co 15023 ranked first for CCS % (13.63). It registered 5.91 per cent improvement over the standard CoJ 64 for CCS %. Co 15023 also ranked first for sucrose % (19.54). The per cent improvement in sucrose % of Co 15023 over CoJ 64 was 5.28 %. Out of 9 test entries, Co 15023, Co 15024, Co 15027, CoLk 15201, CoLk 15205, CoPb 15211 and CoPb 15212 were promoted to AVT I plant on the basis of yield, quality, field stand and resistance to disease.

Results of the current year: In the AVT (Early) I Plant trial, Co 0238 was the best among the standards for CCS yield with zonal mean of 13.34 t/ha. No test entry recorded higher CCS yield than Co 0238 although Co 15027 (13.29 t/ha) and CoLk 15201 (13.03 t/ha) ranked second and third positions, respectively in the zone for CCS yield. For cane yield, Co 0238 was the best among standards with a zonal mean of 106.93 t/ha. The test entry Co 15027 (109.93 t/ha) alone recorded numerically higher cane yield than Co 0238, but the per cent improvement over the best standard for cane yield was <10.0 %. For juice quality, CoJ 64 was the best among the standards with 12.56 % CCS and 18.13 % sucrose at harvest. Among the test entries, Co 15023 ranked first for CCS % at harvest (13.38) and sucrose % (19.28). Co 15023 was the only test entry in the zone that recorded >5 per cent improvement for CCS % and sucrose % over the best standard. Further details are presented in Tables 4.4.1 to 4.4.19.

Table 4.4.1 CCS yield (t/ha) at harvest

Sl No.	Entries	Faridkot *	Kapurthala	Karnal	Kota	Lucknow *	Muzaffar Nagar*	Pantnagar	Shahjahanpur	Sriganganagar	Mean	Rank *
1	Co 15023	6.59	10.23	20.13	12.53	8.85	9.29	15.45	10.63	9.19	13.03	3
2	Co 15024	9.12	11.64	11.00	10.17	7.01	8.58	14.57	9.84	8.96	11.03	
3	Co 15027	10.97	11.49	17.14	12.63	8.70	8.96	17.55	11.54	9.40	13.29	2
4	CoLk 15201	9.47	10.02	11.03	10.73	13.21	10.18	19.39	12.62	9.28	12.18	
5	CoLk 15205	8.67	7.99	10.62	9.06	11.27	6.76	12.73	10.44	10.36	10.20	
6	CoPb 15212	9.97	11.63	8.36	10.03	9.34	7.20	13.35	10.07	10.67	10.69	
Standards												
1	CoJ 64	9.50	10.77	11.14	8.96	8.05	6.53	18.85	9.81	9.51	11.51	
2	Co 0238	9.24	11.79	14.98	11.23	10.50	8.89	19.44	12.91	9.67	13.34	1
3	Co 05009	10.28	10.47	12.55	10.32	5.95	7.66	16.39	9.85	8.77	11.39	
	Mean	9.31	10.67	12.99	10.62	9.21	8.23	16.41	10.86	9.55	11.85	
	SE (m)	0.81		0.63	0.49	0.47	0.19	0.53	0.37	0.64		
	CD at 5%	2.44	2.17	1.90	1.19	0.99	0.41	1.61	0.79	1.88		
	CV	15.15	11.78	8.37	8.02	6.22	7.83	5.63	5.96	9.02		
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank 1			Co 15023	Co 15027	CoLk 15201	CoLk 15201			CoPb 15212		
	Rank 2			Co 15027	Co 15023							
	Rank 3											

No. of locations where an entry recorded >10 % improvement over the best standard: Co 15023 (2), Co 15027 (2), CoLk 15201 (2), CoPb 15212 (1).

Performance across locations: Among the standards Co 0238 was the best (13.34 t/ha). No test entry recorded higher CCS yield than Co 0238 although Co 15027 (13.29 t/ha) and Co 15023 (13.03 t/ha) ranked second and third places, respectively in the zone for CCS yield.

Note: *while calculating mean CCS yield in the zone, data of Faridkot, Lucknow and Muzaffarnagar Centres were excluded due to low cane yield in these trials than the State average cane yield.

Table 4.4.2 Cane yield (t/ha) at harvest

Sl No.	Entries	Faridkot *	Kapurthala	Karnal	Kota	Lucknow *	Muzaffar Nagar *	Pantnagar	Shahjahanpur	Sriganganagar	Mean *	Rank
1	Co 15023	46.60	77.08	129.32	92.06	68.65	70.86	116.35	82.84	78.02	95.94	
2	Co 15024	75.62	97.67	87.92	81.01	56.27	66.66	119.94	77.78	80.09	90.73	
3	Co 15027	89.81	100.34	132.25	95.76	69.99	74.56	150.05	93.46	87.72	109.93	1
4	CoLk 15201	74.69	83.67	89.08	84.01	100.44	80.61	162.92	107.41	86.45	102.26	3
5	CoLk 15205	68.83	64.81	83.76	69.65	85.78	55.31	102.87	83.95	99.99	84.17	
6	CoPb 15212	83.02	95.04	70.16	79.40	78.83	59.87	106.18	89.38	87.52	87.95	
	Standards											
1	CoJ 64	71.91	85.85	86.47	69.90	62.13	52.47	144.50	83.09	83.70	92.25	
2	Co 0238	74.38	96.16	116.40	86.00	82.88	70.74	154.07	103.83	85.15	106.93	2
3	Co 05009	81.17	86.81	101.67	79.68	46.35	61.10	128.09	78.40	84.99	93.27	
	Mean	74.01	87.49	99.67	81.94	72.37	65.80	131.66	88.90	85.96	95.94	
	SE (m)	6.75		4.81	3.28	3.73	2.28	3.94	3.09	3.01		
	CD at 5%	20.24	17.80	14.54	7.93	7.92	4.83	11.92	6.56	8.79		
	CV	15.80	11.76	8.37	6.93	6.32	11.71	5.19	6.02	8.59		
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank 1			Co 15027	Co 15027	CoLk 15201	CoLk 15201			CoLk 15205		
	Rank 2			Co 15023								
	Rank 3											

No. of locations where an entry recorded >10 % improvement over the best standard: Co 15027 (2), CoLk 15201 (2), Co 15023 (1) and CoLk 15205 (1).

Performance across locations: Among the standards, Co 0238 was the best with a mean cane yield of 106.93 t/ha. Test entry Co 15027 (109.93 t/ha) recorded numerically higher cane yield than Co 0238.

Note: *while calculating mean cane yield in the zone, data of Faridkot, Lucknow and Muzaffarnagar Centres were excluded due to low cane yield in these trials than the State average yield.

Table 4.4.3 CCS % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 15023	14.14	13.27	15.56	13.60	12.88	13.11	13.28	12.83	11.78	13.38	1
2	Co 15024	12.07	11.95	12.51	12.56	12.45	12.52	12.14	12.67	11.19	12.23	
3	Co 15027	12.26	11.46	12.96	13.19	12.41	12.02	11.71	12.34	10.72	12.12	
4	CoLk 15201	12.68	12.05	12.38	12.78	13.15	12.41	11.90	11.76	10.74	12.21	
5	CoLk 15205	12.60	12.31	12.67	13.01	13.16	12.20	12.40	12.43	10.36	12.35	
6	CoPb 15212	12.02	12.24	11.92	12.63	11.86	12.02	12.59	11.27	12.19	12.08	
	Standards											
1	CoJ 64	13.21	12.54	12.89	12.81	12.96	12.45	13.04	11.82	11.36	12.56	2
2	Co 0238	12.42	12.25	12.87	13.06	12.72	12.58	12.62	12.53	11.36	12.49	3
3	Co 05009	12.65	12.02	12.35	12.94	12.81	12.55	12.77	12.57	10.32	12.33	
	Mean	12.67	12.23	12.90	12.95	12.71	12.13	12.50	12.25	11.11	12.38	
	SE (m)	0.09		0.11	0.22	0.41	0.24	0.26	0.14	0.29		
	CD at 5%	0.27	0.87	0.32	0.54	NS	0.51	0.78	0.30	0.85		
	CV	1.22	4.09	1.42	2.99	3.98	2.37	3.59	2.02	3.57		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1	Co 15023	Co 15023	Co 15023						CoPb 15212	Co 15023	
	Rank 2											
	Rank 3											

No. of locations where an entry recorded >5 % improvement over the best standard: Co 15023 (3) and CoPb 15212 (1).

Performance across locations: Among the standards CoJ 64 was the best for CCS % with zonal mean of 12.56. Co 15023 was the only test entry in the zone that recorded >5 per cent improvement in CCS % (13.38) over the best standard.

Table 4.4.4 Sucrose % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 15023	20.01	18.89	21.88	19.62	18.45	19.02	19.51	18.58	17.52	19.28	1
2	Co 15024	17.24	17.08	18.06	18.21	17.89	18.20	17.76	18.37	16.48	17.70	
3	Co 15027	17.46	16.42	18.56	19.07	17.74	17.45	17.10	17.92	16.46	17.58	
4	CoLk 15201	18.12	17.17	18.02	18.52	18.83	18.01	17.33	17.12	16.03	17.68	
5	CoLk 15205	18.18	17.62	18.19	18.83	18.87	17.68	18.07	18.04	15.93	17.93	
6	CoPb 15212	17.16	17.55	17.21	18.31	17.20	17.40	18.28	16.51	17.76	17.49	
Standards												
1	CoJ 64	18.82	17.91	18.42	18.55	18.54	18.08	18.96	17.20	16.73	18.13	2
2	Co 0238	17.84	17.54	18.54	18.90	18.26	18.28	18.30	18.18	16.73	18.06	3
3	Co 05009	18.06	17.20	17.85	18.73	18.35	18.22	18.59	18.22	15.89	17.90	
	Mean	18.10	17.49	18.52	18.74	18.24	18.04	18.21	17.79	16.61	17.97	
	SE (m)	0.12		0.15	0.30	0.54	0.33	0.34	0.19	0.27		
	CD at 5%	0.35	1.15	0.45	0.73	NS	0.70	1.02	0.41	0.78		
	CV	1.13	3.81	1.40	2.79	3.65	2.23	3.20	1.86	2.19		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1	Co 15023	Co 15023	Co 15023						CoPb 15212	Co 15023	
	Rank 2											
	Rank 3											

No. of locations where an entry recorded >5 % improvement over the best standard: Co 15023 (3) and CoPb 15212 (1).

Performance across locations: Among the standards CoJ 64 was the best in the zone for sucrose % (18.13). The test entry Co 15023 alone in the zone recorded >5 per cent improvement for sucrose % (19.28) over the zonal mean of CoJ 64.

Table 4.4.5 Brix % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	21.63	20.67	23.26	22.10	20.47	21.50	22.80	21.11	20.29	21.54
2	Co 15024	19.00	18.87	20.35	20.73	19.98	20.83	20.57	20.90	19.33	20.06
3	Co 15027	19.13	18.23	20.58	21.57	19.59	19.90	19.73	20.45	20.90	20.01
4	CoLk 15201	19.97	18.83	20.65	21.03	20.87	20.53	19.90	19.67	19.30	20.08
5	CoLk 15205	20.47	19.50	20.25	21.33	20.96	19.77	20.77	20.57	20.27	20.43
6	CoPb 15212	18.90	19.53	19.39	20.83	19.60	19.73	20.87	19.18	20.40	19.83
	Standards										
1	CoJ 64	20.63	19.73	20.34	21.07	20.53	20.77	21.70	19.74	19.67	20.46
2	Co 0238	19.90	19.43	20.81	21.40	20.36	20.09	20.83	20.70	19.63	20.35
3	Co 05009	19.90	19.03	20.18	21.23	20.35	20.83	21.30	20.75	20.27	20.43
	Mean	19.95	19.31	20.65	21.25	20.30	20.44	20.94	20.34	20.01	20.35
	SE (m)	0.16		0.18	0.29	0.51	0.38	0.33	0.18	0.28	
	CD at 5%	0.48	1.11	0.55	0.71	NS	0.81	1.01	0.39	0.83	
	CV	1.39	3.33	1.52	2.39	3.08	2.27	2.75	1.56	1.92	

Table 4.4.6 Purity % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	92.51	91.41	94.04	88.77	90.17	88.46	85.55	88.03	86.35	89.48
2	Co 15024	90.74	90.47	88.75	87.83	89.55	87.37	86.37	87.89	85.26	88.25
3	Co 15027	91.28	90.06	90.19	88.42	90.55	87.68	86.64	87.64	78.76	87.91
4	CoLk 15201	90.74	91.18	87.23	88.04	90.28	87.68	87.08	87.04	83.06	88.04
5	CoLk 15205	88.83	90.33	89.79	88.25	90.00	87.99	87.00	87.70	78.59	87.61
6	CoPb 15212	90.81	89.86	88.76	87.90	87.74	88.17	87.61	86.07	87.06	88.22
	Standards										
1	CoJ 64	91.23	90.75	90.59	88.05	90.33	87.26	87.37	87.13	85.05	88.64
2	Co 0238	89.65	90.27	89.10	88.30	86.27	87.45	87.83	87.80	85.23	87.99
3	Co 05009	90.75	90.34	88.45	88.18	90.17	87.48	87.25	87.82	78.39	87.65
	Mean	90.73	90.52	89.66	88.19	89.45	87.73	86.97	87.46	83.08	88.20
	SE (m)	0.47		0.32	0.20	1.66	0.71	0.66	0.18	1.83	
	CD at 5%	1.40	NS	0.97	0.49	NS	NS	NS	0.38	5.36	
	CV	0.89	1.01	0.62	0.40	2.27	0.99	1.32	0.36	3.02	

Table 4.4.7 Pol % in cane and Fibre % at harvest

SI No.	Entries	Pol % in cane						Fibre %					
		Kapur thala	Karnal	Lucknow	Muzaffar nagar	Shahja hanpur	Mean	Kapur thala	Karnal	Lucknow	Muzaffar nagar	Shahja hanpur	Mean
1	Co 15023	14.72	17.04	14.37	14.59	14.02	14.95	12.31	12.09	12.15	13.04	14.53	12.82
2	Co 15024	13.76	13.99	13.96	14.02	13.86	13.92	13.32	12.54	12.02	13.37	14.55	13.16
3	Co 15027	13.03	14.59	14.10	13.78	13.43	13.79	13.37	11.43	10.49	13.12	15.05	12.69
4	CoLk 15201	13.77	13.19	14.41	14.22	12.81	13.68	13.90	16.79	13.47	13.26	15.21	14.53
5	CoLk 15205	14.94	13.38	14.36	14.03	13.58	14.06	13.21	16.41	13.89	13.40	14.76	14.33
6	CoPb 15212	14.28	13.00	13.10	13.74	12.40	13.30	14.43	14.43	13.84	13.38	14.89	14.19
	Standards												
1	CoJ 64	13.86	14.42	14.09	14.03	12.86	13.85	12.53	11.70	14.01	13.11	15.27	13.32
2	Co 0238	14.02	14.17	13.88	14.39	13.70	14.03	14.41	13.56	13.98	13.42	14.64	14.00
3	Co 05009	14.14	13.52	14.09	13.94	13.69	13.88	14.39	14.26	13.20	13.55	14.89	14.06
	Mean	14.06	14.15	14.04	14.08	13.37	13.94	13.54	13.69	13.00	13.29	14.87	13.68
	SE (m)		0.12	0.45	-	0.15			0.12	0.48	-	0.16	
	CD at 5%	1.04	0.36	0.96	-	0.32		0.97	0.35	1.02	-	0.34	
	CV	4.29	1.44	3.97	-	1.98		4.18	1.48	4.54	-	1.84	

Table 4.4.8 Juice extraction % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahjahanpur	Sriganganagar	Mean
1	Co 15023	53.35	51.44	54.78	43.78	48.19	53.05		58.85	43.64	50.89
2	Co 15024	48.13	51.27	50.81	42.03	45.87	53.04		58.02	41.81	48.87
3	Co 15027	55.61	51.08	57.44	46.08	50.27	50.64		56.19	43.68	51.37
4	CoLk 15201	46.85	51.52	46.32	38.97	51.16	49.39		53.64	42.24	47.51
5	CoLk 15205	49.07	51.68	54.06	45.78	50.08	53.73		57.59	53.10	51.89
6	CoPb 15212	46.00	51.92	53.59	44.57	43.28	51.27		56.18	46.94	49.22
	Standards										
1	CoJ 64	48.07	51.80	52.06	43.21	39.42	52.35		54.18	45.46	48.32
2	Co 0238	48.87	50.88	54.12	46.57	53.12	51.17		57.89	44.34	50.87
3	Co 05009	49.74	52.04	53.33	44.95	46.56	50.35		56.06	51.60	50.58
	Mean	49.52	51.51	52.94	43.99	47.55	51.55		56.51	45.87	49.93
	SE (m)	0.66		0.63	0.92	3.86	-		1.08	1.14	
	CD at 5%	1.98	NS	1.91	2.23	NS	-		2.30	3.33	
	CV	2.31	1.04	2.07	3.63	9.95	-		3.32	3.38	

Table 4.4.9 Brix % at 8th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	20.30	20.03	22.18	18.77	19.39	20.15	21.70	20.31	18.43	20.14
2	Co 15024	17.47	18.20	19.13	17.90	16.55	19.62	19.90	20.54	17.60	18.55
3	Co 15027	15.00	16.93	19.42	18.20	17.26	18.32	19.17	17.15	20.17	17.96
4	CoLk 15201	18.33	17.47	19.61	17.87	18.36	18.55	19.03	17.48	18.70	18.38
5	CoLk 15205	19.17	18.70	20.65	19.10	19.45	19.15	20.23	20.25	18.83	19.50
6	CoPb 15212	18.33	18.50	19.19	18.00	17.47	18.49	20.30	19.26	18.50	18.67
	Standards										
1	CoJ 64	19.13	19.00	19.88	18.24	19.51	19.79	21.13	19.50	17.87	19.34
2	Co 0238	18.50	18.60	20.04	20.10	18.20	19.85	20.40	20.52	18.47	19.41
3	Co 05009	18.17	17.73	19.22	18.90	18.24	19.32	20.53	19.13	19.30	18.95
	Mean	18.27	18.35	19.92	18.56	18.27	19.25	20.27	19.35	18.65	18.99
	SE (m)	0.27		0.31	0.22	0.50	0.60	0.40	0.09	0.38	
	CD at 5%	0.82	1.11	0.93	0.53	1.06	NS	1.21	0.19	1.11	
	CV	2.59	3.52	2.67	2.04	3.35	3.81	3.41	0.80	2.79	

Table 4.4.10 Sucrose % at 8th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	18.08	17.91	20.43	16.19	17.62	17.35	18.56	17.42	15.67	17.69
2	Co 15024	15.35	16.25	16.34	15.29	14.43	16.71	16.77	17.67	14.17	15.89
3	Co 15027	13.08	14.95	16.33	15.60	15.17	15.82	16.25	14.30	15.27	15.20
4	CoLk 15201	15.78	15.49	16.83	15.26	16.02	16.05	16.01	14.65	15.42	15.72
5	CoLk 15205	15.81	16.54	18.15	16.53	17.24	16.36	17.08	17.35	14.68	16.64
6	CoPb 15212	15.57	16.30	16.34	15.40	15.10	15.86	17.20	16.42	14.74	15.88
	Standards										
1	CoJ 64	16.66	17.31	17.52	15.64	17.16	16.93	17.96	16.49	14.75	16.71
2	Co 0238	15.65	16.46	17.27	17.56	15.73	17.09	17.46	17.64	15.01	16.65
3	Co 05009	16.10	15.72	17.21	16.32	16.23	16.48	17.43	16.30	14.72	16.28
	Mean	15.79	16.32	17.38	15.97	16.08	16.52	17.19	16.47	14.94	16.30
	SE (m)	0.27		0.26	0.23	0.49	0.54	0.32	0.08	0.26	
	CD at 5%	0.81	1.11	0.81	0.54	1.04	NS	0.98	0.17	0.77	
	CV	2.96	3.95	2.66	2.44	3.73	4.03	3.27	0.86	2.28	

Table 4.4.11 Purity % at 8th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	89.06	89.35	92.11	86.22	90.90	86.07	85.54	85.75	85.02	87.78
2	Co 15024	87.86	89.31	85.44	85.41	87.20	85.16	84.25	86.03	80.51	85.69
3	Co 15027	87.25	88.25	84.08	85.70	87.87	86.36	84.79	83.40	75.71	84.82
4	CoLk 15201	86.07	88.66	85.80	85.37	87.21	86.50	84.09	83.78	82.46	85.55
5	CoLk 15205	82.48	88.41	87.92	86.52	88.65	85.41	84.42	85.70	77.96	85.27
6	CoPb 15212	84.93	88.09	85.15	85.51	86.44	85.76	84.75	85.27	79.68	85.06
	Standards										
1	CoJ 64	87.05	91.10	88.16	85.71	87.94	86.20	85.01	84.55	82.54	86.47
2	Co 0238	84.60	88.50	86.15	87.34	86.50	86.12	85.57	85.98	81.27	85.78
3	Co 05009	88.63	88.67	89.57	86.34	90.13	85.31	84.91	85.21	76.27	86.12
	Mean	86.44	88.93	87.15	86.01	88.09	85.88	84.81	85.07	80.16	85.84
	SE (m)	0.50		0.51	0.20	1.17	0.60	0.40	0.28	2.14	
	CD at 5%	1.50	NS	1.53	0.49	2.48	NS	NS	0.58	6.24	
	CV	1.00	1.63	1.01	0.41	1.63	0.86	0.81	0.56	3.46	

Table 4.4.12 CCS % at 8th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	12.55	12.45	14.40	11.06	12.35	11.84	12.63	11.87	10.64	12.20
2	Co 15024	10.59	11.29	11.11	10.40	9.92	11.35	11.32	12.06	10.91	10.99
3	Co 15027	8.99	10.33	11.02	10.63	10.46	10.82	11.01	9.61	9.72	10.29
4	CoLk 15201	10.77	10.73	11.47	10.38	11.01	10.98	10.80	9.86	10.30	10.70
5	CoLk 15205	10.56	11.44	12.52	11.31	11.94	11.01	11.54	11.82	9.50	11.29
6	CoPb 15212	10.56	11.26	11.10	10.48	10.33	10.81	11.65	11.16	11.67	11.00
	Standards										
1	CoJ 64	11.44	12.14	12.10	10.65	11.84	11.52	12.19	11.15	10.82	11.54
2	Co 0238	10.59	11.39	11.80	12.07	10.76	11.68	11.89	12.04	10.97	11.47
3	Co 05009	11.15	10.89	11.98	11.16	11.26	11.21	11.82	11.07	10.43	11.22
	Mean	10.80	11.32	11.94	10.90	11.10	11.26	11.65	11.18	10.55	11.19
	SE (m)	0.13		0.19	0.17	0.38	0.39	0.22	0.07	0.28	
	CD at 5%	0.40	0.85	0.58	0.40	0.81	NS	0.67	0.14	0.82	
	CV	2.12	4.34	2.79	2.64	4.22	4.23	3.27	1.03	3.60	

Table 4.4.13 NMC at harvest ('000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	59.72	83.40	81.33	87.59	62.04	79.75	57.31	99.14	94.32	78.29
2	Co 15024	83.02	87.59	92.52	88.67	64.66	84.57	69.17	90.12	117.16	86.39
3	Co 15027	65.59	89.34	75.23	90.84	49.38	73.82	64.26	102.10	76.91	76.39
4	CoLk 15201	79.63	82.49	97.92	90.62	72.38	79.87	75.18	98.77	102.47	86.59
5	CoLk 15205	97.07	91.42	112.58	87.81	94.21	110.37	90.74	114.81	121.85	102.32
6	CoPb 15212	77.78	93.50	83.87	89.54	86.03	105.67	77.69	108.77	89.14	90.22
	Standards										
1	CoJ 64	91.51	107.35	106.02	88.89	82.48	91.97	114.17	108.02	75.93	96.26
2	Co 0238	86.11	85.27	82.95	91.49	68.83	80.86	77.04	100.86	82.72	84.01
3	Co 05009	72.69	95.21	91.36	89.11	66.51	90.24	73.06	96.17	120.25	88.29
	Mean	79.24	90.62	91.53	89.39	71.84	88.57	77.62	102.09	97.86	87.64
	SE (m)	4.11		3.50	1.39	1.92	2.22	1.50	4.09	3.14	
	CD at 5%	12.32	10.24	10.59	3.35	4.07	4.70	4.53	8.67	9.16	
	CV	8.98	6.53	6.63	2.69	3.28	8.27	3.35	6.94	4.36	

Table 4.4.14 Stalk length (cm)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	181.44	227.08	250.00	203.00	171.73	207.00	259.00	221.67	196.90	213.09
2	Co 15024	196.22	245.00	237.00	194.00	169.87	166.00	237.00	202.00	202.43	205.50
3	Co 15027	228.00	247.08	230.00	228.00	166.87	174.00	268.00	233.67	175.33	216.77
4	CoLk 15201	205.11	260.42	283.00	243.00	213.80	208.00	292.00	269.00	202.80	241.90
5	CoLk 15205	212.66	249.17	257.00	223.00	169.80	152.00	239.00	222.00	181.70	211.81
6	CoPb 15212	251.77	257.92	222.00	233.00	196.93	178.00	247.00	225.33	196.03	223.11
	Standards										
1	CoJ 64	193.44	225.83	227.00	185.00	150.47	168.00	220.00	235.67	166.63	196.89
2	Co 0238	179.77	270.42	255.00	239.00	191.47	238.00	275.00	245.33	176.47	230.05
3	Co 05009	242.33	267.08	273.00	228.00	144.67	254.00	297.00	232.33	169.03	234.16
	Mean	210.08	250.00	248.00	219.00	175.07	194.00	259.00	231.89	185.26	219.14
	SE (m)	6.85		11.00	14.00	13.73	8.00	15.00	6.21	2.65	
	CD at 5%	20.53	23.87	31.00	35.00	29.10	16.00	44.00	13.17	7.74	
	CV	5.64	5.52	7.17	11.37	9.60	4.84	9.70	4.64	1.95	

Table 4.4.15 Stalk diameter (cm)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	2.62	2.64	2.72	2.93	2.57	2.52	2.81	2.47	2.70	2.66
2	Co 15024	2.58	2.87	2.58	2.40	2.40	2.24	2.67	2.40	2.27	2.49
3	Co 15027	3.06	3.15	3.02	3.00	3.18	2.82	3.01	2.70	2.50	2.94
4	CoLk 15201	2.53	2.74	2.30	2.23	2.73	2.35	2.82	2.60	2.67	2.55
5	CoLk 15205	2.10	2.09	1.83	1.80	2.01	1.98	2.29	2.00	2.53	2.07
6	CoPb 15212	2.71	2.42	2.28	2.20	2.15	2.11	2.25	2.13	2.57	2.31
	Standards										
1	CoJ 64	2.43	2.26	2.37	2.20	2.13	2.41	2.30	2.27	2.40	2.31
2	Co 0238	2.54	3.01	2.67	2.30	2.75	2.56	2.68	2.73	2.33	2.62
3	Co 05009	2.43	2.57	2.18	2.10	2.14	2.28	2.32	2.27	2.57	2.32
	Mean	2.56	2.64	2.44	2.35	2.45	2.36	2.57	2.40	2.50	2.47
	SE (m)	0.09		0.05	0.09	0.12	0.04	0.09	0.09	0.14	
	CD at 5%	0.27	0.44	0.15	0.23	0.25	0.08	0.27	0.20	0.41	
	CV	6.01	9.66	3.54	6.94	5.85	1.92	6.04	6.86	7.68	

Table 4.4.16 Single cane weight (kg)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	0.99	0.93	1.59	1.05	1.11	1.05	2.03	1.13	1.10	1.22
2	Co 15024	1.02	1.12	0.95	0.91	0.87	0.95	1.73	1.02	1.16	1.08
3	Co 15027	1.55	1.12	1.76	1.05	1.42	1.17	2.33	1.30	1.10	1.42
4	CoLk 15201	1.04	1.02	0.91	0.93	1.39	1.18	2.17	1.51	1.13	1.25
5	CoLk 15205	0.76	0.71	0.74	0.79	0.91	0.56	1.13	0.82	0.78	0.80
6	CoPb 15212	1.31	1.02	0.83	0.89	0.92	0.69	1.37	0.89	1.05	1.00
	Standards										
1	CoJ 64	0.88	0.80	0.82	0.79	0.75	0.68	1.27	0.89	0.99	0.87
2	Co 0238	0.92	1.13	1.40	0.94	1.20	1.21	2.00	1.50	1.03	1.26
3	Co 05009	1.19	0.91	1.11	0.89	0.70	0.78	1.75	0.94	0.87	1.01
	Mean	1.07	0.97	1.12	0.91	1.03	0.92	1.75	1.11	1.02	1.10
	SE (m)	0.08		0.04	0.03	0.03	0.07	0.04	0.07	0.04	
	CD at 5%	0.24	0.20	0.13	0.07	0.07	0.14	0.11	0.14	0.11	
	CV	13.13	11.66	6.46	5.41	3.67	8.55	3.73	10.22	5.06	

Table 4.4.17 Number of shoots at 240 days ('000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	70.68	87.15	81.33	236.50	67.75					108.68
2	Co 15024	96.14	91.50	92.52	239.42	70.76					118.07
3	Co 15027	70.37	93.36	75.23	245.26	54.48					107.74
4	CoLk 15201	92.28	86.19	97.92	244.68	76.70					119.55
5	CoLk 15205	106.48	95.54	112.58	237.08	102.01					130.74
6	CoPb 15212	91.36	101.17	83.87	241.76	99.00					123.43
	Standards										
1	CoJ 64	102.31	112.17	106.02	240.00	92.05					130.51
2	Co 0238	91.82	89.08	82.95	247.01	79.32					118.04
3	Co 05009	84.72	99.48	91.36	240.59	74.85					118.20
	Mean	89.57	95.07	91.53	241.36	79.66					119.44
	SE (m)	5.55		3.50	3.74	1.84					
	CD at 5%	16.64	12.17	10.59	9.05	3.91					
	CV	10.73	7.40	6.63	2.69	2.83					

Table 4.4.18 Number of tillers at 120 days ('000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahjahanpur	Sriganganagar	Mean
1	Co 15023	87.50	92.08	120.06	215.00	96.84	175.19		200.25	149.96	142.11
2	Co 15024	127.01	96.65	120.52	217.65	94.21	184.19		182.59	156.28	147.39
3	Co 15027	97.07	98.67	107.41	222.96	85.26	182.71		182.10	122.28	137.31
4	CoLk 15201	115.74	91.05	121.68	222.43	95.14	154.69		196.67	162.97	145.05
5	CoLk 15205	127.01	100.97	118.36	215.53	121.22	170.37		217.04	163.74	154.28
6	CoPb 15212	99.54	106.87	106.40	219.78	114.58	197.78		205.93	141.73	149.08
	Standards										
1	CoJ 64	122.53	118.52	127.08	218.19	106.56	186.79		213.58	160.78	156.75
2	Co 0238	126.23	94.09	118.13	224.56	99.31	151.48		193.46	151.54	144.85
3	Co 05009	105.40	105.11	120.68	218.72	86.73	166.91		186.67	154.17	143.05
	Mean	112.00	100.45	117.82	219.42	99.98	174.46		197.59	155.57	147.16
	SE (m)	5.95		0.00	3.40	2.74	2.51		6.72	3.14	
	CD at 5%	17.83	12.88	NS	8.23	5.82	5.32		14.24	12.36	
	CV	9.20	7.42	0.00	2.69	3.36	4.75		5.89	5.48	

Table 4.4.19 Germination % at 45 days

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahjahanpur	Sriganganagar	Mean
1	Co 15023	33.99	43.47	58.92	42.64	32.87	38.24	30.28	52.50	45.59	42.06
2	Co 15024	21.11	38.01	48.84	40.83	23.70	36.58	23.26	48.43	51.66	36.94
3	Co 15027	26.93	37.67	58.80	44.31	28.19	40.56	23.34	54.17	49.66	40.40
4	CoLk 15201	32.17	36.84	58.33	42.33	34.64	30.65	27.43	49.91	48.96	40.14
5	CoLk 15205	27.44	40.37	56.54	45.11	36.94	36.20	25.69	52.31	44.22	40.54
6	CoPb 15212	31.45	48.03	52.26	43.69	37.07	42.50	26.11	56.85	41.55	42.17
	Standards										
1	CoJ 64	31.96	45.20	55.32	45.28	32.81	37.41	31.04	54.72	39.52	41.47
2	Co 0238	31.23	40.12	50.64	45.94	33.85	31.67	30.42	50.46	41.25	39.51
3	Co 05009	31.23	35.97	52.49	43.07	29.41	35.56	29.24	44.63	44.79	38.49
	Mean	29.72	40.63	54.68	41.68	32.16	36.60	27.42	51.55	45.25	39.97
	SE (m)	1.80		1.59	0.87	1.66	0.84	1.52	1.85	0.73	
	CD at 5%	5.40	NS	4.80	2.11	3.51	1.79	4.59	3.92	2.13	
	CV	10.50	12.43	5.02	3.46	6.30	10.16	9.59	6.21	2.19	

Table 4.4.20. Assessment of the performance of entries compared to the best standard by monitoring team

S. No	Genotype	Lucknow	Shahjah anpur	Pant nagar	Muzzaff arnagar	Karnal	Uchani	Kapur thala	Faridkot	Sriganga nagar	Kota
1	Co 15023	Poor	On par	Poor	Poor	On par	NA	Poor	Poor	On par	Poor
2	Co 15024	Poor	Poor	Poor	Poor	On par	NA	Poor	On par	Poor	Poor
3	Co 15027	On par	On par	On par	On par	Better	NA	On par	Better	On Par	Better
4	CoLk 15201	Better	Better	Better	Better	Better	NA	Better	Better	Better	Better
5	CoLk 15205	Better	Better	Better	Poor	Better	NA	Better	Better	Better	Better
6	CoPb 15212	Better	Better	Better	On par	On par	NA	Better	Better	Better	On par
	Standards										
1	CoJ 64										
2	Co 0238	Best	Best	Best	Best	Best	NA	Best		Best	
3	Co 05009								Best		Best

4.5 INITIAL VARIETAL TRIAL (EARLY)

Centres (10)	Faridkot, Kapurthala, Karnal, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur, Sriganaganagar and Uchani.
Entries (9) with parentage	Co 15025 (Co 0241 x Co 8347) Co 16029 (CoS 8436 x Co 89003) CoLk 16201 (87 A 298 x CoSe 92423) CoLk 16202 (LG 95053 x CoLk 94184) CoPb 16211 (CoJ 76 GC) CoPant 16221 (CoH 114 GC) CoPant 16222 (CoJ 77GC) CoPb 16181 (CoSe 92423 GC) CoS 16231 (CoS 8436 x CoT 8201)
Standards (3)	CoJ 64, Co 0238 and Co 05009
Design	RBD
Replications	3
Plot size	Gross : 6 rows × 6 m × 0.9 m Net : 4 rows × 5 m × 0.9 m
Bud rate	12 buds per meter
Planting time	February / March, 2019
Crop Duration	10 month

* Sriganaganagar centre did not test the entry CoS 16231 in the IVT Trial

Results of the previous year

The entries were in multiplication stage in the respective centres.

Results of the current years:

In the IVT (Early), Co 0238 was identified as the best standard for CCS yield with zonal mean of 11.97 t/ha. Only one entry *viz.* CoPb 16211 (12.28 t/ha) recorded numerically higher CCS yield than the best standard and ranked first in the zone. However, its improvement over Co 0238 for CCS yield was less than 10 %. Co 0238 was also the best standard for cane yield with zonal mean of 97.37 t/ha. Three test entries namely, CoPant 16222 (110.43 t/ha), CoPb 16211 (104.80 t/ha) and CoPant 16221 (98.56 t/ha) recorded numerically higher cane yield than the best standard. The percent improvement in cane yield over the best standard was 13.38 for the test entry CoPant 16222. For juice quality traits, Co 0238 was the best among the standards with CCS % of 12.28 and sucrose % of 17.79. No test entry recorded higher CCS % or sucrose % than the best standard although Co 16029 ranked second place in the zone for sucrose % (17.72) and third place in the zone for CCS % (12.20). On the basis of overall mean and the criteria set for identifying qualifying entry, no entry was identified as qualifying entry. Further details are presented in Tables 4.5.1 to 4.5.19.

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.1. CCS (t/ha) at harvest

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 15025	7.16	8.56	17.75	10.56	7.83	9.37	11.97	11.68	11.44	11.25	10.76	
2	Co 16029	10.64	9.44	13.81	10.08	8.57	9.05	12.83	11.53	10.56	11.13	10.76	
3	CoLk 16201	9.21	11.12	11.27	8.93	12.02	10.09	14.89	11.18	12.24	10.43	11.14	
4	CoLk 16202	9.80	9.28	11.18	10.98	14.48	9.82	11.23	12.61	11.01	10.86	11.12	
5	CoPb 16211	9.54	12.62	15.38	13.54	11.20	10.25	13.58	11.96	12.65	12.04	12.28	1
6	CoPant 16221	9.59	9.08	7.95	7.77	12.38	10.56	16.77	10.99	10.87	9.97	10.59	
7	CoPant 16222	9.24	8.09	15.68	9.41	13.06	8.18	20.75	11.26	10.96	9.53	11.62	3
8	CoPb 16181	11.72	12.57	9.18	11.77	12.40	10.33	11.64	11.36	10.75	10.82	11.25	
9	CoS 16231	7.49	5.53	14.70	11.14	10.23	9.94	6.56	10.81		9.33	9.53	
	Standards												
1	CoJ 64	10.07	8.33	10.84	9.08	9.68	8.18	12.14	10.55	11.32	9.18	9.94	
2	Co 0238	10.17	12.45	15.02	11.96	11.87	10.90	13.60	12.33	10.25	11.12	11.97	2
3	Co 05009	11.68	9.27	12.34	10.63	7.19	8.32	10.18	10.07	8.94	10.43	9.91	
	Mean	9.98	9.69	12.93	10.49	10.91	9.58	13.01	11.36	10.63	10.51	10.91	
	SE (m)	0.60		1.00	0.65	1.13	0.32	0.57	0.41	0.25	0.41		
	CD at 5%	1.74	1.60	2.98	1.55	2.35	0.67	1.68	0.85	0.67	1.22		
	CV	10.45	9.80	13.51	10.79	12.74	7.37	7.56	6.26	4.63	6.79		
Top three entries recorded >10 % improvement over the best standard at each location													
	Rank-1			Co 15025	CoPb 16211	CoLk 16202		CoPant 16222		CoPb 16211			
	Rank-2							CoPant 16221					
	Rank-3												

Number of locations where an entry recorded >10% improvement over the best standard: CoPb 16211 (2), Co 15025 (1), CoLk 16202 (1), CoPant 16221 (1) and CoPant 16222 (1)

Performance of the entries across locations: Co 0238 was the best standard for CCS yield with zonal mean of 11.97 t/ha. The test entry CoPb 16211 (12.28 t/ha) recorded numerically higher CCS yield than the best standard and ranked first in the zone but the improvement over Co 0238 was less than 10 %.

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.2. Cane yield (t/ha) at harvest

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 15025	61.73	71.57	132.58	100.40	64.68	80.74	94.37	90.19	99.35	89.11	88.47	
2	Co 16029	91.05	76.73	110.23	80.82	70.94	75.18	100.99	90.56	92.59	92.82	88.19	
3	CoLk 16201	79.01	90.84	92.48	75.71	101.02	89.26	122.97	92.59	100.00	88.82	93.27	
4	CoLk 16202	84.57	74.05	87.70	88.15	121.37	81.11	88.38	97.78	101.85	96.06	92.10	
5	CoPb 16211	86.73	101.73	138.90	108.44	104.49	87.78	112.00	99.44	108.13	100.33	104.80	2
6	CoPant 16221	100.00	84.54	82.58	76.69	122.65	101.85	140.00	96.30	89.50	91.53	98.56	3
7	CoPant 16222	111.73	81.68	123.22	95.81	129.35	77.96	183.10	101.48	101.62	98.40	110.43	1
8	CoPb 16181	95.37	106.28	74.22	94.51	110.21	89.81	99.51	94.07	91.38	93.18	94.85	
9	CoS 16231	71.60	51.05	124.89	103.40	88.59	87.22	59.76	89.63		77.95	83.79	
	Standards												
1	CoJ 64	81.48	63.73	83.87	79.09	77.79	67.41	102.86	82.78	94.98	78.24	81.22	
2	Co 0238	85.19	99.79	112.42	96.00	96.09	90.18	113.61	95.19	89.84	95.36	97.37	
3	Co 05009	96.91	73.05	93.57	90.23	57.67	69.82	83.49	78.33	82.96	89.58	81.56	
	Mean	88.07	81.25	104.72	90.77	95.40	83.19	108.42	92.36	98.59	90.95	93.37	
	SE (m)	5.35		8.80	5.76	7.58	2.88	3.59	3.15	1.87	2.96		
	CD at 5%	15.49	10.62	25.98	13.62	15.71	5.97	10.58	6.54	5.09	8.75		
	CV	10.52	7.72	14.55	10.98	9.73	7.67	5.73	5.91	4.03	5.64		
Top three entries recorded >10 % improvement over the best standard at each location													
	Rank-1	CoPant 16222		CoPb 16211	CoPb 16211	CoPant 16222	CoPant 16221	CoPant 16222		CoPb 16211		CoPant 16222	
	Rank-2			Co 15025		CoPant 16221		CoPant 16221					
	Rank-3			CoS 16231		CoLk 16202							

Number of locations where an entry recorded >10% improvement over the best standard: CoPant 16222 (3), CoPant 16221 (3), CoPb 16211 (3), Co 15025 (1), CoLk 16202 (1), CoS 16231 (1).

Performance of the entries across locations: Co 0238 was the best standard for cane yield with zonal mean of 97.37 t/ha. Three test entries namely, CoPant 16222 (110.43 t/ha), CoPb 16211 (104.80 t/ha) and CoPant 16221 (98.56 t/ha) recorded numerically higher cane yield than the best standard. The percent improvement in cane yield over the best standard was 13.38 in the test entry CoPant 16222.

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.3. CCS (%) at 10th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 15025	11.59	11.96	13.39	10.53	12.10	11.61	12.65	12.95	11.51	12.62	12.09	
2	Co 16029	11.69	12.29	12.54	12.48	12.06	12.09	12.72	12.73	11.40	11.97	12.20	3
3	CoLk 16201	11.66	12.25	12.17	11.79	11.90	11.30	12.09	12.08	12.24	11.74	11.92	
4	CoLk 16202	11.61	12.54	12.77	12.45	11.89	12.12	12.72	12.90	10.80	11.29	12.11	
5	CoPb 16211	11.00	12.41	11.08	12.48	10.76	11.69	12.13	12.02	11.70	12.02	11.73	
6	CoPant 16221	9.57	10.71	9.61	10.13	10.02	10.36	11.98	11.41	12.14	10.91	10.68	
7	CoPant 16222	8.26	9.92	12.78	9.81	10.08	10.52	11.34	11.09	10.79	9.69	10.43	
8	CoPb 16181	12.32	11.82	12.37	12.45	11.24	11.66	11.69	12.07	11.76	11.59	11.90	
9	CoS 16231	10.46	10.84	11.74	10.78	11.53	11.37	10.96	12.06		11.97	11.30	
	Standards												
1	CoJ 64	12.37	13.07	12.93	11.49	12.46	12.14	11.80	12.74	11.92	11.67	12.26	2
2	Co 0238	11.94	12.47	13.38	12.48	12.39	12.09	11.97	12.95	11.41	11.73	12.28	1
3	Co 05009	12.07	12.69	13.19	11.78	12.44	11.93	12.20	12.85	10.78	11.65	12.16	
	Mean	11.39	11.91	12.33	11.50	11.57	11.57	12.02	12.32	10.54	11.57	11.67	
	SE (m)	0.18		0.17	0.10	0.44	0.22	0.31	0.10	0.18	0.25		
	CD at 5%	0.52	0.96	0.51	0.24	0.92	0.46	0.91	0.21	0.50	0.73		
	CV	2.75	4.77	2.42	1.53	4.70	2.34	4.42	1.46	3.68	3.70		
Top three entries recorded >5 % improvement over the best standard at each location													
	Rank-1										Co 15025		
	Rank-2												
	Rank-3												

Number of locations where an entry recorded 5 % improvement over the best standard: Co 15025 (1).

Performance of the entries across locations: Co 0238 was the best standard for CCS % with zonal mean of 12.28. No test entry recorded higher CCS % than the best standard although Co 16029 ranked third place for CCS % (12.20) in the zone.

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.4. Sucrose (%) at 10th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 15025	16.48	17.03	19.29	15.47	17.44	16.90	18.43	18.66	16.48	18.05	17.42	
2	Co 16029	16.62	17.59	18.10	18.11	17.26	17.52	18.39	18.37	17.80	17.42	17.72	2
3	CoLk 16201	16.72	17.61	17.46	17.18	17.11	16.49	17.56	17.48	17.49	17.08	17.22	
4	CoLk 16202	16.51	17.92	18.32	18.07	17.09	17.61	18.38	18.59	16.26	16.37	17.51	
5	CoPb 16211	15.92	17.76	16.11	18.11	15.69	17.02	17.68	17.41	18.26	17.17	17.11	
6	CoPant 16221	13.80	15.43	14.79	14.93	14.83	15.20	17.46	16.56	17.10	15.37	15.55	
7	CoPant 16222	12.06	14.27	18.33	14.50	14.63	15.40	16.57	16.16	18.54	13.70	15.42	
8	CoPb 16181	17.72	16.99	17.80	18.07	16.23	16.92	17.16	17.46	16.74	16.87	17.20	
9	CoS 16231	14.99	15.35	16.77	15.80	16.66	16.98	16.11	17.46		17.04	16.35	
	Standards												
1	CoJ 64	17.70	18.65	18.39	16.77	17.90	17.59	17.31	18.37	17.16	17.19	17.70	3
2	Co 0238	17.15	17.96	19.10	18.11	17.93	17.51	17.71	18.65	16.67	17.10	17.79	1
3	Co 05009	17.18	18.20	18.62	17.16	17.98	17.30	17.84	18.52	16.03	16.94	17.58	
	Mean	16.32	17.06	17.76	16.86	16.73	16.87	17.55	17.81	17.14	16.69	17.08	
	SE (m)	0.26		0.22	0.14	0.57	0.29	0.35	0.14	0.18	0.29		
	CD at 5%	0.75	1.20	0.65	0.33	1.18	0.61	1.04	0.29	0.49	0.86		
	CV	2.74	4.19	2.16	1.42	4.18	2.13	3.49	1.36	2.48	3.03		
Top three entries recorded >5 % improvement over the best standard at each location													
	Rank-1									CoPant 16222			
	Rank-2									CoPb 16211			
	Rank-3												

Number of locations where an entry showing 5 % improvement over the best standard: CoPant 16222 (1) and CoPb 16211 (1).

Performance of the entries across locations: Co 0238 was identified as the best standard for sucrose % with zonal mean of 17.79. No test entry recorded higher sucrose % than the best standard although Co 16029 ranked second place (17.72) in the zone.

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.5. Brix (%) at 10th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	18.00	18.63	21.65	18.07	19.59	19.37	21.19	20.97	18.23	19.97	19.57
2	Co 16029	18.13	19.47	20.41	20.63	19.13	19.90	20.80	20.67	18.46	19.97	19.76
3	CoLk 16201	18.57	19.67	19.41	19.73	19.11	19.00	20.07	19.81	19.30	19.57	19.42
4	CoLk 16202	18.03	19.77	20.39	20.60	19.10	20.10	20.77	20.87	19.93	18.63	19.82
5	CoPb 16211	18.03	19.67	18.43	20.63	18.08	19.51	20.37	19.76	20.33	18.93	19.37
6	CoPant 16221	15.53	17.30	18.86	17.55	17.60	17.70	20.10	18.90	18.26	16.43	17.82
7	CoPant 16222	13.90	15.97	20.38	17.13	16.70	17.87	19.17	18.56	20.93	14.77	17.54
8	CoPb 16181	19.83	19.00	19.95	20.60	18.33	19.26	20.00	19.77	18.30	19.33	19.44
9	CoS 16231	16.63	16.60	18.47	18.40	18.84	19.00	18.83	19.80		18.67	18.36
	Standards											
1	CoJ 64	19.60	20.50	20.08	19.33	19.96	19.97	20.17	20.67	19.23	20.20	19.97
2	Co 0238	19.13	20.13	21.05	20.63	20.33	19.87	20.97	20.93	19.26	19.70	20.20
3	Co 05009	18.77	20.23	19.99	19.72	20.32	19.70	20.66	20.81	19.16	19.37	19.87
	Mean	18.11	18.91	19.92	19.42	18.92	19.27	20.26	20.13	19.22	18.79	19.30
	SE (m)	0.30		0.21	0.13	0.55	0.31	0.28	0.13	0.13	0.25	
	CD at 5%	0.88	1.08	0.63	0.32	1.14	0.65	0.82	0.28	0.34	0.75	
	CV	2.91	3.40	1.84	1.19	3.57	1.99	2.37	1.16	1.52	2.34	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.6. Purity (%) at 10th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	91.57	91.36	89.11	85.57	89.06	87.26	86.97	88.98	90.40	90.59	89.09
2	Co 16029	91.64	90.34	88.68	87.75	90.25	88.03	88.39	88.84	96.42	87.21	89.76
3	CoLk 16201	90.04	89.52	89.93	87.05	89.54	86.79	87.52	88.22	90.62	87.28	88.65
4	CoLk 16202	91.54	90.65	89.83	87.73	89.49	87.61	88.49	89.05	81.59	87.86	88.38
5	CoPb 16211	88.27	90.33	87.38	87.75	87.16	87.21	86.83	88.12	89.82	90.65	88.35
6	CoPant 16221	88.85	89.07	78.43	85.06	84.21	85.88	86.89	87.63	93.65	93.48	87.31
7	CoPant 16222	86.74	89.30	89.94	84.62	87.69	86.19	86.45	87.05	88.58	92.81	87.94
8	CoPb 16181	89.36	89.42	89.22	87.73	88.60	87.85	85.79	88.28	91.48	87.25	88.50
9	CoS 16231	90.12	92.47	90.78	85.89	88.42	87.09	85.54	88.19		91.32	88.87
	Standards											
1	CoJ 64	90.31	91.00	91.55	86.72	89.63	88.05	85.82	88.90	89.24	85.08	88.63
2	Co 0238	89.64	89.18	90.74	87.75	88.24	88.14	84.40	89.12	86.55	86.83	88.06
3	Co 05009	91.52	89.96	93.14	87.04	88.44	87.82	86.36	88.96	83.66	87.48	88.44
	Mean	90.05	90.22	89.06	86.72	88.39	87.33	86.62	88.45	89.27	88.99	88.51
	SE (m)	0.41		0.48	0.12	1.32	0.51	1.17	0.10	1.02	1.11	
	CD at 5%	1.18	NS	1.42	0.27	2.73	1.06	N/A	0.22	2.76	3.27	
	CV	0.78	2.03	0.94	0.23	1.82	0.72	2.34	0.20	2.71	2.16	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.7. Extraction (%) at 10th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	47.90	50.31	52.22	44.74	46.64	46.51		54.12	46.37	65.29	50.46
2	Co 16029	50.46	51.05	50.70	45.76	48.53	48.95		56.65	45.80	63.25	51.24
3	CoLk 16201	42.41	51.27	49.92	45.66	52.52	49.61		57.11	50.07	63.32	51.32
4	CoLk 16202	53.62	51.08	47.73	46.32	46.98	49.44		55.04	50.03	62.10	51.37
5	CoPb 16211	53.04	50.94	51.56	45.36	51.17	43.54		55.38	48.88	64.09	51.55
6	CoPant 16221	51.78	51.21	51.37	49.76	48.15	51.72		57.15	49.72	55.07	51.77
7	CoPant 16222	50.21	50.67	45.59	47.48	44.85	48.98		55.32	51.57	63.96	50.96
8	CoPb 16181	53.89	51.85	45.77	48.72	42.94	51.11		55.81	50.96	61.64	51.41
9	CoS 16231	51.76	51.87	50.99	50.57	48.89	53.82		56.45		65.77	53.77
	Standards											
1	CoJ 64	50.54	50.88	44.56	48.54	42.68	44.60		55.62	50.87	60.35	49.85
2	Co 0238	51.68	50.85	50.07	49.57	45.81	52.82		56.83	48.71	65.32	52.41
3	Co 05009	54.57	51.13	42.78	45.36	43.59	52.32		57.17	44.55	58.99	50.05
	Mean	50.65	51.09	48.61	47.32	46.90	49.62		56.05	44.79	62.43	50.83
	SE (m)	0.95		1.51	0.69	3.17	-		1.10	0.89	1.14	
	CD at 5%	2.74	NS	4.44	1.63	NS	-		NS	2.44	3.36	
	CV	3.23	1.00	5.36	2.52	8.27	-		3.39	4.24	3.15	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.8. Pol% cane and Fibre % at 10th month

Entry	Pol% in cane at harvest						Fibre % at harvest					
	Kapur thala	Karnal	Lucknow	Muzaffar nagar	Shahja hanpur	Mean	Kapur thala	Karnal	Lucknow	Muzaffar nagar	Shahja hanpur	Mean
Co 15025	14.59	14.75	13.22	13.25	13.96	13.95	14.91	13.53	14.16	13.42	15.22	14.25
Co 16029	14.67	13.88	13.43	13.96	13.78	13.94	15.01	13.29	12.20	13.18	14.95	13.73
CoLk 16201	13.49	13.51	13.04	13.01	13.13	13.24	12.02	12.62	13.79	13.11	14.87	13.28
CoLk 16202	13.85	14.03	13.05	13.71	13.93	13.71	11.74	13.40	13.66	13.21	15.06	13.41
CoPb 16211	12.95	10.98	11.89	13.53	13.05	12.48	13.09	15.88	14.26	13.36	15.02	14.32
CoPant 16221	11.36	14.06	11.47	11.53	12.46	12.18	13.66	13.09	12.66	14.09	14.77	13.65
CoPant 16222	11.23	13.19	11.51	12.02	12.10	12.01	14.14	13.30	11.33	13.96	15.10	13.57
CoPb 16181	12.34	10.71	12.27	12.90	13.09	12.26	12.52	15.73	14.45	13.52	15.03	14.25
CoS 16231	11.14	12.96	12.83	12.74	13.10	12.55	14.76	12.69	13.01	13.62	14.98	13.81
Standards												
CoJ 64	14.25	14.34	13.63	13.83	13.75	13.96	12.11	12.06	13.86	13.22	15.13	13.28
Co 0238	13.87	14.61	13.70	13.42	14.02	13.92	14.42	13.52	13.56	13.38	14.85	13.95
Co 05009	14.21	13.97	13.77	13.18	13.91	13.81	14.01	14.99	13.38	13.45	14.89	14.14
Mean	13.16	13.42	12.82	13.06	13.36	13.16	13.53	13.67	13.36	13.46	14.99	13.80
SE (m)		0.10	0.45	-	0.10			0.14	0.63	-	0.12	
CD at 5%	0.62	0.29	0.91	-	0.21		0.83	0.42	1.28	-	NS	
CV	2.80	1.28	4.31	-	1.34		3.64	1.79	5.82	-	1.43	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.9. Number of millable canes at 10th month ('000/ha)

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	45.68	71.38	88.48	94.12	51.13	55.18	54.45	93.52	83.21	73.77	71.09
2	Co 16029	88.73	73.57	90.74	90.08	75.31	65.74	60.37	90.00	70.00	99.39	80.39
3	CoLk 16201	92.28	92.18	113.27	94.12	107.51	88.52	77.41	96.11	85.43	89.47	93.63
4	CoLk 16202	92.90	81.48	108.85	98.93	124.79	91.48	65.00	95.74	90.98	95.37	94.55
5	CoPb 16211	68.36	81.79	88.17	99.01	72.84	81.30	46.67	98.70	101.65	84.29	82.28
6	CoPant 16221	98.30	79.44	100.31	93.83	124.49	108.52	110.56	100.37	97.65	126.39	103.99
7	CoPant 16222	100.77	91.53	73.97	97.08	115.53	91.11	116.85	102.96	122.84	120.65	103.33
8	CoPb 16181	106.33	110.35	92.08	98.72	117.70	110.93	67.56	97.78	108.27	111.79	102.15
9	CoS 16231	54.63	67.51	85.80	90.08	79.22	95.93	33.15	88.33		76.15	74.53
	Standards											
1	CoJ 64	97.53	90.82	109.05	84.61	116.36	112.04	82.96	88.89	102.84	117.16	100.23
2	Co 0238	91.20	85.79	95.58	98.15	90.95	84.25	66.85	92.41	119.38	83.06	90.76
3	Co 05009	95.99	72.54	96.14	94.69	81.89	101.48	62.96	78.33	83.70	94.94	86.27
	Mean	89.49	83.20	95.20	94.45	96.48	90.54	70.40	93.60	88.82	97.70	89.99
	SE (m)	6.23		4.57	4.24	3.31	3.01	1.96	3.73	2.36	2.96	
	CD at 5%	18.05	14.03	13.50	10.04	6.86	6.24	5.78	7.74	6.41	8.73	
	CV	12.06	9.97	8.32	7.78	4.20	7.33	4.82	6.90	5.63	5.24	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.10 Stalk length (cm) at 10th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	198.67	294.17	272.00	227.00	185.27	264.00	235.00	184.33	167.83	244.80	227.31
2	Co 16029	217.33	296.58	265.00	213.00	181.67	235.00	241.00	221.33	153.23	248.87	227.30
3	CoLk 16201	192.00	272.08	247.00	195.00	177.33	196.00	219.00	215.67	149.77	234.40	209.83
4	CoLk 16202	233.00	286.25	283.00	232.00	229.67	240.00	227.00	208.67	207.33	266.93	241.38
5	CoPb 16211	231.00	303.33	257.00	243.00	209.53	237.00	260.00	217.67	209.17	265.27	243.30
6	CoPant 16221	224.33	292.92	242.00	240.00	227.60	248.00	243.00	200.67	218.20	238.33	237.51
7	CoPant 16222	211.67	270.42	248.00	252.00	215.67	250.00	244.00	206.67	209.43	237.60	234.55
8	CoPb 16181	239.33	267.92	263.00	257.00	215.80	255.00	277.00	229.00	205.63	261.00	247.07
9	CoS 16231	196.00	216.95	243.00	250.00	154.53	246.00	203.00	184.67		215.67	212.20
	Standards											
1	CoJ 64	202.33	254.58	217.00	222.00	182.00	176.00	228.00	185.67	173.77	194.20	203.56
2	Co 0238	209.00	299.58	267.00	232.00	209.00	256.00	234.00	219.67	190.40	277.87	239.45
3	Co 05009	273.67	298.75	300.00	262.00	175.80	262.00	241.00	180.33	184.40	261.00	243.90
	Mean	221.56	279.46	259.00	235.00	196.99	239.00	238.00	204.53	172.43	245.49	229.15
	SE (m)	8.14		7.00	9.00	12.60	10.00	11.00	6.83	1.71	7.48	
	CD at 5%	23.59	21.87	21.10	21.00	26.00	20.00	31.00	14.16	4.65	22.08	
	CV	6.37	4.62	4.73	6.57	7.83	5.07	7.76	5.78	2.10	5.28	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.11 Stalk diameter (cm) at 10th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	2.80	3.18	2.90	2.50	2.88	2.52	2.69	2.50	2.04	2.50	2.65
2	Co 16029	2.69	2.97	2.70	2.23	2.63	2.48	2.63	2.41	2.70	2.34	2.58
3	CoLk 16201	2.62	2.94	2.80	2.37	2.66	2.44	2.81	2.25	2.43	2.47	2.58
4	CoLk 16202	2.33	2.67	2.30	2.03	2.39	2.32	2.50	2.33	2.16	2.25	2.33
5	CoPb 16211	2.61	3.23	3.10	2.43	2.84	2.78	3.09	2.76	2.96	2.56	2.84
6	CoPant 16221	2.50	2.59	2.70	2.20	2.40	2.10	2.36	2.24	2.40	2.07	2.36
7	CoPant 16222	2.48	2.80	2.30	2.20	2.61	2.32	2.57	2.15	2.66	2.25	2.43
8	CoPb 16181	2.39	2.73	2.30	2.21	2.73	2.10	2.37	2.30	2.50	2.03	2.37
9	CoS 16231	2.84	2.05	2.90	2.33	3.07	2.12	3.19	2.67		2.55	2.64
	Standards											
1	CoJ 64	2.62	2.08	2.40	2.10	2.42	2.30	2.27	2.21	2.93	2.17	2.35
2	Co 0238	2.51	2.99	2.60	2.17	2.37	2.36	2.70	2.65	2.50	2.57	2.54
3	Co 05009	2.22	2.53	2.00	2.37	2.46	2.16	2.33	2.38	2.83	2.25	2.35
	Mean	2.50	2.73	2.59	2.26	2.62	2.33	2.63	2.40	2.34	2.33	2.47
	SE (m)	0.07		0.14	0.08	0.15	0.09	0.08	0.05	0.05	0.05	
	CD at 5%	0.21	0.35	0.40	0.20	0.30	0.18	0.25	0.10	0.14	0.13	
	CV	5.07	7.61	9.01	6.48	6.81	0.51	5.55	3.52	4.65	3.36	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.12 Single cane weight (kg) at 10th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	1.38	1.01	1.50	1.07	1.27	1.59	1.73	1.10	0.94	1.32	1.29
2	Co 16029	1.28	1.05	1.21	0.90	0.94	1.20	1.67	0.99	0.85	1.01	1.11
3	CoLk 16201	1.03	1.00	0.81	0.80	0.94	1.07	1.59	0.89	0.89	1.03	1.00
4	CoLk 16202	1.06	0.91	0.81	0.89	0.97	1.15	1.36	0.92	0.71	1.06	0.98
5	CoPb 16211	1.40	1.25	1.58	1.09	1.43	1.11	2.40	1.27	1.09	1.33	1.39
6	CoPant 16221	1.07	1.06	0.90	0.82	0.99	0.97	1.27	0.88	0.96	0.79	0.97
7	CoPant 16222	1.17	0.90	1.22	0.99	1.12	1.07	1.57	0.83	0.85	0.86	1.06
8	CoPb 16181	1.06	0.97	1.00	0.96	0.94	0.84	1.47	0.94	0.96	0.90	1.00
9	CoS 16231	1.30	0.76	1.44	1.15	1.13	0.95	1.80	0.97		1.18	1.19
	Standards											
1	CoJ 64	0.99	0.71	0.77	0.93	0.67	0.63	1.24	0.84	0.98	0.68	0.84
2	Co 0238	1.09	1.17	1.18	0.98	1.06	1.16	1.70	1.14	1.16	1.24	1.19
3	Co 05009	1.18	1.01	0.97	0.96	0.70	0.74	1.33	0.92	1.09	0.98	0.99
	Mean	1.13	0.98	1.12	0.96	1.01	1.04	1.59	0.97	0.87	1.03	1.07
	SE (m)	0.07		0.06	0.03	0.08	0.06	0.02	0.05	0.03	0.03	
	CD at 5%	0.19	0.15	0.18	0.08	0.17	0.13	0.07	0.11	0.08	0.09	
	CV	10.15	8.86	9.60	5.88	9.80	7.16	2.41	9.41	7.07	5.14	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.13 CCS (%) at 8th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	10.62	10.05	12.09	8.47	10.93	10.28	11.29	12.01	10.56	11.98	10.83
2	Co 16029	10.51	11.00	12.44	10.19	10.10	10.62	11.57	11.69	10.82	12.00	11.09
3	CoLk 16201	10.99	11.86	11.18	10.37	10.75	10.24	11.20	11.77	11.53	11.60	11.15
4	CoLk 16202	9.73	11.42	9.98	10.41	10.10	9.90	11.01	11.75	9.63	10.32	10.42
5	CoPb 16211	10.17	11.12	10.43	10.17	9.30	10.97	10.87	10.76	10.89	10.84	10.55
6	CoPant 16221	8.28	9.01	7.28	8.70	8.65	9.09	10.64	10.19	11.95	7.48	9.13
7	CoPant 16222	6.73	7.35	6.41	8.29	6.09	7.84	8.97	8.52	10.09	6.09	7.64
8	CoPb 16181	11.13	10.12	11.08	10.39	10.20	10.22	10.77	10.70	10.65	11.46	10.67
9	CoS 16231	8.70	9.11	8.85	8.78	10.09	10.74	9.73	10.46		10.36	9.65
	Standards											
1	CoJ 64	11.30	12.03	12.19	9.03	11.35	11.14	10.87	12.07	11.57	11.73	11.33
2	Co 0238	10.83	11.51	12.05	11.33	10.75	11.40	10.99	12.35	10.36	11.47	11.30
3	Co 05009	10.63	12.05	11.97	10.32	10.88	11.05	11.24	11.71	10.75	11.68	11.23
	Mean	10.18	10.55	10.50	9.70	9.93	10.29	10.76	11.16	9.88	10.58	10.35
	SE (m)	0.10		0.21	0.16	0.67	0.25	0.23	0.13	0.17	0.15	
	CD at 5%	0.28	0.92	0.61	0.37	1.39	0.51	0.67	0.27	0.45	0.43	
	CV	1.65	5.20	3.42	2.80	8.27	2.94	3.62	2.01	3.55	2.37	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.14 Sucrose (%) at 8th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	15.27	14.63	17.39	12.68	15.98	15.13	16.70	17.50	16.11	17.25	15.86
2	Co 16029	15.19	15.80	17.71	15.00	14.91	15.62	17.13	17.10	15.78	17.07	16.13
3	CoLk 16201	15.84	16.91	16.33	15.25	15.68	15.17	16.54	17.18	15.26	16.78	16.09
4	CoLk 16202	14.13	16.48	15.14	15.30	15.22	14.77	16.37	17.18	14.58	15.13	15.43
5	CoPb 16211	14.78	16.18	15.45	14.98	14.02	16.06	16.16	15.86	14.21	15.95	15.36
6	CoPant 16221	12.09	13.24	11.63	12.99	13.06	13.99	15.86	15.10	15.75	11.29	13.50
7	CoPant 16222	10.03	11.07	10.30	12.43	9.60	12.40	13.43	12.80	14.31	9.59	11.60
8	CoPb 16181	16.10	14.84	16.17	15.27	15.12	15.09	16.08	15.78	14.60	16.45	15.55
9	CoS 16231	12.58	13.35	13.28	13.10	14.87	15.80	14.50	15.46		15.12	14.23
	Standards											
1	CoJ 64	16.35	17.38	17.48	13.43	16.73	16.34	16.23	17.59	15.15	17.09	16.38
2	Co 0238	15.69	16.62	17.61	16.55	15.86	16.72	16.25	17.96	14.59	16.66	16.45
3	Co 05009	15.37	17.16	17.25	15.19	15.90	16.30	16.62	17.05	14.87	16.80	16.25
	Mean	14.75	15.31	15.48	14.35	14.74	15.28	15.99	16.38	15.02	15.43	15.27
	SE (m)	0.14		0.25	0.21	0.76	0.29	0.32	0.17	0.15	0.18	
	CD at 5%	0.40	1.21	0.73	0.50	1.58	0.60	0.93	0.36	0.42	0.54	
	CV	1.62	4.67	2.77	2.56	6.35	2.32	3.41	1.83	2.37	2.05	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.15 Brix (%) at 8th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	17.07	16.80	19.46	15.37	18.52	17.70	19.80	20.15	17.87	19.33	18.21
2	Co 16029	17.17	17.63	19.38	17.62	17.59	18.27	20.33	19.80	18.17	18.63	18.46
3	CoLk 16201	17.80	18.57	18.87	17.87	18.04	18.00	19.53	19.81	17.81	19.03	18.53
4	CoLk 16202	16.13	18.57	18.84	17.91	18.69	17.80	19.60	19.92	18.05	17.60	18.31
5	CoPb 16211	16.90	18.57	18.35	17.60	17.20	18.63	19.33	18.68	16.29	18.70	18.03
6	CoPant 16221	13.97	15.50	15.78	15.67	16.10	17.83	19.07	17.94	18.21	13.90	16.40
7	CoPant 16222	12.07	13.57	14.07	15.13	12.74	16.56	16.27	15.64	17.03	12.73	14.58
8	CoPb 16181	18.23	17.27	18.65	17.88	17.99	17.79	19.40	18.61	16.63	18.33	18.08
9	CoS 16231	14.23	15.53	16.20	15.78	17.50	18.50	17.43	18.28		17.47	16.77
	Standards											
1	CoJ 64	18.50	19.63	19.43	16.10	19.68	19.00	19.57	20.22	17.30	19.63	18.91
2	Co 0238	17.80	18.77	20.38	19.13	18.69	19.47	19.23	20.54	17.66	19.03	19.07
3	Co 05009	17.37	18.77	19.38	17.80	18.38	19.17	19.67	19.56	17.89	18.80	18.68
	Mean	16.74	17.43	18.23	16.99	17.59	18.22	19.10	19.09	17.54	17.77	17.87
	SE (m)	0.18		0.23	0.21	0.51	0.33	0.34	0.17	0.18	0.23	
	CD at 5%	0.51	1.11	0.67	0.49	1.05	0.69	1.01	0.35	0.48	0.67	
	CV	1.83	3.76	2.14	2.10	3.52	2.24	3.11	1.53	2.54	2.21	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.16 Purity (%) at 8th month

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	89.48	87.03	89.38	82.49	86.27	85.30	84.32	86.88	90.15	89.23	87.05
2	Co 16029	88.49	89.60	91.35	85.12	84.65	85.51	84.27	86.36	86.85	91.62	87.38
3	CoLk 16201	89.00	91.07	86.53	85.37	87.09	84.25	84.67	86.69	85.66	88.18	86.85
4	CoLk 16202	87.58	88.74	80.38	85.42	81.38	82.99	83.54	86.27	80.78	85.95	84.30
5	CoPb 16211	87.45	87.16	78.63	85.11	81.54	86.19	83.56	84.93	87.23	85.29	84.71
6	CoPant 16221	86.62	85.37	73.71	82.88	80.95	78.55	83.18	84.17	86.49	81.20	82.31
7	CoPant 16222	83.12	81.55	73.17	82.16	75.29	74.95	82.54	81.85	84.03	75.32	79.40
8	CoPb 16181	88.30	85.89	86.68	85.39	84.01	84.77	82.87	84.82	87.79	89.72	86.02
9	CoS 16231	88.40	85.97	82.02	83.03	85.00	85.42	83.17	84.57		86.60	84.91
	Standards											
1	CoJ 64	88.37	88.52	89.95	83.43	84.95	86.47	82.92	86.96	87.57	87.05	86.62
2	Co 0238	88.14	88.56	86.49	86.54	84.91	85.89	84.49	87.41	82.62	87.57	86.26
3	Co 05009	88.48	91.42	89.03	85.31	86.50	85.02	84.51	87.19	83.12	89.37	86.99
	Mean	87.98	87.57	83.94	84.35	83.55	83.77	83.67	85.67	85.66	86.42	85.26
	SE (m)	0.42		0.89	0.23	2.95	1.27	0.39	0.27	1.42	0.78	
	CD at 5%	1.23	2.31	2.61	0.54	6.12	2.64	1.14	0.56	3.86	2.31	
	CV	0.83	1.56	1.83	0.47	4.33	1.87	0.80	0.54	3.46	1.57	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.17 Number of shoots at 240 days ('000 /ha)

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	52.47	73.63	88.48	194.41	55.04					98.31	93.72
2	Co 16029	92.44	75.90	90.74	187.15	86.32					115.28	107.97
3	CoLk 16201	107.25	95.04	113.27	194.41	128.70					122.62	126.88
4	CoLk 16202	99.38	84.01	108.85	203.07	137.96					135.86	128.19
5	CoPb 16211	73.15	84.33	88.17	203.22	81.17					107.35	106.23
6	CoPant 16221	108.64	81.92	100.31	193.89	139.51					164.35	131.44
7	CoPant 16222	112.04	94.38	73.97	199.74	134.88					163.64	129.77
8	CoPb 16181	112.65	113.78	92.08	202.70	125.21					145.99	132.07
9	CoS 16231	56.79	69.61	85.80	187.15	98.77					104.25	100.39
	Standards											
1	CoJ 64	106.17	93.65	109.05	177.30	136.83					138.21	126.87
2	Co 0238	98.77	88.46	95.58	201.67	107.72					128.70	120.15
3	Co 05009	101.08	74.82	96.14	195.44	94.03					118.52	113.34
	Mean	96.21	85.79	95.20	195.01	110.51					128.59	118.55
	SE (m)	6.25		4.57	7.64	6.13					6.27	
	CD at 5%	18.10	14.04	13.50	18.07	12.72					18.52	
	CV	11.25	9.97	8.32	6.78	6.80					8.45	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.18 Number of tillers at 120 days ('000 /ha)

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	73.15	77.67	105.04	179.41	59.05	155.19		175.19	132.33	144.75	122.42
2	Co 16029	107.25	80.06	115.84	172.15	90.12	168.52		188.15	135.36	171.91	136.60
3	CoLk 16201	126.70	100.18	131.79	179.41	133.64	199.26		214.81	135.33	224.84	160.66
4	CoLk 16202	128.24	88.58	130.86	190.30	145.78	187.04		185.56	122.84	216.20	155.04
5	CoPb 16211	92.59	88.93	101.75	188.22	88.48	149.07		177.78	137.17	154.48	130.94
6	CoPant 16221	133.18	86.36	110.08	178.89	148.35	193.15		212.22	131.83	294.14	165.36
7	CoPant 16222	136.57	99.50	87.55	190.30	141.26	189.07		204.07	125.84	241.76	157.32
8	CoPb 16181	125.15	119.96	125.31	187.70	132.20	169.81		190.00	146.17	206.11	155.82
9	CoS 16231	68.98	73.40	108.33	172.15	104.73	185.74		187.59		153.86	131.85
	Standards											
1	CoJ 64	120.83	98.72	134.05	162.30	143.72	155.37		197.59	138.84	166.36	146.42
2	Co 0238	123.92	93.26	124.28	186.67	113.79	152.59		205.19	131.17	207.56	148.71
3	Co 05009	129.32	78.91	118.21	180.44	98.15	167.59		172.59	113.00	225.62	142.65
	Mean	117.38	90.46	116.09	180.86	116.61	161.28		192.56	132.96	200.63	145.43
	SE (m)	8.76		7.63	7.63	5.71	6.93		7.75	2.72	11.41	
	CD at 5%	25.38	15.16	22.52	18.05	11.84	14.37		16.07	8.85	33.68	
	CV	12.93	9.90	11.38	7.31	6.00	8.85		6.97	4.69	9.85	

Varietal Improvement Programme-AICRP (Sugarcane)
Principal Investigator's Report (2019-20)
North West Zone - IVT (Early)

Table 4.5.19 Germination (%) at 45th days

Sl. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15025	16.31	36.57	47.96	52.22	26.77	36.94	26.25	41.67	48.25	41.47	37.44
2	Co 16029	35.52	40.68	53.49	49.72	29.49	40.97	26.94	45.69	45.37	51.93	41.98
3	CoLk 16201	36.11	58.10	46.68	52.50	55.42	51.81	30.36	58.47	41.26	47.33	47.80
4	CoLk 16202	33.29	51.85	51.39	47.15	41.81	46.11	29.44	43.06	35.40	59.41	43.89
5	CoPb 16211	28.63	43.67	41.20	50.41	30.25	30.97	32.36	42.92	45.68	49.35	39.54
6	CoPant 16221	33.39	41.96	50.08	51.11	48.07	51.53	27.50	55.28	41.23	53.49	45.36
7	CoPant 16222	42.32	52.62	33.33	51.29	46.02	53.89	33.20	57.78	34.88	55.48	46.08
8	CoPb 16181	29.99	55.97	40.20	48.74	40.62	43.19	30.14	45.69	36.10	49.97	42.06
9	CoS 16231	22.13	36.83	42.90	48.92	40.52	38.06	25.42	43.47		42.85	37.90
	Standards											
1	CoJ 64	35.81	41.08	52.62	38.48	54.77	38.33	26.94	51.39	38.39	50.34	42.81
2	Co 0238	37.27	43.44	50.97	46.44	36.08	35.14	26.53	50.97	40.77	60.08	42.77
3	Co 05009	39.11	43.06	43.87	39.83	26.31	41.66	30.28	40.69	41.32	53.79	39.99
	Mean	33.53	45.49	46.22	48.07	39.68	42.38	28.78	48.09	37.39	51.29	42.09
	SE (m)	2.11		1.65	1.76	2.52	1.07	0.84	2.11	0.22	2.60	
	CD at 5%	6.11	9.02	4.86	4.16	5.23	2.21	2.47	4.38	0.59	7.67	
	CV	10.89	11.71	6.17	6.33	7.78	7.40	5.04	7.60	1.24	8.77	

Table 4.5.20. Assessment of the performance of entries compared to the best standard by monitoring team

S. No	Genotype	Lucknow	Shahjahanpur	Pantnagar	Muzzaffarnagar	Karnal	Uchani	Kapurthala	Faridkot	Sriganganagar	Kota
1	Co 15025	Poor	Poor	On par	Poor	NA	Poor	Poor	Poor	Poor	On par
2	Co 16029	On par	On par	On par	On par	NA	On par	Better	Better	On par	Better
3	CoLk 16201	Better	On par	On Par	On par	NA	On par	On par	On par	On par	Better
4	CoLk 16202	Better	Better	Better	Better	NA	Better	Better	Better	On par	Better
5	CoPant 16221	Better	On par	On Par	On Par	NA	Better	Better	Better	Better	On par
6	CoPant 16222	Better	Better	Better	Better	NA	Better	Better	Better	Better	Better
7	CoPb 16211	Better	Better	On par	On par	NA	On par	Better	Better	On par	On Par
8	CoPb 16181	Better	On par	Better	On par	NA	On par	On par	On par	Better	Better
9	CoS 16231	Poor	Poor	Poor	On Par	NA	Poor	Poor	Poor	NP	Better
Standards											
1	CoJ 64										
2	Co 0238	Best	Best		Best	NA	Best	Best			
3	Co 05009			Best					Best	Best	Best

4.6 Advanced Varietal Trial- II Plant-Midlate

Centres (9)	Faridkot, Kapurthala, Kota, Lucknow, Muzafarnagar, Pantnagar, Shahjahanpur, Sriganganagar, Uchani
Entries (5)	Co 14035, CoH 14261, CoLk 14203, CoLk 14204, CoPb 14184, CoPb 14185, CoS 14233
Standards (3)	CoS 767, CoPant 97222, Co 05011
Design	RBD
Replications	3
Plot size	Gross : 8 rows × 6 m × 0.90 m Net : 6 rows × 5 m × 0.90 m
Bud rate	12 buds/metre
Planting time	February/March, 2019
Crop Duration	12 months

Results of the previous year:

In the previous year, CoPant 97222 was identified as the best standard for CCS yield across the zone and recorded the CCS yield of 11.22 t/ha. Among the test entries, CoPb 14185 (12.77 t/ha), CoS 14233 (12.46 t/ha) and CoLk 14204 (12.40 t/ha) showed 13.81, 11.05 and 10.70 percent improvement for the CCS yield (t/ha) over the best standard CoPant 97222. Similarly, entries CoPb 14185 recorded the highest zonal mean for cane yield of 95.58 t/ha with 11.46 percent improvement over the best standard CoPant 97222 (85.75 t/ha). Besides, CoS 14233 (95.03 t/ha) and CoLk 14204 (94.67 t/ha) also recorded 10.82 and 10.40 percent improvement for cane yield over the best standard CoPant 97222 in the zone. None of the test entries recorded five percent improvement for CCS(%) and sucrose (%) over the best standard CoPant 97222 (13.06% CCS and 18.83% sucrose). However, four test entries viz., CoPb 14185 (13.28% CCS and 19.15% sucrose), CoS 14233 (13.08% CSS and 18.88% sucrose), CoH 14261 (13.10% CCS and 18.85% sucrose) and CoLk 14204 (13.08 CCS% and 18.84% sucrose) recorded the numerically superior CCS(%) and sucrose (%) as compared the best standard CoPant 97222.

Results of the current years:

Seven test entries and three standards (CoS 767, CoPant 97222, Co 05011) were evaluated in RCBD design with three replications in nine locations across the North West Zone. Co 05011 was the best standard and recorded the highest CCS yield of 10.90 t/ha. Test entries such as CoPb 14185 (12.72 t/ha) and CoS 14233 (12.34 t/ha) recorded highest CCS yield with 16.70 and 13.17 percent improvement for CCS yield over the best standard Co 05011. For cane yield among the test entries, CoPb 14185 recorded the highest yield (97.91 t/ha) across the zone with 10.13 percent improvement over the better standard CoS 767 (88.90 t/ha). Entries CoS 14233 (97.22 t/ha) and CoLk 14203 (94.52 t/ha) recorded 9.36 and 6.32 percent improvement over the better standard CoS 767 respectively. The best standard Co 05011 recorded 12.61% CCS in the zone and none of the test entries showed five percent improvement over the best standard. However, CoPb 14185 (13.00%) and CoH 14261 (12.94%) recorded the numerically superior value for CCS (%) with 3.11 and 2.62 percent improvement over the best standard Co 05011 respectively. Two test entries namely CoPb 14185 (18.67%) and CoH 14261 (18.67%) recorded the numerically superior values for sucrose content as compared to the best standard Co 05011 (18.12%). However, none of the test entries recorded five percent improvement for sucrose content over the best standard Co 05011. Further details are presented in Tables 4.6.1 to 4.6.19.

Qualifying entries: The test entries CoPb 14185 and CoS 14233 recorded 12.75 and 11.96 percent improvement for cane yield and numerically superior for sucrose (%). Hence, both the entries viz., CoPb 14185 and CoS 14233 were identified as qualifying entries.

Sl No	Entries	Percent improvement of best standard (Co 05011)	
		Cane yield (t/ha)	Sucrose (%)
1	CoPb 14185	12.75	3.01
2.	CoS 14233	11.96	0.41

Table 4.6.1. CCS (t/ha) at harvest

S. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean	Rank
1	Co 14035	9.57	11.66	11.24	10.02	8.66	13.61	10.84	7.15	11.32	10.45	
2	CoH 14261	12.48	12.85	10.45	10.22	8.98	13.86	10.41	11.22	11.08	11.28	5
3	CoLk 14203	10.19	12.09	10.55	15.96	10.20	16.22	10.35	10.54	10.36	11.83	3
4	CoLk 14204	9.13	12.68	10.94	14.07	9.33	18.84	11.98	6.72	-	11.71	4
5	CoPb 14184	11.56	12.93	11.42	9.84	10.11	16.76	9.66	9.14	10.00	11.27	6
6	CoPb 14185	13.83	12.50	12.36	12.17	13.78	20.75	9.82	7.94	11.37	12.72	1
7	CoS 14233	10.53	13.05	11.56	13.03	11.93	19.60	12.48	6.66	12.21	12.34	2
	Stds											
1	CoS 767	10.29	11.88	10.43	10.45	8.96	15.35	9.50	8.48	10.31	10.63	
2	CoPant 97222	10.00	6.33	10.70	10.87	8.33	18.42	8.84	10.03	9.86	10.38	
3	Co 05011	10.40	11.50	10.86	10.47	10.29	15.56	9.30	9.65	10.10	10.90	7
	Mean	10.80	11.75	11.05	11.71	10.06	16.90	10.32	8.75	10.73	11.35	
	SE (m)	0.57		0.41	0.74	0.33	0.75	0.41	0.38	0.38		
	CD at 5%	1.66	1.85	0.97	1.55	0.69	2.24	0.87	1.11	1.15		
	CV %	9.09	9.19	6.37	7.69	10.84	7.67	6.96	5.24	6.15		
Top entries with 10 percent improvement for CCS yield (t/ha) over the best standard at each centre												
	Rank-1	CoPb 14185		CoPb 14185	CoLk 14203	CoPb 14185	CoPb 14185	CoS 14233	CoH 14261	CoS 14233	CoPb 14185	
	Rank-2	CoH 14261			CoLk 14204	CoS 14233		CoLk 14204		CoPb 14185	CoS 14233	
	Rank-3	CoPb 14184			CoS 14233			Co 14035				

Number of locations where an entry showing more than 10% improvement: CoPb 14185 (5), CoS 14233 (4), CoH 14261 (2), CoLk 14203 (2), Co 14035 (1), CoLk 14203 (1), CoPb 14184 (1).

Performance of the entries across locations: Among the standards, Co 05011 was the best standard and recorded the highest CCS yield of 10.90 t/ha). Test entries such as CoPb 14185 (12.72 t/ha) and CoS 14233 (12.34 t/ha) recorded the highest CCS yield with 16.70 and 13.17 percent improvement over the best standard Co 05011.

Table 4.6.2. Cane yield (t/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 14035	78.09	86.70	81.48	71.54	70.24	108.19	88.89	65.68	89.98	82.31	
2	CoH 14261	98.46	96.38	76.09	74.95	69.37	104.48	81.85	97.78	86.94	87.37	
3	CoLk 14203	80.86	89.56	80.92	117.44	82.09	133.69	83.95	94.57	87.62	94.52	3
4	CoLk 14204	71.91	94.65	80.67	108.46	70.49	162.83	93.83	68.40	-	93.90	4
5	CoPb 14184	91.98	100.91	82.89	78.16	83.45	140.65	78.02	75.31	83.92	90.59	5
6	CoPb 14185	97.84	94.75	88.26	88.64	105.92	165.84	80.12	69.75	90.04	97.91	1
7	CoS 14233	84.57	98.91	82.96	99.43	92.34	152.89	96.30	70.37	97.21	97.22	2
	Stds											
1	CoS 767	82.10	90.58	77.90	84.29	69.62	137.45	76.79	91.36	90.02	88.90	6
2	CoPant 97222	79.63	53.36	78.52	79.03	63.21	149.70	71.98	87.41	85.02	83.10	
3	Co 05011	84.26	87.19	79.39	79.99	81.73	127.86	76.67	79.88	84.52	86.83	
	Mean	84.97	89.30	80.91	88.19	78.85	138.36	82.84	80.05	88.36	90.26	
	SE (m)	4.53		2.81	4.81	2.78	6.17	3.13	2.83	2.53		
	CD at 5%	13.29	13.11	6.74	10.10	5.84	18.48	6.57	8.16	7.64		
	CV %	9.22	8.57	6.02	6.67	11.65	7.73	6.54	4.33	4.95		
Top entries with 10 percent improvement for cane yield (t/ha) over the best standard at each centre												
	Rank-1	CoH 14261	CoPb 14184		CoLk 14203	CoPb 14185	CoPb 14185	CoS 14233			CoPb 14185	
	Rank-2	CoPb 14185			CoLk 14204	CoS 14233		CoLk 14204				
	Rank-3				CoS 14233			Co 14035				

Number of locations where an entry showing more than 10% improvement over the best standard: CoPb 14185 (3), CoS 14233 (3), CoLk 14204 (2), CoH 14261 (1), CoPb 14184 (1), CoLk 14203 (1), Co 14035 (1).

Performance of the entries across locations: Among the test entries, CoPb 14185 recorded the highest yield (97.91 t/ha) across the zone with 10.13 percent improvement over the better standard CoS 767 (88.90 t/ha). CoS 14233 (97.22 t/ha) and CoLk 14203 (94.52 t/ha) recorded 9.36 and 6.32 percent improvement over the better standard CoS 767 respectively.

Table 4.6.3. CCS (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 14035	12.26	13.47	13.80	13.99	12.34	12.58	12.19	10.89	12.58	12.68	3
2	CoH 14261	12.68	13.34	13.75	13.63	12.94	13.28	12.74	11.47	12.63	12.94	2
3	CoLk 14203	12.63	13.50	13.04	13.58	12.46	12.12	12.33	11.15	11.83	12.52	
4	CoLk 14204	12.70	13.38	13.55	12.96	13.23	11.57	12.77	9.83	-	12.50	
5	CoPb 14184	12.56	12.82	13.77	12.59	12.22	11.92	12.38	12.14	11.91	12.48	
6	CoPb 14185	14.15	13.19	14.00	13.74	13.05	12.52	12.26	11.38	12.73	13.00	1
7	CoS 14233	12.46	13.18	13.93	13.12	12.98	12.81	12.95	9.47	12.57	12.61	
	Stds											
1	CoS 767	12.52	13.11	13.39	12.41	12.56	11.18	12.38	11.69	11.45	12.30	
2	CoPant 97222	12.57	11.87	13.65	13.76	13.21	12.31	12.27	11.48	11.61	12.53	
3	Co 05011	12.33	13.17	13.67	13.09	12.87	12.19	12.14	12.08	11.95	12.61	4
	Mean	12.69	13.10	13.66	13.29	12.79	12.25	12.44	11.16	12.14	12.62	
	SE (m)	0.13		0.17	0.36	0.30	0.18	0.14	0.24	0.29		
	CD at 5%	0.38	0.45	0.40	0.75	0.62	0.54	0.29	0.68	0.89		
	CV %	1.79	2.03	2.14	3.30	2.85	2.53	1.92	2.59	4.20		
Top entries with five percent improvement for CCS (%) over the best standard at each centre												
	Rank-1	CoPb 14185										
	Rank-2											
	Rank-3											

Number of locations where an entry showing more than five percent improvement over the best standard: CoPb 14185 (1)

Performance of the entries across locations: The best standard Co 05011 recorded the 12.61% CCS in the zone and none of the test entries showed five percent improvement of the best standard. However, CoPb 14185 (13.00%) and CoH 14261 (12.94%) recorded numerically superior value for CCS (%) with 3.11 and 2.62 percent improvement over the best standard Co 05011.

Table 4.6.4. Sucrose (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 14035	17.59	19.05	19.89	19.89	17.88	18.22	17.76	16.17	18.05	18.28	2
2	CoH 14261	18.07	19.02	19.82	19.41	18.84	19.31	18.61	16.74	18.25	18.67	1
3	CoLk 14203	17.91	19.07	18.86	19.35	18.10	17.69	17.94	16.36	17.37	18.07	
4	CoLk 14204	18.07	19.03	19.55	18.43	19.25	17.00	18.52	15.45	-	18.16	4
5	CoPb 14184	17.90	18.22	19.86	18.00	17.80	17.47	18.00	17.12	17.07	17.94	
6	CoPb 14185	20.01	18.73	20.17	19.53	18.83	18.22	17.85	16.59	18.09	18.67	1
7	CoS 14233	17.83	18.75	20.07	18.68	18.87	18.64	18.76	14.19	17.98	18.20	3
	Stds											
1	CoS 767	17.84	18.59	19.34	17.78	18.29	16.47	18.00	16.65	16.66	17.74	
2	CoPant 97222	17.92	16.88	19.69	19.59	19.16	17.92	17.87	16.69	16.79	18.06	
3	Co 05011	17.52	18.62	19.72	18.71	18.72	17.82	17.69	17.04	17.26	18.12	5
	Mean	18.07	18.60	19.70	18.94	18.57	17.88	18.10	16.30	17.50	18.19	
	SE (m)	0.17		0.23	0.49	0.40	0.23	0.16	0.22	0.37		
	CD at 5%	0.51	0.57	0.55	1.04	0.85	0.68	0.33	0.63	1.10		
	CV %	1.66	1.79	2.01	3.20	0.27	2.19	1.51	1.66	3.61		
Top entries with five percent improvement for sucrose (%) over the best standard at each centre												
	Rank-1	CoPb 14185										
	Rank-2											
	Rank-3											

Number of locations where an entry showing more than five percent improvement over the best standard: CoPb 14185 (1).

Performance of the entries across locations: Two test entries namely CoPb 14185 and CoH 14261 recorded numerically superior values for sucrose content (18.67% both) compared to the best standard Co 05011 (18.12%). However, none of the test entries recorded five percent improvement for sucrose content over the best standard Co 05011.

Table 4.6.5. Brix (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	19.57	20.53	22.37	21.71	20.33	20.70	20.42	19.29	20.10	20.56
2	CoH 14261	19.83	20.90	22.30	21.25	21.60	22.10	21.53	19.31	20.30	21.01
3	CoLk 14203	19.43	20.53	21.37	21.24	20.66	20.40	20.56	19.07	20.27	20.39
4	CoLk 14204	19.77	20.80	22.03	20.13	22.06	19.87	21.10	18.41	-	20.52
5	CoPb 14184	19.63	19.87	22.33	19.89	20.46	20.30	20.62	18.33	18.93	20.04
6	CoPb 14185	21.57	20.37	22.63	21.29	21.31	20.90	20.49	19.10	20.03	20.85
7	CoS 14233	19.73	20.50	22.53	20.46	21.60	21.37	21.31	17.23	19.90	20.51
	Stds										
1	CoS 767	19.57	20.17	21.83	19.75	21.00	19.37	20.63	18.23	19.10	19.96
2	CoPant 97222	19.70	18.43	22.17	21.46	21.83	20.57	20.50	19.11	19.00	20.31
3	Co 05011	19.10	20.07	22.20	20.68	21.33	20.63	20.36	18.27	19.50	20.24
	Mean	19.79	20.22	22.18	20.78	21.22	20.62	20.75	18.64	19.68	20.44
	SE (m)	0.23		0.22	0.53	0.43	0.20	0.11	0.18	0.31	
	CD at 5%	0.66	0.52	0.53	1.12	0.91	0.61	0.24	0.51	0.94	
	CV %	1.98	1.50	1.73	3.15	2.50	1.70	0.95	1.14	2.74	

Table 4.6.6. Purity (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	89.89	92.77	88.94	91.63	87.96	88.03	86.99	83.83	89.82	88.87
2	CoH 14261	91.11	91.00	88.89	91.34	87.21	87.36	86.46	86.69	89.85	88.88
3	CoLk 14203	92.18	92.89	88.27	91.17	87.57	86.72	87.24	85.79	85.71	88.62
4	CoLk 14204	91.42	91.50	88.72	91.80	87.24	85.57	87.77	83.92	-	88.49
5	CoPb 14184	91.23	91.73	88.92	90.51	86.98	86.03	87.32	93.40	90.14	89.58
6	CoPb 14185	92.76	91.95	89.11	91.70	88.75	87.16	87.10	86.86	90.30	89.52
7	CoS 14233	90.35	91.48	89.05	91.30	87.36	87.26	88.02	82.36	90.35	88.61
	Stds										
1	CoS 767	91.21	92.20	88.60	90.07	87.11	85.03	87.27	91.33	87.24	88.90
2	CoPant 97222	91.00	91.60	88.81	91.34	87.76	87.14	87.17	87.34	88.33	88.94
3	Co 05011	91.74	92.79	88.84	90.81	87.74	86.35	86.90	93.27	88.49	89.66
	Mean	91.29	91.99	88.82	91.17	87.57	86.67	87.22	87.48	88.91	89.01
	SE (m)	0.65		0.15	0.62	0.73	0.50	86.99	1.49	0.84	
	CD at 5%	1.90	NS	0.35	ns	NS	1.48	86.46	4.29	2.55	
	CV %	1.23	0.85	0.28	0.83	1.02	0.99	87.24	2.11	1.64	

Table 4.6.7. Extraction (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	56.01	51.66	47.06	53.09	47.01		53.78	51.12	64.32	53.01
2	CoH 14261	57.94	51.56	53.82	46.73	46.47		56.43	54.86	64.62	54.05
3	CoLk 14203	51.69	51.30	48.81	46.89	43.22		54.03	50.37	55.83	50.27
4	CoLk 14204	56.49	51.93	49.22	47.50	48.02		55.33	52.56	-	51.58
5	CoPb 14184	52.48	51.04	42.95	47.21	44.53		53.12	54.79	59.56	50.71
6	CoPb 14185	55.94	52.41	40.37	57.92	57.75		52.32	51.93	61.05	53.71
7	CoS 14233	52.44	51.39	40.13	49.51	43.88		55.13	50.20	58.16	50.11
	Stds										
1	CoS 767	54.31	52.28	41.74	48.12	48.01		54.90	56.65	60.61	52.08
2	CoPant 97222	57.39	50.45	38.88	52.52	48.83		54.91	51.45	63.02	52.18
3	Co 05011	57.60	52.15	40.16	55.14	54.61		55.74	53.65	67.00	54.51
	Mean	55.23	51.62	44.31	50.46	48.23		54.57	52.76	61.57	52.22
	SE (m)	0.58		0.72	2.54	-		0.79	1.12	1.35	
	CD at 5%	1.71	NS	1.74	5.34	-		1.65	3.22	4.08	
	CV %	1.83	2.07	2.83	6.17	-		2.50	2.40	3.80	

Table 4.6.8. Pol % cane and Fibre (%) content at harvest

S. No.	Entry	Fibre (%)					Pol%cane				
		Kapur thala	Luck now	Muzafar nagar	Shahja hanpur	Mean	Kapur thala	Luck now	Muzafar nagar	Shahja hanpur	Mean
1	Co 14035	14.50	14.71	13.92	15.36	14.62	15.03	14.98	13.66	13.26	14.23
2	CoH 14261	15.17	14.17	14.15	15.03	14.63	15.22	14.72	14.35	13.95	14.56
3	CoLk 14203	14.93	13.53	14.11	15.33	14.47	15.17	14.80	13.78	13.39	14.29
4	CoLk 14204	13.46	13.85	14.05	15.21	14.14	15.60	14.04	14.41	13.85	14.47
5	CoPb 14184	14.69	13.89	14.46	15.47	14.63	13.99	13.70	13.67	13.42	13.69
6	CoPb 14185	13.32	10.60	14.21	15.59	13.43	15.34	15.51	14.14	13.28	14.57
7	CoS 14233	13.61	14.94	13.98	15.24	14.44	14.45	14.02	14.92	14.03	14.36
	Stds										
1	CoS 767	13.36	14.44	14.78	15.24	14.45	14.47	13.44	14.22	13.46	13.90
2	CoPant 97222	15.19	12.14	14.19	15.27	14.20	13.64	15.26	14.21	13.35	14.11
3	Co 05011	13.40	11.00	14.56	15.18	13.53	15.28	14.78	14.25	13.24	14.39
	Mean	14.16	13.33	14.24	15.29	14.26	14.82	14.52	14.16	13.52	14.26
	SE (m)		0.72	-	0.11			0.44	-	0.12	
	CD at 5%	0.55	1.52	-	NS		0.39	0.93	-	0.26	
	CV %	2.27	6.65	-	1.24		1.55	3.72	-	1.59	

Table 4.6.9. Number of millable canes (‘000/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	75.46	83.12	86.44	81.40	84.94	68.80	98.27	85.93	89.73	83.79
2	CoH 14261	87.04	77.76	87.78	108.72	94.44	80.56	101.85	76.67	88.93	89.31
3	CoLk 14203	81.02	82.78	92.67	121.45	85.55	98.61	93.95	99.51	98.41	94.88
4	CoLk 14204	80.40	83.63	89.78	122.92	86.67	127.87	103.83	87.28		97.80
5	CoPb 14184	86.57	85.06	93.11	81.40	80.49	86.11	88.64	86.79	88.51	86.30
6	CoPb 14185	96.30	81.82	92.00	96.37	96.30	96.02	88.77	84.07	97.40	92.12
7	CoS 14233	97.38	98.12	88.89	117.44	105.80	126.11	105.06	95.68	114.43	105.43
	Stds										
1	CoS 767	96.30	92.40	88.22	105.25	100.98	105.74	97.90	96.42	92.96	97.35
2	CoPant 97222	81.64	71.33	86.22	90.82	88.15	109.07	99.14	85.23	76.33	87.55
3	Co 05011	86.73	86.69	91.33	108.02	95.68	94.44	102.10	93.58	84.56	93.68
	Mean	86.88	84.27	89.64	103.38	91.90	99.33	97.95	89.12	92.36	92.82
	SE (m)	5.89		1.60	4.97	2.36	1.44	3.71	3.73	3.07	
	CD at 5%	17.27	7.72	3.84	10.44	4.95	4.30	7.80	10.75	9.29	
	CV %	11.60	5.34	3.09	5.89	8.48	2.50	6.57	4.78	5.76	

Table 4.6.10 Cane height (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	236.22	223.75	223.00	206.67	232.00	270.00	227.33	193.00	298.20	234.46
2	CoH 14261	215.56	194.17	165.00	157.00	160.00	242.00	209.00	182.67	234.33	195.53
3	CoLk 14203	248.55	226.25	233.00	253.33	228.00	290.00	234.67	206.33	274.80	243.88
4	CoLk 14204	197.11	199.17	238.00	235.00	188.00	289.00	214.00	163.33	-	215.45
5	CoPb 14184	217.00	195.00	263.00	185.00	202.00	252.00	199.67	213.00	228.13	217.20
6	CoPb 14185	228.67	195.00	222.00	190.00	195.00	252.00	194.00	181.33	251.00	212.11
7	CoS 14233	184.11	198.75	240.00	198.33	198.00	239.00	228.67	231.67	246.60	218.35
	Stds										
1	CoS 767	212.11	173.75	237.00	216.67	208.00	257.00	217.00	210.33	260.87	221.41
2	CoPant 97222	190.67	150.42	212.00	198.33	168.00	267.00	186.00	182.00	266.93	202.37
3	Co 05011	203.22	176.08	218.00	185.00	177.00	236.00	195.00	185.33	237.87	201.50
	Mean	213.32	193.23	225.10	202.53	195.60	259.40	210.53	194.90	255.41	216.23
	SE (m)	9.63						7.25	9.34	7.06	
	CD at 5%	28.24	22.75					15.23	26.89	21.34	
	CV %	7.72	6.87					5.96	5.87	4.79	

Table 4.6.11 Cane diameter (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	2.54	2.48	2.27	2.16	2.28	2.47	2.37	1.96	2.27	2.31
2	CoH 14261	2.79	2.91	2.47	2.35	2.52	2.53	2.21	1.76	2.41	2.44
3	CoLk 14203	2.43	2.54	2.30	2.39	2.14	2.23	2.31	2.14	1.99	2.27
4	CoLk 14204	2.57	2.55	2.23	2.38	2.46	2.37	2.41	1.71	-	2.33
5	CoPb 14184	2.69	2.52	2.33	2.44	2.42	2.67	2.28	2.27	2.23	2.43
6	CoPb 14185	2.63	2.50	2.33	2.49	2.24	2.63	2.25	1.75	2.16	2.33
7	CoS 14233	2.43	2.50	1.93	2.15	2.02	2.25	2.33	2.46	2.19	2.25
	Stds										
1	CoS 767	2.42	2.43	2.00	2.20	2.31	2.17	2.27	2.07	2.19	2.23
2	CoPant 97222	2.78	2.35	2.00	2.23	2.20	2.23	2.39	1.85	2.24	2.25
3	Co 05011	2.59	2.49	2.37	2.15	2.44	2.58	2.33	1.82	2.24	2.33
	Mean	2.59	2.53	2.22	2.29	2.30	2.41	2.32	1.98	2.21	2.32
	SE (m)	0.06		0.08	0.07	0.06	0.06	0.04	0.09	0.05	
	CD at 5%	0.17	NS	0.19	0.16	0.13	0.19	0.09	0.27	0.15	
	CV %	3.79	8.17	6.29	3.94	3.41	4.44	3.03	5.86	3.82	

Table 4.6.12 Single cane weight (kg) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	1.07	1.04	0.94	0.88	1.04	1.57	1.05	0.78	1.03	1.04
2	CoH 14261	1.28	1.24	0.87	0.69	0.86	1.29	0.87	0.72	1.06	0.99
3	CoLk 14203	1.17	1.08	0.87	0.97	0.97	1.35	0.85	0.65	0.96	0.98
4	CoLk 14204	1.06	1.13	0.90	0.88	0.86	1.27	0.97	0.73	-	0.98
5	CoPb 14184	1.31	1.18	0.89	0.96	1.06	1.63	0.87	0.69	0.99	1.06
6	CoPb 14185	1.32	1.16	0.96	0.92	1.13	1.73	0.94	0.69	0.94	1.09
7	CoS 14233	0.87	1.01	0.93	0.85	0.92	1.21	0.88	0.82	0.89	0.93
	Stds										
1	CoS 767	0.90	0.98	0.88	0.80	0.71	1.30	0.86	0.84	1.02	0.92
2	CoPant 97222	1.13	0.75	0.91	0.87	0.62	1.37	0.87	0.97	1.13	0.96
3	Co 05011	1.06	1.01	0.87	0.74	0.82	1.35	0.95	0.74	1.06	0.96
	Mean	1.12	1.06	0.90	0.86	0.90	1.41	0.91	0.76	1.01	0.99
	SE (m)	0.09		0.03	0.04	0.02	0.06	0.04	0.03	0.02	
	CD at 5%	0.26	0.11	0.07	0.09	0.04	0.17	0.08	0.09	0.07	
	CV %	13.77	6.31	5.64	6.12	2.87	6.97	6.91	4.93	4.18	

Table 4.6.13 CCS (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	11.32	11.98	11.72	12.52	10.93	11.37	11.61	9.01	11.95	11.38
2	CoH 14261	11.72	12.66	11.67	12.70	11.01	11.75	12.33	8.97	11.98	11.64
3	CoLk 14203	11.34	12.30	10.96	11.65	11.01	11.08	11.68	9.51	11.24	11.20
4	CoLk 14204	11.34	12.64	11.47	10.99	10.88	10.52	12.08	9.49	-	11.18
5	CoPb 14184	11.50	11.61	11.70	11.39	10.81	10.98	11.86	9.17	11.51	11.17
6	CoPb 14185	12.74	12.03	11.92	12.36	11.19	11.50	11.42	9.22	11.92	11.59
7	CoS 14233	11.32	12.34	11.85	12.07	10.75	11.55	12.37	8.70	11.91	11.43
	Stds										
1	CoS 767	11.72	11.85	11.31	11.44	10.47	10.13	11.35	9.48	10.86	10.96
2	CoPant 97222	11.87	10.30	11.57	12.78	10.84	11.08	11.52	9.71	10.79	11.16
3	Co 05011	11.00	11.55	11.59	12.01	11.32	11.40	11.61	9.58	11.54	11.29
	Mean	11.59	11.93	11.58	11.99	10.92	11.14	11.78	9.28	11.52	11.30
	SE (m)	0.11		0.17	0.38	0.30	0.18	0.19	0.54	0.21	
	CD at 5%	0.33	0.53	0.40	0.81	NS	0.54	0.39	1.56	0.62	
	CV %	1.66	2.60	2.52	3.92	3.36	2.82	2.74	7.12	3.09	

Table 4.6.14 Sucrose (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	16.32	17.28	17.08	18.00	15.86	16.84	17.02	13.38	17.19	16.55
2	CoH 14261	16.79	18.08	17.01	18.25	16.21	17.49	17.98	13.37	17.24	16.94
3	CoLk 14203	16.38	17.60	16.05	16.90	16.08	16.39	17.11	13.41	16.39	16.26
4	CoLk 14204	16.36	18.00	16.74	16.10	16.05	15.70	17.64	13.53	-	16.27
5	CoPb 14184	16.60	16.76	17.04	16.56	15.92	16.31	17.36	13.44	16.47	16.27
6	CoPb 14185	18.08	17.24	17.35	17.82	16.37	17.00	16.78	13.21	17.21	16.78
7	CoS 14233	16.38	17.61	17.25	17.40	15.77	17.13	18.02	12.81	17.09	16.61
	Stds										
1	CoS 767	16.78	17.08	16.53	16.58	15.76	15.16	16.67	13.74	15.71	16.00
2	CoPant 97222	16.88	14.80	16.87	18.31	15.92	16.39	16.90	12.67	15.59	16.04
3	Co 05011	15.76	16.62	16.91	17.27	16.58	16.84	17.02	13.55	16.49	16.34
	Mean	16.63	17.11	16.88	17.32	16.05	16.53	17.25	13.31	16.60	16.41
	SE (m)	0.15		0.23	0.48	0.40	0.23	0.25	0.52	0.28	
	CD at 5%	0.44	0.66	0.55	1.01	NS	0.70	0.52	1.48	0.85	
	CV %	1.57	2.26	2.34	3.41	3.08	2.43	2.49	4.71	2.94	

Table 4.6.15 Brix (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	18.37	19.43	19.64	20.15	18.74	20.00	85.91	15.97	19.25	26.38
2	CoH 14261	18.63	19.90	19.57	20.41	19.05	20.97	86.93	16.07	19.32	26.76
3	CoLk 14203	18.47	19.47	18.64	19.25	18.58	19.43	85.98	15.87	18.90	26.07
4	CoLk 14204	18.43	19.70	19.30	18.73	18.91	18.93	86.50	16.83	-	27.17
5	CoPb 14184	18.70	18.90	19.60	18.96	18.71	19.47	86.17	15.63	18.25	26.04
6	CoPb 14185	19.67	19.13	19.90	20.04	18.94	20.10	85.59	15.61	19.42	26.49
7	CoS 14233	18.57	19.40	19.80	19.56	18.38	20.40	87.03	15.83	19.03	26.44
	Stds										
1	CoS 767	18.60	19.20	19.10	18.85	18.31	18.37	85.52	15.63	17.82	25.71
2	CoPant 97222	18.43	16.53	19.44	20.31	18.61	19.40	85.76	14.57	17.62	25.63
3	Co 05011	17.47	18.60	19.47	19.34	19.24	19.87	85.93	14.63	18.20	25.86
	Mean	18.53	19.03	19.45	19.56	18.75	19.69	86.13	15.66	18.65	26.26
	SE (m)	0.21		0.22	0.54	0.39	0.22	0.26	0.27	0.31	
	CD at 5%	0.60	0.57	0.53	1.13	NS	0.67	0.54	0.79	0.93	
	CV %	1.93	1.77	1.97	3.38	2.57	1.96	0.52	2.21	2.85	

Table 4.6.16 Purity (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	88.87	88.91	86.97	89.40	84.63	84.19	19.81	83.78	89.30	79.54
2	CoH 14261	90.09	90.84	86.91	89.46	85.10	83.42	20.68	83.20	89.27	79.89
3	CoLk 14203	88.68	90.42	86.10	87.81	86.36	84.34	19.90	84.50	86.74	79.43
4	CoLk 14204	88.82	91.35	86.69	86.10	84.84	82.93	20.39	80.39	-	77.69
5	CoPb 14184	88.75	88.67	86.95	83.73	85.07	83.78	20.15	85.99	90.31	79.27
6	CoPb 14185	91.93	90.07	87.19	88.76	86.37	84.56	19.60	84.63	88.65	80.20
7	CoS 14233	88.23	90.79	87.11	84.78	85.81	83.99	20.71	80.92	89.79	79.13
	Stds										
1	CoS 767	90.21	88.94	86.52	88.02	86.09	82.54	19.50	87.91	88.20	79.77
2	CoPant 97222	91.55	89.51	86.80	90.15	85.55	84.45	19.70	86.96	88.49	80.35
3	Co 05011	90.23	89.35	86.84	89.27	86.17	84.75	19.80	92.62	90.62	81.07
	Mean	89.74	89.89	86.81	87.75	85.60	83.90	20.02	85.09	89.04	79.63
	SE (m)	0.58		0.19	1.90	0.71	0.54	0.23	3.91	0.51	
	CD at 5%	1.71	1.55	0.46	3.99	NS	N/A	0.48	11.25	1.54	
	CV %	1.12	1.01	0.38	2.65	1.01	1.11	1.98	5.39	0.99	

Table 4.6.17 Number of shoots (‘000/ha) at 8th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	89.66	86.23	230.52	84.65					108.73	119.96
2	CoH 14261	96.30	80.69	234.07	117.28					107.93	127.25
3	CoLk 14203	92.44	85.91	239.41	130.17					117.41	133.07
4	CoLk 14204	90.28	86.42	248.30	141.05					-	141.51
5	CoPb 14184	96.30	88.22	249.33	96.53					107.51	127.58
6	CoPb 14185	109.57	84.89	237.04	105.56					116.40	130.69
7	CoS 14233	115.28	103.22	235.26	127.47					133.43	142.93
	Stds										
1	CoS 767	108.18	95.85	224.93	115.82					111.96	131.35
2	CoPant 97222	85.34	74.01	243.56	100.54					95.33	119.76
3	Co 05011	108.49	89.58	243.56	124.61					103.56	133.96
	Mean	99.18	87.50	238.60	114.37					111.36	130.81
	SE (m)	4.96		4.27	8.60					3.07	
	CD at 5%	14.54	8.38	10.23	18.06					9.29	
	CV %	8.55	5.58	3.09	9.21					4.78	

Table 4.6.18 Number of tillers (‘000/ha) at 120th days

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	117.90	90.35	196.90	88.43	158.64		178.02	162.40	125.40	139.75
2	CoH 14261	130.25	84.49	199.94	126.70	193.21		204.69	144.90	124.69	151.11
3	CoLk 14203	117.90	89.94	211.07	142.90	196.30		195.93	188.07	154.84	162.12
4	CoLk 14204	104.78	94.05	204.49	145.83	201.11		185.56	164.97	-	157.26
5	CoPb 14184	121.45	92.42	212.09	115.90	182.96		192.72	164.03	123.77	150.67
6	CoPb 14185	138.27	88.92	209.56	116.51	159.88		184.69	215.60	126.85	155.04
7	CoS 14233	147.84	108.06	202.47	137.81	207.66		209.01	180.83	167.26	170.12
	Stds										
1	CoS 767	149.54	100.40	200.95	129.32	194.57		202.22	182.23	134.11	161.67
2	CoPant 97222	100.62	77.52	196.40	107.56	162.84		180.74	229.13	132.71	148.44
3	Co 05011	130.40	93.83	208.04	128.01	190.37		206.79	176.87	140.56	159.36
	Mean	125.90	92.00	204.19	123.90	184.75		194.04	180.90	136.69	155.55
	SE (m)	7.74		3.65	9.23	3.96		7.19	7.06	5.15	
	CD at 5%	22.70	9.43	8.74	19.39	8.32		15.11	20.32	15.56	
	CV %	10.36	5.98	3.09	9.12	7.09		6.42	4.29	6.52	

Table 4.6.19 Germination (%) at 45th days

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	24.15	39.34	47.02	26.68	27.78	20.42	44.17	34.05	49.02	34.74
2	CoH 14261	35.22	43.06	45.66	39.07	37.50	23.75	51.11	42.42	59.09	41.88
3	CoLk 14203	26.79	37.66	48.36	41.98	39.35	27.50	46.20	46.48	57.77	41.34
4	CoLk 14204	23.65	47.58	50.35	33.68	51.48	30.14	49.07	39.11	-	40.63
5	CoPb 14184	30.08	45.44	46.72	41.96	47.78	26.95	46.57	45.81	61.89	43.69
6	CoPb 14185	33.94	41.85	46.59	37.61	42.22	28.82	45.74	44.07	62.42	42.58
7	CoS 14233	32.65	54.49	45.88	38.31	52.22	35.56	57.22	48.85	57.72	46.99
	Stds										
1	CoS 767	32.65	42.29	42.78	35.07	40.56	30.63	53.43	42.26	49.48	41.02
2	CoPant 97222	29.58	33.72	50.61	30.76	31.57	26.88	41.76	48.98	40.31	37.13
3	Co 05011	27.86	40.05	44.81	33.22	44.35	26.39	55.00	46.25	51.80	41.08
	Mean	29.66	42.55	46.88	35.83	41.48	27.70	49.03	43.83	54.39	41.11
	SE (m)	1.69		1.53	1.66	0.57	1.10	2.50	0.44	2.34	
	CD at 5%	4.95	7.29	3.66	3.49	1.20	3.29	5.24	1.28	7.06	
	CV %	9.71	9.99	5.64	5.67	6.05	6.87	8.82	1.24	7.44	

Table 4.6.20. Assessment of the performance of entries compared to the best standard by monitoring team

S. No	Genotype	Lucknow	Shahjahanpur	Pantnagar	Muzaffarnagar	Karnal	Uchani	Kapurthala	Faridkot	Sriganganagar	Kota
1	Co 14035	Poor	On par	Poor	Poor	NA	Better	On par	On par	On par	Better
2	CoH 14261	Poor	Poor	On par	Poor	NA	Poor	Poor	Better	On par	Poor
3	CoLk 14203	Better	Better	Better	Better	NA	Better	Better	Better	Poor	Better
4	CoLk 14204	Better	Better	Better	Better	NA	NP	On par	On par	On par	Better
5	CoPb 14184	On Par	poor	On par	Poor	NA	On par	On par	Better	On par	On par
6	CoPb 14185	Better	On par	Poor	On Par	NA	Better	Better	Better	On Par	Better
7	CoS 14233	Better	Better	Better	Better	NA	Better	Better	On par	Better	Better
	Standards										
1	CoS 767	Best	Best		Best						
2	CoPant 97222			Best			Best			Best	
3	Co 05011							Best	Best		Best

Two clones i.e. CoLk 14203 and CoLk 14204 were interchanged and mislabeled at Shahjahanpur, Muzaffarnagar, Uchani, Kapurthala, Faridkot and Sriganganagar.

4.7 Advanced Varietal Trial - Ratoon - Midlate

Centres (9)	Faridkot, Kapurthala, Kota, Lucknow, Muzafarnagar, Pantnagar, Shahjahanpur, Sriganganagar, Uchani
Entries (7)	Co 14035, CoH 14261, CoLk 14203, CoLk 14204, CoPb 14184, CoPb 14185, CoS 14233
Standards (3)	CoS 767, CoPant 97222, Co 05011
Design	RBD
Replications	3
Plot size	Gross : 8 rows × 6 m × 0.90 m Net : 6 rows × 5 m × 0.90 m
Bud rate	12 buds/metre
Ratooning time	February/March, 2019
Crop Duration	12 months

Results of the previous year:

In the previous year, CoPant 97222 was identified as the best standard for CCS yield across the zone and recorded the CCS yield of 11.22 t/ha. Among the test entries, CoPb 14185 (12.77 t/ha), CoS 14233 (12.46 t/ha) and CoLk 14204 (12.40 t/ha) showed 13.81, 11.05 and 10.70 percent improvement for the CCS yield (t/ha) over the best standard CoPant 97222. Similarly, entries CoPb 14185 recorded the highest zonal mean for cane yield of 95.58 t/ha with 11.46 percent improvement over the best standard CoPant 97222 (85.75 t/ha). Besides, CoS 14233 (95.03 t/ha) and CoLk 14204 (94.67 t/ha) also recorded 10.82 and 10.40 percent improvement for cane yield over the best standard CoPant 97222 in the zone. None of the test entries recorded five percent improvement for CCS(%) and sucrose (%) over the best standard CoPant 97222 (13.06% CCS and 18.83% sucrose). However, four test entries viz., CoPb 14185 (13.28% CCS and 19.15% sucrose), CoS 14233 (13.08% CSS and 18.88% sucrose), CoH 14261 (13.10% CCS and 18.85% sucrose) and CoLk 14204 (13.08 CCS% and 18.84% sucrose) recorded the numerically superior CCS(%) and sucrose (%) as compared the best standard CoPant 97222.

Results of the current years:

Seven test entries and four standards were evaluated in RBD with three replications at eight centres across North-West Zone. Co 05011 was the best standard which recorded 9.59 t/ha of CCS yield. Among the test entries, CoLk 14204 recorded the highest zonal CCS yield of 9.43 t/ha followed by CoLk 14203 (9.31 t/ha). None of the test entries showed 10 percent improvement for CCS yield over the best standard Co 05011. For cane yield, Co 05011 was the best standard and recorded the highest cane yield of 79.09 t/ha. Among the test entries, CoLk 14204 recorded the highest cane yield of 79.16 t/ha followed by CoLk 14203 (78.72 t/ha). None of the test entries recorded 10 percent improvement for cane yield over the best standard Co 05011. Co 05011 recorded the 12.19% of CCS and among the test entries, CoPb 14185 (12.56%) and Co 14035 (12.26%) recorded 3.06 and 0.61 percent improvement over the best standard Co 05011 respectively. For sucrose content, CoPant 97222 recorded the highest sucrose content of 17.49%. Among the test entries, CoPb 14184 (17.68%) and CoH 14261 (17.68%) showed 1.10 and 0.97 percent improvement over the best standard Co 05011 respectively. None of the test entries showed five percent improvement for CCS (%) and sucrose content. Further details are found in the Table 4.7.1. to 4.7.14.

Qualifying entries: None

Table 4.7.1. CCS (t/ha) at harvest

S. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean	Rank
1	Co 14035	6.92	9.4	8.3	8.24	7.38	4.34	9.55	6.78	9.54	7.83	
2	CoH 14261	9.64	8.73	6.72	7.77	5.95	8.21	9.68	8.7	8.59	8.22	
3	CoLk 14203	8.68	9.90	7.87	12.24	8.48	9.73	9.72	8.43	8.71	9.31	3
4	CoLk 14204	10.59	9.17	8.02	10.07	7.92	13.4	9.63	6.65	-	9.43	2
5	CoPb 14184	11.23	8.80	8.39	5.92	8.58	7.45	8.93	7.74	8.6	8.40	
6	CoPb 14185	12.9	9.30	8.41	6.09	8.71	12.62	8.44	7.71	8.98	9.24	
7	CoS 14233	7.83	10.13	7.68	4.91	9.96	8.52	10.76	7.32	9.87	8.55	
	Stds											
1	CoS 767	7.01	7.18	6.93	6.65	6.91	10.81	9.37	7.62	9.29	7.97	
2	CoPant 97222	9.77	9.22	7.42	9.73	6.56	11.63	8.98	10.24	8.14	9.08	
3	Co 05011	10.18	9.06	7.83	9.90	8.6	11.87	9.56	9.97	9.34	9.59	1
	Mean	9.48	9.09	7.76	8.15	7.91	9.86	9.46	8.12	9.01	8.76	
	SE (m)	0.77		0.37	0.82	0.33	0.3	0.38	0.55	0.34		
	CD at 5%	2.22	1.28	0.88	1.72	0.7	0.89	0.8	1.59	1.02		
	CV %	14.14	8.29	8.17	12.27	13.86	5.24	6.95	8.07	6.49		
Top entries with 10 percent improvement for CCS yield (t/ha) over the best standard at each centre												
	Rank-1	CoPb 14185			CoLk 14203	CoS 14233	CoLk 14204	CoS 14233				
	Rank-2	CoPb 14184										

Number of locations where an entry showing more than 10% improvement: CoS 14233 (2), CoPb 14185 (1), CoPb 14184 (1), CoLk 14204 (1), CoLk 14203 (1)

Performance of the entries across locations: Among the standards, Co 05011 was the best and recorded 9.59 t/ha of CCS yield. Among the test entries, CoLk 14204 recorded the highest zonal CCS yield of 9.43 t/ha followed by CoLk 14203 (9.31 t/ha). None of the test entries showed 10 percent improvement for CCS yield over the best standard Co 05011.

Table 4.7.2. Cane yield (t/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 14035	59.33	70.99	63.94	64.21	62.10	34.85	79.26	61.60	78.44	63.86	
2	CoH 14261	80.93	65.47	55.11	60.43	48.14	66.01	74.81	85.31	70.86	67.45	
3	CoLk 14203	73.05	77.43	66.37	92.30	74.94	81.25	78.64	85.80	78.74	78.72	3
4	CoLk 14204	83.33	70.21	67.52	83.94	65.43	118.12	76.30	68.40	-	79.16	1
5	CoPb 14184	93.96	67.91	65.72	47.49	72.59	68.12	72.71	70.12	71.94	70.06	
6	CoPb 14185	95.68	72.59	68.52	46.84	70.25	102.83	68.40	62.47	73.67	73.47	
7	CoS 14233	65.50	78.15	61.96	39.26	80.49	68.44	84.44	69.38	83.97	70.18	
	Stds											
1	CoS 767	57.27	68.97	62.00	56.30	56.79	92.50	77.04	86.17	78.69	70.64	
2	CoPant 97222	80.59	56.46	61.03	75.46	54.56	96.99	73.83	87.41	69.45	72.86	
3	Co 05011	85.05	73.33	64.23	75.86	70.74	98.76	78.39	88.27	77.18	79.09	2
	Mean	77.47	70.15	63.64	64.21	65.60	82.79	76.38	76.49	75.88	72.55	
	SE (m)	6.33		2.45	6.46	2.94	1.85	2.74	3.41	2.55		
	CD at 5%	18.33	9.83	5.86	13.57	6.18	5.53	5.75	9.81	7.72		
	CV %	14.26	8.18	6.66	12.32	14.54	3.86	6.21	5.46	5.83		
Top entries with 10 percent improvement for cane yield (t/ha) over the best standard at each centre												
	Rank-1	CoPb 14185			CoLk 14203	CoS 14233	CoLk 14204					
	Rank-2	CoPb 14184			CoLk 14204							
	Rank-3											

Number of locations where an entry showing more than 10% improvement over the best standard: CoLk 14204 (2), CoLk 14203 (1), CoPb 14184 (1), CoPb 14185 (1), CoS 14233 (1).

Performance of the entries across locations: For cane yield, Co 05011 was the best standard and recorded the highest cane yield of 79.09 t/ha. Among the test entries, CoLk 14204 recorded the highest cane yield of 79.16 t/ha followed by CoLk 14203 (78.72 t/ha). None of the test entries recorded 10 percent improvement for cane yield over the best standard Co 05011.

Table 4.7.3. CCS (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 14035	11.65	13.23	12.96	12.82	11.87	12.45	12.19	11.00	12.16	12.26	2
2	CoH 14261	11.90	13.34	12.20	12.86	12.39	12.43	12.74	10.20	12.11	12.24	3
3	CoLk 14203	11.88	12.79	11.87	13.25	11.41	11.98	12.33	9.82	11.07	11.82	
4	CoLk 14204	12.72	13.08	11.87	12.03	12.12	11.34	12.77	9.72	-	11.96	
5	CoPb 14184	11.95	12.95	12.76	12.47	11.34	10.94	12.38	11.04	11.96	11.98	
6	CoPb 14185	13.51	12.82	12.25	12.99	12.39	12.27	12.26	12.34	12.19	12.56	1
7	CoS 14233	11.95	12.96	12.38	12.53	12.38	12.45	12.95	10.55	11.76	12.21	4
	Stds											
1	CoS 767	12.24	12.77	11.19	11.85	12.20	11.69	12.38	12.16	11.81	12.03	
2	CoPant 97222	12.12	12.71	12.18	12.89	12.06	12.00	12.27	11.72	11.72	12.19	5
3	Co 05011	11.98	12.58	12.20	13.05	12.11	12.02	12.17	11.29	12.09	12.17	
	Mean	12.19	12.92	12.19	12.67	12.03	11.96	12.44	10.98	11.87	12.14	
	SE (m)	0.11		0.31	0.45	0.30	0.24	0.14	0.36	0.15		
	CD at 5%	0.30	0.31	0.74	ns	NS	0.71	0.30	1.03	0.46		
	CV %	1.49	1.39	4.40	4.34	3.03	3.44	1.97	3.99	2.22		
Top entries with five percent improvement for CCS (%) over the best standard at each centre												
	Rank-1	CoPb 14185										
	Rank-2											
	Rank-3											

Number of locations where an entry showing more than five percent improvement over the best standard: CoPb 14185 (1)

Performance of the entries across locations: For CCS (%), Co 05011 was the best standard and recorded the 12.19% of CCS. Among the test entries, CoPb 14185 (12.56%) and Co 14035 (12.26%) recorded 3.06 and 0.61 percent improvement over the best standard Co 05011 respectively.

Table 4.7.4. Sucrose (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 14035	16.55	18.73	18.76	18.40	17.34	17.95	17.53	15.83	17.22	17.59	3
2	CoH 14261	16.92	19.01	17.73	18.44	18.06	18.07	18.69	14.73	17.30	17.66	2
3	CoLk 14203	17.01	18.23	17.28	18.86	16.78	17.34	17.92	14.01	16.13	17.06	
4	CoLk 14204	18.35	18.69	17.28	17.28	17.76	16.57	18.28	13.66	-	17.23	
5	CoPb 14184	17.13	18.30	18.48	17.80	17.40	16.04	17.82	15.16	17.01	17.24	
6	CoPb 14185	19.26	18.23	17.80	18.56	18.13	17.72	17.89	14.25	17.31	17.68	1
7	CoS 14233	17.04	18.52	17.97	17.94	18.03	18.14	18.43	14.69	16.86	17.51	4
	Stds											
1	CoS 767	17.40	18.12	16.35	16.91	17.84	16.96	17.53	15.80	16.68	17.07	
2	CoPant 97222	17.17	18.15	17.69	18.52	17.52	17.41	18.69	15.71	16.56	17.49	5
3	Co 05011	17.18	17.99	17.73	18.61	17.56	17.48	17.92	15.39	17.12	17.44	
	Mean	17.40	18.40	17.71	18.13	17.64	17.37	18.07	14.92	16.91	17.40	
	SE (m)	0.14		0.42	0.60	0.42	0.31	0.22	0.32	0.18		
	CD at 5%	0.41	0.41	1.00	ns	NS	0.93	0.47	0.92	0.54		
	CV %	1.42	1.30	4.10	4.04	2.88	3.10	2.15	2.57	1.82		
Top entries with 10 percent improvement for sucrose (%) over the best standard at each centre												
	Rank-1	CoPb 14185										
	Rank-2											
	Rank-3											

Number of locations where an entry showing more than five percent improvement over the best standards: CoPb 14185 (1)

Performance of the entries across locations: CoPant 97222 recorded the highest sucrose content of 17.49%. Among the test entries, CoPb 14184 (17.68%) and CoH 14261 (17.68%) showed 1.10 and 0.97 percent improvement over the best standard Co 05011 respectively.

Table 4.7.5. Brix (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	18.03	20.23	21.27	20.47	20.03	20.17	20.04	18.73	18.80	19.75
2	CoH 14261	18.47	20.87	20.27	20.51	20.76	20.67	21.11	17.63	19.12	19.93
3	CoLk 14203	18.83	20.00	19.83	20.64	19.63	19.67	20.40	16.89	18.53	19.38
4	CoLk 14204	20.67	20.63	19.83	19.28	20.63	19.17	20.78	16.53	-	19.69
5	CoPb 14184	19.03	19.70	21.00	19.59	20.36	18.67	20.34	17.87	18.70	19.47
6	CoPb 14185	21.17	19.90	20.33	20.46	21.03	20.00	20.39	17.61	18.85	19.97
7	CoS 14233	18.70	20.43	20.50	19.90	20.70	20.83	20.87	17.29	18.73	19.77
	Stds										
1	CoS 767	18.97	19.70	18.93	18.61	20.66	19.33	20.14	18.77	18.20	19.26
2	CoPant 97222	18.60	20.00	20.23	20.68	20.00	19.83	20.15	18.83	17.88	19.58
3	Co 05011	19.10	19.90	20.27	20.44	20.01	20.00	20.41	17.82	18.53	19.61
	Mean	19.16	20.14	20.25	20.06	20.38	19.83	20.46	17.80	18.59	19.64
	SE (m)	0.21		0.41	0.58	0.32	0.31	0.22	0.28	0.19	
	CD at 5%	0.60	0.58	0.97	1.23	0.67	0.94	0.46	0.81	0.58	
	CV %	1.87	1.67	3.48	3.57	1.92	2.74	1.87	2.21	1.80	

Table 4.7.6. Purity (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	91.78	92.55	88.20	89.87	86.55	88.99	87.45	84.52	91.61	89.06
2	CoH 14261	91.63	91.12	87.47	89.92	85.77	87.48	88.52	83.55	90.47	88.44
3	CoLk 14203	90.32	91.19	87.12	91.39	85.46	88.13	87.85	82.95	87.03	87.94
4	CoLk 14204	88.77	90.64	87.13	89.64	86.08	86.42	88.00	82.64	-	87.42
5	CoPb 14184	90.00	92.90	88.01	90.86	85.45	85.92	87.59	84.83	90.98	88.50
6	CoPb 14185	91.02	91.59	87.49	90.73	86.21	88.57	87.74	80.92	91.83	88.46
7	CoS 14233	91.14	90.63	87.65	90.15	87.11	87.06	88.29	84.96	89.99	88.55
	Stds										
1	CoS 767	91.74	91.98	86.37	90.82	86.35	87.70	87.58	84.18	91.64	88.71
2	CoPant 97222	92.34	90.77	87.44	89.59	87.59	87.76	87.57	83.43	92.58	88.79
3	Co 05011	89.93	90.42	87.47	91.07	87.76	87.38	88.52	86.36	92.41	89.04
	Mean	90.87	91.38	87.44	90.40	86.43	87.54	87.91	83.83	90.95	88.49
	SE (m)	0.59		0.31	0.85	0.95	0.65	0.29	3.13	0.82	
	CD at 5%	1.70	NS	0.75	ns	NS	N/A	NS	9.03	2.47	
	CV %	1.12	1.06	0.62	1.16	1.34	1.28	0.57	3.91	1.56	

Table 4.7.7. Extraction (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	51.78	52.29	49.21	44.48	51.93		55.38	49.03	62.87	52.12
2	CoH 14261	54.48	51.28	55.97	43.91	50.69		56.16	46.61	60.94	52.50
3	CoLk 14203	50.24	53.25	50.96	42.77	44.21		54.31	46.18	52.97	49.36
4	CoLk 14204	54.81	51.67	51.37	40.04	52.90		55.37	49.96	-	50.87
5	CoPb 14184	52.08	51.80	45.10	40.42	54.69		53.61	38.68	50.75	48.39
6	CoPb 14185	56.05	51.63	42.52	50.80	55.87		54.76	41.27	60.20	51.64
7	CoS 14233	53.46	51.49	42.28	40.75	47.81		53.79	42.34	59.29	48.90
	Stds										
1	CoS 767	52.69	52.60	43.89	42.53	46.37		55.28	45.99	58.41	49.72
2	CoPant 97222	57.24	51.77	41.03	44.80	51.69		56.60	44.20	51.42	49.84
3	Co 05011	56.18	53.12	42.31	43.45	47.36		55.60	47.05	59.50	50.57
	Mean	53.90	52.09	46.46	43.39	50.35		55.09	45.13	57.37	50.39
	SE (m)	0.79		0.72	3.08	-		0.61	4.49	1.66	
	CD at 5%	2.28	NS	1.74	ns	-		1.29	12.92	5.01	
	CV %	2.54	1.77	2.70	8.70	-		1.93	12.17	5.00	

Table 4.7.8. Pol % cane and Fibre (%) content at harvest

S. No.	Entry	Fibre (%)					Pol%cane				
		Kapur thala	Luck now	Muzafar nagar	Shahja hanpur	Mean	Kapur thala	Luck now	Muzafar nagar	Shahja hanpur	Mean
1	Co 14035	14.95	13.41	13.26	15.16	14.19	14.87	14.09	13.38	13.12	13.86
2	CoH 14261	14.27	13.66	13.68	14.94	14.14	14.57	14.08	13.49	14.03	14.04
3	CoLk 14203	14.03	14.16	13.90	15.31	14.35	14.55	14.31	12.81	13.39	13.76
4	CoLk 14204	13.53	14.47	13.58	15.28	14.21	14.74	13.06	13.62	13.66	13.77
5	CoPb 14184	13.49	14.07	14.05	15.46	14.27	14.44	13.52	13.38	13.28	13.65
6	CoPb 14185	12.89	11.61	13.96	15.28	13.43	14.64	14.55	13.63	13.37	14.05
7	CoS 14233	13.90	14.97	13.75	15.33	14.49	14.25	13.46	13.77	13.76	13.81
	Stds										
1	CoS 767	14.22	15.51	13.44	15.13	14.57	14.68	12.60	13.99	13.21	13.62
2	CoPant 97222	14.47	11.63	13.27	15.12	13.62	15.31	14.51	13.44	13.22	14.12
3	Co 05011	13.44	11.69	13.08	15.15	13.34	14.34	14.57	13.07	13.52	13.88
	Mean	13.92	13.52	13.60	15.22	14.06	14.64	13.87	13.46	13.46	13.86
	SE (m)		0.51	-	0.09			0.45	-	0.18	
	CD at 5%	0.57	1.07	-	NS		0.55	0.95	-	0.38	
	CV %	2.18	4.00		2.34		2.40	4.62		1.08	

Table 4.7.9. Number of millable canes (‘000/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	67.56	77.50	69.56	83.33	80.37	33.70	94.69	52.22	78.36	70.81
2	CoH 14261	81.10	72.92	70.94	99.69	89.63	52.13	97.04	55.68	79.83	77.66
3	CoLk 14203	87.62	77.86	76.01	111.65	102.47	66.57	99.14	61.73	93.04	86.23
4	CoLk 14204	94.65	77.91	76.70	132.25	92.35	98.43	100.49	69.26	-	92.76
5	CoPb 14184	98.08	79.60	76.47	80.17	90.74	53.80	88.77	55.68	78.66	78.00
6	CoPb 14185	107.85	76.55	75.32	60.80	99.75	64.81	97.28	51.23	78.94	79.17
7	CoS 14233	100.48	90.78	72.09	69.75	115.43	73.33	111.60	58.02	105.72	88.58
	Stds										
1	CoS 767	96.88	86.20	71.40	95.37	108.76	75.00	100.99	51.11	78.40	84.90
2	CoPant 97222	92.76	66.65	69.33	106.64	84.81	83.15	98.15	54.57	91.73	83.09
3	Co 05011	95.16	80.68	74.63	129.17	101.73	80.09	96.79	58.40	88.65	89.48
	Mean	92.21	78.67	73.25	96.88	96.60	68.10	98.49	56.79	85.93	83.07
	SE (m)	7.07		1.23	4.77	2.66	1.31	3.60	1.82	3.74	
	CD at 5%	20.48	7.36	2.94	10.03	5.60	3.91	7.56	5.23	11.30	
	CV %	13.85	5.46	2.90	6.04	9.12	3.33	6.33	3.92	7.53	

Table 4.7.10 Cane height (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	188.33	243.89	215.00	187.67	248.00	201.00	195.67	172.00	255.07	211.85
2	CoH 14261	182.33	197.22	166.00	136.33	156.00	181.00	174.67	153.67	171.67	168.77
3	CoLk 14203	228.44	229.44	263.00	198.67	229.00	235.00	193.67	174.33	221.73	219.25
4	CoLk 14204	181.33	200.00	260.00	183.33	219.00	206.00	183.33	153.00	-	198.25
5	CoPb 14184	212.33	192.22	207.00	142.00	198.00	202.00	171.33	184.33	204.33	190.39
6	CoPb 14185	176.67	215.56	214.00	143.00	236.00	240.00	179.33	175.67	222.40	200.29
7	CoS 14233	168.78	217.22	217.00	142.33	208.00	175.00	192.00	215.33	217.60	194.81
	Stds										
1	CoS 767	172.89	207.78	233.00	167.67	207.00	221.00	181.67	156.67	230.07	197.53
2	CoPant 97222	197.11	216.67	192.00	171.00	170.00	223.00	174.00	183.00	192.00	190.98
3	Co 05011	185.00	213.33	178.00	143.33	208.00	214.00	172.67	161.67	181.00	184.11
	Mean	189.32	213.33	214.50	161.53	207.90	209.80	181.83	172.97	210.65	195.62
	SE (m)	9.45						5.17	6.80	6.76	
	CD at 5%	27.36	9.90					10.86	19.60	20.43	
	CV %	8.60	2.71					4.93	4.82	5.56	

Table 4.7.11 Cane diameter (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	2.50	2.44	2.17	2.31	2.39	2.21	2.33	1.88	2.30	2.28
2	CoH 14261	2.71	2.52	2.10	2.55	2.41	2.63	2.15	1.97	2.46	2.39
3	CoLk 14203	2.30	2.46	1.93	2.19	2.22	2.27	2.31	2.30	2.28	2.25
4	CoLk 14204	2.17	2.47	2.27	2.07	2.32	2.39	2.40	1.61	-	2.21
5	CoPb 14184	2.70	2.62	2.33	2.40	2.43	2.57	2.49	2.35	2.41	2.48
6	CoPb 14185	2.57	2.42	2.67	2.65	2.50	2.59	2.35	1.77	2.43	2.44
7	CoS 14233	2.24	2.42	1.93	2.23	2.28	2.19	2.33	2.58	2.23	2.27
	Stds										
1	CoS 767	2.25	2.80	2.07	2.11	2.07	2.33	2.13	2.21	2.19	2.24
2	CoPant 97222	2.59	2.28	2.27	2.38	2.09	2.26	2.33	2.03	2.56	2.31
3	Co 05011	2.43	2.34	2.27	2.38	2.41	2.70	2.37	1.74	2.21	2.32
	Mean	2.45	2.48	2.20	2.33	2.31	2.41	2.32	2.04	2.34	2.32
	SE (m)	0.07		0.07	0.11	0.07	0.09	0.06	0.07	0.06	
	CD at 5%	0.21	0.18	0.18	0.23	15.00	0.27	0.12	0.21	0.19	
	CV %	5.03	4.31	5.81	5.76	3.78	6.37	4.24	4.45	4.58	

Table 4.7.12 Single cane weight (kg) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	0.85	0.92	0.92	0.77	0.98	1.03	0.96	0.64	1.10	0.91
2	CoH 14261	1.00	0.90	0.78	0.61	0.57	1.27	0.75	0.56	0.94	0.82
3	CoLk 14203	1.07	0.99	0.87	0.83	0.77	1.22	0.85	0.55	0.89	0.89
4	CoLk 14204	0.72	0.90	0.88	0.63	0.89	1.20	0.93	0.64	-	0.85
5	CoPb 14184	1.23	0.85	0.86	0.59	0.97	1.27	0.78	0.56	1.01	0.90
6	CoPb 14185	1.01	0.95	0.91	0.77	1.13	1.59	0.82	0.58	1.01	0.98
7	CoS 14233	0.63	0.86	0.86	0.57	0.76	0.93	1.01	0.72	0.86	0.80
	Stds										
1	CoS 767	0.68	0.80	0.87	0.59	0.76	1.23	0.76	0.71	1.10	0.83
2	CoPant 97222	0.99	0.85	0.88	0.71	0.68	1.17	0.81	0.75	0.79	0.85
3	Co 05011	0.93	0.91	0.86	0.59	0.99	1.23	0.93	0.65	0.92	0.89
	Mean	0.91	0.89	0.87	0.67	0.85	1.21	0.86	0.64	0.96	0.87
	SE (m)	0.06		0.03	0.06	0.07	0.02	0.06	0.04	0.03	
	CD at 5%	0.19	0.08	0.07	0.12	0.14	0.07	0.12	0.09	0.09	
	CV %	11.70	5.27	5.98	10.72	9.76	3.20	11.51	6.65	5.62	

Table 4.7.13 Number of shoots (‘000/ha) at 180 days

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	70.13	80.06	159.70	95.06					90.36	99.06
2	CoH 14261	94.65	75.33	162.81	146.30					91.83	114.18
3	CoLk 14203	99.11	80.44	174.22	145.06					104.38	120.64
4	CoLk 14204	115.40	80.50	175.78	178.39					-	137.52
5	CoPb 14184	116.43	81.86	175.26	107.79					90.66	114.40
6	CoPb 14185	121.06	79.08	172.67	77.55					90.94	108.26
7	CoS 14233	134.26	93.80	165.41	84.64					117.72	119.17
	Stds										
1	CoS 767	118.14	89.04	163.85	118.83					90.40	116.05
2	CoPant 97222	114.20	68.85	159.19	129.17					103.73	115.03
3	Co 05011	115.40	83.33	171.11	155.01					100.65	125.10
	Mean	109.88	81.23	168.00	123.78					97.85	116.94
	SE (m)	6.31		2.76	10.78					4.17	
	CD at 5%	18.27	7.74	6.62	22.65					12.61	
	CV %	10.34	5.56	2.85	10.67					7.38	

Table 4.7.14 Number of tillers (‘000/ha) at 90 days

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 14035	96.88	82.79	146.01	108.72	182.22		171.61	88.68	118.60	124.44
2	CoH 14261	185.36	78.43	148.86	168.29	176.91		206.30	94.55	111.82	146.31
3	CoLk 14203	150.72	83.11	159.29	174.54	193.46		195.93	104.82	124.41	148.28
4	CoLk 14204	179.18	83.96	160.71	222.61	204.19		185.56	97.61	-	161.97
5	CoPb 14184	194.96	84.72	160.24	140.89	180.25		192.71	94.55	116.14	145.56
6	CoPb 14185	183.81	81.82	157.87	82.02	166.05		184.69	87.00	131.23	134.31
7	CoS 14233	241.60	96.78	151.23	99.92	198.52		220.86	98.53	157.78	158.15
	Stds										
1	CoS 767	168.72	92.06	149.81	154.71	200.74		204.69	86.79	131.64	148.64
2	CoPant 97222	147.81	71.67	145.54	150.38	155.31		180.74	92.66	117.53	132.71
3	Co 05011	165.81	87.35	156.44	187.58	182.34		202.22	99.16	147.37	153.53
	Mean	171.49	84.27	153.60	148.97	184.00		194.53	94.44	128.50	145.39
	SE (m)	9.74		2.53	11.67	3.68		7.28	4.91	5.25	
	CD at 5%	28.21	7.49	6.06	24.52	7.73		15.43	14.13	15.88	
	CV %	10.41	5.19	2.85	9.59	6.61		6.48	3.92	7.08	

Table 4.7.15. Assessment of the performance of entries compared to the best standard by monitoring team

S. No	Genotype	Lucknow	Shahjahanpur	Pantnagar	Muzaffarnagar	Karnal	Uchani	Kapurthala	Faridkot	Sriganganagar	Kota
1	Co 14035	Better	On par	Poor	On par	NA	On par	On par	Poor	Poor	On par
2	CoH 14261	Poor	Poor	Poor	Poor	NA	Poor	Poor	Better	On par	Better
3	CoLk 14203	Better	Better**	Better	On par**	NA	On par**	On par**	Poor**	Poor	Better
4	CoLk 14204	Better	Better**	On par	Better**	NA	NP	On par**	On Par**	Better**	Poor
5	CoPb 14184	Poor	On par	Poor	On par	NA	Poor	Better	Better	Poor	Better
6	CoPb 14185	Poor	Poor	On par	Better	NA	On par	On par	Better	On par	Poor
7	CoS 14233	Poor	Better	Better	On par	NA	On par	On par	Poor	Poor	Poor
	Standards										
1	CoS 767	III	Best	III	Best	NA	Best	II	III	III	II
2	CoPant 97222	Best	III	Best	III	NA	III	III	II	II	III
3	Co 05011	II	II	II	II	NA	II	Best	Best	Best	Best

** Two clones i.e. CoLk 14203 and CoLk 14204 were interchanged and mislabeled at Shahjahanpur, Muzaffarnagar, Uchani, Kapurthala, Faridkot and Sriganganagar.

4.8 ADVANCED VARIETAL TRIAL (MIDLATE)

Pooled data of 2 Plant crops + 1 Ratoon

Centres (9)	Faridkot, Kapurthala, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur, Sriganganagar and Uchani.
Entries (7)	Co 14035, CoH 14261, CoLk 14203, CoLk 14204, CoPb 14184, CoPb 14185, CoS 14233
Standards (3)	CoS 767, CoPant 97222 and Co 05011
Design	RBD
Replications	3
Plot size	Gross: 8 Rows x 6 m x 0.90 m Net : 6 Rows x 5 m x 0.90 m

Seven midlate clones were evaluated along with three standards during 2018-19 in AVT-I Plant and during 2019-20 in AVT-II Plant as well as AVT-Ratoon experiments at 9 locations in North West Zone. The mean CCS yield, cane yield, CCS % and sucrose % of two plant crops and one ratoon are presented in Tables 4.8.1 to 4.8.4 as well as in Figure 4.8.1 to 4.8.1.

Commercial cane sugar yield (CCS yield): The mean CCS yield of the best standard, Co 05011 in the zone was 10.42 t/ha (Table 4.8.1 & Fig 4.8.1). CoPb 14185 recorded CCS yield of 11.58 t/ha with improvement of 11.11 percent over the best standard. Three entries viz., CoS 14233 (11.36 t/ha), CoLk 14204 (11.18 t/ha) and CoLk 14203 (11.05 t/ha) recorded 8.97, 7.27 and 6.01 percent improvement over the best standard respectively in the zone.

Cane yield: The best standard Co 05011 recorded 83.12 t/ha of cane yield in the zone. None of the test entries recorded 10 percent improvement over the best standard. However, entries namely CoS 14233, CoPb 14185 and CoLk 14203 recorded cane yield of 89.33, 88.99 and 88.85 t/ha with improvement of 7.48, 7.06 and 6.89 percent improvement over the best standard respectively in the zone.

CCS % at harvest: CoPant 97222 was the best standard for CCS % with zonal mean of 12.59% (Table 4.8.1 & Fig 4.8.1). None of the test entries recorded >5 % improvement in CCS % over CoPant 97222. However, entries CoPb 14185 (12.95), CoH 14261 (12.76) and CoS 14233 (12.63) recorded numerically superior CCS (%) across the zone with 2.83, 1.34 and 0.34 percent improvement over the best standard respectively.

Sucrose % at harvest: The standard CoPant 97222 was the best in the zone for sucrose % (18.12). None of the test entries recorded >5% improvement for sucrose % over the best standard (Table 4.8.1 & Fig 4.8.1). However, CoPb 14185 (18.50 %), CoH 14261 (18.39 %) and CoS 14233 (18.20 %) recorded numerically superior sucrose content (%) across the zone with 2.07, 1.49 and 0.40 percent improvement over the best standard respectively in the zone.

Qualifying entries: None of the entries was identified as qualifying entry.

Table 4.8.1. CCS (t/ha) at harvest

SI No	Entries	Faridkot				Kapurthala				Kota				Lucknow				Muzaffarnagar			
		I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean
1	Co 14035	10.33	9.57	6.92	8.94	11.17	11.66	9.40	10.74	10.71	11.24	8.30	10.08	8.55	10.02	8.24	8.94	10.96	8.66	7.38	9.00
2	CoH 14261	14.16	12.48	9.64	12.09	9.88	12.85	8.73	10.49	9.07	10.45	6.72	8.75	9.46	10.22	7.77	9.15	9.31	8.98	5.95	8.08
3	CoLk 14203	12.43	10.19	8.68	10.43	11.42	12.09	9.90	11.14	9.82	10.55	7.87	9.41	15.08	15.96	12.24	14.43	13.39	10.20	8.48	10.69
4	CoLk 14204	10.67	9.13	10.59	10.13	11.80	12.68	9.17	11.22	10.10	10.94	8.02	9.69	13.96	14.07	10.07	12.70	12.44	9.33	7.92	9.90
5	CoPb 14184	13.78	11.56	11.23	12.19	10.19	12.93	8.80	10.64	10.81	11.42	8.39	10.21	10.64	9.84	5.92	8.80	11.44	10.11	8.58	10.04
6	CoPb 14185	16.87	13.83	12.90	14.53	12.41	12.50	9.30	11.40	11.52	12.36	8.41	10.76	9.13	12.17	6.09	9.13	14.11	13.78	8.71	12.20
7	CoS 14233	10.66	10.53	7.83	9.67	11.57	13.05	10.13	11.58	10.03	11.56	7.68	9.76	13.60	13.03	4.91	13.32	12.90	11.93	9.96	11.60
	Standards																				
1	CoS 767	10.95	10.29	7.01	9.42	11.20	11.88	7.18	10.09	8.46	10.43	6.93	8.61	10.25	10.45	6.65	9.12	9.91	8.96	6.91	8.59
2	CoPant 97222	14.20	10.00	9.77	11.32	11.53	6.33	9.22	9.03	9.32	10.70	7.42	9.15	10.36	10.87	9.73	10.32	9.32	8.33	6.56	8.07
3	Co 05011	11.71	10.40	10.18	10.76	10.86	11.50	9.06	10.47	9.88	10.86	7.83	9.52	9.85	10.47	9.90	10.07	10.67	10.29	8.60	9.85
	Mean	12.58	10.80	9.48	10.95	11.20	11.75	9.09	10.68	9.97	11.05	7.76	9.59	11.09	11.71	8.15	10.32	11.45	10.06	7.91	9.81
Top three entries recorded 10 percent improvement over the best standard																					
						CoS 14233				CoPb 14185				CoLk 14203, CoS 14233, CoLk 14204				CoPb 14185, CoS 14233			

SI No	Entries	Pantnagar				Shahjahanpur				Sriganganagar				Uchani				Weigh ted Mean	% impr. over best standard	Rank	
		I	II	R*	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean				
1	Co 14035	6.06	13.61	4.34	8.00	11.30	10.84	9.55	10.56	9.38	7.15	6.78	7.77	12.27	11.32	9.54	11.04	9.45	-9.29		
2	CoH 14261	12.26	13.86	8.21	11.44	11.46	10.41	9.68	10.52	11.43	11.22	8.70	10.45	12.63	11.08	8.59	10.77	10.19	-2.20		
3	CoLk 14203	10.41	16.22	9.73	12.12	11.64	10.35	9.72	10.57	12.38	10.54	8.43	10.45	11.51	10.36	8.71	10.19	11.05	6.01	4	
4	CoLk 14204	17.81	18.84	13.40	16.68	11.22	11.98	9.63	10.94	11.17	6.72	6.65	8.18					11.18	7.27	3	
5	CoPb 14184	10.86	16.76	7.45	11.69	10.48	9.66	8.93	9.69	11.68	9.14	7.74	9.52	11.41	10.00	8.60	10.00	10.31	-1.08		
6	CoPb 14185	16.71	20.75	12.62	16.69	10.60	9.82	8.44	9.62	10.97	7.94	7.71	8.87	12.64	11.37	8.98	11.00	11.58	11.11	1	
7	CoS 14233	16.13	19.60	8.52	14.75	12.12	12.48	10.76	11.79	12.27	6.66	7.32	8.75	12.86	12.21	9.87	11.65	11.36	8.97	2	
	Standards																				
1	CoS 767	13.32	15.35	10.81	13.16	9.48	9.50	9.37	9.45	11.34	8.48	7.62	9.15	11.12	10.31	9.29	10.24	9.76			
2	CoPant 97222	14.26	18.42	11.63	14.77	9.88	8.84	8.98	9.23	11.96	10.03	10.24	10.74	10.17	9.86	8.14	9.39	10.22			
3	Co 05011	11.44	15.56	11.87	12.96	9.96	9.30	9.56	9.61	10.70	9.65	9.97	10.11	11.87	10.10	9.34	10.44	10.42			
	Mean	12.93	16.90	9.86	13.23	10.81	10.32	9.46	10.20	11.33	8.75	8.12	9.40	11.83	10.73	9.01	10.52	10.52			
Top three entries recorded 10 percent improvement over the best standard																					
		CoPb 14185, CoLk 14204				CoS 14233, CoLk 14203, CoLk 14204								CoS 14233				CoS 14233			

Varietal Improvement Programme – AICRP (Sugarcane)
Principal Investigator's Report (2019-20), North West Zone – AVT (Midlate)-Pooled Data

Table 4.8.2. Cane yield (t/ha) at harvest

SI No	Entries	Faridkot				Kapurthala				Kota				Lucknow				Muzaffarnagar			
		I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean
1	Co 14035	83.68	78.09	59.33	73.70	86.69	86.70	70.99	81.46	80.37	81.48	63.94	75.26	68.19	71.54	64.21	67.98	80.86	70.24	62.10	71.07
2	CoH 14261	114.20	98.46	80.93	97.86	80.82	96.38	65.47	80.89	72.60	76.09	55.11	67.93	68.11	74.95	60.43	67.83	68.15	69.37	48.14	61.89
3	CoLk 14203	100.48	80.86	73.05	84.80	90.50	89.56	77.43	85.83	79.67	80.92	66.37	75.65	113.09	117.44	92.30	107.61	100.74	82.09	74.94	85.92
4	CoLk 14204	79.22	71.91	83.33	78.15	92.50	94.65	70.21	85.79	83.00	80.67	67.52	77.06	109.29	108.46	83.94	100.56	91.97	70.49	65.43	75.96
5	CoPb 14184	109.74	91.98	93.96	98.56	88.02	100.91	67.91	85.61	81.84	82.89	65.72	76.82	86.55	78.16	47.49	70.73	85.18	83.45	72.59	80.41
6	CoPb 14185	122.77	97.84	95.68	105.43	96.12	94.75	72.59	87.82	86.52	88.26	68.52	81.10	74.74	88.64	46.84	70.07	102.71	105.92	70.25	92.96
7	CoS 14233	85.05	84.57	65.50	78.37	91.64	98.91	78.15	89.57	79.16	82.96	61.96	74.69	101.72	99.43	39.26	100.58	94.81	92.34	80.49	89.21
	Standards																				
1	CoS 767	88.48	82.10	57.27	75.95	89.59	90.58	68.97	83.05	75.65	77.90	62.00	71.85	82.96	84.29	56.30	74.52	73.21	69.62	56.79	66.54
2	CoPant 97222	112.48	79.63	80.59	90.90	85.85	53.36	56.46	65.22	74.12	78.52	61.03	71.22	78.35	79.03	75.46	77.61	69.26	63.21	54.56	62.34
3	Co 05011	97.39	84.26	85.05	88.90	80.65	87.19	73.33	80.39	78.36	79.39	64.23	73.99	73.82	79.99	75.86	76.56	81.73	81.73	70.74	78.07
	Mean	99.35	84.97	77.47	87.26	88.24	89.30	70.15	82.56	79.13	80.91	63.64	74.56	85.68	88.19	64.21	79.36	84.86	78.85	65.60	76.44
Top three entries recorded 10 percent improvement over the best standard																					
		CoPb 14185												CoLk 14203, CoS 14233 CoLk 14204				CoPb 14185, CoS 14233, CoLk 14203			

SI No	Entries	Pantnagar				Shahjahanpur				Sriganganagar				Uchani				Weigh ted Mean	% impr. over best standard	Rank	
		I	II	R*	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean				
1	Co 14035	43.52	108.19	34.85	62.19	85.43	88.89	79.26	84.53	83.27	65.68	61.60	70.18	95.25	89.98	78.44	87.89	74.92	-9.86		
2	CoH 14261	86.69	104.48	66.01	85.73	81.85	81.85	74.81	79.50	97.36	97.78	85.31	93.48	94.53	86.94	70.86	84.11	79.91	-3.85		
3	CoLk 14203	75.41	133.69	81.25	96.78	86.79	83.95	78.64	83.13	104.41	94.57	85.80	94.93	88.53	87.62	78.74	84.96	88.85	6.89	4	
4	CoLk 14204	131.15	162.83	118.12	137.37	81.73	93.83	76.30	83.95	88.53	68.40	68.40	75.11					89.25	7.37	2	
5	CoPb 14184	78.27	140.65	68.12	95.68	78.89	78.02	72.71	76.54	96.70	75.31	70.12	80.71	92.50	83.92	71.94	82.79	83.09	-0.03		
6	CoPb 14185	119.41	165.84	102.83	129.36	76.79	80.12	68.40	75.10	87.82	69.75	62.47	73.35	93.36	90.04	73.67	85.69	88.99	7.06	3	
7	CoS 14233	114.74	152.89	68.44	112.02	91.11	96.30	84.44	90.62	99.18	70.37	69.38	79.64	97.90	97.21	83.97	93.03	89.33	7.48	1	
	Standards																				
1	CoS 767	98.50	137.45	92.50	109.48	76.67	76.79	77.04	76.83	94.16	91.36	86.17	90.56	90.34	90.02	78.69	86.35	81.68			
2	CoPant 97222	98.14	149.70	96.99	114.94	73.21	71.98	73.83	73.01	96.07	87.41	87.41	90.30	84.30	85.02	69.45	79.59	80.57			
3	Co 05011	80.53	127.86	98.76	102.38	75.68	76.67	78.39	76.91	91.53	79.88	88.27	86.56	91.13	84.52	77.18	84.28	83.12			
	Mean	92.64	138.36	82.79	104.60	80.82	82.84	76.38	80.01	93.90	80.05	76.49	83.48	91.98	88.36	75.88	85.41				
Top three entries recorded 10 percent improvement over the best standard																					
		CoLk 14204, CoPb 14185				CoS 14233															

Table 4.8.3. CCS (%) at harvest

SI No	Entries	Faridkot				Kapurthala				Kota				Lucknow				Muzaffarnagar			
		I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean
1	Co 14035	12.33	12.26	11.65	12.08	12.89	13.47	13.23	13.20	13.29	13.80	12.96	13.35	12.48	13.99	12.82	13.10	13.53	12.34	11.87	12.58
2	CoH 14261	12.39	12.68	11.90	12.32	12.23	13.34	13.34	12.97	12.48	13.75	12.20	12.81	13.90	13.63	12.86	13.46	13.66	12.94	12.39	13.00
3	CoLk 14203	12.37	12.63	11.88	12.29	12.62	13.50	12.79	12.97	12.33	13.04	11.87	12.41	13.35	13.58	13.25	13.39	13.29	12.46	11.41	12.39
4	CoLk 14204	13.47	12.70	12.72	12.96	12.76	13.38	13.08	13.07	12.18	13.55	11.87	12.53	12.77	12.96	12.03	12.59	13.52	13.23	12.12	12.96
5	CoPb 14184	12.56	12.56	11.95	12.36	11.57	12.82	12.95	12.45	13.22	13.77	12.76	13.25	12.27	12.59	12.47	12.44	13.44	12.22	11.34	12.33
6	CoPb 14185	13.74	14.15	13.51	13.80	12.92	13.19	12.82	12.98	13.32	14.00	12.25	13.19	12.15	13.74	12.99	12.96	13.58	13.05	12.39	13.01
7	CoS 14233	12.53	12.46	11.95	12.31	12.63	13.18	12.96	12.92	12.66	13.93	12.38	12.99	13.39	13.12	12.53	13.01	13.62	12.98	12.38	12.99
	Standards																				
1	CoS 767	12.37	12.52	12.24	12.38	12.50	13.11	12.77	12.79	11.19	13.39	11.19	11.92	12.38	12.41	11.85	12.21	13.58	12.56	12.20	12.78
2	CoPant 97222	12.64	12.57	12.12	12.44	13.43	11.87	12.71	12.67	12.58	13.65	12.18	12.80	13.22	13.76	12.89	13.29	13.46	13.21	12.06	12.91
3	Co 05011	12.02	12.33	11.98	12.11	13.46	13.17	12.58	13.07	12.63	13.67	12.20	12.83	13.33	13.09	13.05	13.16	13.07	12.87	12.11	12.68
	Mean	12.64	12.69	12.19	12.51	12.70	13.10	12.92	12.91	12.59	13.66	12.19	12.81	12.92	13.29	12.67	12.96	13.48	12.79	12.03	12.77
Top three entries recorded 10 percent improvement over the best standard																					

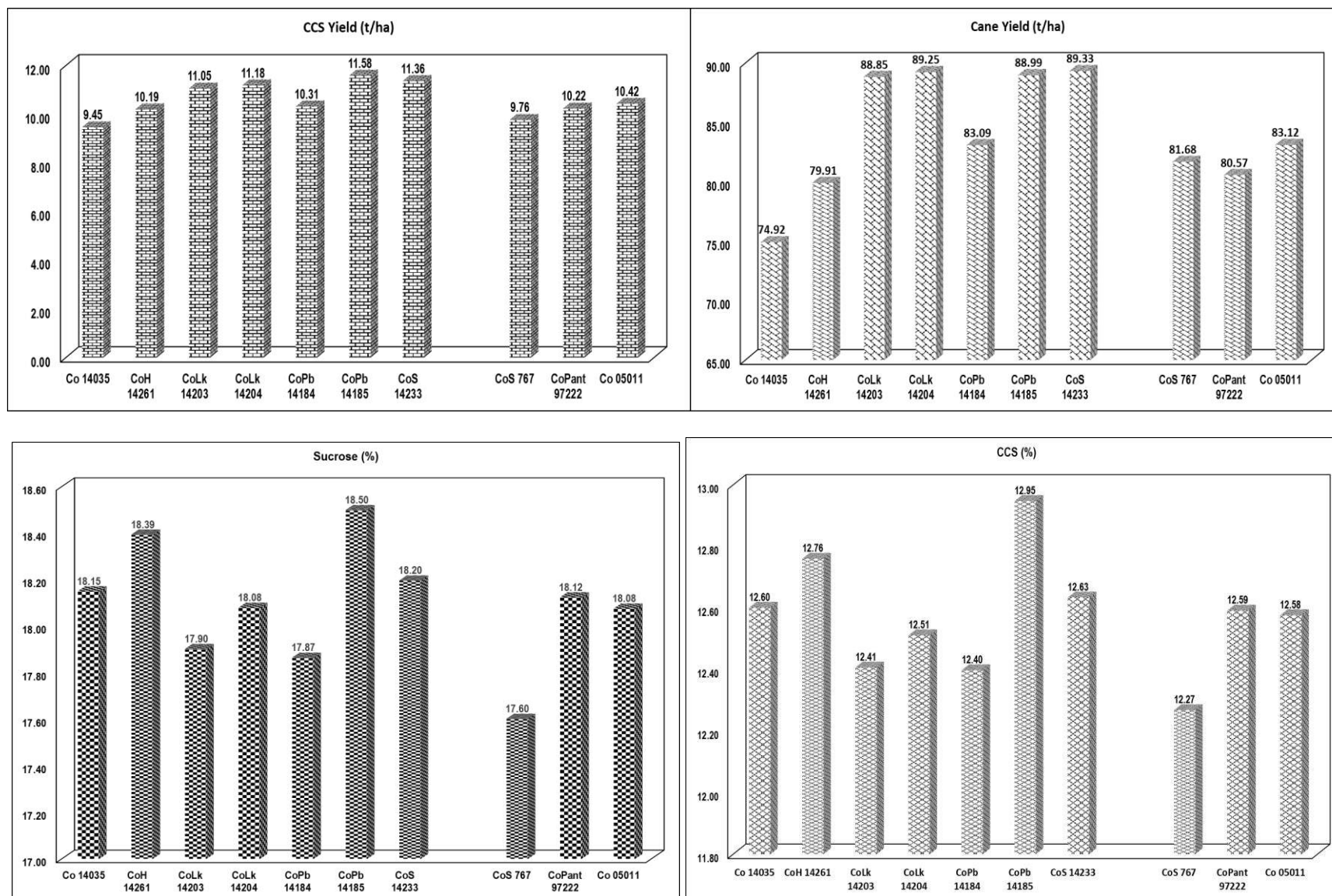
SI No	Entries	Pantnagar				Shahjahanpur				Sriganganagar				Uchani				Weigh ted Mean	% impr. over best standard	Rank	
		I	II	R*	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean				
1	Co 14035	13.89	12.58	12.45	12.97	13.22	12.19	12.19	12.53	11.27	10.89	11.00	11.05	12.90	12.58	12.16	12.55	12.60	0.08		
2	CoH 14261	14.13	13.28	12.43	13.28	13.99	12.74	12.74	13.16	11.74	11.47	10.20	11.14	13.37	12.63	12.11	12.70	12.76	1.34	2	
3	CoLk 14203	13.80	12.12	11.98	12.63	13.41	12.33	12.33	12.69	11.86	11.15	9.82	10.94	12.91	11.83	11.07	11.94	12.41	-1.47		
4	CoLk 14204	13.60	11.57	11.34	12.17	13.72	12.77	12.77	13.09	12.61	9.83	9.72	10.72					12.51	-0.64		
5	CoPb 14184	13.88	11.92	10.94	12.25	13.27	12.38	12.38	12.68	12.08	12.14	11.04	11.75	12.35	11.91	11.96	12.07	12.40	-1.54		
6	CoPb 14185	14.00	12.52	12.27	12.93	13.80	12.26	12.26	12.77	12.49	11.38	12.34	12.07	13.55	12.73	12.19	12.82	12.95	2.83	1	
7	CoS 14233	14.07	12.81	12.45	13.11	13.30	12.95	12.95	13.07	12.37	9.47	10.55	10.80	13.17	12.57	11.76	12.50	12.63	0.34	3	
	Standards																				
1	CoS 767	13.52	11.18	11.69	12.13	12.37	12.38	12.38	12.38	12.05	11.69	12.16	11.97	12.30	11.45	11.81	11.85	12.27			
2	CoPant 97222	14.53	12.31	12.00	12.95	13.49	12.27	12.27	12.68	12.45	11.48	11.72	11.88	11.77	11.61	11.72	11.70	12.59			
3	Co 05011	14.21	12.19	12.02	12.81	13.17	12.14	12.17	12.49	11.69	12.08	11.29	11.69	13.01	11.95	12.09	12.35	12.58			
	Mean	13.96	12.25	11.96	12.72	13.37	12.44	12.44	12.75	12.06	11.16	10.98	11.40	12.81	12.14	11.87	12.27				
Top three entries recorded 10 percent improvement over the best standard																					
CoPb 14185																					

Table 4.8.4. Sucrose (%) at harvest

SI No	Entries	Faridkot				Kapurthala				Kota				Lucknow				Muzaffarnagar			
		I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean
1	Co 14035	17.73	17.59	16.55	17.29	18.73	19.05	18.73	18.84	19.21	19.89	18.76	19.29	17.97	19.89	18.40	18.75	19.55	17.88	17.34	18.26
2	CoH 14261	17.84	18.07	16.92	17.61	17.67	19.02	19.01	18.57	18.11	19.82	17.73	18.55	19.95	19.41	18.44	19.27	19.70	18.84	18.06	18.87
3	CoLk 14203	17.82	17.91	17.01	17.58	18.13	19.07	18.23	18.48	17.90	18.86	17.28	18.01	19.12	19.35	18.86	19.11	19.24	18.10	16.78	18.04
4	CoLk 14204	19.13	18.07	18.35	18.52	18.48	19.03	18.69	18.73	17.69	19.55	17.28	18.17	18.31	18.43	17.28	18.01	19.53	19.25	17.76	18.85
5	CoPb 14184	17.91	17.90	17.13	17.65	16.89	18.22	18.30	17.80	19.10	19.86	18.48	19.15	17.76	18.00	17.80	17.85	19.44	17.80	17.40	18.21
6	CoPb 14185	19.57	20.01	19.26	19.61	18.51	18.73	18.23	18.49	19.24	20.17	17.80	19.07	17.51	19.53	18.56	18.53	19.64	18.83	18.13	18.87
7	CoS 14233	17.97	17.83	17.04	17.61	18.51	18.75	18.52	18.59	18.35	20.07	17.97	18.80	19.13	18.68	17.94	18.58	19.66	18.87	18.03	18.85
	Standards																				
1	CoS 767	17.81	17.84	17.40	17.68	18.12	18.59	18.12	18.28	16.35	19.34	16.35	17.35	17.76	17.78	16.91	17.48	19.59	18.29	17.84	18.57
2	CoPant 97222	17.86	17.92	17.17	17.65	19.18	16.88	18.15	18.07	18.24	19.69	17.69	18.54	18.96	19.59	18.52	19.02	19.42	19.16	17.52	18.70
3	Co 05011	17.29	17.52	17.18	17.33	19.25	18.62	17.99	18.62	18.31	19.72	17.73	18.59	19.05	18.71	18.61	18.79	18.90	18.72	17.56	18.39
	Mean	18.09	18.07	17.40	17.85	18.35	18.60	18.40	18.45	18.25	19.70	17.71	18.55	18.55	18.94	18.13	18.54	19.47	18.57	17.64	18.56
Top three entries recorded 10 percent improvement over the best standard																					
		CoPb 14185																			

SI No	Entries	Pantnagar				Shahjahanpur				Sriganganagar				Uchani				Weigh ted Mean	% impr. over best standard	Rank	
		I	II	R*	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean				
1	Co 14035	20.18	18.22	17.95	18.78	19.05	17.76	17.53	18.11	16.33	16.17	15.83	16.11	18.51	18.05	17.22	17.93	18.15	0.14		
2	CoH 14261	20.54	19.31	18.07	19.31	19.82	18.61	18.69	19.04	16.84	16.74	14.73	16.10	19.16	18.25	17.30	18.24	18.39	1.49	2	
3	CoLk 14203	20.05	17.69	17.34	18.36	19.31	17.94	17.92	18.39	16.98	16.36	14.01	15.78	18.61	17.37	16.13	17.37	17.90	-1.23		
4	CoLk 14204	19.71	17.00	16.57	17.76	19.72	18.52	18.28	18.84	18.18	15.45	13.66	15.76					18.08	-0.25		
5	CoPb 14184	20.13	17.47	16.04	17.88	19.04	18.00	17.82	18.29	17.51	17.12	15.16	16.60	18.00	17.07	17.01	17.36	17.87	-1.43		
6	CoPb 14185	20.34	18.22	17.72	18.76	19.79	17.85	17.89	18.51	18.21	16.59	14.25	16.35	19.51	18.09	17.31	18.30	18.50	2.07	1	
7	CoS 14233	20.46	18.64	18.14	19.08	19.16	18.76	18.43	18.78	17.74	14.19	14.69	15.54	18.95	17.98	16.86	17.93	18.20	0.40	3	
	Standards																				
1	CoS 767	19.61	16.47	16.96	17.68	17.92	18.00	17.53	17.82	17.28	16.65	15.80	16.58	17.62	16.66	16.68	16.99	17.60			
2	CoPant 97222	21.07	17.92	17.41	18.80	19.42	17.87	18.69	18.66	18.04	16.69	15.71	16.81	17.25	16.79	16.56	16.87	18.12			
3	Co 05011	20.69	17.82	17.48	18.66	19.01	17.69	17.92	18.21	16.85	17.04	15.39	16.43	18.63	17.26	17.12	17.67	18.08			
	Mean	20.28	17.88	17.37	18.51	19.22	18.10	18.07	18.46	17.40	16.30	14.92	16.21	18.47	17.50	16.91	17.63				
Top three entries recorded 10 percent improvement over the best standard																					

Fig. 4.8.1 Pooled mean data for CCS yield (t/ha), cane yield (t/ha), CCS (%) and Sucrose (%) at harvest.



4.9 Advanced Varietal Trial I Plant - Midlate

Centres (9)	Faridkot, Kapurthala, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur, Sriganganagar and Uchani
Entries (7)	Co 15026, CoLk 15206, CoLk 15207, CoLk 15209, CoPb 15213, CoS 15232 CoS 15233
Standards (3)	CoS 767, CoPant 97222, Co 05011
Design	RBD
Replications	3
Plot size	Gross : 8 rows × 6 m × 0.90 m Net : 6 rows × 5 m × 0.90 m
Bud rate	12 buds/metre
Planting time	February/March, 2019
Crop Duration	12 months

Results of the previous year:

Eleven test entries and three standards (CoS 767, CoPant 97222, Co 05011) were evaluated in RBD design with three replications in nine AICRP centres located across the North West Zone. For CCS yield, entry CoS 15233 recorded mean CCS yield of 11.96 t/ha across the zone and ranked first among the test entries with 13.90 percent improvement over the best standard CoPant 97222 (10.50 t/ha). Entry CoLk 15206 ranked 2nd with CCS yield of 11.63 t/ha and 10.76 percent improvement over the best standard CoPant 97222. Similarly, CoS 15233 recorded 93.53 t/ha of cane yield and ranked first among the entries with 14.30 percent improvement over the best standard CoPant 97222 (81.83 t/ha). The second best entry CoLk 15206 recorded 90.24 t/ha of cane yield with 10.28 percent improvement over the best standard. For CCS (%) and Sucrose content at harvest, none of the entries showed five percent improvement over the best standard CoPant 97222 (12.88% CCS and 18.53% sucrose). However, CoLk 15207 recorded the highest CCS(%) of 13.05 followed by Co 15026 (12.93%) and CoLk 15206 (12.88%). CoLk 15207 recorded the highest sucrose content of 18.77% followed by Co 15026 (18.58%) and CoLk 15206 (18.55%).

Results of the current years:

Seven test entries and three standards (CoS 767, CoPant 97222, Co 05011) were evaluated in RCBD design with three replications in nine locations across the North-West Zone. For CCS yield, CoPant 97222 was identified as the best standard across the zone and recorded the CCS yield of 11.58 t/ha. Among the test entries, CoS 15232 (12.29 t/ha) and Co 15026 (11.87 t/ha) were numerically superior over the best standard CoPant 97222. None of the test entries recorded 10 percent improvement for CCS yield as compared to the best standard CoPant 97222. Among the standards, CoPant 97222 recorded the highest zonal mean for cane yield of 89.27 t/ha. Among the test entries, CoS 15232 recorded the highest zonal mean for cane yield 95.60 t/ha with 7.01 percent improvement over the best standard CoPant 97222. Entries CoS 15233 (92.67 t/ha) and Co 15026 (92.52 t/ha) were recorded higher cane yield with 3.81 and 3.64 percent improvement for cane yield over the best standard CoPant 97222. None of the test entries recorded 10 percent improvement for cane yield as compared to the better standard CoPant 97222. For CCS (%), CoLk 15207 (13.01%), Co 15206 (12.99%), CoLk 15209 (12.88%), CoS 15232 (12.84%) and CoLk 15206 (12.82%) recorded 3.14, 1.66, 0.80, 0.48 and 0.29 percent improvement over the best standard CoPant 97222 (12.78%) respectively for CCS percent at harvest. None of the test entries

recorded five percent improvement for CCS (%) as compared to the best standard CoPant 97222. For sucrose content also, none of the test entries recorded the five percent improvement over the best standard CoPant 97222 (18.27%) for sucrose content. However, five test entries *viz.*, CoLk 15207 (18.92%), Co 15026 (18.57%), CoLk 15206 (18.44%), CoLk 15209 (18.42%) and CoPb 15213 (18.32%) recorded the numerically superior sucrose content at harvest as compared the better standard CoPant 97222. Further details are presented in Tables **4.9.1** to **4.9.19**.

Qualifying entries: None

Table 4.9.1. CCS (t/ha) at harvest

S. No.	Entry	Farid Kot*	Kapur thala	Kota	Luck Now*	Muzafar Nagar*	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 15026	9.80	10.65	11.34	4.97	10.14	21.15	12.55	9.09	11.92	12.78	
2	CoLk 15206	9.07	11.48	12.60	12.93	10.84	16.78	13.07	8.85	11.23	12.34	3
3	CoLk 15207	9.94	12.80	10.98	12.86	8.61	9.72	13.04	8.57	12.17	11.21	
4	CoLk 15209	8.44	8.47	10.50	9.38	9.62	16.38	11.28	10.97	9.86	11.24	
5	CoPb 15213	10.45	11.20	10.32	9.13	9.42	16.41	11.38	6.55	9.28	10.86	
6	CoS 15232	10.59	11.21	11.67	10.10	11.15	21.99	12.42	10.06	11.41	13.13	1
7	CoS 15233	10.33	11.48	11.28	8.07	12.59	14.98	12.91	10.28	10.85	11.96	
	Stds											
1	CoS 767	9.06	9.34	9.32	8.67	9.04	17.39	10.91	9.20	10.05	11.04	
2	CoPant 97222	11.93	7.42	9.74	8.91	9.02	24.75	11.34	10.50	10.58	12.39	2
3	Co 05011	10.38	11.06	10.19	9.49	10.21	17.93	10.96	10.69	9.87	11.78	
	Mean	10.00	10.51	10.79	9.45	10.06	17.75	11.99	9.48	10.72	11.87	
	SE (m)	0.66		0.55	0.68	0.30	0.80	0.47	0.49	1.21		
	CD at 5%	1.96	2.05	1.31	1.43	0.62	2.39	0.99	1.41	0.40		
	CV %	11.43	11.39	8.77	8.80	9.80	7.79	6.77	6.16	6.51		
Top entries with 10 percent improvement for CCS (t/ha) over the best standard at each centre												
	Rank-1		CoLk 15207	CoLk 15206	CoLk 15206	CoS 15233		CoLk 15206		CoLk 15207		
	Rank-2			CoS 15232	CoLk 15207			CoLk 15207		Co 15026		
	Rank-3			Co 15026				CoS 15233				

* Data of Faridkot, Lucknow and Muzafarnagar centres were not considered for calculation of mean as the trial mean of these centres for cane yield (t/ha) were lower than the respective state sugarcane productivity

Number of locations where an entry showed more than 10% improvement: CoLk 15207 (4), Co 15026 (2), CoLk 15206 (3), CoS 15233 (2) CoS 15232 (1).

Performance of the entries across locations: Among the standards, CoPant 97222 was identified as the best standard across the zone and recorded the CCS yield of 12.39 t/ha. Among the test entries, CoS 15232 (13.13 t/ha) was numerically superior over the best standard CoPant 97222. None of the test entries recorded 10 percent improvement for CCS yield as compared to the best standard CoPant 97222.

Table 4.9.2. Cane yield (t/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 15026	79.56	82.71	87.46	41.10	77.40	152.49	89.88	72.22	92.02	96.13	
2	CoLk 15206	72.70	90.99	88.24	95.44	87.53	122.26	92.84	84.57	98.12	96.17	4
3	CoLk 15207	71.67	96.50	81.21	94.00	69.13	70.53	94.07	77.16	94.66	85.69	
4	CoLk 15209	61.04	66.45	77.32	72.32	76.79	124.28	82.72	93.21	83.44	87.90	
5	CoPb 15213	82.99	89.98	75.63	67.20	74.32	125.77	84.20	55.31	78.72	84.94	
6	CoS 15232	82.99	88.92	83.85	75.62	89.01	165.54	90.49	84.20	99.80	102.13	1
7	CoS 15233	88.82	91.82	82.17	67.28	94.56	118.42	94.81	102.47	93.71	97.23	2
	Stds											
1	CoS 767	68.59	75.29	75.93	73.58	72.33	140.98	79.88	97.28	86.65	92.67	
2	CoPant 97222	90.19	58.24	77.81	68.36	66.67	178.67	82.35	90.25	90.91	96.37	3
3	Co 05011	81.28	88.64	80.52	71.30	80.86	137.93	78.64	91.98	83.66	93.56	
	Mean	77.98	82.95	81.01	72.62	78.86	133.69	86.99	84.87	90.17		
	SE (m)	4.83		4.03	5.17	2.32	5.60	3.52	3.89	8.36		
	CD at 5%	14.35	16.94	9.66	10.87	4.88	16.77	7.47	11.21	2.79		
	CV %	10.73	11.91	8.62	8.73	9.75	7.26	7.01	5.61	5.36		
Top entries with 10 percent improvement for CCS (t/ha) over the best standard at each centre												
	Rank-1				CoLk 15206	CoS 15233		CoS 15233				
	Rank-2				CoLk 15207	CoS 15232		CoLk 15206				

* Data of Faridkot, Lucknow and Muzafarnagar centres were not considered for calculation of mean as the trial mean of these centres for cane yield (t/ha) were lower than the respective state sugarcane productivity

Number of locations where an entry showed more than 10% improvement over the best standards: CoS 15233 (2), CoLk 15206 (2), CoLk 15207 (1), CoS 15232 (1).

Performance of the entries across locations: Among the standards, CoPant 97222 recorded the highest zonal mean for cane yield of 96.37 t/ha. Among the test entries, CoS 15232 recorded the highest zonal mean for cane yield 102.13 t/ha with 5.55 percent improvement over the best standard CoPant 97222. CoS 15233 (97.23 t/ha) also recorded higher cane yield compared to CoPant 97222. None of the test entries recorded 10 percent improvement for cane yield as compared to the better standard CoPant 97222.

Table 4.9.3. CCS (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 15026	12.32	12.90	12.96	12.14	13.19	13.88	13.97	12.59	12.98	12.99	2
2	CoLk 15206	12.48	12.62	14.28	13.54	12.72	13.73	14.08	10.46	11.44	12.82	5
3	CoLk 15207	13.89	13.25	13.52	13.67	12.68	13.77	13.87	11.11	12.86	13.18	1
4	CoLk 15209	13.82	12.73	13.57	12.95	12.52	13.14	13.63	11.77	11.80	12.88	3
5	CoPb 15213	12.57	12.44	13.65	13.59	12.66	13.06	13.32	11.84	11.81	12.77	
6	CoS 15232	12.76	12.62	13.90	13.37	12.53	13.28	13.73	11.95	11.42	12.84	4
7	CoS 15233	11.63	12.54	13.72	12.01	13.31	12.67	13.61	10.03	11.58	12.34	
	Stds											
1	CoS 767	13.21	12.39	12.30	11.77	12.17	12.33	13.65	12.21	11.59	12.40	
2	CoPant 97222	13.23	12.74	12.53	13.05	12.56	13.86	13.79	11.63	11.63	12.78	6
3	Co 05011	12.75	12.47	12.66	13.28	12.65	13.00	13.94	11.62	11.80	12.69	
	Mean	12.87	12.67	13.31	12.94	12.70	13.27	13.76	11.52	11.89	12.77	
	SE (m)	0.15		0.23	0.29	0.26	0.27	0.14	0.22	0.74		
	CD at 5%	0.44	0.46	0.55	0.61	NS	0.82	0.29	0.65	0.25		
	CV %	2.00	2.12	2.96	2.76	2.52	3.56	1.71	2.38	3.59		
Top entries with five percent improvement for CCS (t/ha) over the best standard at each centre												
	Rank-1	CoLk 15207		CoLk 15206		CoS 15233				Co 15026		
	Rank-2			CoS 15232						CoLk 15207		
	Rank-3			CoS 15233								

Number of locations where an entry showed more than five percent improvement over the best standards: CoLk 15207 (2), CoS 15233 (2), CoLk 15206 (1), CoS 15232 (1), Co 15026 (1).

Performance of the entries across locations: Among the test entries, CoLk 15207 (13.01%), Co 15206 (12.99%), CoLk 15209 (12.88%), CoS 15232 (12.84%) and CoLk 15206 (12.82%) recorded 3.14, 1.66, 0.80, 0.48 and 0.29 percent improvement over the best standard CoPant 97222 (12.78%) respectively for CCS percent at harvest. None of the test entries recorded five percent improvement for CCS (%) as compared to the best standard CoPant 97222.

Table 4.9.4. Sucrose (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 15026	17.70	18.35	18.76	17.53	19.11	20.30	19.13	17.82	18.46	18.57	2
2	CoLk 15206	17.99	18.02	20.55	19.34	18.47	20.15	19.29	15.47	16.64	18.44	3
3	CoLk 15207	19.78	18.83	19.52	19.58	18.72	20.10	19.00	16.37	18.35	18.92	1
4	CoLk 15209	19.69	18.08	19.58	18.61	18.16	19.09	18.67	16.85	17.01	18.42	4
5	CoPb 15213	17.84	17.76	19.69	19.42	18.33	18.88	18.24	17.10	17.04	18.26	
6	CoS 15232	18.11	17.71	20.03	19.12	18.15	19.32	18.81	17.18	16.49	18.32	5
7	CoS 15233	16.68	17.84	19.79	17.15	19.28	18.24	18.65	17.91	16.80	18.04	
	Stds											
1	CoS 767	18.93	17.67	17.87	16.87	18.15	17.92	18.70	17.28	16.73	17.79	
2	CoPant 97222	18.75	18.14	18.18	18.69	18.20	20.06	18.89	16.60	16.89	18.27	6
3	Co 05011	18.09	17.80	18.35	19.06	18.30	18.88	19.10	16.95	17.26	18.20	
	Mean	18.36	18.02	19.23	18.54	18.49	19.29	18.85	16.95	17.17	18.32	
	SE (m)	0.21		0.31	0.38	0.29	0.33	0.19	0.21	0.93		
	CD at 5%	0.61	0.56	0.74	0.79	0.61	0.99	0.39	0.60	0.31		
	CV %	1.95	1.83	2.77	2.50	1.92	2.98	1.71	1.53	3.15		
Top entries with five percent improvement for CCS (t/ha) over the best standard at each centre												
	Rank-1			CoLk 15206		CoS 15233				Co 15026		
	Rank-2			CoS 15232						CoLk 15207		
	Rank-3			CoS 15233								
	10% imp mean	19.88	19.05	19.27	20.01	19.22	21.06	20.06	18.14	18.12	19.18	

Number of locations where an entry showed more than five percent improvement over the best standards: CoS 15233 (2), CoS 15232 (1), CoLk 15206 (1), CoLk 15207 (1), Co 15026 (1).

Performance of the entries across locations: None of the test entries recorded the five percent improvement over the best standard CoPant 97222 (18.27%) for sucrose content. However, five test entries viz., CoLk 15207 (18.92%), Co 15026 (18.57%), CoLk 15206 (18.44%), CoLk 15209 (18.42%) and CoPb 15213 (18.32%) recorded numerically superior sucrose content at harvest as compared the best standard CoPant 97222.

Table 4.9.5. Brix (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	19.77	20.07	21.27	19.80	21.71	23.50	21.69	19.23	20.17	20.80
2	CoLk 15206	20.23	19.83	23.00	21.35	21.06	23.50	21.83	18.30	19.03	20.90
3	CoLk 15207	21.67	20.50	22.00	21.71	21.26	23.17	21.60	19.23	20.17	21.26
4	CoLk 15209	21.57	19.67	22.07	20.78	20.69	21.83	21.34	18.67	19.10	20.64
5	CoPb 15213	19.40	19.53	22.17	21.42	20.83	21.37	21.00	19.31	19.20	20.47
6	CoS 15232	19.70	18.77	22.50	21.13	20.59	22.13	21.48	19.20	18.60	20.46
7	CoS 15233	18.57	19.47	22.27	18.90	21.89	20.43	21.32	21.33	19.13	20.37
	Stds										
1	CoS 767	21.00	19.40	20.40	18.74	20.66	20.50	21.36	18.67	18.87	19.96
2	CoPant 97222	20.33	19.87	20.70	20.74	20.66	22.73	21.50	18.27	19.30	20.46
3	Co 05011	19.63	19.57	20.87	21.23	20.79	21.57	21.69	19.50	19.93	20.53
	Mean	20.19	19.67	21.73	20.58	21.01	22.07	21.48	19.17	19.35	20.58
	SE (m)	0.23		0.30	0.40	0.34	0.29	0.15	0.24	0.83	
	CD at 5%	0.69	0.60	0.72	0.84	0.72	0.87	0.32	0.69	0.28	
	CV %	1.98	1.80	2.38	2.37	2.00	2.28	1.21	1.55	2.49	

Table 4.9.6. Purity (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	89.57	91.46	88.21	88.51	88.05	86.38	88.20	92.67	91.50	89.39
2	CoLk 15206	88.92	90.84	89.33	90.60	87.68	85.73	88.37	84.54	87.40	88.16
3	CoLk 15207	91.28	91.83	88.71	90.19	88.07	86.76	87.96	85.13	91.01	88.99
4	CoLk 15209	91.29	91.93	88.74	89.57	87.85	87.44	87.49	90.25	89.03	89.29
5	CoPb 15213	91.99	90.91	88.81	90.82	88.02	88.36	86.88	88.56	88.72	89.23
6	CoS 15232	91.95	94.40	89.00	90.48	88.12	87.31	87.56	89.48	88.65	89.66
7	CoS 15233	89.84	91.63	88.88	90.72	88.05	89.21	87.49	83.97	87.80	88.62
	Stds										
1	CoS 767	90.12	91.08	87.57	90.06	87.83	87.43	87.53	92.55	88.67	89.20
2	CoPant 97222	92.22	91.31	87.80	90.62	88.09	88.25	87.92	90.86	87.53	89.40
3	Co 05011	92.12	90.96	87.92	89.77	88.02	87.58	88.06	86.92	86.61	88.66
	Mean	90.93	91.64	88.50	90.13	87.98	87.45	87.75	88.49	88.69	89.06
	SE (m)	0.34		0.20	0.91	0.23	0.87	0.27	1.53	2.09	
	CD at 5%	1.01	NS	0.49	ns	NS	N/A	0.57	4.39	0.70	
	CV %	0.65	1.33	0.40	1.23	0.32	1.72	0.53	2.13	1.37	

Table 4.9.7. Extraction (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	59.32	51.98	45.19	55.56	49.56		54.78	52.23	65.39	54.25
2	CoLk 15206	53.92	51.64	55.31	48.01	48.46		55.16	51.39	59.80	52.96
3	CoLk 15207	53.88	51.73	49.03	41.27	50.47		52.39	50.04	58.59	50.93
4	CoLk 15209	49.82	51.60	50.94	43.19	48.16		54.68	47.41	61.18	50.87
5	CoPb 15213	54.51	51.05	42.87	50.84	52.04		55.90	52.89	66.58	53.34
6	CoS 15232	50.92	51.66	46.33	43.86	49.81		55.08	50.92	58.39	50.87
7	CoS 15233	57.49	51.44	41.05	49.47	50.34		56.11	40.96	65.64	51.56
	Stds										
1	CoS 767	55.86	51.59	43.93	42.96	48.05		56.32	46.98	63.00	51.09
2	CoPant 97222	58.06	51.24	37.62	47.69	47.61		56.46	49.17	62.84	51.34
3	Co 05011	57.03	51.86	38.62	45.85	52.02		55.50	50.11	62.33	51.66
	Mean	55.08	51.58	45.09	46.87	49.65		55.24	49.21	62.37	51.89
	SE (m)	0.91		2.32	3.86	-		0.92	1.11	3.76	
	CD at 5%	2.71	NS	5.57	8.11	-		NS	3.21	1.26	
	CV %	2.87	1.70	8.92	10.08	-		2.87	2.64	3.49	

Table 4.9.8. Pol % cane and Fibre (%) content at harvest

S. No.	Entry	Pol%cane					Fibre (%)				
		Kapur thala	Luck now	Muzafar nagar	Shahja hanpur	Mean	Kapur thala	Luck now	Muzafar nagar	Shahja hanpur	Mean
1	Co 15026	14.70	13.55	14.72	14.29	14.32	14.71	12.66	14.09	15.32	14.20
2	CoLk 15206	14.71	14.84	14.59	14.42	14.64	14.83	13.29	14.02	15.24	14.34
3	CoLk 15207	15.07	14.96	14.89	14.16	14.77	14.81	13.62	13.88	15.47	14.44
4	CoLk 15209	15.09	14.06	13.62	13.94	14.18	13.55	14.45	14.27	15.34	14.40
5	CoPb 15213	13.75	14.73	14.31	13.69	14.12	14.68	14.12	14.58	14.95	14.58
6	CoS 15232	14.76	14.33	13.82	14.06	14.24	13.53	15.08	14.33	15.21	14.54
7	CoS 15233	13.98	13.42	14.95	13.97	14.08	12.63	11.72	13.79	15.10	13.31
	Standards										
1	CoS 767	13.92	12.77	14.09	14.00	13.69	13.56	14.34	14.36	15.12	14.34
2	CoPant 97222	13.60	14.47	14.12	14.16	14.09	14.63	12.62	13.92	15.05	14.05
3	Co 05011	14.83	14.81	14.24	14.28	14.54	13.48	12.30	14.11	15.20	13.77
	Mean	14.44	14.19	14.34	14.10	14.27	14.04	13.42	14.14	15.20	14.20
	SE(m)		0.29	-	0.14			0.51	-	0.15	
	CD	0.32	0.61	-	NS		0.63	1.06	-	NS	
	CV	1.31	2.53	-	1.75		2.66	4.62	-	1.76	

Table 4.9.9. Number of millable canes (‘000/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	85.19	80.04	88.76	42.99	81.72	76.94	91.85	110.99	91.42	83.32
2	CoLk 15206	91.05	84.10	93.17	94.25	61.97	84.54	100.86	86.42	110.68	89.67
3	CoLk 15207	85.34	89.60	92.33	104.41	87.03	51.85	103.46	99.88	112.42	91.81
4	CoLk 15209	94.44	83.59	92.12	91.05	100.12	102.50	104.32	111.98	102.50	98.07
5	CoPb 15213	117.90	100.96	88.55	97.59	80.48	95.00	113.33	88.77	139.94	102.50
6	CoS 15232	107.56	101.44	93.17	99.49	81.10	115.46	111.73	108.77	126.63	105.04
7	CoS 15233	97.22	79.64	85.81	74.35	82.71	73.15	98.89	94.07	90.64	86.28
	Stds										
1	CoS 767	89.97	82.39	81.82	99.38	97.65	97.04	105.80	91.98	112.59	95.40
2	CoPant 97222	96.91	70.65	91.70	79.03	72.59	119.81	97.53	90.25	104.21	91.41
3	Co 05011	90.43	95.05	87.66	103.44	88.01	92.78	99.26	88.77	104.41	94.42
	Mean	95.60	86.75	89.51	88.60	83.34	90.91	102.70	97.19	109.54	93.79
	SE (m)	4.82		2.81	3.15	2.65	1.44	4.02	5.49	12.16	
	CD at 5%	14.32	8.06	6.73	6.61	5.57	4.31	8.52	15.81	4.06	
	CV %	8.73	5.42	5.43	4.35	10.52	2.74	6.78	7.21	6.42	

Table 4.9.10 Cane height (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	185.55	226.25	217.00	204.00	205.00	258.00	218.33	205.00	249.33	218.72
2	CoLk 15206	168.11	255.83	233.00	215.00	212.00	268.00	234.00	180.30	262.07	225.37
3	CoLk 15207	221.33	243.33	228.00	200.67	210.00	261.00	217.67	207.07	246.87	226.21
4	CoLk 15209	162.33	227.50	193.00	159.00	205.00	257.00	204.00	184.97	245.00	204.20
5	CoPb 15213	201.89	219.17	192.00	194.00	222.00	264.00	203.33	176.27	257.80	214.50
6	CoS 15232	209.33	239.17	217.00	178.27	242.00	318.00	236.67	202.43	266.47	234.37
7	CoS 15233	209.00	275.00	245.00	189.67	245.00	269.00	239.33	218.00	271.60	240.18
	Stds			0.00	0.00	0.00	0.00				
1	CoS 767	194.77	176.25	230.00	197.00	215.00	268.00	230.67	176.67	261.53	216.65
2	CoPant 97222	203.44	187.50	198.00	183.33	190.00	284.00	217.67	196.97	309.33	218.92
3	Co 05011	182.44	187.50	212.00	156.13	195.00	280.00	225.33	168.20	239.47	205.12
	Mean	193.82	223.75	196.82	170.64	194.64	247.91	222.70	191.59	260.95	220.42
	SE (m)	9.15						6.96	1.82	23.98	
	CD at 5%	27.17	29.55					14.75	5.23	8.01	
	CV %	8.17	7.70	4.89	9.80	3.70	5.77	5.41	1.16	5.32	

Table 4.9.11 Cane diameter (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	2.76	1.85	2.30	2.97	2.45	2.78	2.51	2.40	2.47	2.50
2	CoLk 15206	2.52	1.88	2.17	2.43	2.38	2.17	2.47	1.57	2.26	2.21
3	CoLk 15207	2.24	2.23	2.23	2.15	2.01	2.31	2.23	1.83	2.13	2.15
4	CoLk 15209	2.49	1.69	1.97	2.23	2.36	2.11	2.37	2.27	2.07	2.17
5	CoPb 15213	2.11	1.80	2.20	2.16	2.11	2.31	2.15	1.90	2.01	2.08
6	CoS 15232	2.11	2.13	2.00	2.27	2.30	2.03	2.31	2.07	1.93	2.13
7	CoS 15233	2.45	2.08	2.27	2.70	2.48	2.47	2.71	2.40	2.49	2.45
	Stds										
1	CoS 767	2.31	2.45	1.90	2.29	2.18	2.32	2.35	1.97	2.09	2.21
2	CoPant 97222	2.48	2.41	2.00	2.47	2.30	2.27	2.51	2.27	2.19	2.32
3	Co 05011	2.50	2.35	2.40	2.39	2.36	2.33	2.53	2.20	2.40	2.38
	Mean	2.40	2.09	2.14	2.41	2.29	2.31	2.41	2.09	2.21	2.26
	SE (m)	0.09		0.08	0.10	0.06	0.07	0.05	0.15	0.18	
	CD at 5%	0.27	0.29	0.20	0.21	0.12	0.22	0.12	0.43	0.06	
	CV %	6.46	8.24	6.62	5.10	3.03	5.46	3.92	8.70	4.83	

Table 4.9.12 Single cane weight (kg) at harvest

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	1.06	1.03	0.98	0.96	1.02	1.98	1.12	1.06	1.07	1.14
2	CoLk 15206	0.87	1.09	0.95	1.01	1.47	1.45	1.06	1.06	0.97	1.10
3	CoLk 15207	0.91	1.08	0.88	0.90	0.86	1.36	0.88	0.98	0.87	0.97
4	CoLk 15209	0.74	0.79	0.84	0.79	0.81	1.21	0.87	1.01	0.83	0.88
5	CoPb 15213	0.70	0.89	0.85	0.69	0.95	1.33	0.80	1.06	0.60	0.88
6	CoS 15232	0.75	0.88	0.90	0.76	1.16	1.43	0.87	0.91	0.80	0.94
7	CoS 15233	1.00	1.15	0.96	0.90	1.19	1.62	1.34	1.01	1.12	1.14
	Stds										
1	CoS 767	0.86	0.92	0.93	0.74	0.77	1.45	0.81	0.90	0.79	0.91
2	CoPant 97222	0.94	0.83	0.85	0.87	0.92	1.49	0.87	0.87	0.95	0.95
3	Co 05011	0.90	0.93	0.92	0.69	0.97	1.49	1.01	0.86	0.87	0.96
	Mean	0.87	0.96	0.91	0.83	1.01	1.48	0.96	0.97	0.89	0.99
	SE (m)	0.06		0.03	0.05	0.06	0.06	0.05	0.06	0.09	
	CD at 5%	0.16	0.19	0.07	0.11	0.11	0.19	0.10	0.17	0.03	
	CV %	10.99	11.80	5.26	7.89	6.65	7.21	8.16	7.61	5.57	

Table 4.9.13 CCS (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	10.89	11.73	11.52	12.57	10.92	10.55	12.02	11.53	11.82	11.51
2	CoLk 15206	11.38	11.36	12.43	12.40	10.91	10.99	11.39	10.19	10.63	11.30
3	CoLk 15207	12.61	12.02	12.33	12.53	10.61	10.81	12.00	10.78	10.85	11.62
4	CoLk 15209	12.72	11.16	11.41	12.67	10.69	9.95	11.63	10.64	9.87	11.19
5	CoPb 15213	11.29	10.53	10.91	12.21	10.50	10.66	11.95	11.57	9.74	11.04
6	CoS 15232	10.86	10.09	11.36	12.03	10.89	10.10	11.50	10.81	9.11	10.75
7	CoS 15233	10.48	11.04	12.00	11.09	10.83	10.25	10.69	9.85	9.78	10.67
	Stds										
1	CoS 767	11.94	11.23	11.74	11.74	11.47	10.76	11.53	11.27	9.19	11.21
2	CoPant 97222	11.66	11.76	12.53	12.63	10.39	10.95	11.98	11.75	10.82	11.61
3	Co 05011	10.38	11.26	12.66	12.17	11.21	11.22	11.60	10.80	11.29	11.40
	Mean	11.42	11.22	11.89	12.20	10.84	10.62	11.63	10.92	10.31	11.23
	SE (m)	0.09		0.16	0.30	0.23	0.19	0.26	0.47	1.03	
	CD at 5%	0.27	0.61	0.37	0.62	0.49	0.58	NS	1.34	0.34	
	CV %	1.37	3.19	2.26	2.97	2.64	3.17	3.91	5.22	5.78	

Table 4.9.14 Sucrose (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	15.77	16.80	16.80	17.93	15.95	15.71	17.55	16.39	16.78	16.63
2	CoLk 15206	16.47	16.18	18.04	17.82	15.96	16.31	16.72	14.29	15.43	16.36
3	CoLk 15207	18.06	17.23	17.90	17.86	15.48	16.09	17.53	15.27	15.61	16.78
4	CoLk 15209	18.19	15.98	16.66	18.05	15.65	14.94	17.05	15.52	14.25	16.25
5	CoPb 15213	16.21	15.33	15.98	17.52	15.34	15.86	17.43	15.53	14.37	15.95
6	CoS 15232	15.57	14.51	16.59	17.23	15.92	15.16	16.87	15.78	13.17	15.65
7	CoS 15233	15.06	15.82	17.45	15.94	15.78	15.32	15.82	16.09	14.11	15.71
	Stds										
1	CoS 767	17.14	16.20	17.11	16.80	16.72	16.01	16.90	16.22	13.47	16.29
2	CoPant 97222	16.65	16.90	18.18	18.01	15.26	16.31	17.49	15.48	15.49	16.64
3	Co 05011	14.99	16.20	18.35	17.36	16.30	16.62	16.88	15.87	16.05	16.51
	Mean	16.41	16.12	17.31	17.45	15.84	15.83	17.02	15.64	14.87	16.28
	SE (m)	0.13		0.21	0.41	0.33	0.26	0.33	0.45	1.35	
	CD at 5%	0.39	0.74	0.50	0.86	0.69	0.78	0.69	1.30	0.45	
	CV %	1.39	2.71	2.10	2.87	2.55	2.83	3.31	3.49	5.25	

Table 4.9.15 Brix (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	17.90	18.63	19.37	19.70	18.44	18.83	20.25	17.87	18.63	18.85
2	CoLk 15206	18.67	17.73	20.57	19.91	18.47	19.43	19.51	17.23	17.97	18.83
3	CoLk 15207	20.03	19.17	20.43	19.58	17.88	19.30	20.26	18.64	17.83	19.24
4	CoLk 15209	20.10	17.70	19.23	19.80	18.17	18.23	19.85	17.89	16.43	18.60
5	CoPb 15213	18.07	17.60	18.57	19.50	17.76	19.00	20.06	18.23	17.30	18.45
6	CoS 15232	17.30	16.23	19.17	19.10	18.44	18.47	19.67	18.21	15.27	17.98
7	CoS 15233	16.83	17.53	20.00	17.79	18.14	18.53	18.74	19.47	16.27	18.14
	Stds										
1	CoS 767	19.10	18.23	19.67	18.57	19.21	19.20	19.66	18.20	16.03	18.65
2	CoPant 97222	18.33	18.90	20.70	19.81	17.84	19.57	20.18	17.43	17.53	18.92
3	Co 05011	16.93	18.13	20.87	19.08	18.95	19.73	19.35	18.55	17.87	18.83
	Mean	18.33	17.99	19.86	19.28	18.33	19.03	19.75	18.17	17.11	18.65
	SE (m)	0.18		0.20	0.43	0.40	0.25	0.26	0.34	1.35	
	CD at 5%	0.52	0.61	0.49	0.91	0.83	0.75	0.55	0.97	0.45	
	CV %	1.66	1.98	1.78	2.74	2.65	2.29	2.28	2.26	4.58	

Table 4.9.16 Purity (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	88.15	90.15	86.75	91.05	86.49	83.40	86.65	91.72	91.90	88.47
2	CoLk 15206	88.22	91.23	87.70	89.47	86.38	83.93	85.71	82.94	87.67	87.03
3	CoLk 15207	90.17	89.90	87.60	91.22	86.60	83.35	86.51	81.92	89.32	87.40
4	CoLk 15209	90.50	90.25	86.63	91.18	86.15	81.94	85.92	86.75	88.70	87.56
5	CoPb 15213	89.74	87.10	86.05	89.84	86.41	83.46	86.86	85.19	84.85	86.61
6	CoS 15232	90.02	89.41	86.57	90.19	86.32	82.10	85.77	86.66	88.37	87.27
7	CoS 15233	89.48	90.19	87.26	89.61	87.05	82.68	84.42	82.64	88.53	86.87
	Stds										
1	CoS 767	89.75	88.84	86.99	90.46	87.05	83.38	85.91	89.12	85.99	87.50
2	CoPant 97222	90.82	89.42	87.80	90.93	85.49	83.33	86.64	88.81	90.26	88.17
3	Co 05011	88.54	89.36	87.92	91.01	86.03	84.22	87.18	85.55	91.67	87.94
	Mean	89.54	89.59	87.13	90.50	86.40	83.18	86.16	86.13	88.73	87.48
	SE (m)	0.35		0.16	0.45	0.67	0.38	0.71	2.87	3.28	
	CD at 5%	1.04	2.02	0.39	0.95	NS	1.14	NS	8.25	1.09	
	CV %	0.67	1.32	0.32	0.61	0.95	0.79	1.42	4.01	2.14	

Table 4.9.17 Number of shoots (‘000/ha) at 8th month

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	98.61	83.04	264.64	53.58					101.53	120.28
2	CoLk 15206	109.26	87.28	276.57	97.46					137.17	141.55
3	CoLk 15207	94.75	92.96	274.30	110.91					134.93	141.57
4	CoLk 15209	109.88	86.77	273.73	97.88					125.33	138.72
5	CoPb 15213	120.37	103.71	264.07	103.44					190.43	156.40
6	CoS 15232	112.35	110.97	276.57	104.19					146.17	150.05
7	CoS 15233	101.85	82.66	256.69	81.01					108.33	126.11
	Stds										
1	CoS 767	106.33	85.52	245.90	103.05					134.57	135.07
2	CoPant 97222	103.70	73.30	272.59	91.02					135.03	135.13
3	Co 05011	109.10	99.36	277.33	106.47					137.50	145.95
	Mean	106.62	90.56	268.24	94.90					135.10	139.08
	SE (m)	4.38		8.79	3.27					17.00	
	CD at 5%	13.01	8.41	21.07	6.86					5.68	
	CV %	7.11	5.42	5.68	4.22					7.28	

Table 4.9.18 Number of tillers (‘000/ha) at 120th days

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	144.14	88.68	247.38	58.94	159.75		195.80	176.47	135.27	150.80
2	CoLk 15206	139.66	93.23	258.53	104.83	154.44		190.00	142.71	169.67	156.63
3	CoLk 15207	119.44	99.28	256.41	117.81	162.96		202.22	158.80	154.23	158.89
4	CoLk 15209	156.64	92.71	255.88	101.55	171.73		210.62	178.04	163.50	166.33
5	CoPb 15213	144.91	110.52	246.85	112.05	180.61		205.31	141.14	214.43	169.48
6	CoS 15232	144.91	116.15	258.53	113.44	165.30		195.80	172.94	176.63	167.96
7	CoS 15233	129.94	88.33	239.95	90.14	175.68		198.89	149.58	126.07	149.82
	Stds										
1	CoS 767	141.36	91.37	229.86	119.30	188.27		174.81	146.24	157.83	156.13
2	CoPant 97222	118.67	78.28	254.81	97.34	135.18		189.51	143.49	150.30	145.95
3	Co 05011	146.30	105.46	248.44	120.41	151.11		192.10	146.44	156.37	158.33
	Mean	138.60	96.40	249.66	103.58	164.50		195.51	155.59	160.43	158.03
	SE (m)	6.21		8.10	4.43	2.31		6.08	7.94	14.11	
	CD at 5%	18.46	9.48	19.42	9.30	4.85		12.89	22.85	4.71	
	CV %	7.76	5.73	5.62	5.23	4.64		5.39	6.42	5.09	

Table 4.9.19 Germination (%) at 45th days

S. No.	Entry	Farid kot	Kapur thala	Kota	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 15026	27.85	41.25	42.90	28.30	37.59	23.40	50.28	44.60	44.07	37.80
2	CoLk 15206	33.18	38.70	45.30	40.74	34.26	26.32	52.78	41.67	59.50	41.38
3	CoLk 15207	29.55	47.33	47.50	35.84	39.35	24.93	56.30	48.96	52.89	42.52
4	CoLk 15209	36.03	42.18	46.39	39.06	35.83	31.95	58.15	45.34	53.68	43.18
5	CoPb 15213	33.26	40.15	43.75	36.96	42.59	23.96	57.13	47.46	60.74	42.89
6	CoS 15232	30.86	44.90	44.29	33.60	44.72	27.99	58.06	48.66	45.79	42.10
7	CoS 15233	33.49	51.84	46.61	32.70	52.04	27.71	54.63	45.01	60.03	44.90
	Stds										
1	CoS 767	29.32	41.66	42.83	43.17	36.11	26.18	52.96	40.95	42.07	39.47
2	CoPant 97222	37.42	35.45	42.38	31.06	34.08	27.64	51.67	45.66	57.27	40.29
3	Co 05011	30.02	44.84	46.86	37.09	38.98	28.40	48.33	40.56	52.99	40.90
	Mean	32.10	42.83	44.88	35.85	39.56	26.85	54.03	44.89	52.90	41.54
	SE (m)	1.76		1.39	2.43	0.68	0.97	2.02	0.52	6.32	
	CD at 5%	5.22	6.88	3.34	5.11	1.42	2.89	4.28	1.49	2.11	
	CV %	9.48	9.38	5.38	8.32	7.53	6.22	6.48	1.41	6.91	

Table 4.9.20. Assessment of the performance of entries compared to the best standard by monitoring team

S. No	Genotype	Lucknow	Shahjahanpur	Pantnagar	Muzzaffarnagar	Karnal	Uchani	Kapurthala	Faridkot	Sriganganagar	Kota
1	Co 15026	Poor	Poor	Better	On par	NA	Poor	Poor	Better	Poor	On par
2	CoLk 15206	Better	On par	Better	On par	NA	Better	On par	On par	On par	Better
3	CoLk 15207	Better	Better	On par	Better	NA	Better	Better	Better	Better	Better
4	CoLk 15209	On par	On par	Better	Poor	NA	Poor	Poor	On par	Better	Poor
5	CoPb 15213	On par	On par	Poor	Poor	NA	Poor	Poor	Better	Better	Poor
6	CoS 15232	Better	Better	Better	On par	NA	On par	Better	Better	On par	On par
7	CoS 15233	On par	Better	On par	Better	NA	On par	Poor	On par	Better	Better
Standards											
1	CoS 767	Best						Best			
2	CoPant 97222		Best	Best			Best		Best	Best	
3	Co 05011				Best						Best

4.10 Initial Varietal Trial (Midlate)

Centres (9)	Faridkot, Kapurthala, Karnal, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur and Sriganaganar
Entries (7)	Co 16030 (Co 0238 x Co 8347) CoLk 16203 (CoLk 7901 GC) CoLk 16204 (Co 1158 x CoLk 8002) CoPb 16212 (Co 85002 GC) CoPant 16223 (CoPant 1216 self) CoS 16232 (Co 1148 x Co 7717) CoS 16233 (Co 89003 x CoSe 92423)
Standards (3)	CoS 767, CoPant 97222, Co 05011
Design	RBD
Replications	3
Plot size	Gross : 6 rows × 6 m × 0.90 m Net : 4 rows × 5 m × 0.90 m
Bud rate	12 buds/metre
Planting time	February/March, 2019
Crop Duration	12 months

Results of the previous year:

The entries were under multiplication in the respective centres

Results of the current years:

Seven test entries and three standards (CoS 767, CoPant 97222 and Co 05011) were evaluated in randomized block design with three replications across nine centers of North-West Zone. For CCS yield (t/ha), Co 16030 and CoS 16232 ranked first and second among the test entries with CCS yield of 13.66 t/ha and 13.60 t/ha with 13.04 and 12.58 percent improvement respectively over the best standard Co 05011 (12.08 t/ha). CoPant 16223 ranked 3rd with CCS yield of 13.42 t/ha and 11.03 percent improvement over the best standard Co 05011. For cane yield, CoPant 16223 recorded 113.03 t/ha of cane yield and ranked first among the entries with 18.21 percent improvement over the best standard Co 05011 (98.40 t/ha). Entries viz., CoS 16232 and Co 16030 were recorded 108.63 t/ha and 107.49 t/ha of cane yield with 13.61 and 12.41 percent improvement respectively over the best standard Co 05011. For CCS (%), CoS 16233 recorded the highest CCS of 13.17% with improvement of 3.44 percent improvement over the best standard CoPant 97222 (12.73%). Entry Co 16030 recorded 12.64% CCS, ranked second among the test entries followed by CoS 16232 (12.46%). Among the standards, CoPant 97222 recorded the highest sucrose content of 18.40% followed by Co 05011 (18.09%) and CoS 767 (17.93%). Among the test entries, CoS 16233 recorded the highest sucrose content of 18.92% with improvement of 2.86 percent over CoPant 97222. Entry Co 16030 recorded 18.28 percent of sucrose and CoPant 97222 recorded 18.40% sucrose content. None of the test entries showed five percent improvement over the best standard for quality parameters such as CCS (%) and sucrose content (%). Further details are presented in Tables 4.10.1 to 4.10.19.

Qualifying entries: The test entry Co 16030 recorded 12.41 percent improvement for cane yield and 1.05 percent improvement for sucrose (%) as compared to Co 05011 and identified as qualifying entry.

Sl No	Entries	Percent improvement over the best standard	
		Cane yield	Sucrose
1.	Co 16030	12.41	1.05

Table 4.10.1. CCS (t/ha) at harvest

S. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean	Rank
1	Co 16030	11.24	15.34	18.02	12.76	11.85	13.31	18.67	11.62	10.12	13.66	1
2	CoLk 16203	8.65	10.31	12.19	11.08	12.83	9.94	12.00	11.99	9.56	10.95	
3	CoLk 16204	10.07	11.66	13.99	11.00	12.49	12.45	11.66	11.68	10.62	11.74	
4	CoPb 16212	12.59	15.47	11.25	10.83	9.04	10.63	18.68	12.01	9.09	12.18	5
5	CoPant 16223	12.69	12.67	15.84	9.25	14.19	10.49	21.58	12.16	11.88	13.42	3
6	CoS 16232	13.41	12.17	18.38	10.40	12.85	11.89	21.15	12.81	9.37	13.60	2
7	CoS 16233	10.71	12.77	17.40	12.18	12.21	12.73	8.43	12.79	12.60	12.42	4
	Stds											
1	CoS 767	10.86	10.53	15.19	9.87	9.93	9.16	11.53	10.11	8.49	10.63	
2	CoPant 97222	10.66	7.76	17.38	10.39	10.42	10.55	17.05	9.68	9.95	11.54	
3	Co 05011	11.65	11.15	17.31	10.05	12.16	10.22	14.98	9.99	11.24	12.08	6
	Mean	11.25	11.98	15.70	10.78	11.80	11.14	15.57	11.48	10.49	12.22	
	SE (m)	0.96		0.74	0.48	0.80	0.43	0.68	0.41	0.67		
	CD at 5%	2.86	1.88	2.21	1.15	1.68	0.89	2.05	0.86	1.92		
	CV %	14.83	9.15	8.13	7.69	8.31	8.39	7.60	6.19	7.06		
Top entries with 10 percent improvement for CCS Yield (t/ha) over the best standard at each centre												
	Rank-1	CoS 16232	CoPb 16212		Co 16030		Co 16030	CoPant 16223	CoS 16232	CoS 16233	CoS 16232	
	Rank-2		Co 16030		CoS 16233		CoLk 16204	CoS 16232	CoS 16233		Co 16030	
	Rank-3		CoPant 16223				CoS 16233		CoPant 16223		CoPant 16223	
	Rank-4								CoPb 16212		CoPant 16223	

Number of locations where an entry showed more than 10% improvement: CoS 16233 (4), Co 16030 (3), CoPb 16212 (2), CoS 16232 (3), CoPant 16223 (3), CoLk 16204 (1).

Performance of the entries across locations: Co 16030 and CoS 16232 ranked first and second among the test entries with pooled CCS yield mean of 13.66 t/ha and 13.60 t/ha with 13.04 and 12.58 percent improvement respectively over the best standard Co 05011 (12.08 t/ha). Entry CoPant 16223 ranked 3rd with CCS yield of 13.42 t/ha and 11.03 percent improvement over the best standard Co 05011.

Table 4.10.2. Cane yield (t/ha) at harvest

S. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean	Rank
1	Co 16030	94.14	117.51	131.95	92.97	97.16	103.33	141.57	90.74	98.02	107.49	3
2	CoLk 16203	70.37	78.46	98.81	81.33	105.90	80.37	97.16	96.85	95.80	89.45	
3	CoLk 16204	85.19	91.35	114.06	79.75	103.43	100.74	94.98	97.04	86.17	94.75	
4	CoPb 16212	106.79	121.41	105.16	87.68	81.83	80.92	144.35	102.78	77.78	100.97	4
5	CoPant 16223	120.68	110.00	126.59	75.03	124.04	89.44	178.52	96.30	96.67	113.03	1
6	CoS 16232	111.73	93.80	134.70	86.15	108.28	91.67	170.62	94.81	85.93	108.63	2
7	CoS 16233	82.72	97.77	124.73	84.05	102.48	97.04	64.34	98.33	99.26	94.52	
	Stds											
1	CoS 767	86.73	81.93	115.95	76.52	88.57	70.18	98.12	82.41	101.73	89.13	
2	CoPant 97222	84.26	59.26	127.48	74.74	83.99	82.04	135.35	75.74	90.99	90.43	
3	Co 05011	95.06	86.42	129.16	78.49	97.68	78.15	121.43	80.74	93.46	95.62	5
	Mean	93.77	93.79	120.86	81.67	99.34	87.39	124.64	91.57	92.58	98.40	
	SE (m)	7.43		5.93	3.40	6.39	3.19	5.54	2.84	4.06		
	CD at 5%	22.06	14.77	17.77	8.16	13.42	6.69	16.58	5.96	11.69		
	CV %	13.72	9.19	8.51	7.22	7.87	8.04	7.70	5.37	4.89		
Top entries with 10 percent improvement for Cane Yield (t/ha) over the best standard at each centre												
	Rank-1	CoPant 16223	CoPb 16212		Co 16030	CoPant 16223	Co 16030	CoPant 16223	CoPb 16212		CoPant 16223	
	Rank-2	CoS 16232	Co 16030		CoPb 16212	CoS 16232	CoLk 16204	CoS 16232	CoS 16233		CoS 16232	
	Rank-3	CoPb 16212	CoPant 16223				CoS 16233		CoLk 16204		Co 16030	

Number of locations where an entry showed more than 10% improvement over the best standard: CoS 16233 (4), CoS 16232 (3), CoPb 16212 (4), Co 16030 (3), CoLk 16204 (2), CoS 16233 (2).

Performance of the entries across locations: Among the test entries, CoPant 16223 recorded 113.03 t/ha of cane yield and ranked first among the entries with 18.21 percent improvement over the best standard Co 05011 (98.40 t/ha). Entries CoS 16232 and Co 16030 recorded 108.63 and 107.49 t/ha of cane yield with 13.61 and 12.41 percent improvement over the best standard.

Table 4.10.3. CCS (%) at harvest

S. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean	Rank
1	Co 16030	11.94	13.05	13.66	13.72	12.21	12.88	13.19	12.79	10.32	12.64	3
2	CoLk 16203	12.29	13.13	12.34	13.60	12.11	12.37	12.36	12.38	9.98	12.28	
3	CoLk 16204	11.80	12.75	12.28	13.80	12.04	12.68	12.27	12.03	12.32	12.44	
4	CoPb 16212	11.79	12.74	10.71	12.35	11.08	13.12	12.93	11.71	11.69	12.01	
5	CoPant 16223	10.51	11.52	12.51	12.33	11.45	11.71	12.09	12.64	12.29	11.89	
6	CoS 16232	11.99	12.97	13.65	12.07	11.87	12.97	12.44	13.25	10.91	12.46	
7	CoS 16233	12.94	13.07	13.95	14.49	11.90	13.13	13.11	13.26	12.69	13.17	1
	Stds											
1	CoS 767	12.50	12.85	13.10	12.91	11.23	13.05	11.75	12.28	12.51	12.46	
2	CoPant 97222	12.65	13.09	13.63	13.90	12.40	12.62	12.60	12.78	10.93	12.73	2
3	Co 05011	12.24	12.93	13.40	12.81	12.49	13.05	12.34	12.31	12.03	12.62	
	Mean	12.07	12.81	12.92	13.19	11.88	12.76	12.51	12.54	11.37	12.47	
	SE (m)	0.14		0.09	0.18	0.28	0.17	0.29	0.24	0.34		
	CD at 5%	0.40	0.47	0.28	0.43	0.60	0.36	0.86	0.49	0.98		
	CV %	1.95	2.14	1.24	2.38	2.93	1.64	3.96	3.25	3.69		
Top entries with five percent improvement for CCS (%) over the best standard at each centre												
	Rank-1											
	Rank-2											
	Rank-3											

Number of locations where an entry showed more than five percent improvement over the best standard: None.

Performance of the entries across locations: Among the test entries CoS 16233 recorded the highest CCS (%) of 13.17% with improvement of 3.44 percent over the best standard CoPant 97222 (12.73%). Co 16030 recorded 12.64% CCS and ranked second among the test entries followed by CoS 16232 (12.46%).

Table 4.10.4. Sucrose (%) at harvest

S. No.	Entry	Faridkot	Kapur thala	Karnal	Kota	Lucknow	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean	Rank
1	Co 16030	17.06	18.54	19.47	19.79	17.65	18.66	19.13	18.61	15.60	18.28	3
2	CoLk 16203	17.52	18.66	17.79	19.62	17.64	17.92	18.03	18.04	16.68	17.99	
3	CoLk 16204	16.70	18.16	17.64	19.89	17.37	18.38	17.88	17.59	17.38	17.89	
4	CoPb 16212	16.74	18.14	15.58	17.93	16.23	18.90	18.71	17.13	17.34	17.41	
5	CoPant 16223	15.14	16.57	17.99	17.90	16.66	17.11	17.67	18.41	17.53	17.22	
6	CoS 16232	17.07	18.45	19.33	17.56	17.25	18.76	18.11	19.22	16.51	18.03	
7	CoS 16233	18.38	18.65	19.87	20.82	17.27	19.02	19.11	19.24	17.96	18.92	1
	Stds											
1	CoS 767	17.70	18.29	18.64	18.69	16.32	18.84	17.25	17.91	17.72	17.93	
2	CoPant 97222	17.93	18.62	19.38	20.03	17.84	18.27	18.27	18.59	16.66	18.40	2
3	Co 05011	17.41	18.37	19.05	18.55	18.02	18.92	18.02	17.95	16.52	18.09	
	Mean	17.17	18.24	18.48	19.07	17.22	18.48	18.22	18.27	16.99	18.02	
	SE (m)	0.19		0.12	0.25	0.37	0.21	0.35	0.32	0.33		
	CD at 5%	0.58	0.65	0.37	0.59	0.78	0.44	1.06	0.67	0.94		
	CV %	1.96	2.10	1.14	2.23	2.63	1.39	3.37	3.03	2.38		
Top entries with five percent improvement for Sucrose (%) over the best standard at each centre												
	Rank-1											
	Rank-2											
	Rank-3											

Number of locations where an entry showing more than five percent improvement over the best standard: None

Performance of the entries across locations: Among the standards, CoPant 97222 recorded the highest sucrose content of 18.40% followed by Co 05011 (18.09%) and CoS 767 (17.93%). Among the test entries, CoS 16233 recorded the highest sucrose content of 18.92% with improvement of 2.86 percent over CoPant 97222.

Table 4.10.5. Brix (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	18.83	20.20	21.37	22.27	19.94	21.19	21.77	21.31	19.23	20.68
2	CoLk 16203	19.23	20.33	20.03	22.10	20.28	20.38	20.80	20.76	20.57	20.50
3	CoLk 16204	18.07	19.90	19.71	22.37	19.58	20.89	20.53	20.34	19.01	20.04
4	CoPb 16212	18.20	19.87	17.84	20.47	18.86	21.23	21.20	19.87	20.63	19.80
5	CoPant 16223	17.00	18.55	20.13	20.43	19.10	19.78	20.43	21.13	19.27	19.54
6	CoS 16232	18.67	20.13	20.90	20.10	19.75	21.21	20.80	21.92	20.43	20.43
7	CoS 16233	20.03	20.50	21.79	23.27	19.70	21.39	21.97	21.93	19.33	21.10
	Stds										
1	CoS 767	19.13	20.00	20.39	21.20	18.66	21.23	20.13	20.63	19.17	20.06
2	CoPant 97222	19.43	20.33	21.12	22.50	19.97	20.86	20.80	21.30	20.12	20.71
3	Co 05011	19.03	20.00	20.79	21.07	20.29	21.32	20.83	20.68	19.27	20.36
	Mean	18.76	19.98	20.41	21.57	19.61	20.95	20.93	20.99	19.70	20.32
	SE (m)	0.24		0.16	0.24	0.46	0.19	0.27	0.31	0.22	
	CD at 5%	0.71	0.73	0.47	0.57	0.97	0.40	0.82	0.66	0.64	
	CV %	2.20	2.15	1.33	1.91	2.88	1.12	2.26	2.60	1.38	

Table 4.10.6. Purity (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	90.62	91.78	91.12	88.88	88.43	88.05	87.89	87.30	81.12	88.35
2	CoLk 16203	91.11	91.77	88.85	88.74	87.06	87.93	86.66	86.91	81.09	87.79
3	CoLk 16204	92.45	91.24	89.51	88.94	88.71	87.97	87.00	86.46	91.43	89.30
4	CoPb 16212	91.98	91.32	87.31	87.63	86.00	89.04	88.23	86.19	84.05	87.97
5	CoPant 16223	89.11	89.34	89.36	87.60	87.27	86.50	86.46	87.08	90.97	88.19
6	CoS 16232	91.43	91.62	92.47	87.35	87.17	88.40	87.06	87.69	80.81	88.22
7	CoS 16233	91.77	90.98	91.22	89.49	87.68	88.91	86.99	87.73	92.91	89.74
	Stds										
1	CoS 767	92.51	91.44	91.44	88.16	87.47	88.75	85.68	86.78	92.44	89.41
2	CoPant 97222	92.26	91.57	91.74	89.03	89.33	87.58	87.84	87.28	82.80	88.83
3	Co 05011	91.47	91.83	91.66	88.07	88.74	88.71	86.51	86.81	85.73	88.84
	Mean	91.47	91.29	90.47	88.38	87.79	88.19	87.03	87.02	86.34	88.66
	SE (m)	0.44		0.42	0.16	1.27	0.38	0.70	0.23	1.98	
	CD at 5%	1.32	0.95	1.26	0.39	ns	0.79	N/A	0.48	5.73	
	CV %	0.84	0.61	0.80	0.32	1.78	0.53	1.39	0.45	2.86	

Table 4.10.7. Extraction (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	58.66	51.16	53.34	43.62	54.08	51.56		56.15	51.39	52.50
2	CoLk 16203	52.01	50.82	42.26	49.66	46.04	45.05		52.61	55.21	49.21
3	CoLk 16204	53.80	51.38	43.91	48.16	43.54	47.80		56.51	51.82	49.62
4	CoPb 16212	60.92	50.89	47.38	46.50	46.63	50.52		53.26	44.58	50.09
5	CoPant 16223	57.19	52.25	46.16	44.06	46.88	47.23		53.19	47.04	49.25
6	CoS 16232	59.81	50.86	51.82	42.68	52.05	50.09		56.75	53.40	52.18
7	CoS 16233	55.63	51.59	50.14	42.39	45.95	49.19		54.04	46.63	49.45
	Stds										
1	CoS 767	59.20	53.49	48.18	43.56	42.27	48.60		56.36	49.37	50.13
2	CoPant 97222	60.66	51.33	45.23	40.13	52.66	52.26		56.35	45.12	50.47
3	Co 05011	61.11	51.61	48.36	40.86	48.03	50.34		56.38	41.87	49.82
	Mean	57.90	51.54	47.68	44.16	47.81	49.26		55.16	48.64	50.27
	SE (m)	0.80		0.54	2.31	3.09	-		0.63	4.32	
	CD at 5%	2.39	NS	1.30	5.53	6.49	-		1.31	12.45	
	CV %	2.40	2.08	1.98	9.04	7.92	-		1.96	10.88	

Table 4.10.8. Pol % cane and Fibre (%) content at harvest

S. No.	Entry	Pol%cane						Fibre (%)					
		Kapur thala	Kar nal	Luck now	Muzaf arnagar	Shahja hanpur	Mean	Kapur thala	Kar nal	Luck now	Muzaf arnagar	Shahja hanpur	Mean
1	Co 16030	13.61	15.05	13.58	14.39	13.91	14.11	15.30	12.69	13.01	13.88	15.23	14.02
2	CoLk 16203	14.05	13.46	13.53	13.72	13.43	13.64	15.08	14.37	13.33	14.04	15.56	14.48
3	CoLk 16204	13.35	13.27	13.45	14.06	13.14	13.45	15.23	14.79	12.57	14.26	15.28	14.43
4	CoPb 16212	13.80	11.95	12.70	14.19	12.75	13.08	15.38	13.28	11.73	14.54	15.59	14.10
5	CoPant 16223	12.27	13.75	13.07	12.94	13.71	13.15	15.28	13.59	11.55	14.77	15.49	14.14
6	CoS 16232	13.87	14.84	13.43	14.12	14.41	14.13	13.76	13.24	12.15	13.82	15.06	13.61
7	CoS 16233	14.52	15.18	13.54	14.46	14.35	14.41	14.52	13.64	11.59	13.65	15.41	13.76
	Stds												
1	CoS 767	13.99	13.89	12.31	14.1	13.4	13.54	13.64	15.48	14.57	14.42	15.15	14.65
2	CoPant 97222	15.68	14.82	13.89	14.12	13.89	14.48	14.28	13.49	12.11	14.06	15.29	13.85
3	Co 05011	14.44	14.76	14.23	14.23	13.45	14.22	13.55	12.51	11.04	14.16	15.08	13.27
	Mean	13.96	14.10	13.37	14.03	13.64	13.82	14.6	13.71	12.37	14.16	15.31	14.03
	SE (m)		0.10	0.28	-	0.23			0.12	0.51	-	0.1	
	CD at 5%	0.44	0.29	0.59	-	0.49		0.8	0.36	1.07	-	0.21	
	CV %	1.84	1.18	2.56	-	2.98		3.22	1.52	5.07	-	1.12	

Table 4.10.9. Number of millable canes (‘000/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	92.90	92.68	99.38	86.44	92.70	82.96	82.41	94.81	82.10	89.60
2	CoLk 16203	83.33	90.39	102.47	87.78	103.64	118.85	79.26	104.81	98.40	96.55
3	CoLk 16204	92.75	91.79	115.84	92.67	124.12	102.59	80.00	101.30	134.81	103.99
4	CoPb 16212	87.96	93.49	86.93	93.33	83.12	82.04	76.30	95.74	105.06	89.33
5	CoPant 16223	100.31	97.60	98.56	93.11	120.29	98.52	123.33	101.30	110.74	104.86
6	CoS 16232	95.68	96.07	101.23	92.00	112.04	95.37	103.52	100.00	108.64	100.51
7	CoS 16233	88.89	97.73	109.47	88.89	114.15	103.89	62.22	109.07	111.23	98.39
	Stds										
1	CoS 767	103.55	87.81	103.81	88.22	116.30	109.81	79.63	101.85	109.26	100.03
2	CoPant 97222	88.43	72.71	105.86	86.22	89.20	91.85	109.07	89.63	106.17	93.24
3	Co 05011	96.60	85.86	113.37	89.56	111.83	96.30	87.22	97.22	96.30	97.14
	Mean	93.04	90.61	103.69	89.82	106.74	98.22	88.30	99.57	106.27	97.36
	SE (m)	5.96		4.73	1.13	6.44	2.96	1.69	3.18	5.61	
	CD at 5%	17.71	12.27	14.18	2.70	13.52	6.23	5.07	6.68	16.17	
	CV %	11.10	7.90	7.91	2.17	7.39	9.99	3.32	5.53	6.47	

Table 4.10.10 Cane height (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	243.88	212.08	250.00	220.00	207.00	251.00	266.00	206.00	244.57	233.39
2	CoLk 16203	199.77	179.17	217.00	240.00	209.67	192.00	241.00	193.33	176.17	205.35
3	CoLk 16204	195.00	169.25	262.00	207.00	212.33	210.00	231.00	184.00	201.63	208.02
4	CoPb 16212	282.11	260.67	283.00	250.00	280.67	262.00	322.00	239.67	243.97	269.34
5	CoPant 16223	234.33	220.83	315.00	227.00	213.00	220.00	275.00	196.00	227.37	236.50
6	CoS 16232	262.00	234.17	280.00	257.00	216.00	242.00	308.00	209.00	223.63	247.98
7	CoS 16233	250.11	246.25	273.00	213.00	239.00	234.00	240.00	192.67	196.30	231.59
	Stds										
1	CoS 767	217.00	214.58	260.00	227.00	219.00	212.00	249.00	192.00	178.00	218.73
2	CoPant 97222	211.00	158.75	280.00	188.00	229.00	157.00	249.00	179.33	196.00	205.34
3	Co 05011	221.33	166.67	227.00	178.00	196.00	174.00	259.00	185.00	135.77	193.64
	Mean	231.65	206.24	264.70	220.70	222.17	215.40	264.00	197.70	202.34	224.99
	SE (m)	8.78							7.46	1.35	
	CD at 5%	26.09	37.98						15.67	3.87	
	CV %	6.56	10.74						6.54	0.81	

Table 4.10.11 Cane diameter (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	2.79	2.68	2.97	2.70	2.84	2.58	2.71	2.47	2.50	2.69
2	CoLk 16203	2.68	2.48	2.43	2.30	2.36	1.98	2.35	2.33	2.27	2.35
3	CoLk 16204	2.68	2.58	2.04	2.17	2.46	2.56	2.41	2.25	1.97	2.35
4	CoPb 16212	2.81	2.67	2.42	2.90	2.71	2.18	2.63	2.51	2.60	2.60
5	CoPant 16223	2.81	2.59	2.44	2.03	2.75	2.11	2.41	2.29	2.40	2.43
6	CoS 16232	2.50	2.42	2.57	2.53	2.23	2.24	2.43	2.33	2.20	2.38
7	CoS 16233	2.47	2.42	2.32	2.40	2.35	2.08	2.19	2.29	2.80	2.37
	Stds										
1	CoS 767	2.48	2.38	2.28	2.23	2.29	2.22	2.17	2.14	2.30	2.28
2	CoPant 97222	2.94	2.30	2.30	2.33	2.47	2.48	2.39	2.32	2.27	2.42
3	Co 05011	2.74	2.51	2.38	2.50	2.51	2.43	2.56	2.33	2.53	2.50
	Mean	2.69	2.50	2.42	2.41	2.50	2.29	2.42	2.33	2.38	2.44
	SE (m)	0.07		0.11	0.09	0.11	0.06	0.04	0.06	0.13	
	CD at 5%	0.21	NS	0.33	0.23	0.24	0.12	0.12	0.13	0.38	
	CV %	4.51	6.29	7.99	6.83	5.52	3.08	2.90	4.75	6.82	

Table 4.10.12 Single cane weight (kg) at harvest

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	1.23	1.27	1.33	1.08	1.05	1.30	1.72	1.12	1.01	1.23
2	CoLk 16203	1.03	0.88	0.96	0.93	1.02	0.71	1.23	0.87	0.91	0.95
3	CoLk 16204	1.05	1.00	0.99	0.86	0.83	1.01	1.19	0.84	0.72	0.94
4	CoPb 16212	1.37	1.30	1.21	0.94	0.99	1.14	1.89	1.13	0.93	1.21
5	CoPant 16223	1.31	1.13	1.28	0.81	1.03	1.04	1.45	0.86	1.17	1.12
6	CoS 16232	1.21	0.98	1.33	0.94	0.97	1.15	1.65	0.93	0.85	1.11
7	CoS 16233	1.13	1.00	1.14	0.95	0.90	0.91	1.03	0.87	0.91	0.98
	Stds										
1	CoS 767	0.95	0.93	1.12	0.87	0.76	0.85	1.23	0.83	1.15	0.97
2	CoPant 97222	1.17	0.82	1.20	0.87	0.96	0.93	1.24	0.92	1.10	1.02
3	Co 05011	1.16	1.00	1.14	0.88	0.87	0.88	1.39	1.07	1.04	1.05
	Mean	1.16	1.03	1.17	0.91	0.94	0.99	1.40	0.94	0.98	1.06
	SE (m)	0.04		0.03	0.04	0.07	0.04	0.06	0.05	0.05	
	CD at 5%	0.13	0.14	0.08	0.09	0.14	0.07	0.17	0.10	0.15	
	CV %	6.32	7.82	3.78	7.41	8.62	4.36	6.90	8.56	6.41	

Table 4.10.13 CCS (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	9.63	11.10	11.69	11.31	10.69	10.94	12.19	11.40	9.93	10.99
2	CoLk 16203	10.35	12.37	10.81	12.10	10.22	10.82	11.14	9.96	7.92	10.63
3	CoLk 16204	10.48	11.07	9.80	12.05	10.20	11.04	11.20	9.79	10.77	10.71
4	CoPb 16212	10.46	11.48	7.65	12.00	8.22	11.15	11.99	10.84	11.35	10.57
5	CoPant 16223	8.54	8.75	11.53	8.82	9.17	9.62	11.29	9.31	11.60	9.85
6	CoS 16232	10.23	12.03	11.29	11.36	10.41	10.84	11.25	11.50	10.26	11.02
7	CoS 16233	10.79	12.50	12.44	11.44	11.67	11.20	12.43	12.11	12.80	11.93
	Stds										
1	CoS 767	11.57	12.59	11.16	10.78	10.04	11.13	10.66	10.91	11.64	11.16
2	CoPant 97222	10.54	11.50	11.11	11.82	11.39	10.94	11.12	11.30	10.71	11.16
3	Co 05011	10.61	11.24	11.70	12.07	11.28	11.09	11.31	10.32	11.98	11.29
	Mean	10.32	11.46	10.92	11.37	10.33	10.88	11.46	10.75	10.90	10.93
	SE (m)	0.15		0.28	0.11	0.85	0.26	0.21	0.18	0.22	
	CD at 5%	0.45	0.90	0.84	0.25	1.79	0.54	0.62	0.37	0.62	
	CV %	2.52	4.59	4.47	1.60	10.08	2.88	3.12	2.87	2.41	

Table 4.10.14 Sucrose (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	14.10	16.08	16.95	16.53	15.69	16.01	18.01	16.71	14.28	16.04
2	CoLk 16203	15.10	17.60	15.87	17.59	15.27	15.83	16.66	14.81	15.05	15.98
3	CoLk 16204	15.13	16.02	14.62	17.52	14.97	16.09	16.68	14.57	15.56	15.68
4	CoPb 16212	15.09	16.48	11.75	17.45	12.47	16.27	17.66	15.97	15.39	15.39
5	CoPant 16223	12.57	12.92	16.55	13.16	13.45	14.13	16.69	13.90	16.59	14.44
6	CoS 16232	14.86	17.22	16.36	16.59	15.30	15.80	16.76	16.84	15.06	16.09
7	CoS 16233	15.64	17.83	17.81	16.70	16.91	16.38	18.32	17.67	15.69	16.99
	Stds										
1	CoS 767	16.64	17.98	16.28	15.80	14.80	16.28	15.99	16.06	15.43	16.14
2	CoPant 97222	15.22	16.60	16.13	17.21	16.50	16.06	16.53	16.57	15.06	16.21
3	Co 05011	15.42	16.24	16.89	17.56	16.31	16.28	16.83	15.28	15.29	16.23
	Mean	14.98	16.50	15.92	16.61	15.17	15.91	17.01	15.84	15.34	15.92
	SE (m)	0.21		0.35	0.14	0.99	0.36	0.28	0.24	0.20	
	CD at 5%	0.61	1.03	1.04	0.34	2.07	0.75	0.82	0.50	0.59	
	CV %	2.38	3.66	3.77	1.48	7.95	2.75	2.80	2.60	1.58	

Table 4.10.15 Brix (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	16.37	18.27	19.31	19.10	18.33	18.57	21.30	19.42	17.87	18.73
2	CoLk 16203	17.43	19.23	18.52	20.13	18.43	18.33	20.17	17.70	18.73	18.74
3	CoLk 16204	17.07	18.17	17.59	20.07	17.47	18.50	20.00	17.47	17.57	18.21
4	CoPb 16212	17.00	18.37	18.41	20.00	15.51	18.76	20.77	18.77	18.47	18.45
5	CoPant 16223	14.77	15.27	14.90	15.83	15.68	16.53	19.77	16.77	18.35	16.43
6	CoS 16232	17.00	19.10	18.62	19.17	17.89	18.16	20.13	19.56	18.80	18.71
7	CoS 16233	17.77	19.60	19.72	19.27	19.25	18.99	21.53	20.35	18.07	19.39
	Stds										
1	CoS 767	18.63	19.83	18.75	18.40	17.41	18.86	19.43	18.87	17.63	18.65
2	CoPant 97222	17.20	18.73	18.40	19.77	18.74	18.76	19.77	19.30	18.50	18.80
3	Co 05011	17.63	18.33	19.05	20.10	18.46	18.99	20.17	18.12	18.17	18.78
	Mean	17.09	18.49	18.33	19.18	17.72	18.45	20.30	18.63	18.22	18.49
	SE (m)	0.23			0.14	0.66	0.44	0.28	0.22	0.18	
	CD at 5%	0.68	0.63		0.33	1.39	0.92	0.83	0.47	0.52	
	CV %	2.32	2.00		1.25	4.58	2.90	2.37	2.08	1.23	

Table 4.10.16 Purity (%) at 10th month

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	86.18	88.03	87.78	86.52	85.57	86.20	84.56	86.02	79.91	85.64
2	CoLk 16203	86.64	91.46	85.69	87.37	82.67	86.32	82.62	83.64	80.35	85.20
3	CoLk 16204	88.66	88.18	83.12	87.32	85.71	87.01	83.40	83.41	88.56	86.15
4	CoPb 16212	88.76	89.73	78.76	87.27	80.03	86.74	85.03	85.05	83.32	84.97
5	CoPant 16223	85.14	84.52	89.87	83.09	85.76	85.49	84.43	82.90	90.41	85.73
6	CoS 16232	87.43	90.16	87.86	86.58	85.41	87.02	83.22	86.06	80.11	85.98
7	CoS 16233	88.01	90.94	90.29	86.66	87.88	86.26	85.06	86.81	86.83	87.64
	Stds										
1	CoS 767	89.30	90.67	86.85	85.89	85.10	86.33	82.25	85.12	87.52	86.56
2	CoPant 97222	88.51	88.62	87.62	87.08	88.02	85.61	83.62	85.85	81.41	86.26
3	Co 05011	87.47	88.58	88.66	87.35	88.46	85.74	83.44	84.31	84.15	86.46
	Mean	87.61	89.09	86.65	86.51	85.46	86.27	83.76	84.92	84.26	86.06
	SE (m)	0.43		1.05	0.13	3.68	0.83	0.49	0.26	1.42	
	CD at 5%	1.28	3.61	3.16	0.32	ns	NS	1.46	0.55	4.09	
	CV %	0.85	2.37	2.11	0.26	5.28	1.18	1.01	0.54	1.98	

Table 4.10.17 Number of shoots (`000/ha) at 8th month

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	99.38	102.26	99.38	230.52	98.87	-	-	-	-	126.08
2	CoLk 16203	93.36	94.30	102.47	234.07	113.25	-	-	-	-	127.49
3	CoLk 16204	103.09	95.77	115.84	247.11	140.05	-	-	-	-	140.37
4	CoPb 16212	89.97	99.62	86.93	248.89	89.22	-	-	-	-	122.93
5	CoPant 16223	113.73	108.44	98.56	248.30	127.08	-	-	-	-	139.22
6	CoS 16232	110.34	100.23	101.23	245.33	120.78	-	-	-	-	135.58
7	CoS 16233	98.61	101.96	109.47	237.04	128.67	-	-	-	-	135.15
	Stds										
1	CoS 767	106.33	95.09	103.81	235.26	128.91	-	-	-	-	133.88
2	CoPant 97222	89.66	65.42	105.86	229.93	103.18	-	-	-	-	118.81
3	Co 05011	101.39	89.58	113.37	238.81	123.74	-	-	-	-	133.38
	Mean	100.59	95.27	103.69	239.52	117.37	-	-	-	-	131.29
	SE (m)	7.65		4.73	3.01	8.14	-	-	-	-	
	CD at 5%	22.72	16.40	14.18	7.21	17.10	-	-	-	-	
	CV %	13.17	10.04	7.91	2.17	8.49	-	-	-	-	

Table 4.10.18 Number of tillers (`000/ha) at 120th days

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	129.78	108.44	108.13	196.90	104.38	170.36		184.81	128.07	141.36
2	CoLk 16203	116.36	99.98	108.44	199.94	122.67	191.67		191.11	153.50	147.96
3	CoLk 16204	118.06	101.87	168.72	211.07	151.24	180.37		199.07	210.31	167.59
4	CoPb 16212	116.36	106.07	97.74	212.59	102.07	155.19		191.67	163.90	143.20
5	CoPant 16223	123.15	114.81	149.28	212.09	125.56	204.99		200.56	172.76	162.90
6	CoS 16232	136.57	106.69	126.54	209.56	129.81	198.15		195.93	169.48	159.09
7	CoS 16233	149.07	108.44	133.74	202.47	139.61	205.92		209.63	173.53	165.30
	Stds										
1	CoS 767	143.98	101.26	115.12	200.95	138.56	166.48		198.52	170.44	154.41
2	CoPant 97222	118.06	69.59	128.40	196.40	111.70	137.40		185.19	165.63	139.05
3	Co 05011	131.02	95.47	110.49	203.99	130.78	179.25		172.59	150.22	146.73
	Mean	128.24	101.26	124.66	204.59	125.64	178.98		192.91	165.78	152.76
	SE (m)	8.48		6.70	2.57	10.68	6.06		6.58	8.76	
	CD at 5%	25.21	16.90	20.07	6.16	22.44	12.73		13.81	25.22	
	CV %	11.46	9.74	9.31	2.17	10.41	11.19		5.90	7.29	

Table 4.10.19 Germination (%) at 45th days

S. No.	Entry	Farid kot	Kapur thala	Karnal	Kota	Luck now	Muzafar nagar	Pant nagar	Shah jahanpur	Sriganga nagar	Mean
1	Co 16030	30.58	43.43	49.54	46.71	31.71	38.33	32.50	45.83	45.61	40.47
2	CoLk 16203	31.72	47.11	52.85	43.90	31.87	44.16	29.58	46.81	38.97	40.77
3	CoLk 16204	29.63	44.94	59.72	42.59	34.72	35.41	26.81	42.92	37.71	39.38
4	CoPb 16212	36.68	52.24	52.85	45.21	31.79	36.66	29.30	43.61	46.23	41.62
5	CoPant 16223	37.82	43.89	53.94	45.42	33.87	46.61	33.89	47.78	42.29	42.83
6	CoS 16232	32.86	37.92	46.91	41.01	34.49	39.85	30.56	44.58	40.44	38.74
7	CoS 16233	40.29	42.15	56.40	42.37	45.45	45.31	24.86	54.44	41.28	43.62
	Stds										
1	CoS 767	29.91	48.99	48.45	43.10	36.11	36.52	22.78	45.28	40.43	39.06
2	CoPant 97222	32.01	34.60	44.60	41.84	30.79	28.60	29.86	41.25	45.85	36.60
3	Co 05011	34.87	41.84	40.74	40.55	31.64	40.55	28.33	41.67	40.47	37.85
	Mean	33.64	43.71	50.60	43.26	34.24	39.20	28.85	45.42	41.93	40.09
	SE (m)	1.76		1.74	1.52	2.12	1.42	1.09	2.40	0.29	
	CD at 5%	5.23	NS	5.22	3.64	4.45	3.06	3.27	5.04	0.82	
	CV %	9.06	14.16	5.97	6.09	7.58	10.62	6.55	9.15	0.84	

Table 4.10.20. Assessment of the performance of entries compared to the best standard by monitoring team

S. No	Genotype	Lucknow	Shahjahanpur	Pantnagar	Muzzaffarnagar	Karnal	Uchani	Kapurthala	Faridkot	Sriganganagar	Kota
1	Co 16030	Better	On Par	On Par	On Par	Better	NA	Better	Better	Better	Better
2	CoLk 16203	Better	Better	On Par	Better	On par	NA	On Par	Better	Better	Better
3	CoLk 16204	Better	Better	On Par	Better	Better	NA	On Par	On par	On Par	Better
4	CoPant 16223	Better	Better	Better	Better	Better	NA	Better	Better	On Par	Better
5	CoPb 16212	Better	Better	Better	On Par	Better	NA	Better	Better	Better	Better
6	CoS 16232	Better	On Par	Better	On Par	Better	NA	On Par	Better	Better	Better
7	CoS 16233	Better	Better	On Par	Better	Better	NA	Better	Better	Better	On Par
Standards											
1	CoS 767	Best						Best			
2	CoPant 97222			Best		Best					Best
3	Co 05011		Best		Best				Best	Best	

5. NORTH CENTRAL ZONE

North Central and North East zones of comprises of the states of Assam, Bihar, Central & Eastern Uttar Pradesh and West Bengal.

State	Centres
Assam	Buralikson
Bihar	Motipur & Pusa
Uttar Pradesh	Seorahi
West Bengal	Bethuadahari

Trials conducted during 2019-20:

Sl. No.	Location	AVT Early II Plant	AVT Early Ratoon	AVT Early I Plant	IVT Early	AVT Midlate II Plant	AVT Midlate Ratoon	AVT Midlate I Plant	IVT Midlate
1	Bethuadahari	C	C	C	C	C	C	C	C
2	Buralikson	C	C	C	C	C	NC	NC	C
3	Motipur	C	C	C	C	C	C	C	C
4	Pusa	C	C	C	C	C	C	C	C
5	Seorahi	C	C	C	C	C	C	C	C

C – Trial Conducted, NC– Not Conducted

5.1. ADVANCED VARIETAL TRIAL (EARLY) - II PLANT CROP

Centers (5)	Bethuadahari, Buralikson, Motipur, Pusa and Seorahi
Entries (4)	CoLk 14206, CoP 14437, CoSe 14451 and CoSe 14454
Standards (3)	CoLk 94184, CoSe 95422 and CoSe 01421
Design	RBD
Replications	Three
Plot size	Gross : 6m x 8r x 0.75m Net : 5m x 6r x 0.75m
Seed rate	12 buds per meter
Date of planting	February – March 2019
Crop duration	10 months

Results of the previous year:

Four test entries and three standards were evaluated in AVT (Early) I plant trial at five locations of North Central and North East zones during 2018-19 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over the best standard across the zone for CCS yield. The entry CoP 14437 (9.72 t/ha) ranked first in the zone and recorded >10% improvement over the best standard at Pusa and Seorahi centers. For cane yield, none of the test entries recorded >10% improvement in the zone. Test entry CoP 14437 (79.88 t/ha) ranked top in the zone and recorded >10% improvement over the best standard at Pusa and Seorahi centers. For CCS%, none of the test entries recorded >10% improvement in the zone. The standard CoSe 01421 (12.42%) ranked top in the zone which was followed by test entry CoLk 14206 (12.33%) for mean CCS%. For sucrose, none of the test entries recorded >10% improvement in the zone. The standard CoSe 01421 (18.09%) ranked top in the zone, followed by another standard CoLk 94184 (17.89%) for sucrose%. Based on cane yield and juice quality parameters, none of the test entry recorded >10% improvement over the best standard for CCS yield and cane yield or >5% improvement for CCS% and sucrose%. Hence, no test entry was selected as qualified entry in the zone.

Results of the current year:

Four test entries and three standards were evaluated in AVT (Early) II plant trial at five locations of North Central and North East zones during 2019-20 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over the best standard across the zone for CCS yield. Test entry CoSe 14451 ranked top in the zone with 10.89 t/ha of mean CCS yield. Other test entries CoLk 14206 and CoSe 14454 ranked second and third in the zone with 10.64 t/ha and 10.28 t/ha of mean CCS yield and also recorded 12.53% and 13.95% improvement over best standard at Motipur and Seorahi centers respectively. For cane yield, none of the test entries recorded >10% improvement in the zone. Test entry CoSe 14451 ranked top in the zone with 89.32 t/ha of mean cane yield and recorded 13.67% and 13.93% improvement over best standard at Seorahi and Pusa centers respectively. For CCS%, none of the test entries recorded >5% improvement in the zone. The standard CoLk 94184 ranked first in the zone with 12.59% of mean CCS%, followed by another standard CoSe 01421 with 12.30% of mean CCS%. For sucrose, none of the test entries recorded >5% improvement in the zone and the standard CoLk 94184 (18.22%) ranked first in the zone. The test entries CoLk 14206 and CoP 14437 ranked second and third in the zone with 17.83% and 17.79% of mean sucrose%. Based on cane yield and juice quality parameters, none of the test entries recorded >10% improvement over best standard for CCS yield and cane yield or >5% improvement for CCS% and sucrose%. Hence, none of the test entries was selected as qualifying entry in the zone. **The data are presented in table 5.1.1 to 5.1.20.**

Table 5.1.1. CCS at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14206	10.04	10.86	13.02*	9.78	9.49	10.64	2
2	CoP 14437	10.07	10.23	9.65	9.31	11.34	10.12	
3	CoSe 14451	10.22	11.51	12.08	9.40	11.22	10.89	1
4	CoSe 14454	10.62*	10.60	11.55	9.24	9.39	10.28	3
	Standards							
1	CoLk 94184	9.32	11.20	10.61	9.88	10.04	10.21	
2	CoSe 95422	8.77	8.20	11.57	7.38	10.73	9.33	
3	CoSe 01421	8.08	9.46	11.15	8.17	8.63	9.10	
	GM	9.59	10.29	11.37	8.48	10.12	9.97	
	SE	0.38	0.50	0.31	-	0.65		
	CD	1.18	1.57	0.95	-	1.35		
	CV	6.95	8.49	4.78	-	7.85		
	Qualifying entries at each location							
	1	CoSe 14454		CoLk 14206				
	2							
	3							

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoSe 14454 (1) and CoLk 14206 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard across the zone for CCS yield. Test entry CoSe 14451 ranked top in the zone with 10.89 t/ha of mean CCS yield. Other test entries CoLk 14206 and CoSe 14454 ranked second and third in the zone with 10.64 t/ha and 10.28 t/ha of mean CCS yield and also recorded 12.53% and 13.95% improvement over best standard at Motipur and Seorahi centers respectively.

Table 5.1.2. Cane Yield at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14206	84.74*	86.06	110.01*	72.57	82.39	87.15	2
2	CoP 14437	85.04*	86.06	82.76	70.75	89.34	82.79	
3	CoSe 14451	88.74*	93.58*	106.07	70.43	87.80	89.32	1
4	CoSe 14454	89.48*	88.17	101.13	70.42	73.50	84.54	3
	Standards							
1	CoLk 94184	78.07	82.14	91.76	74.36	80.03	81.27	
2	CoSe 95422	75.11	74.15	99.28	62.10	84.97	79.12	
3	CoSe 01421	69.04	75.55	95.71	62.77	68.43	74.30	
	GM	81.46	83.67	98.11	66.41	80.92	82.11	
	SE	1.54	3.72	2.26	-	5.96		
	CD	4.77	11.58	9.51	-	12.39		
	CV	7.41	7.69	3.99	-	9.02		
Qualifying entries at each location								
	1	CoSe 14454	CoSe 14451	CoLk 14206				
	2	CoSe 14451						
	3							

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoSe 14454 (1), CoSe 14451 (2) and CoLk 14206 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard across the zone for cane yield. Test entry CoSe 14451 ranked top in the zone with 89.32 t/ha of mean cane yield and recorded 13.67% and 13.93% improvement over best standard at Seorahi and Pusa centers respectively. Other test entries CoLk 14206 and CoSe 14454 ranked second and third in the zone with 87.15 t/ha and 84.54 t/ha of mean cane yield and also recorded 10.81% and 14.62% improvement over best standard at Motipur and Seorahi centers respectively.

Table 5.1.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14206	11.84	12.62	11.83	13.48	11.52	12.26	
2	CoP 14437	11.86	11.88	11.66	13.16	12.71	12.25	
3	CoSe 14451	11.53	12.30	11.39	13.35	12.79	12.27	3
4	CoSe 14454	11.87	11.98	11.41	13.12	12.78	12.23	
	Standards							
1	CoLk 94184	11.94	13.63	11.56	13.29	12.55	12.59	1
2	CoSe 95422	11.67	11.05	11.66	11.88	12.63	11.78	
3	CoSe 01421	11.70	12.53	11.65	13.02	12.62	12.30	2
	GM	11.77	12.28	11.59	12.73	12.51	12.18	
	SE	0.15	0.16	0.17	-	0.23		
	CD	0.49	0.51	0.52	-	0.47		
	CV	2.34	20.32	2.57	-	2.23		
	Qualifying entries at each location							
	1							
	2							
	3							

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement for CCS% over the best standard in the zone. The standard CoLk 94184 ranked first in the zone with 12.59% of mean CCS%, followed by another standard CoSe 01421 with 12.30% of mean CCS%. Test entries CoSe 14451 ranked third with 12.27% mean CCS% in the zone.

Table 5.1.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14206	17.07	18.14	17.18	19.51	17.27	17.83	2
2	CoP 14437	17.15	17.31	16.70	19.05	18.74	17.79	3
3	CoSe 14451	16.72	17.65	16.32	19.24	18.85	17.76	
4	CoSe 14454	17.17	17.27	16.48	18.92	18.54	17.68	
	Standards							
1	CoLk 94184	17.26	19.66	16.62	19.15	18.39	18.22	1
2	CoSe 95422	16.98	16.09	16.70	17.23	18.38	17.08	
3	CoSe 01421	16.90	17.95	16.70	18.85	18.19	17.72	
	GM	17.04	17.72	16.67	18.41	18.34	17.64	
	SE	0.24	0.22	0.30	-	0.24		
	CD	0.74	0.69	0.93	-	0.50		
	CV	2.47	2.16	3.18	-	1.62		
	Qualifying entries at each locations							
	1							
	2							
	3							

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement for sucrose% over the best standard in the zone. The standard CoLk 94184 ranked first in the zone with 18.22% of mean sucrose%. The test entries CoLk 14206 and CoP 14437 ranked second and third in the zone with 17.83% and 17.79% of mean sucrose% across the locations.

Table 5.1.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	19.17	20.27	19.61	22.13	21.00	20.44
2	CoP 14437	19.40	19.90	18.51	21.60	22.07	20.30
3	CoSe 14451	19.04	19.67	18.11	21.64	22.20	20.13
4	CoSe 14454	19.44	19.43	18.58	21.29	21.13	19.97
	Standards						
1	CoLk 94184	19.54	22.13	18.58	21.54	21.37	20.63
2	CoSe 95422	19.44	18.47	18.51	19.61	21.07	19.42
3	CoSe 01421	19.10	19.93	18.54	21.37	20.47	19.88
	GM	19.30	19.97	18.63	20.84	21.33	20.01
	SE	0.34	0.27	0.54	-	0.18	
	CD	1.05	0.85	1.65	-	0.37	
	CV	3.06	2.36	5.06	-	1.03	

Table 5.1.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	89.02	89.53	87.60	88.16	82.26	87.31
2	CoP 14437	88.38	88.63	90.54	88.19	84.93	88.13
3	CoSe 14451	87.83	89.73	90.13	88.91	84.93	88.31
4	CoSe 14454	88.31	88.86	88.69	88.87	87.73	88.49
	Standards	-					
1	CoLk 94184	88.36	88.83	89.45	88.90	86.07	88.32
2	CoSe 95422	87.20	87.10	90.26	87.86	87.24	87.93
3	CoSe 01421	88.48	90.03	90.08	88.21	88.89	89.14
	GM	88.23	88.96	89.53	88.32	86.01	88.21
	SE	0.34	0.43	1.24	-	0.99	
	CD	1.06	1.32	3.78	-	2.06	
	CV	0.67	0.83	2.40	-	1.41	

Table 5.1.7. Pol % cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	-	13.99	13.41	-	-	13.70
2	CoP 14437	-	13.45	13.01	-	-	13.23
3	CoSe 14451	-	13.56	12.78	-	-	13.17
4	CoSe 14454	-	13.26	12.87	-	-	13.07
	Standards	-			-	-	
1	CoLk 94184	-	15.00	12.87	-	-	13.94
2	CoSe 95422	-	12.4	13.05	-	-	12.73
3	CoSe 01421	-	13.89	13.07	-	-	13.48
	GM	-	13.65	13.01	-	-	13.33
	SE	-	0.18	-	-	-	
	CD	-	0.55	-	-	-	
	CV	-	2.24	-	-	-	

Table 5.1.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	-	58.30	60.09	-	-	59.20
2	CoP 14437	-	62.10	55.79	-	-	58.95
3	CoSe 14451	-	56.80	60.13	-	-	58.47
4	CoSe 14454	-	57.10	60.08	-	-	58.59
	Standards	-			-	-	
1	CoLk 94184	-	55.60	60.58	-	-	58.09
2	CoSe 95422	-	54.90	59.34	-	-	57.12
3	CoSe 01421	-	56.12	59.86	-	-	57.99
	GM	-	57.27	59.41	-	-	58.34
	SE	-	2.15	1.01	-	-	
	CD	-	6.63	3.08	-	-	
	CV	-	6.51	2.90	-	-	

Table 5.1.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	-	12.85	11.96	-	-	12.41
2	CoP 14437	-	12.30	12.10	-	-	12.20
3	CoSe 14451	-	13.15	11.68	-	-	12.42
4	CoSe 14454	-	13.22	11.89	-	-	12.56
	Standards	-			-	-	
1	CoLk 94184	-	13.70	12.53	-	-	13.12
2	CoSe 95422	-	12.95	11.84	-	-	12.40
3	CoSe 01421	-	12.61	11.75	-	-	12.18
	GM	-	12.97	11.96	-	-	12.47
	SE	-	0.54	0.36	-	-	
	CD	-	1.64	1.12	-	-	
	CV	-	7.20	5.34	-	-	

Table 5.1.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	107.00	97.30	94.10	142.42	74.60	103.08
2	CoP 14437	115.00	108.22	112.97	134.14	64.53	106.97
3	CoSe 14451	114.00	103.17	107.17	125.75	64.60	102.94
4	CoSe 14454	126.00	109.12	120.37	126.66	77.50	111.93
	Standards						
1	CoLk 94184	113.00	101.90	115.93	138.64	65.57	107.01
2	CoSe 95422	106.00	95.24	112.85	121.13	69.80	101.00
3	CoSe 01421	94.00	89.65	93.73	119.07	75.63	94.42
	GM	111.00	100.66	108.16	126.28	70.32	103.28
	SE	1.42	3.10	4.00	-	4.74	
	CD	4.37	9.67	12.15	-	9.86	
	CV	4.97	5.34	5.97	-	8.26	

Table 5.1.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	202	192	240	239	237	222.01
2	CoP 14437	202	223	187	238	245	218.94
3	CoSe 14451	207	241	270	232	243	238.64
4	CoSe 14454	209	223	212	274	233	230.20
	Standards	-					
1	CoLk 94184	203	246	217	274	228	233.53
2	CoSe 95422	205	218	197	231	248	219.56
3	CoSe 01421	177	246	215	223	214	215.00
	GM	201	227	220	242	235	225.06
	SE	3.95	4.45	1.01	-	2.50	
	CD	12.17	13.87	24.62	-	5.20	
	CV	3.41	3.40	2.96	-	1.30	

Table 5.1.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	2.30	2.21	2.70	2.09	2.57	2.37
2	CoP 14437	2.20	2.08	2.36	2.24	2.67	2.31
3	CoSe 14451	2.20	2.17	2.20	2.19	2.60	2.27
4	CoSe 14454	2.20	2.07	2.40	1.96	2.50	2.23
	Standards						
1	CoLk 94184	2.10	2.37	2.23	2.17	2.50	2.27
2	CoSe 95422	2.00	2.26	2.33	1.98	2.47	2.21
3	CoSe 01421	1.90	2.21	2.30	2.04	2.43	2.18
	GM	2.10	2.20	2.36	2.06	2.53	2.25
	SE	0.05	0.05	8.11	-	0.09	
	CD	0.16	0.16	0.19	-	0.19	
	CV	4.34	3.99	4.80	-	4.39	

Table 5.1.13. Single Cane Weight (kg.) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	0.69	0.88	1.22	0.66	1.12	0.91
2	CoP 14437	0.72	0.80	0.73	0.66	1.40	0.86
3	CoSe 14451	0.74	0.91	1.06	0.69	1.39	0.96
4	CoSe 14454	0.75	0.81	0.90	0.70	0.97	0.83
	Standards						
1	CoLk 94184	0.66	0.81	0.83	0.76	1.24	0.86
2	CoSe 95422	0.65	0.77	0.82	0.70	1.23	0.83
3	CoSe 01421	0.63	0.78	0.92	0.67	0.92	0.78
	GM	0.69	0.82	0.93	0.71	1.18	0.87
	SE	0.01	0.04	0.05	-	0.05	
	CD	0.03	0.11	0.17	-	0.11	
	CV	2.74	7.37	10.70	-	5.23	

Table 5.1.14. CCS (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	10.93	12.53	11.60	11.37	9.33	11.15
2	CoP 14437	10.82	12.34	11.04	10.99	10.45	11.13
3	CoSe 14451	11.01	12.41	10.16	11.00	10.69	11.05
4	CoSe 14454	11.12	11.80	10.73	11.08	9.55	10.86
	Standards						
1	CoLk 94184	11.12	12.94	11.31	11.40	9.70	11.29
2	CoSe 95422	11.11	11.26	11.50	10.87	10.49	11.05
3	CoSe 01421	10.83	12.30	11.03	11.04	9.10	10.86
	GM	10.10	12.23	11.04	11.10	9.90	10.87
	SE	0.15	0.37	0.311	-	0.34	
	CD	0.46	-	0.95	-	0.71	
	CV	2.38	5.24	4.88	-	4.23	

Table 5.1.15. Sucrose (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	16.02	18.25	16.40	16.75	14.81	16.45
2	CoP 14437	15.87	17.88	16.09	16.21	16.36	16.48
3	CoSe 14451	16.10	17.80	14.51	16.22	16.59	16.24
4	CoSe 14454	16.32	17.00	15.35	16.33	15.15	16.03
	Standards						
1	CoLk 94184	16.26	18.71	16.32	16.78	15.42	16.70
2	CoSe 95422	16.24	16.34	16.48	16.00	16.17	16.25
3	CoSe 01421	15.86	17.72	15.65	16.29	14.60	16.02
	GM	16.10	17.67	15.83	16.36	15.59	16.31
	SE	0.18	0.50	0.41	-	0.33	
	CD	0.56	1.52	1.26	-	0.68	
	CV	1.97	4.90	4.54	-	2.55	

Table 5.1.16. Brix (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	18.65	20.67	17.67	19.67	19.87	19.31
2	CoP 14437	18.49	20.33	18.51	19.11	21.47	19.58
3	CoSe 14451	18.65	19.87	16.19	19.08	21.47	19.05
4	CoSe 14454	19.04	19.47	17.00	19.21	20.33	19.01
	Standards						
1	CoLk 94184	18.82	21.13	18.37	19.68	20.73	19.75
2	CoSe 95422	18.78	18.63	18.30	18.78	20.67	19.03
3	CoSe 01421	18.43	19.90	17.04	19.22	19.93	18.90
	GM	18.69	20.0	17.58	19.23	20.64	19.23
	SE	0.14	0.53	0.44	-	0.34	
	CD	0.43	1.60	1.33	-	0.70	
	CV	1.30	4.56	4.33	-	1.99	

Table 5.1.17. Purity (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	85.92	89.53	92.84	85.16	74.58	85.61
2	CoP 14437	85.81	88.63	86.89	84.82	76.21	84.47
3	CoSe 14451	86.33	89.73	89.55	85.01	77.31	85.59
4	CoSe 14454	85.72	88.87	90.29	85.01	74.51	84.88
	Standards						
1	CoLk 94184	86.36	88.83	88.85	85.26	74.38	84.74
2	CoSe 95422	86.50	87.10	90.12	85.20	78.26	85.44
3	CoSe 01421	86.09	90.03	92.00	84.76	73.36	85.25
	GM	86.10	88.96	90.08	85.07	75.52	85.15
	SE	0.47	0.43	-	-	4.26	
	CD	1.46	1.32	-	-	2.51	
	CV	0.95	0.83	-	-	3.32	

Table 5.1.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	-	135.10	101.50	151.35	77.67	116.41
2	CoP 14437	-	155.08	124.19	140.08	67.57	121.73
3	CoSe 14451	-	137.50	125.92	131.05	67.77	115.56
4	CoSe 14454	-	132.10	139.73	132.41	80.43	121.17
	Standards						
1	CoLk 94184	-	141.25	127.40	144.04	68.37	120.27
2	CoSe 95422	-	122.17	123.95	126.33	73.03	111.37
3	CoSe 01421	-	115.18	132.70	124.74	78.63	112.81
	GM	-	134.05	125.06	131.70	73.35	116.04
	SE	-	3.83	5.01	-	4.66	
	CD	-	11.94	15.20	-	9.68	
	CV	-	4.95	6.94	-	7.77	

Table 5.1.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	172.00	95.60	109.52	147.26	72.40	119.36
2	CoP 14437	181.00	105.65	136.16	135.72	62.80	124.27
3	CoSe 14451	179.00	101.72	138.99	126.29	62.23	121.65
4	CoSe 14454	197.00	103.77	130.24	126.63	74.57	126.44
	Standards						
1	CoLk 94184	176.00	108.15	134.43	138.91	63.00	124.10
2	CoSe 95422	171.00	88.90	130.61	120.46	66.67	115.53
3	CoSe 01421	156.00	79.60	148.24	119.71	70.73	114.86
	GM	176.00	97.63	132.60	126.36	67.49	120.02
	SE	0.92	4.42	5.60	-	4.23	
	CD	2.84	13.78	16.99	-	8.81	
	CV	2.04	7.85	7.31	-	7.68	

Table 5.1.20. Germination (%) at 45 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralikson	Mean
1	CoLk 14206	51.85	37.15	24.06	42.35	33.33	37.75
2	CoP 14437	56.20	39.10	30.47	40.13	38.00	40.78
3	CoSe 14451	53.98	36.70	30.08	37.89	36.67	39.06
4	CoSe 14454	61.67	38.72	25.14	40.85	31.33	39.54
	Standards	-					
1	CoLk 94184	52.87	40.30	23.40	41.65	36.00	38.84
2	CoSe 95422	49.63	36.89	27.47	40.04	37.33	38.27
3	CoSe 01421	44.54	32.60	26.13	36.12	29.33	33.74
	GM	52.96	37.35	26.68	39.27	34.57	38.17
	SE	0.35	1.68	1.84	-	3.59	
	CD	1.08	5.11	5.61	-	7.46	
	CV	4.10	7.81	12.00	-	12.71	

Table 5.1.21. Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entry	Seorahi	Pusa	Motipur	Bethuadhari	Buralikson
CoLk14206	Good	Very good	Very good	Good	Very good
CoP 14437	Good	Very good	Very good	Very good	Very good
CoSe 14451	Very good	Good	Very good	Very good	Good
CoSe 14454	Very good	Very good	Very good	Very good	Very good
Standards					
CoLk 94184	Good	Good	Very good	Good	Very good
CoSe 95422	Very good	Very good	Very good	Good	Very good
CoSe 01421	Good	Very good	Good	Good	Not Planted

5.2. ADVANCED VARIETAL TRIAL (EARLY) - RATOON

Centers (5)	Bethuadahari, Buralikson, Motipur, Pusa and Seorahi
Entries (4)	CoLk 14206, CoP 14437, CoSe 14451 and CoSe 14454
Standards (3)	CoLk 94184, CoSe 95422 and CoSe 01421
Design	RBD
Replications	Three
Plot size	Gross : 6m x 8r x 0.75m Net : 5m x 6r x 0.75m
Ratooning time	February / March, 2019
Crop duration	9 months

Results of the previous year:

Four test entries and three standards were evaluated in AVT (Early) I plant trial at five locations of North Central and North East zones during 2018-19 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over the best standard across the zone for CCS yield. The entry CoP 14437 (9.72 t/ha) ranked first in the zone and recorded >10% improvement over the best standard at Pusa and Seorahi centers. For cane yield, none of the test entries recorded >10% improvement in the zone. Test entry CoP 14437 (79.88 t/ha) ranked top in the zone and recorded >10% improvement over the best standard at Pusa and Seorahi centers. For CCS%, none of the test entries recorded >10% improvement in the zone. The standard CoSe 01421 (12.42%) ranked top in the zone which was followed by test entry CoLk 14206 (12.33%) for mean CCS%. For sucrose, none of the test entries recorded >10% improvement in the zone. The standard CoSe 01421 (18.09%) ranked top in the zone, followed by another standard CoLk 94184 (17.89%) for sucrose%. Based on cane yield and juice quality parameters, none of the test entry recorded >10% improvement over the best standard for CCS yield and cane yield or >5% improvement for CCS% and sucrose%. Hence, no qualifying entry was identified in the zone.

Results of the current year:

Four test entries and three standards were evaluated in AVT (Early) ratoon trial at five locations of North Central and North East zones during 2019-20 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over the best standard across the zone for CCS yield. The standard CoP 94184 ranked top in the zone with 8.68 t/ha of mean CCS yield. The test entries CoSe 14451 and CoLk 14437 ranked second and third with 8.43 t/ha and 8.35 t/ha CCS yield and also recorded 14.52% and 19.07% improvement over the best standard respectively at Seorahi center. For cane yield, none of the test entries recorded >10% improvement in the zone. The standard CoLk 94184 ranked top with 69.64 t/ha of mean cane yield in the zone. The test entries CoSe 14451 and CoSe 14454 ranked second and third in the zone with 69.10 t/ha and 68.84 t/ha of mean cane yield and also recorded 18.08% and 22.54% improvement over the best standard respectively at Seorahi center. For CCS%, none of the test entries recorded >5% improvement in the zone. The standard CoLk 94184 ranked first in the zone with 12.48% of mean CCS%. For sucrose%, none of the test entries recorded >5% improvement in the zone. The standard CoLk 94184 ranked first in the zone with 18.07% mean sucrose%. Based on cane yield and juice quality parameters, none of the test entries recorded >10% improvement over the best standard for CCS yield and cane yield or >5% improvement for CCS% and sucrose%. Hence, no qualifying entry was identified in the zone. **The data are presented in table 5.2.1 to 5.2.15.**

Table 5.2.1. CCS at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14206	8.16	8.35	7.91	8.58	8.32	8.26	
2	CoP 14437	9.43*	8.13	5.63	8.63	9.92	8.35	3
3	CoSe 14451	9.07*	9.61	5.85	8.32	9.28	8.43	2
4	CoSe 14454	9.61*	8.87	6.91	8.50	7.33	8.24	
	Standards							
1	CoLk 94184	7.92	9.92	8.18	9.16	8.20	8.68	1
2	CoSe 95422	7.59	7.50	7.46	7.05	8.44	7.61	
3	CoSe 01421	7.10	7.00	7.34	7.85	7.59	7.38	
	GM	8.41	8.49	7.00	8.02	8.44	8.07	
	SE	0.23	0.35	0.20	-	0.77		
	CD	0.73	1.10	0.62	-	1.61		
	CV	4.87	7.21	5.08	-	11.23		
Qualifying entries at each location								
	1	CoSe 14454				CoP 14437		
	2	CoP 14437						
	3	CoSe 14451						

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoSe 14454 (1), CoP 14437 (2) and CoSe 14451 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard across the zone for CCS yield. The standard CoP 94184 ranked top in the zone with 8.68 t/ha of mean CCS yield. The test entries CoSe 14451 and CoLk 14437 ranked second and third with 8.43 t/ha and 8.35 t/ha CCS yield and also recorded 14.52% and 19.07% improvement over the best standard respectively at Seorahi center. Another test entry CoSe 14454 recorded >10% improvement over best standard at Seorahi center.

Table 5.2.2. Cane Yield at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14206	70.81*	66.37	67.22	62.76	70.33	67.50	
2	CoP 14437	80.59*	66.23	48.59	61.14	79.70	67.25	
3	CoSe 14451	78.37*	76.42	53.77	61.90	75.03	69.10	2
4	CoSe 14454	81.33*	74.86	62.40	61.90	63.73	68.84	3
	Standards							
1	CoLk 94184	66.37	78.10	70.42	64.23	69.07	69.64	1
2	CoSe 95422	64.15	62.91	67.46	56.03	72.77	64.66	
3	CoSe 01421	61.93	61.34	62.40	56.03	64.30	61.20	
	GM	71.94	70.03	61.42	58.76	70.70	66.57	
	SE	0.84	2.32	1.65	-	6.14		
	CD	2.60	7.23	5.02	-	12.77		
	CV	4.58	5.79	4.68	-	10.63		
	Qualifying entries at each location							
	1	CoSe 14454						
	2	CoP 14437						
	3	CoSe 14451						

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoSe 14454 (1), CoP 14437 (1) and CoSe 14451 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard in the zone for cane yield. The standard CoLk 94184 ranked top with 69.64 t/ha of cane yield in the zone. The test entries CoSe 14451 and CoSe 14454 ranked second and third in the zone with 69.10 t/ha and 68.84 t/ha of mean cane yield and also recorded 18.08% and 22.54% improvement over best standard respectively at Seorahi center. Another test entry CoP 14437 recorded >10% improvement over best standard at Seorahi center.

Table 5.2.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14206	11.53	12.59	11.76	13.66	11.84	12.28	3
2	CoP 14437	11.71	12.28	11.59	14.12	12.45	12.43	2
3	CoSe 14451	11.58	12.57	10.89	13.45	12.37	12.17	
4	CoSe 14454	11.81	11.85	11.08	13.74	11.50	12.00	
	Standards							
1	CoLk 94184	11.94	12.71	11.63	14.25	11.86	12.48	1
2	CoSe 95422	11.84	11.94	11.06	12.58	11.59	11.80	
3	CoSe 01421	11.47	11.40	11.76	14.01	11.82	12.09	
	GM	11.70	12.19	11.39	13.61	11.92	12.16	
	SE	0.12	0.24	0.14	-	0.22		
	CD	0.38	0.76	0.42	-	0.47		
	CV	1.85	3.46	2.14	-	2.30		
	Qualifying entries at each location							
	1							
	2							
	3							

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement for CCS% over the best standard in the zone. The standard CoLk 94184 ranked first in the zone with 12.48% of mean CCS%. Test entries CoP 14437 and CoLk 14206 ranked second and third in the zone with 12.43% and 12.28% improvement for mean CCS% across the locations respectively.

Table 5.2.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14206	16.82	18.17	17.12	19.62	17.39	17.82	3
2	CoP 14437	17.15	17.69	16.90	20.29	18.22	18.05	2
3	CoSe 14451	16.86	18.18	15.50	19.35	18.20	17.62	
4	CoSe 14454	17.16	17.08	15.94	19.71	17.03	17.38	
	Standards							
1	CoLk 94184	17.35	18.31	16.90	20.39	17.39	18.07	1
2	CoSe 95422	17.27	17.24	15.94	18.08	17.15	17.14	
3	CoSe 01421	16.76	16.53	17.26	20.17	17.18	17.58	
	GM	17.05	17.69	16.50	19.55	17.51	17.66	
	SE	0.16	0.32	0.27	-	0.23		
	CD	0.51	1.01	0.83	-	0.47		
	CV	1.69	3.18	2.87	-	1.59		
	Qualifying entries at each location							
	1							
	2							
	3							

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement for sucrose% over the best standard in the zone. The standard CoLk 94184 ranked first in the zone with 18.07% mean sucrose%. Test entries CoP 14437 and CoLk 14206 ranked second and third in the zone with 18.05% and 17.82% improvement for mean CCS% across the locations respectively.

Table 5.2.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	19.40	20.47	19.64	21.86	20.33	20.34
2	CoP 14437	19.94	19.87	19.44	22.67	21.13	20.61
3	CoSe 14451	19.37	20.60	16.95	21.68	21.33	19.99
4	CoSe 14454	19.61	19.23	17.84	21.93	20.20	19.76
	Standards						
1	CoLk 94184	19.86	20.60	19.31	22.55	20.27	20.52
2	CoSe 95422	19.88	19.47	17.88	20.19	20.33	19.55
3	CoSe 01421	19.39	18.80	20.11	22.60	19.67	20.11
	GM	19.64	19.86	18.74	21.78	20.47	20.10
	SE	0.15	0.32	0.50	-	0.18	
	CD	0.48	1.01	1.99	-	0.38	
	CV	1.37	2.83	4.64	-	1.09	

Table 5.2.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	86.71	88.80	87.15	89.75	85.55	87.59
2	CoP 14437	86.01	89.07	86.92	89.50	86.21	87.54
3	CoSe 14451	87.04	88.33	91.71	89.25	85.31	88.33
4	CoSe 14454	87.49	88.77	89.38	89.88	84.30	87.96
	Standards						
1	CoLk 94184	87.38	88.87	87.56	90.42	85.82	88.01
2	CoSe 95422	86.77	88.53	89.15	89.55	84.38	87.68
3	CoSe 01421	86.45	87.93	85.81	89.25	87.38	87.36
	GM	86.84	88.61	88.24	89.74	85.56	87.80
	SE	0.28	0.55	1.10	-	1.17	
	CD	0.87	1.67	3.33	-	2.44	
	CV	0.56	1.07	2.15	-	1.68	

Table 5.2.7. Pol % cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	-	14.00	13.38	-	-	13.69
2	CoP 14437	-	13.73	12.97	-	-	13.35
3	CoSe 14451	-	13.94	11.97	-	-	12.96
4	CoSe 14454	-	13.06	12.33	-	-	12.70
	Standards						
1	CoLk 94184	-	14.20	13.06	-	-	13.63
2	CoSe 95422	-	13.26	12.30	-	-	12.78
3	CoSe 01421	-	12.78	13.20	-	-	12.99
	GM	-	13.57	12.74	-	-	13.16
	SE	-	0.31	-	-	-	
	CD	-	0.97	-	-	-	
	CV	-	4.01	-	-	-	

Table 5.2.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	-	56.10	57.78	-	-	56.94
2	CoP 14437	-	59.50	57.14	-	-	58.32
3	CoSe 14451	-	55.15	56.62	-	-	55.89
4	CoSe 14454	-	56.22	57.48	-	-	56.85
	Standards					-	
1	CoLk 94184	-	54.13	59.04	-	-	56.59
2	CoSe 95422	-	53.00	60.21	-	-	56.61
3	CoSe 01421	-	54.25	60.40	-	-	57.33
	GM	-	55.48	58.38	-	-	56.93
	SE	-	2.72	1.26	-	-	
	CD	-	5.08	3.84	-	-	
	CV	-	8.50	3.75	-	-	

Table 5.2.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	-	12.96	11.81	-	-	12.39
2	CoP 14437	-	12.45	13.24	-	-	12.85
3	CoSe 14451	-	13.32	12.82	-	-	13.07
4	CoSe 14454	-	13.51	12.64	-	-	13.08
	Standards					-	
1	CoLk 94184	-	13.85	12.73	-	-	13.29
2	CoSe 95422	-	13.10	12.84	-	-	12.97
3	CoSe 01421	-	12.72	13.52	-	-	13.12
	GM	-	13.13	12.80	-	-	12.97
	SE	-	0.45	0.24	-	-	
	CD	-	1.37	0.75	-	-	
	CV	-	5.96	3.36	-	-	

Table 5.2.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	103.00	88.70	91.64	122.19	67.57	94.62
2	CoP 14437	112.00	92.23	107.30	116.43	63.14	98.22
3	CoSe 14451	105.00	95.85	119.02	106.93	60.96	97.55
4	CoSe 14454	122.00	96.15	101.13	108.74	75.51	100.71
	Standards						
1	CoLk 94184	110.00	103.1	96.08	119.77	62.31	98.25
2	CoSe 95422	102.00	92.85	155.15	105.26	71.94	105.44
3	CoSe 01421	90.00	85.45	149.36	100.70	68.88	98.88
	GM	106.00	93.48	117.10	108.58	67.19	98.47
	SE	1.21	2.67	8.39	-	6.44	
	CD	3.75	8.32	25.45	-	13.39	
	CV	4.46	4.95	12.41	-	11.74	

Table 5.2.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	195.00	196.57	225.00	219.33	221.67	211.51
2	CoP 14437	203.00	207.00	208.33	219.67	242.67	216.13
3	CoSe 14451	213.00	240.67	241.66	210.67	244.67	230.13
4	CoSe 14454	218.00	213.48	245.00	236.67	223.67	227.36
	Standards						
1	CoLk 94184	205.00	213.67	233.33	238.33	222.67	222.60
2	CoSe 95422	197.00	199.78	206.66	214.33	240.00	211.55
3	CoSe 01421	177.00	192.40	221.66	206.33	210.33	201.54
	GM	201.00	209.0	225.95	219.66	229.38	217.01
	SE	5.35	5.10	7.84	-	2.95	
	CD	16.14	15.89	23.78	-	6.13	
	CV	4.59	4.24	6.01	-	1.57	

Table 5.2.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	2.20	2.21	2.40	1.83	2.30	2.19
2	CoP 14437	2.30	2.12	2.26	1.97	2.60	2.25
3	CoSe 14451	2.20	2.10	2.06	1.87	2.43	2.13
4	CoSe 14454	2.30	2.03	2.26	1.75	2.40	2.15
	Standards						
1	CoLk 94184	2.00	2.61	2.06	1.88	2.43	2.20
2	CoSe 95422	2.03	1.98	2.03	1.73	2.33	2.02
3	CoSe 01421	2.00	2.09	2.26	1.74	2.23	2.06
	GM	2.10	2.16	2.19	1.78	2.39	2.12
	SE	0.04	0.05	0.09	-	0.05	
	CD	0.14	0.15	0.30	-	0.11	
	CV	3.86	3.78	7.69	-	2.66	

Table 5.2.13. Single Cane Weight (kg.) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14206	0.67	0.75	1.15	0.53	1.08	0.84
2	CoP 14437	0.74	0.72	0.76	0.55	1.29	0.81
3	CoSe 14451	0.74	0.80	0.80	0.51	1.27	0.82
4	CoSe 14454	0.75	0.78	1.05	0.54	0.89	0.80
	Standards						
1	CoLk 94184	0.66	0.76	0.77	0.60	1.16	0.79
2	CoSe 95422	0.64	0.68	0.64	0.51	1.09	0.71
3	CoSe 01421	0.63	0.72	0.96	0.51	0.91	0.75
	GM	0.69	0.74	0.87	0.54	1.10	0.79
	SE	0.01	0.04	0.07	-	0.08	
	CD	0.03	0.14	0.21	-	0.17	
	CV	2.45	10.33	14.00	-	9.31	

Table 5.2.14. Number of Shoots ('000/ha) at 180 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson	Mean
1	CoLk 14206	-	145.10	102.12	129.45	70.95	111.91
2	CoP 14437	-	155.10	125.55	122.65	67.43	117.68
3	CoSe 14451	-	141.60	136.16	114.43	65.29	114.37
4	CoSe 14454	-	139.85	110.63	116.39	79.23	111.53
	Standards						
1	CoLk 94184	-	150.64	126.66	126.43	65.98	117.43
2	CoSe 95422	-	129.70	177.23	110.71	73.42	122.77
3	CoSe 01421	-	122.15	166.66	107.09	76.18	118.02
	GM	-	140.59	134.57	114.74	71.21	115.28
	SE	-	4.44	6.64	-	5.62	
	CD	-	13.83	20.15	-	11.68	
	CV	-	5.47	8.55	-	9.66	

Table 5.2.15. Number of Tillers ('000/ha) at 90 days

S. No.	Entries	Seorahi*	Pusa	Motipur	Bethua dahari	Buralikson	Mean
1	CoLk 14206	169.00	103.17	115.68	135.28	63.52	117.33
2	CoP 14437	181.00	115.96	149.11	129.07	58.35	126.70
3	CoSe 14451	173.00	110.88	161.69	121.25	56.50	124.66
4	CoSe 14454	187.00	105.70	131.22	121.77	73.08	123.75
	Standards						
1	CoLk 94184	175.00	112.68	155.15	132.47	65.24	128.11
2	CoSe 95422	174.00	97.23	217.06	116.07	65.15	133.90
3	CoSe 01421	149.00	83.90	189.19	112.99	68.44	120.70
	GM	173.00	104.22	159.87	120.51	64.32	124.38
	SE	0.90	4.29	5.06	-	4.91	
	CD	2.74	13.37	15.36	-	10.22	
	CV	2.03	7.13	5.48	-	9.36	

* Tillers at 120 days

Table 5.2.16 Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entry	Seorahi	Pusa	Motipur	Bethuadahari	Buralikson
CoLk 14206	Good	Good	Very good	Good	Good
CoP 14437	Very good	Very good	Very good	Very good	Very good
CoSe 14451	Good	Good	Good	Very good	Good
CoSe 14454	Very good	Good	Very good	Very good	Very good
Standards					
CoLk 94184	Excellent	Very good	Very good	Very good	Good
CoSe 95422	Very good	Good	Excellent	Very good	Good
CoSe 01421	Good	Average	Good	Good	Not Planted

5.3. ADVANCED VARIETAL TRIAL (EARLY)
Mean of two plant and one ratoon crops (2018-20)

In the North Central and North East zones, four early clones were evaluated along with three standards during the crop seasons 2018–20. The trial was conducted by five centres across the zone. Pooled data of two plant and one ratoon trials of five centres are presented in tables **5.3.1.** to **5.3.4.** and in figures **5.3.1.** to **5.3.4.** The salient results pertaining to CCS (t/ha), cane yield (t/ha), CCS% and sucrose% are given below.

Commercial Cane Sugar (t/ha):

None of the test entries recorded >10% improvement over the best standard for CCS yield across locations based on weighted mean. CoSe 14451 (9.50 t/ha) ranked first in the zone and recorded 13.15% improvement over the best standard CoLk 94184 at Seorahi center. The standard CoLk 94184 (9.44 t/ha) ranked second in the zone. The test entry CoLk 14206 (9.43 t/ha) ranked third in the zone for sugar yield.

Cane Yield (t/ha):

None of the test entries recorded >10% improvement over the best standard for cane yield across locations based on weighted mean. CoSe 14451 (78.95 t/ha) ranked first in the zone and recorded 15.75% and 12.96% improvement over the best standard CoLk 94184 (75.87 t/ha) at Seorahi and Pusa centers respectively. Another test entry, CoLk 14206 (76.64 t/ha) ranked second across the zone. CoSe 14454 (76.57 t/ha) ranked third in the zone and also recorded 19.33% improvement over the best standard at Seorahi centre.

Commercial Cane Sugar (%):

None of the test entries recorded >5% improvement over the best standard for CCS% across locations based on weighted mean. The standard CoLk 94184 ranked first in the zone with 12.46% mean CCS%, followed by another standard CoSe 01421 (12.33%). Test entry CoLk 14206 ranked third with 12.32% mean CCS% across the zone.

Sucrose (%):

In the zone, none of the test entries recorded >5% improvement over the best standard for sucrose% on weighted mean basis. The standard CoLk 94184 ranked first in the zone with 18.08% mean sucrose%. The test entries CoLk 14206 (17.89%) and the standard CoSe 01421 (17.88%) ranked second and third respectively in the zone.

Overall performance:

Based on the pooled mean of two plant and one ratoon crops in the zone, CoSe 14451 was the best test entry across the zone and also numerically superior for CCS (t/ha) and cane yield (t/ha), however it recorded numerically inferior compared to the best standard for CCS% and sucrose%. Hence, none of the test entries was identified as qualifying entry across locations in the zone.

Table 5.3.1. CCS at harvest (t/ha) - Pooled data of two plant and one ratoon crops

Sl No.	Entries	Seorahi				Pusa				Motipur				Bethuadahari			
		IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean
1	CoLk 14206	8.92	10.04	8.16	9.04	11.52	10.86	8.35	10.24	8.23	13.02	7.91	9.72	8.80	9.78	8.58	9.05
2	CoP 14437	9.96	10.07	9.43	9.82	13.03	10.23	8.13	10.46	8.33	9.65	5.63	7.87	8.46	9.31	8.63	8.80
3	CoSe 14451	9.97	10.22	9.07	9.75	11.62	11.51	9.61	10.91	8.42	12.08	5.85	8.78	8.45	9.40	8.32	8.72
4	CoSe 14454	10.14	10.62	9.61	10.12	11.02	10.60	8.87	10.16	8.45	11.55	6.91	8.97	8.15	9.24	8.50	8.63
Standards																	
1	CoLk 94184	8.61	9.32	7.92	8.62	9.71	11.20	9.92	10.28	9.07	10.61	8.18	9.29	9.34	9.88	9.16	9.46
2	CoSe 95422	8.24	8.77	7.59	8.20	8.86	8.20	7.50	8.19	8.03	11.57	7.46	9.02	6.90	7.38	7.05	7.11
3	CoSe 01421	8.21	8.08	7.10	7.80	8.50	9.46	7.00	8.32	9.25	11.15	7.34	9.25	7.79	8.17	7.85	7.94
	GM	9.15	9.59	8.41	9.05	10.61	10.29	8.48	9.80	8.54	11.38	7.04	8.99	8.27	9.02	8.30	8.53
Sl No.	Entries	Buralikson				GM (Wt. Avg.)	Rank										
		IP	IIP	R	Mean												
1	CoLk 14206	9.00	9.49	8.32	8.94	9.43	3										
2	CoP 14437	8.83	11.34	9.92	10.03	9.38											
3	CoSe 14451	8.26	11.22	9.28	9.59	9.50	1										
4	CoSe 14454	9.45	9.39	7.33	8.72	9.26											
Standards																	
1	CoLk 94184	9.65	10.04	8.20	9.30	9.44	2										
2	CoSe 95422	9.06	10.73	8.44	9.41	8.38											
3	CoSe 01421		8.63	7.59	8.11	8.33											
	GM	9.04	10.12	8.44	9.16												

Table 5.3.2. Cane yield at harvest (t/ha) - Pooled data of two plant and one ratoon crops

Sl No.	Entries	Seorahi				Pusa				Motipur				Bethuadahari			
		IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean
1	CoLk 14206	74.37	84.74	70.81	76.64	84.29	86.06	66.37	78.91	70.91	110.01	67.22	82.71	73.31	72.57	62.76	69.55
2	CoP 14437	84.00	85.04	80.59	83.21	95.54	86.06	66.23	82.61	72.01	82.76	48.59	67.79	71.26	70.75	61.14	67.72
3	CoSe 14451	82.22	88.74	78.37	83.11	93.28	93.58	76.42	87.76	73.78	106.07	53.77	77.87	70.33	70.43	61.90	67.55
4	CoSe 14454	86.22	89.48	81.33	85.68	83.53	88.17	74.86	82.19	73.97	101.13	62.40	79.17	69.78	70.42	61.90	67.37
Standards																	
1	CoLk 94184	70.96	78.07	66.37	71.80	72.84	82.14	78.10	77.69	76.72	91.76	70.42	79.63	75.26	74.36	64.23	71.28
2	CoSe 95422	70.52	75.11	64.15	69.93	69.04	74.15	62.91	68.70	71.21	99.28	67.46	79.32	60.44	62.10	56.03	59.52
3	CoSe 01421	68.74	69.04	61.93	66.57	61.94	75.55	61.34	66.28	79.27	95.71	62.40	79.13	63.04	62.77	56.03	60.61
	GM	76.72	81.46	71.94	76.70	80.07	83.67	69.46	77.73	73.98	98.10	61.75	77.95	69.06	69.06	60.57	66.23
Sl No.	Entries	Buralikson				GM (Wt. Avg.)	Rank										
		IP	IIP	R	Mean												
1	CoLk 14206	82.39	70.33	73.31	75.34	76.64	2										
2	CoP 14437	89.34	79.70	71.26	80.10	76.30											
3	CoSe 14451	87.80	75.03	70.33	77.72	78.95	1										
4	CoSe 14454	73.50	63.73	69.78	69.00	76.57	3										
Standards																	
1	CoLk 94184	80.03	69.07	75.26	74.79	75.87											
2	CoSe 95422	84.97	72.77	60.44	72.73	71.10											
3	CoSe 01421	68.43	64.30	63.04	65.26	67.86											
	GM	80.92	70.70	69.06	73.56												

Table 5.3.3. CCS (%) at harvest - Pooled data of two plant and one ratoon crops

Sl No.	Entries	Seorahi				Pusa				Motipur				Bethuadahari			
		IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean
1	CoLk 14206	11.99	11.84	11.53	11.79	13.66	12.62	12.59	12.96	11.61	11.83	11.76	11.73	12.01	13.48	13.66	13.05
2	CoP 14437	11.86	11.86	11.71	11.81	13.63	11.88	12.28	12.60	11.57	11.66	11.59	11.61	11.88	13.16	14.12	13.05
3	CoSe 14451	12.13	11.53	11.58	11.75	12.44	12.30	12.57	12.44	11.42	11.39	10.89	11.23	12.02	13.35	13.45	12.94
4	CoSe 14454	11.76	11.87	11.81	11.81	13.18	11.98	11.85	12.34	11.43	11.41	11.08	11.31	11.69	13.12	13.74	12.85
Standards																	
1	CoLk 94184	12.13	11.94	11.94	12.00	13.34	13.63	12.71	13.23	11.81	11.56	11.63	11.67	12.42	13.29	14.25	13.32
2	CoSe 95422	11.69	11.67	11.84	11.73	12.84	11.05	11.94	11.94	11.28	11.66	11.06	11.33	11.42	11.88	12.58	11.96
3	CoSe 01421	11.95	11.70	11.47	11.71	13.71	12.53	11.40	12.55	11.67	11.65	11.76	11.69	12.36	13.02	14.01	13.13
	GM	11.93	11.77	11.70	11.80	13.26	12.28	12.19	12.58	11.54	11.59	11.40	11.51	11.97	13.04	13.69	12.90
Sl No.	Entries	Buralikson				GM (Wt. Avg.)	Rank										
		IP	IIP	R	Mean												
1	CoLk 14206	12.40	11.52	11.84	11.92	12.32	3										
2	CoP 14437	11.55	12.71	12.45	12.24	12.28											
3	CoSe 14451	10.87	12.79	12.37	12.01	12.04											
4	CoSe 14454	12.09	12.78	11.50	12.12	12.11											
Standards																	
1	CoLk 94184	11.65	12.55	11.86	12.02	12.46	1										
2	CoSe 95422	11.71	12.63	11.59	11.98	11.80											
3	CoSe 01421	-	12.62	11.82	12.22	12.33	2										
	GM	11.71	12.51	11.92	12.07												

* Trial not conducted

Table 5.3.4. Sucrose (%) at harvest - Pooled data of two plant and one ratoon crops

Sl No.	Entries	Seorahi				Pusa				Motipur				Bethuadahari			
		IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean
1	CoLk 14206	17.27	17.07	16.82	17.05	19.70	18.14	18.17	18.67	17.26	17.18	17.12	17.19	17.45	19.51	19.62	18.86
2	CoP 14437	17.22	17.15	17.15	17.17	19.70	17.31	17.69	18.23	16.98	16.70	16.90	16.86	17.22	19.05	20.29	18.85
3	CoSe 14451	17.65	16.72	16.86	17.08	18.06	17.65	18.18	17.96	16.62	16.32	15.50	16.15	17.32	19.24	19.35	18.64
4	CoSe 14454	17.07	17.17	17.16	17.13	19.07	17.27	17.08	17.81	16.46	16.48	15.94	16.29	16.87	18.92	19.71	18.50
	Standards																
1	CoLk 94184	17.57	17.26	17.35	17.39	19.36	19.66	18.31	19.11	17.63	16.62	16.90	17.05	17.91	19.15	20.39	19.15
2	CoSe 95422	16.93	16.98	17.27	17.06	18.62	16.09	17.24	17.32	16.21	16.70	15.94	16.28	16.54	17.23	18.08	17.28
3	CoSe 01421	17.37	16.90	16.76	17.01	19.78	17.95	16.53	18.09	17.34	16.70	17.26	17.10	17.88	18.85	20.17	18.97
	GM	17.30	17.04	17.05	17.13	19.18	17.72	17.60	18.17	16.93	16.67	16.51	16.70	17.31	18.85	19.66	18.61
Sl No.	Entries	Buralikson				GM (Wt. Avg)	Rank										
		IP	IIP	R	Mean												
1	CoLk 14206	17.68	17.27	17.39	17.45	17.89	2										
2	CoP 14437	16.78	18.74	18.22	17.91	17.84											
3	CoSe 14451	16.33	18.85	18.20	17.79	17.49											
4	CoSe 14454	17.15	18.54	17.03	17.57	17.48											
	Standards																
1	CoLk 94184	16.98	18.39	17.39	17.59	18.08	1										
2	CoSe 95422	16.94	18.38	17.15	17.49	17.10											
3	CoSe 01421	-	18.19	17.18	17.69	17.88	3										
	GM	16.98	18.34	17.51	17.64												

Fig: 5.3.1. Mean performance of entries in two plant and one ratoon crops - CCS at harvest (t/ha)

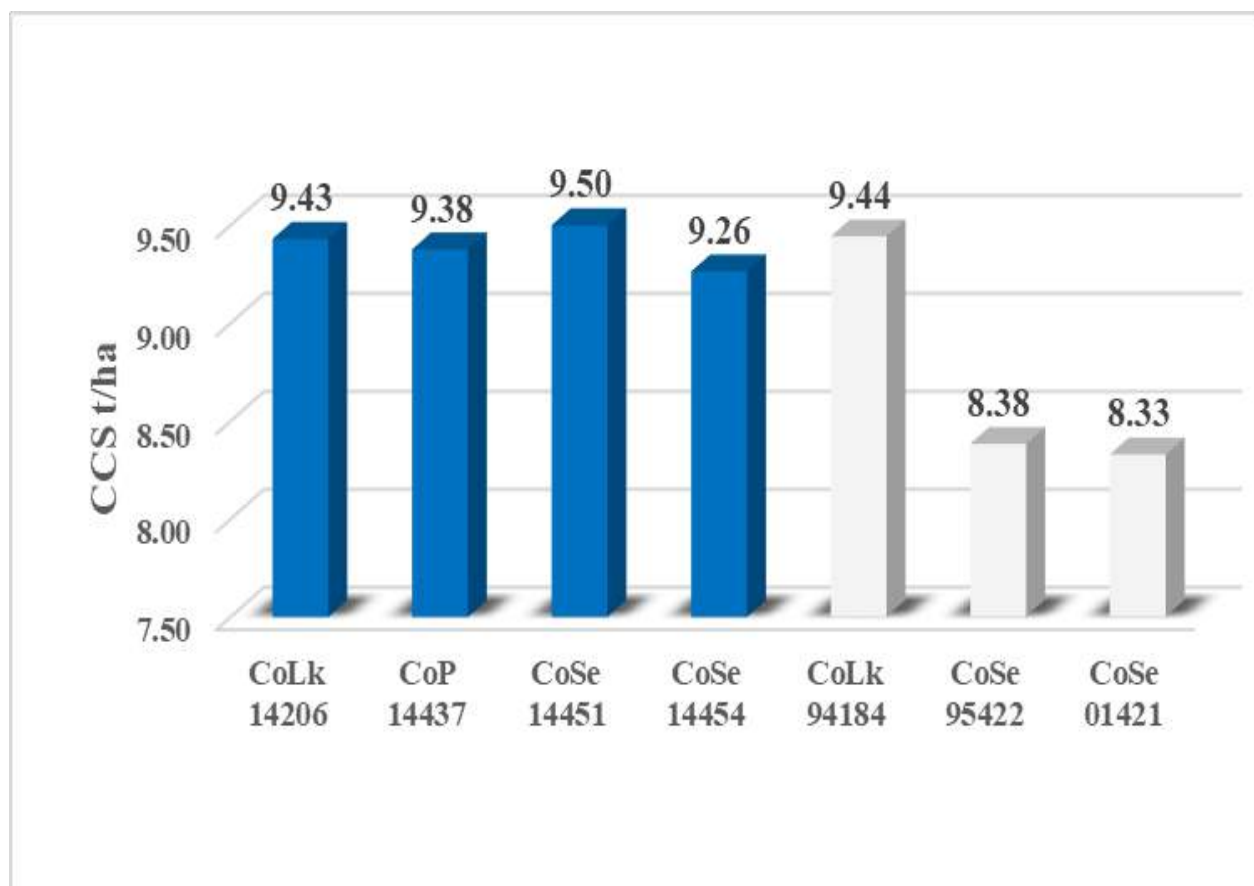


Fig: 5.3.2.Mean performance of entries in two plant and one ratoon crops- Cane yield at harvest (t/ha)

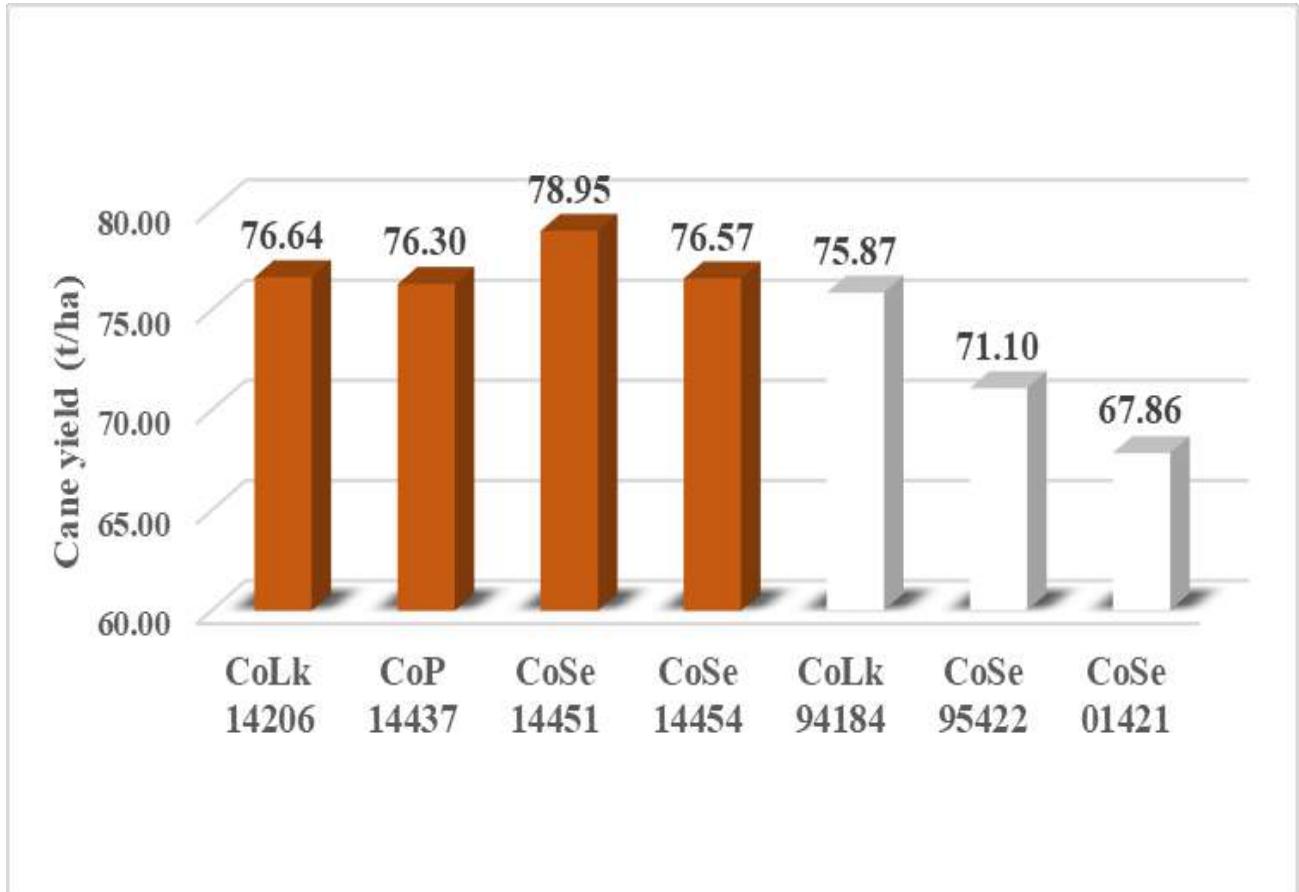


Fig 5.3.3. Mean performance of entries in two plant and one ratoon crops - CCS% at harvest

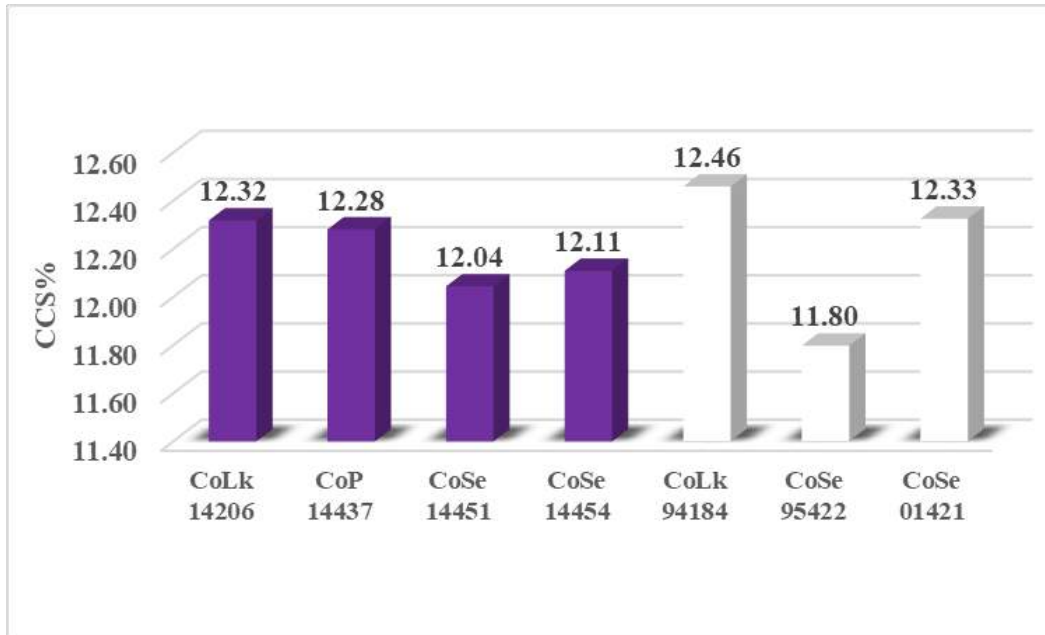
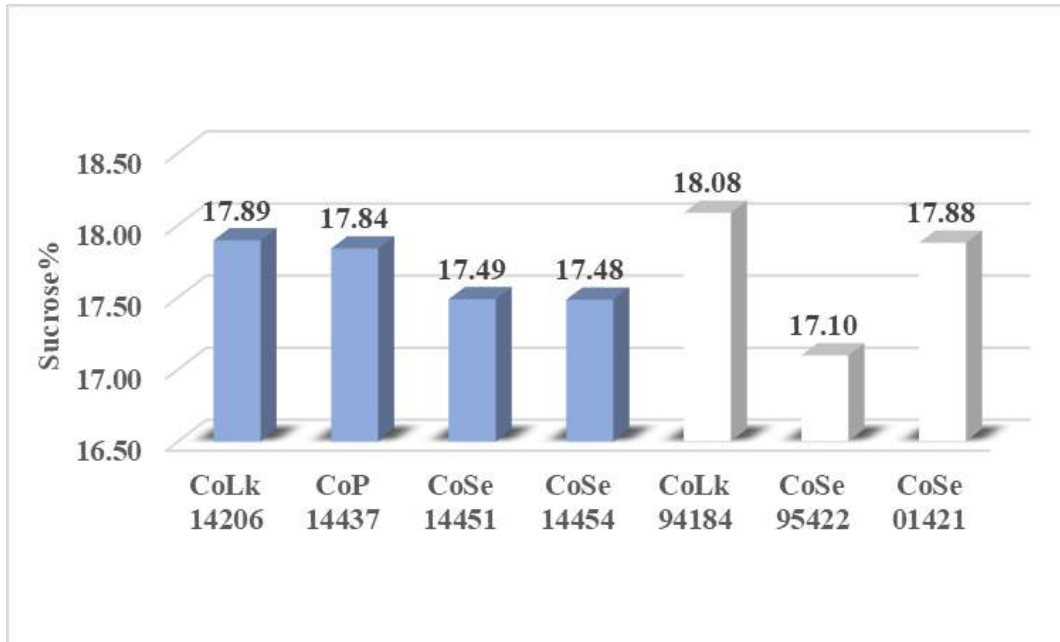


Fig 5.3.4. Mean performance of entries in two plant and one ratoon crops - Sucrose% at harvest



5.4. ADVANCED VARIETAL TRIAL (EARLY) – I PLANT

Centers (4)	Bethuadahari, Motipur and Pusa and Seorahi
Entries (5)	CoP 15436, CoSe 15452, CoSe 15455, CoLk 15466 and CoLk 15467
Standards (3)	CoLk 94184, CoSe 95422 and CoSe 01421
Design	RBD
Replications	Three
Plot size	Gross : 6m x 8r x 0.75m Net : 5m x 6r x 0.75m
Seed rate	12 buds per meter
Date of planting	February - March, 2019
Crop duration	10 months

Results of the previous year:

Nine test entries and three standards were evaluated in IVT (Early) trial at four locations of North Central and North East zones during 2018-19 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over the best standard for CCS yield in the zone. The entry CoP 15436 (9.37 t/ha) ranked first in the zone and recorded >10% improvement over the best standard at Pusa center. The test entries CoLk 15467 (9.14 t/ha) ranked second in the zone and recorded significantly superior over the best standard at Seorahi center. For cane yield, none of the test entries recorded >10% improvement in the zone. The entries CoP 15436 (79.36 t/ha) and CoSe 15455 (75.14 t/ha) ranked first and second respectively and both recorded >10% improvement over the best standard at Pusa center. For CCS%, none of the test entries recorded >5% improvement in the zone. The test entries CoLk 15467 (12.61%) ranked top followed by CoSe 15451 (12.59%). For juice sucrose%, none of the test entries recorded >5% improvement in the zone. CoLk 15467 (18.45%) was top ranked entry and numerically superior over the best standard (CoLk 94184) across locations. Based on cane yield and juice quality parameters, none of the test entries recorded >10% improvement over the best standard for CCS yield and cane yield and >5% improvement for CCS% and sucrose %. No test entry was selected as qualifying entry in the zone.

Results of the current year:

Five test entries and three standards were evaluated in AVT (Early) I plant trial at four locations of North Central and North East zones during 2019-20 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over the best standard for CCS yield in the zone. The test entry CoLk 15466 ranked top in the zone with 11.31 t/ha of mean CCS yield across the locations and also recorded 17.46% improvement over the best standard at Seorahi center. Test entry CoSe 15452 and standard CoLk 94184 ranked second and third with 10.74 t/ha and 10.54 t/ha of mean CCS yield respectively in the zone. For cane yield, none of the test entries recorded >10% improvement in the zone. The test entry CoLk 15466 ranked top in the zone with 93.01 t/ha of mean cane yield in the zone and also recorded 10.04% and 13.48% improvement over the best standard at Seorahi and Motipur centers respectively. Test entries CoSe 15452 and CoP 15436 ranked second and third with 88.63 t/ha and 87.97 t/ha of mean cane yield and recorded 18.23% and 15.30% improvement over the best standard at Seorahi center respectively. For CCS%, none of the test entries recorded >5% improvement across locations. The test entry CoLk 15466 ranked top in the zone with 12.28% of mean CCS% in the zone and recorded 6.80% improvement over best standard at Seorahi center. For sucrose%, none of the test entries recorded >5% improvement across locations. The test entry CoLk 15466 ranked top in the zone with 17.83% mean sucrose %. Based on cane yield and juice quality parameters, none of the test entries recorded >10% improvement over best standard for CCS yield and cane yield or >5% improvement for CCS% and sucrose%. Hence, no test entry was selected as qualifying entry in the zone. **The data are presented in table 5.4.1 to 5.4.20.**

Table 5.4.1. CCS (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean	Overall rank
1	CoP 15436	9.69*	10.35	12.17	8.78	10.25	
2	CoSe 15452	10.35*	10.85	13.37*	8.39	10.74	2
3	CoSe 15455	9.20*	9.51	13.37*	7.88	9.99	
4	CoLk 15466	9.62*	13.74	13.36*	8.50	11.31	1
5	CoLk 15467	9.70*	9.22	13.22	8.44	10.15	
	Standards						
1	CoLk 94184	8.19	12.81	12.4	8.77	10.54	3
2	CoSe 95422	8.09	8.44	11.29	7.45	8.82	
3	CoSe 01421	7.90	8.35	12.18	6.98	8.85	
	GM	9.09	10.41	12.67	7.73	9.98	
	SE	0.22	0.60	0.48	-		
	CD	0.69	1.83	1.44	-		
	CV	4.33	9.92	6.54	-		
Top three qualifying entries at each locations							
	1	CoSe 15452					
	2	CoLk 15467					
	3	CoP 15436					

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoSe 15452 (1), CoLk 15467 (1), CoP 15436 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard for CCS yield in the zone. The test entry CoLk 15466 ranked top in the zone with 11.31 t/ha of mean CCS yield across the locations and also recorded 17.46% improvement over best standard at Seorahi center. Test entries CoSe 15452 and standard CoLk 94184 ranked second and third with 10.74 t/ha and 10.54 t/ha of mean CCS yield respectively and CoSe 15452 recorded 26.37% improvement over best standard at Seorahi center. Test entries CoLk 15467 and CoP 15436 recorded >10% improvement over best standard at Seorahi center.

Table 5.4.2. Cane Yield (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean	Overall rank
1	CoP 15436	83.36	80.87	114.58*	73.06	87.97	3
2	CoSe 15452	85.48	85.17	113.47*	70.39	88.63	2
3	CoSe 15455	80.89	64.37	115.14*	65.04	81.36	
4	CoLk 15466	79.56	101.80	119.80*	70.86	93.01	1
5	CoLk 15467	81.48	69.34	112.48*	70.97	83.57	
	Standards						
1	CoLk 94184	72.30	96.10	105.57	71.40	86.34	
2	CoSe 95422	71.56	66.91	104.09	64.26	76.71	
3	CoSe 01421	67.55	66.85	103.72	62.35	75.12	
	GM	77.76	78.93	111.11	66.00	83.45	
	SE	6.33	2.62	2.01	-		
	CD	19.23	8.04	6.02	-		
	CV	3.17	5.76	3.13	-		
Top three qualifying entries at each locations							
1		CoSe 15452		CoLk 15466			
2		CoP 15436					
3		CoLk 15467					

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoSe 15452 (1), CoP 15436 (1), CoLk 15467 (1) and CoLk 15466 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard for cane yield in the zone. The test entry CoLk 15466 ranked top in the zone with 93.01 t/ha of mean cane yield in the zone and also recorded 10.04% and 13.48% improvement over best standard at Seorahi and Motipur centers respectively. Test entries CoSe 15452 and CoP 15436 ranked second and third with 88.63 t/ha and 87.97 t/ha of mean cane yield and recorded 18.23% and 15.30% improvement over the best standard at Seorahi center respectively. CoLk 15467 recorded >10% improvement over the best standard at Seorahi center.

Table 5.4.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean	Overall rank
1	CoP 15436	11.64	12.80	10.65	12.02	11.78	
2	CoSe 15452	12.10	12.74	11.77	11.92	12.13	
3	CoSe 15455	11.38	12.71	11.23	12.12	11.86	
4	CoLk 15466	12.10	13.49	11.53	11.99	12.28	1
5	CoLk 15467	11.91	13.30	11.76	11.89	12.22	2
	Standards						
1	CoLk 94184	11.33	13.32	11.74	12.29	12.17	3
2	CoSe 95422	11.32	12.62	10.83	11.59	11.59	
3	CoSe 01421	11.70	12.32	11.74	11.19	11.74	
	GM	11.69	12.91	11.40	11.69	11.92	
	SE	0.19	0.27	0.40	-		
	CD	0.59	0.81	1.21	-		
	CV	2.89	3.56	6.13	-		
Top three qualifying entries at each locations							
	1	CoSe 15452					
	2	CoLk 15466					
	3	CoLk 15467					

No. of locations where an entry recorded >5% improvement: CoSe 15452 (1), CoLk 15466 (1) and CoLk 15467 (1).

Performance across the locations: None of the test entries recorded >5% improvement over the best standard for CCS% across locations. The test entry CoLk 15466 ranked top in the zone with 12.28% of mean CCS% in the zone and recorded 6.80% improvement over best standard at Seorahi center. Test entry CoLk 15467 and standard CoLk 94184 ranked second and third in the zone with 12.22% and 12.13% mean CCS% respectively and CoLk 15467 recorded 5.12% improvement over best standard at Seorahi center respectively.

Table 5.4.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean	Overall rank
1	CoP 15436	16.83	18.50	15.54	17.34	17.05	
2	CoSe 15452	17.50	18.48	17.25	17.19	17.61	3
3	CoSe 15455	16.48	18.35	16.24	17.43	17.13	
4	CoLk 15466	17.53	19.46	16.98	17.33	17.83	1
5	CoLk 15467	17.26	19.25	17.12	17.19	17.71	2
	Standards						
1	CoLk 94184	16.41	18.89	17.18	17.71	17.55	
2	CoSe 95422	16.42	18.24	15.70	16.77	16.78	
3	CoSe 01421	16.88	18.08	16.87	16.23	17.02	
	GM	16.91	18.66	16.61	16.90	17.27	
	SE	0.30	0.31	0.62	-		
	CD	0.91	0.94	1.88	-		
	CV	3.08	2.88	6.55	-		
	Top three qualifying entries at each locations						
	1						
	2						
	3						

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement over the best standard for sucrose% across locations. The test entry CoLk 15466 ranked top in the zone with 17.83% of mean sucrose%. Test entries CoLk 15467 and CoSe 15452 ranked second and third in the zone with 17.71% and 17.61% of mean sucrose respectively.

Table 5.4.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	19.05	20.93	17.93	19.52	19.36
2	CoSe 15452	19.79	21.07	20.04	19.35	20.06
3	CoSe 15455	18.69	20.73	18.38	19.50	19.33
4	CoLk 15466	19.92	21.93	19.91	19.59	20.34
5	CoLk 15467	19.62	21.83	19.64	19.47	20.14
	Standards					
1	CoLk 94184	18.62	21.20	19.91	19.89	19.91
2	CoSe 95422	18.72	20.60	17.86	19.01	19.05
3	CoSe 01421	19.02	20.67	18.84	18.48	19.25
	GM	19.18	21.12	19.06	19.13	19.62
	SE	0.32	0.40	0.95	-	
	CD	0.99	1.22	2.87	-	
	CV	2.94	3.29	8.68	-	

Table 5.4.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	88.30	88.37	86.59	88.83	88.02
2	CoSe 15452	88.43	87.80	86.19	88.84	87.82
3	CoSe 15455	88.15	88.50	88.66	89.38	88.67
4	CoLk 15466	88.03	88.70	85.33	88.46	87.63
5	CoLk 15467	87.96	88.17	87.17	88.29	87.90
	Standards					
1	CoLk 94184	87.81	89.13	86.28	89.04	88.07
2	CoSe 95422	87.70	88.53	87.86	88.22	88.08
3	CoSe 01421	88.76	87.50	89.86	87.82	88.49
	GM	88.14	88.34	87.29	88.36	88.03
	SE	0.35	0.47	1.97	-	
	CD	1.06	1.43	5.92	-	
	CV	0.68	0.93	3.91	-	

Table 5.4.7. Pol (%) cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	-	14.41	12.04	-	13.23
2	CoSe 15452	-	14.26	13.37	-	13.82
3	CoSe 15455	-	14.12	12.60	-	13.36
4	CoLk 15466	-	15.00	13.11	-	14.06
5	CoLk 15467	-	14.92	13.32	-	14.12
	Standards					
1	CoLk 94184	-	14.33	13.29	-	13.81
2	CoSe 95422	-	14.06	12.25	-	13.16
3	CoSe 01421	-	14.06	13.07	-	13.57
	GM	-	14.40	12.88	-	13.64
	SE	-	0.22	-	-	
	CD	-	0.66	-	-	
	CV	-	2.60	-	-	

Table 5.4.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	-	60.15	60.25	-	60.20
2	CoSe 15452	-	56.65	58.30	-	57.48
3	CoSe 15455	-	54.62	59.50	-	57.06
4	CoLk 15466	-	54.60	62.13	-	58.37
5	CoLk 15467	-	55.30	60.84	-	58.07
	Standards					
1	CoLk 94184	-	53.15	57.96	-	55.56
2	CoSe 95422	-	55.70	59.44	-	57.57
3	CoSe 01421	-	56.10	60.57	-	58.34
	GM	-	55.78	59.87	-	57.83
	SE	-	2.48	0.69	-	
	CD	-	7.54	2.08	-	
	CV	-	7.71	2.01	-	

Table 5.4.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	-	12.10	12.53	-	12.32
2	CoSe 15452	-	12.85	12.51	-	12.68
3	CoSe 15455	-	13.05	12.46	-	12.76
4	CoLk 15466	-	13.02	12.81	-	12.92
5	CoLk 15467	-	12.50	12.19	-	12.35
	Standards					
1	CoLk 94184	-	14.10	12.66	-	13.38
2	CoSe 95422	-	12.90	11.97	-	12.44
3	CoSe 01421	-	12.78	12.54	-	12.66
	GM	-	12.97	12.46	-	12.72
	SE	-	2.52	0.35	-	
	CD	-	1.58	1.07	-	
	CV	-	6.99	4.95	-	

Table 5.4.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	124.00	112.17	154.78	125.46	129.10
2	CoSe 15452	127.00	98.20	135.05	120.58	120.21
3	CoSe 15455	118.00	105.15	147.01	114.43	121.15
4	CoLk 15466	121.00	95.32	150.59	121.56	122.12
5	CoLk 15467	122.00	94.65	149.85	121.61	122.03
	Standards					
1	CoLk 94184	115.00	109.38	114.21	124.19	115.70
2	CoSe 95422	114.00	87.81	123.09	119.26	111.04
3	CoSe 01421	102.00	85.15	139.49	108.49	108.78
	GM	118.00	98.48	139.26	117.31	118.26
	SE	1.00	3.95	5.79	-	
	CD	3.03	12.10	17.35	-	
	CV	3.30	6.95	7.19	-	

Table 5.4.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	170	214	233	263	220.17
2	CoSe 15452	169	154	247	226	198.93
3	CoSe 15455	172	189	253	259	218.33
4	CoLk 15466	171	213	270	265	229.75
5	CoLk 15467	163	176	220	235	198.31
	Standards					
1	CoLk 94184	168	224	275	276	235.72
2	CoSe 95422	164	213	233	219	207.33
3	CoSe 01421	169	203	290	217	219.70
	GM	168	198	253	237	214.06
	SE	4.25	4.48	8.31	-	
	CD	12.90	13.73	24.92	-	
	CV	4.37	3.92	5.69	-	

Table 5.4.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	2.00	2.06	1.96	1.97	2.00
2	CoSe 15452	2.10	2.02	2.13	2.14	2.10
3	CoSe 15455	2.10	2.06	2.23	2.25	2.16
4	CoLk 15466	1.90	1.93	1.80	1.96	1.90
5	CoLk 15467	1.90	2.18	2.03	2.10	2.05
	Standards					
1	CoLk 94184	1.90	2.04	1.86	2.11	1.98
2	CoSe 95422	2.10	2.24	2.23	2.05	2.16
3	CoSe 01421	2.00	2.34	2.03	2.11	2.12
	GM	2.00	2.11	2.03	2.09	2.06
	SE	0.05	0.04	0.05	-	
	CD	0.18	0.13	0.17	-	
	CV	5.05	3.52	4.69	-	

Table 5.4.13. Single Cane Weight (kg) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	0.66	0.72	0.71	0.67	0.69
2	CoSe 15452	0.64	0.87	0.94	0.77	0.80
3	CoSe 15455	0.66	0.61	0.95	0.69	0.73
4	CoLk 15466	0.68	1.07	0.80	0.58	0.78
5	CoLk 15467	0.69	0.73	0.71	0.69	0.71
	Standards					
1	CoLk 94184	0.67	0.88	0.83	0.80	0.80
2	CoSe 95422	0.62	0.73	0.9	0.66	0.73
3	CoSe 01421	0.63	0.78	0.86	0.64	0.73
	GM	0.66	0.80	0.84	0.70	0.75
	SE	0.01	0.02	0.03	-	
	CD	0.02	0.06	0.09	-	
	CV	1.75	4.32	6.52	-	

Table 5.4.14. CCS (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	10.81	12.63	11.41	10.85	11.43
2	CoSe 15452	11.68	12.74	11.35	11.01	11.70
3	CoSe 15455	10.42	11.87	10.97	11.25	11.13
4	CoLk 15466	11.34	12.47	11.79	11.07	11.67
5	CoLk 15467	11.12	13.15	11.89	11.05	11.80
	Standards					
1	CoLk 94184	11.37	12.50	11.74	11.52	11.78
2	CoSe 95422	10.70	11.45	11.23	10.69	11.02
3	CoSe 01421	11.05	12.28	11.46	10.79	11.40
	GM	11.06	12.39	11.48	11.00	11.48
	SE	0.08	0.22	0.31	-	
	CD	0.25	0.68	0.94	-	
	CV	1.29	3.09	4.28	-	

Table 5.4.15. Sucrose (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	15.88	18.34	16.35	15.97	16.64
2	CoSe 15452	17.01	18.54	16.16	16.16	16.97
3	CoSe 15455	15.40	17.12	15.60	16.50	16.16
4	CoLk 15466	16.65	18.13	17.26	16.32	17.09
5	CoLk 15467	16.28	19.17	17.22	16.24	17.23
	Standards					
1	CoLk 94184	16.62	18.01	17.04	16.89	17.14
2	CoSe 95422	15.80	16.58	16.04	15.78	16.05
3	CoSe 01421	16.22	17.66	15.95	15.94	16.44
	GM	16.24	17.94	16.45	16.20	16.71
	SE	0.11	0.31	0.41	-	
	CD	0.34	0.96	1.22	-	
	CV	1.22	3.03	4.29	-	

Table 5.4.16. Brix (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	18.54	20.93	18.15	18.75	19.09
2	CoSe 15452	19.54	21.27	17.69	18.85	19.34
3	CoSe 15455	18.22	19.27	17.03	19.24	18.44
4	CoLk 15466	19.43	20.73	20.05	19.23	19.86
5	CoLk 15467	18.89	22.07	19.55	19.01	19.88
	Standards					
1	CoLk 94184	19.25	19.87	19.45	19.64	19.55
2	CoSe 95422	18.65	18.80	17.70	18.60	18.44
3	CoSe 01421	18.93	19.73	16.58	18.84	18.52
	GM	18.93	20.33	18.28	19.03	19.14
	SE	0.13	0.43	0.42	-	
	CD	0.42	1.31	1.26	-	
	CV	1.27	3.65	3.98	-	

Table 5.4.17. Purity (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	85.68	87.63	90.09	85.17	87.14
2	CoSe 15452	87.03	87.83	91.32	85.73	87.98
3	CoSe 15455	84.54	88.87	91.51	85.76	87.67
4	CoLk 15466	85.69	87.47	86.07	84.87	86.03
5	CoLk 15467	86.18	86.90	88.15	85.43	86.67
	Standards					
1	CoLk 94184	86.35	89.13	87.63	86.00	87.28
2	CoSe 95422	84.54	88.17	90.67	84.84	87.06
3	CoSe 01421	85.66	89.47	96.15	84.61	88.97
	GM	85.71	88.18	90.20	85.15	87.31
	SE	0.24	0.59	-	-	
	CD	0.75	1.78	-	-	
	CV	0.50	1.15	-	-	

Table 5.4.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	-	144.87	168.22	134.22	149.10
2	CoSe 15452	-	127.15	147.87	128.42	134.48
3	CoSe 15455	-	132.25	146.64	121.33	133.41
4	CoLk 15466	-	122.17	156.63	128.72	135.84
5	CoLk 15467	-	129.00	152.81	128.21	136.67
	Standards					
1	CoLk 94184	-	141.15	132.70	132.02	135.29
2	CoSe 95422	-	135.21	144.67	126.02	135.30
3	CoSe 01421	-	121.18	179.45	115.82	138.82
	GM	-	131.62	153.62	124.62	136.62
	SE	-	3.89	7.12	-	
	CD	-	11.91	21.36	-	
	CV	-	5.12	8.03	-	

Table 5.4.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	178.00	103.85	178.21	129.86	147.48
2	CoSe 15452	180.00	96.60	172.05	122.95	142.90
3	CoSe 15455	173.00	101.75	164.03	113.52	138.08
4	CoLk 15466	174.00	91.60	169.95	122.82	139.59
5	CoLk 15467	176.00	97.80	160.45	122.25	139.13
	Standards					
1	CoLk 94184	173.00	105.10	140.6	126.75	136.36
2	CoSe 95422	163.00	88.15	156.51	117.97	131.41
3	CoSe 01421	143.00	79.60	184.87	103.33	127.70
	GM	170.00	95.56	165.83	116.02	136.85
	SE	0.97	4.50	6.85	-	
	CD	2.97	13.79	20.53	-	
	CV	2.24	8.16	7.15	-	

Table 5.4.20. Germination (%) at 45 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoP 15436	52.41	43.60	27.33	36.57	39.98
2	CoSe 15452	56.39	42.25	26.61	38.17	40.86
3	CoSe 15455	48.24	41.17	26.09	36.88	38.10
4	CoLk 15466	49.72	38.90	29.25	37.15	38.76
5	CoLk 15467	50.74	41.50	29.62	36.36	39.56
	Standards					
1	CoLk 94184	51.20	44.30	27.09	39.27	40.47
2	CoSe 95422	45.56	36.73	30.19	37.03	37.38
3	CoSe 01421	48.15	35.10	30.25	34.62	37.03
	GM	50.30	40.44	28.30	36.97	39.00
	SE	0.31	2.42	1.07	-	
	CD	0.95	7.33	3.21	-	
	CV	3.88	10.35	6.55	-	

Table 5.4.21. Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entry	Seorahi	Pusa	Motipur	Bethua dhari	Buralikson
CoLk 15466	Good	Good	Very good	Good	-
CoLk 15467	Good	Good	Very Good	Very Good	-
CoP 15436	Good	Very good	Good	Very Good	-
CoSe 15452	Good	Good	Good	Good	-
CoSe 15455	Excellent	Good	Very good	Very good	-
Standards					
CoLk 94184	Very good	Good	Very good	Very Good	-
CoSe 95422	Very good	Very good	Excellent	Very good	-
CoSe 01421	Good	Good	Good	Good	-

5.5. INITIAL VARIETAL TRIAL (EARLY)

Centers (5)	Bethuadahari, Buralikson, Motipur, Pusa and Seorahi
Entries (8)	CoP 16436 (CoS 86216 GC) CoP 16437 (CoSe 92423 x Co 1148) CoP 16438 (Co 86032 GC) CoLk 16466 (BO 91 x Co 86002) CoLk 16467 (Co 98010 x CoPant 97222) CoLk 16468 (BO 146 GC) CoSe 16451 (CoS 8432 x Co 89003) CoBln 16501 (CoH 7803 GC)
Standards (3)	CoLk 94184, CoSe 95422 and CoSe 01421
Design	RBD
Replications	Three
Plot size	Gross : 6m x 6r x 0.75m Net : 5m x 4r x 0.75m
Seed rate	12 buds per meter
Date of planting	February - March, 2019
Crop duration	10 months

Results of the previous year:

Eight test entries viz., CoP 16436, CoP 16437, CoP 16438, CoLk 16466, CoLk 16467, CoLk 16468, CoSe 16451 and CoBln 16501 along with three standards CoLk 94184, CoSe 95422 and CoSe 01421 were under multiplication during 2018-19.

Results of the current year:

Eight test entries and three standards were evaluated in IVT (Midlate) trial at five locations of North Central and North East zones during 2019-20 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over standard for CCS yield in the zone. The test entry CoP 16437 ranked top in the zone with 10.35 t/ha of mean CCS yield across the locations and also recorded 10.06% and 13.56% improvement over the best standard at Seorahi and Pusa centers respectively. Test entries CoSe 16451 and CoLk 16468 ranked second and third with 10.04 t/ha and 9.92 t/ha of mean CCS yield and recorded 10.76% and 11.85% improvement over the best standard at Seorahi and Pusa centers respectively. For cane yield, none of the test entries recorded >10% improvement in the zone. The test entry CoP 16437 ranked top in the zone with 86.17 t/ha of mean cane yield across the locations and also recorded 38.42% improvement over the best standard at Pusa center. Test entries CoSe 16451 and CoLk 16468 ranked second and third with 83.60 t/ha and 82.84 t/ha of mean cane yield and recorded 12.68% and 23.76% improvement over best standard at Seorahi and Pusa centers respectively. For CCS%, none of the test entries recorded >5% improvement in the zone. Test entries CoP 16437 and CoLk 16468 ranked second and third across the locations with 12.08% and 12.03% of mean CCS% respectively in the zone. For sucrose%, none of the test entries recorded >5% improvement in the zone. The test entry CoSe 16451 ranked top in the zone with 17.72% of mean sucrose%. Another test entry CoP 16437 ranked second across the locations with 17.46% of mean sucrose%. Based on cane yield and juice quality parameters, none of the test entries recorded >10% improvement over best standard for CCS yield and cane yield or >5% improvement for CCS% and sucrose % and no test entry was selected as qualifying entry in the zone. **The data are presented in tables 5.5.1 to 5.5.20.**

Table 5.5.1. CCS at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoP 16436	9.45	7.40	12.10	8.35	5.51	8.56	
2	CoP 16437	10.06*	13.56*	12.31	8.52	7.30	10.35	1
3	CoP 16438	9.79	13.07*	10.22	8.39	7.41	9.78	
4	CoLk 16466	9.60	10.37	12.34	8.45	7.89	9.73	
5	CoLk 16467	9.26	8.40	10.80	8.29	5.89	8.53	
6	CoLk 16468	9.73	11.85*	12.12	8.38	7.50	9.92	3
7	CoSe 16451	10.76*	9.82	12.13	8.34	9.85	10.04	2
8	CoBln 16501	4.59	8.60	8.09	6.29	11.25	7.76	
	Standards							
1	CoLk 94184	8.90	9.72	12.40	8.84	8.90	9.75	
2	CoSe 95422	8.79	7.76	10.30	7.58	10.08	8.90	
3	CoSe 01421	7.56	7.89	8.73	7.34	7.18	7.74	
	GM	8.95	9.86	11.05	7.92	8.07	9.17	
	SE (m)	0.24	0.49	0.27	-	0.79		
	CD	0.72	1.47	0.81	-	1.64		
	CV	4.78	8.69	4.35	-	11.99		
	Qualifying entries at each location							
	1	CoSe 16451	CoP 16437					
	2	CoP 16437	CoP 16438					
	3		CoLk 16468					

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoLk 16468 (1), CoP 16437 (2) CoP 16438 (1) and CoSe 16451 (1)

Performance across the locations: None of the test entries recorded >10% improvement over the best standard for CCS yield in the zone. The test entry CoP 16437 ranked top in the zone with 10.35 t/ha of mean CCS yield across the locations and also recorded 10.06% and 13.56% improvement over best standard at Seorahi and Pusa centers respectively. Test entries CoSe 16451 and CoLk 16468 ranked second and third with 10.04 t/ha and 9.92 t/ha of mean CCS yield and recorded 10.76% and 11.85% improvement over the best standard at Seorahi and Pusa center respectively.

Table 5.5.2. Cane Yield at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson	Mean	Overall rank
1	CoP 16436	80.44	61.33	105.64	67.92	45.67	72.20	
2	CoP 16437	84.45*	107.03*	111.75	68.67	58.93	86.17	1
3	CoP 16438	81.78*	103.23*	93.41	69.11	61.43	81.79	
4	CoLk 16466	85.33*	82.07	111.38	69.40	64.73	82.58	
5	CoLk 16467	83.55*	66.57	98.59	68.85	48.47	73.21	
6	CoLk 16468	82.22*	95.69*	109.80	67.31	59.17	82.84	3
7	CoSe 16451	86.89*	79.11	105.08	68.10	78.83	83.60	2
8	CoBln 16501	43.56	80.96	75.98	55.84	92.40	69.75	
	Standards							
1	CoLk 94184	77.11	77.32	106.56	70.88	74.70	81.31	
2	CoSe 95422	72.00	66.32	91.11	63.39	80.90	74.74	
3	CoSe 01421	66.22	63.35	79.32	60.46	62.20	66.31	
	GM	76.69	81.96	99.06	64.91	66.13	77.75	
	SE	1.19	2.92	2.51	-	6.53		
	CD	3.51	8.67	7.93	-	13.58		
	CV	4.03	6.30	4.40	-	12.09		
	Qualifying entries at each location							
	1	CoSe 16451	CoP 16437			CoBln 16501		
	2	CoLk 16466	CoP 16438					
	3		CoLk 16468					

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoLk 16466 (1), CoLk 16468 (1), CoSe 16451 (1), CoP 16437 (1), CoP 16438 (1) and CoBln 16501 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard for cane yield in the zone. The test entry CoP 16437 ranked top in the zone with 86.17 t/ha of mean cane yield across the locations and also recorded 38.42% improvement over best standard at Pusa center. Test entries CoSe 16451 and CoLk 16468 ranked second and third with 83.60 t/ha and 82.84 t/ha of mean cane yield and recorded 12.68% and 23.76% improvement over best standard at Seorahi and Pusa centers respectively. Other test entries CoLk 16466, CoP 16438 and CoBln 16501 recorded >10% improvement over best standard at Seorahi, Pusa and Buralikson centers respectively.

Table 5.5.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoP 16436	11.75	12.11	11.46	12.29	12.06	11.93	
2	CoP 16437	11.92	12.65	11.02	12.41	12.39	12.08	2
3	CoP 16438	11.97	12.66	10.97	12.14	12.06	11.96	
4	CoLk 16466	11.25	12.63	11.08	12.17	12.19	11.86	
5	CoLk 16467	11.08	12.61	10.97	12.05	12.12	11.77	
6	CoLk 16468	11.84	12.37	11.06	12.46	12.66	12.08	2
7	CoSe 16451	12.38	12.42	11.54	12.25	12.52	12.22	1
8	CoBln 16501	10.55	10.61	10.69	11.27	12.19	11.06	
	Standards							
1	CoLk 94184	11.53	12.58	11.64	12.47	11.91	12.03	3
2	CoSe 95422	12.21	11.71	11.14	11.96	12.46	11.90	
3	CoSe 01421	11.42	12.46	11.01	12.13	11.56	11.72	
	GM	11.63	12.24	11.15	12.19	12.19	11.88	
	SE	0.12	0.27	0.32	-	0.19		
	CD	0.38	0.79	0.95	-	0.4		
	CV	1.92	3.74	5.01	-	1.94		
	Qualifying entries at each location							
	1							
	2							
	3							

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement over the best standard for CCS% in the zone. The test entry CoSe 16451 ranked top in the zone with 12.22% of mean CCS%. Both the test entries CoP 16437 and CoLk 16468 ranked second across the locations with 12.08% of mean CCS%, followed by standard CoLk 94184 (12.03%).

Table 5.5.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoP 16436	16.95	17.43	16.48	17.81	17.82	17.30	
2	CoP 16437	17.20	18.30	15.67	17.94	18.20	17.46	2
3	CoP 16438	17.25	18.32	15.61	17.46	17.74	17.28	
4	CoLk 16466	16.24	18.24	15.81	17.58	17.91	17.16	
5	CoLk 16467	16.02	18.16	15.65	17.39	17.77	17.00	
6	CoLk 16468	17.12	17.82	15.81	18.02	18.39	17.43	3
7	CoSe 16451	17.88	17.94	16.74	17.73	18.29	17.72	1
8	CoBln 16501	15.48	15.49	15.42	16.44	17.70	16.11	
	Standards							
1	CoLk 94184	16.70	18.21	16.9	17.98	17.37	17.43	3
2	CoSe 95422	17.63	16.94	15.88	17.25	18.16	17.17	
3	CoSe 01421	16.48	17.96	15.79	17.54	16.95	16.94	
	GM	16.81	17.88	15.98	17.59	17.84	17.22	
	SE	0.17	0.37	0.52	-	0.22		
	CD	0.52	1.09	1.53	-	0.47		
	CV	1.82	3.99	5.65	-	1.54		
	Qualifying entries at each location							
	1							
	2							
	3							

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement over the best standard for sucrose% in the zone. The test entry CoSe 16451 ranked top in the zone with 17.72% of mean sucrose%. Another test entry CoP 16437 ranked second across the locations with 17.46% of mean sucrose%, followed by CoLk 16468 and standard CoLk 94184 both recording 17.43% and ranked third.

Table 5.5.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	19.07	19.53	18.41	20.24	21.07	19.66
2	CoP 16437	19.37	20.73	17.10	20.29	21.27	19.75
3	CoP 16438	19.37	20.76	17.06	19.55	20.80	19.51
4	CoLk 16466	18.33	20.60	17.40	19.84	20.93	19.42
5	CoLk 16467	18.15	20.40	17.20	19.61	20.67	19.21
6	CoLk 16468	19.37	20.00	17.46	20.41	21.00	19.65
7	CoSe 16451	20.19	20.27	19.04	20.11	21.13	20.15
8	CoBln 16501	18.07	17.87	17.38	18.94	20.20	18.49
	Standards						
1	CoLk 94184	18.94	20.67	19.28	20.21	20.00	19.82
2	CoSe 95422	19.90	19.20	17.30	19.42	20.87	19.34
3	CoSe 01421	18.57	20.20	17.53	19.84	19.73	19.17
	GM	19.03	20.00	17.74	19.82	20.70	19.46
	SE	0.18	0.40	0.76	-	0.30	
	CD	0.54	1.18	2.23	-	0.63	
	CV	1.68	3.49	7.43	-	1.79	

Table 5.5.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	88.86	89.23	89.50	87.99	84.59	88.03
2	CoP 16437	88.81	88.23	91.78	88.42	85.59	88.57
3	CoP 16438	89.04	88.23	91.59	89.31	85.33	88.70
4	CoLk 16466	88.79	88.53	90.94	88.61	85.54	88.48
5	CoLk 16467	88.30	89.03	91.09	88.68	85.99	88.62
6	CoLk 16468	88.36	88.83	90.55	88.29	87.59	88.72
7	CoSe 16451	88.53	88.47	87.94	88.17	86.54	87.93
8	CoBln 16501	85.67	86.70	88.93	86.80	87.66	87.15
	Standards						
1	CoLk 94184	88.17	88.10	87.71	88.97	86.83	87.96
2	CoSe 95422	88.60	88.20	91.92	88.83	87.03	88.92
3	CoSe 01421	88.66	88.90	90.17	88.41	85.88	88.40
	GM	88.34	88.36	90.19	88.74	86.23	88.37
	SE	0.28	0.47	1.25	-	1.10	
	CD	0.84	1.39	3.68	-	2.30	
	CV	0.56	0.92	2.40	-	1.57	

Table 5.5.7. Pol % cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	-	13.57	12.72	-	-	13.15
2	CoP 16437	-	14.29	12.20	-	-	13.25
3	CoP 16438	-	14.22	12.02	-	-	13.12
4	CoLk 16466	-	14.17	12.23	-	-	13.20
5	CoLk 16467	-	14.04	12.07	-	-	13.06
6	CoLk 16468	-	13.74	12.26	-	-	13.00
7	CoSe 16451	-	13.81	12.97	-	-	13.39
8	CoBln 16501	-	12.01	11.94	-	-	11.98
	Standards						
1	CoLk 94184	-	13.99	13.06	-	-	13.53
2	CoSe 95422	-	13.03	12.36	-	-	12.70
3	CoSe 01421	-	13.97	12.33	-	-	13.15
	GM	-	13.69	12.37	-	-	13.03
	SE	-	0.30	-	-	-	-
	CD	-	0.88	-	-	-	-
	CV	-	3.73	-	-	-	-

Table 5.5.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	-	58.12	59.39	-	-	58.76
2	CoP 16437	-	62.34	60.11	-	-	61.23
3	CoP 16438	-	61.52	55.91	-	-	58.72
4	CoLk 16466	-	55.12	60.73	-	-	57.93
5	CoLk 16467	-	56.40	55.97	-	-	56.19
6	CoLk 16468	-	53.85	57.42	-	-	55.64
7	CoSe 16451	-	53.12	59.37	-	-	56.25
8	CoBln 16501	-	48.52	58.90	-	-	53.71
	Standards						
1	CoLk 94184	-	54.13	57.29	-	-	55.71
2	CoSe 95422	-	55.52	58.72	-	-	57.12
3	CoSe 01421	-	56.10	58.26	-	-	57.18
	GM	-	55.86	58.37	-	-	57.12
	SE	-	1.42	1.48	-	-	-
	CD	-	4.23	4.35	-	-	-
	CV	-	4.41	4.39	-	-	-

Table 5.5.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	-	12.10	12.81	-	-	12.46
2	CoP 16437	-	11.90	12.17	-	-	12.04
3	CoP 16438	-	12.36	13.04	-	-	12.70
4	CoLk 16466	-	12.30	12.71	-	-	12.51
5	CoLk 16467	-	12.70	12.91	-	-	12.81
6	CoLk 16468	-	12.91	12.46	-	-	12.69
7	CoSe 16451	-	12.98	12.54	-	-	12.76
8	CoBln 16501	-	12.52	12.63	-	-	12.58
	Standards						
1	CoLk 94184	-	13.15	12.75	-	-	12.95
2	CoSe 95422	-	13.10	12.17	-	-	12.64
3	CoSe 01421	-	12.21	11.94	-	-	12.08
	GM	-	12.60	12.56	-	-	12.58
	SE	-	0.23	0.21	-	-	-
	CD	-	0.68	0.62	-	-	-
	CV	-	3.16	2.95	-	-	-

Table 5.5.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	118.00	97.35	101.00	114.84	58.33	97.90
2	CoP 16437	116.00	102.35	85.65	116.74	64.51	97.05
3	CoP 16438	112.00	99.46	99.89	118.56	64.71	98.92
4	CoLk 16466	124.00	82.50	126.39	120.04	69.44	104.47
5	CoLk 16467	121.00	81.30	110.08	117.99	63.27	98.73
6	CoLk 16468	116.00	91.25	128.43	118.69	60.18	102.91
7	CoSe 16451	134.00	94.30	98.59	117.57	70.78	103.05
8	CoBln 16501	82.00	77.20	85.25	93.07	68.21	81.15
	Standards						
1	CoLk 94184	115.00	91.10	118.42	125.34	61.11	102.19
2	CoSe 95422	117.00	83.15	131.95	119.27	65.02	103.28
3	CoSe 01421	108.00	83.40	127.32	93.68	65.86	95.65
	GM	115.00	90.00	110.27	112.76	64.68	98.54
	SE	1.76	3.45	6.87	-	5.98	
	CD	5.21	10.26	20.17	-	12.45	
	CV	3.98	6.69	10.80	-	11.33	

Table 5.5.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	168	152	210	241	161	186.38
2	CoP 16437	177	312	240	243	180	230.38
3	CoP 16438	173	305	240	259	186	232.48
4	CoLk 16466	174	251	270	250	189	226.72
5	CoLk 16467	164	243	237	240	170	210.68
6	CoLk 16468	178	255	243	236	188	219.99
7	CoSe 16451	167	228	240	255	235	225.22
8	CoBln 16501	150	311	247	248	270	245.22
	Standards						
1	CoLk 94184	161	238	283	271	220	234.69
2	CoSe 95422	164	235	230	225	240	218.83
3	CoSe 01421	155	250	233	228	191	211.46
	GM	166	253	243	241	203	221.20
	SE	4.80	7.74	16.29	-	3.71	
	CD	14.16	22.98	47.80	-	7.72	
	CV	4.95	5.30	11.61	-	2.24	

Table 5.5.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	2.00	1.94	2.56	1.92	2.33	2.15
2	CoP 16437	2.20	3.24	2.50	2.06	2.33	2.47
3	CoP 16438	2.00	2.39	2.00	2.10	2.40	2.18
4	CoLk 16466	2.20	2.26	2.20	2.16	2.33	2.23
5	CoLk 16467	2.10	2.42	2.10	2.15	2.23	2.20
6	CoLk 16468	2.10	2.45	2.33	2.14	2.37	2.28
7	CoSe 16451	2.10	2.45	2.20	2.21	2.63	2.32
8	CoBln 16501	1.90	2.40	2.53	2.20	2.87	2.38
	Standards						
1	CoLk 94184	2.00	2.36	2.03	2.10	2.50	2.20
2	CoSe 95422	2.10	2.15	2.20	2.03	2.37	2.17
3	CoSe 01421	2.00	2.16	2.23	2.06	2.23	2.14
	GM	2.00	2.38	2.26	2.06	2.42	2.22
	SE	0.04	0.07	0.11	-	0.05	
	CD	0.14	0.21	0.34	-	0.10	
	CV	4.14	5.22	9.09	-	2.49	

Table 5.5.13. Single Cane Weight (kg.) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	0.69	0.63	1.04	0.50	0.79	0.73
2	CoP 16437	0.73	1.05	1.28	0.60	0.91	0.91
3	CoP 16438	0.72	1.04	0.71	0.61	0.96	0.81
4	CoLk 16466	0.70	0.99	1.05	0.65	0.94	0.87
5	CoLk 16467	0.69	0.82	0.91	0.61	0.77	0.76
6	CoLk 16468	0.72	1.05	1.03	0.63	0.99	0.88
7	CoSe 16451	0.66	0.84	1.05	0.67	1.12	0.87
8	CoBln 16501	0.56	1.05	0.96	0.52	1.32	0.88
	Standards						
1	CoLk 94184	0.67	0.85	0.88	0.71	1.25	0.87
2	CoSe 95422	0.63	0.80	1.01	0.63	1.28	0.87
3	CoSe 01421	0.62	0.76	0.82	0.58	0.99	0.75
	GM	0.67	0.90	0.97	0.64	1.03	0.84
	SE	0.01	0.04	0.07	-	0.06	
	CD	0.02	0.11	0.29	-	0.13	
	CV	1.90	7.19	12.90	-	7.52	

Table 5.5.14. CCS (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	10.50	11.48	10.68	11.08	10.06	10.76
2	CoP 16437	10.72	12.21	11.60	11.58	8.94	11.01
3	CoP 16438	10.66	12.06	11.68	11.28	10.41	11.22
4	CoLk 16466	10.51	11.78	9.22	11.24	9.80	10.51
5	CoLk 16467	10.65	12.34	10.98	11.09	10.13	11.04
6	CoLk 16468	10.14	12.05	11.01	11.53	9.68	10.88
7	CoSe 16451	10.73	11.75	11.56	11.27	9.55	10.97
8	CoBln 16501	9.45	10.38	9.30	10.79	8.82	9.75
	Standards						
1	CoLk 94184	10.81	12.14	11.69	11.72	9.77	11.23
2	CoSe 95422	10.83	11.39	10.39	11.19	10.35	10.83
3	CoSe 01421	10.67	11.9	11.80	11.12	9.36	10.97
	GM	10.52	11.77	10.90	11.34	9.72	10.85
	SE	0.12	0.36	0.37	-	0.56	
	CD	0.37	1.06	1.10	-	1.17	
	CV	2.12	5.28	5.97	-	7.08	

Table 5.5.15. Sucrose (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	15.47	16.69	15.07	16.38	15.57	15.84
2	CoP 16437	15.84	17.72	16.64	16.99	14.72	16.38
3	CoP 16438	15.70	17.45	16.80	16.51	16.09	16.51
4	CoLk 16466	15.12	17.06	13.43	16.55	15.34	15.50
5	CoLk 16467	15.69	17.82	15.85	16.25	16.05	16.33
6	CoLk 16468	14.92	17.24	15.65	16.92	15.37	16.02
7	CoSe 16451	15.75	17.12	16.42	16.66	15.29	16.25
8	CoBln 16501	14.11	16.69	13.32	15.97	14.44	14.91
	Standards						
1	CoLk 94184	15.73	17.67	16.8	17.17	15.69	16.61
2	CoSe 95422	15.89	16.51	14.71	16.54	16.22	15.97
3	CoSe 01421	15.65	17.24	16.78	16.42	14.94	16.21
	GM	15.44	17.20	15.59	16.71	15.43	16.07
	SE	0.15	0.46	0.49	-	0.68	
	CD	0.47	1.37	1.45	-	1.41	
	CV	1.78	4.7	5.52	-	5.39	

Table 5.5.16. Brix (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	18.17	19.77	16.16	19.39	20.04	18.71
2	CoP 16437	18.70	20.20	18.53	19.81	20.90	19.63
3	CoP 16438	18.43	19.75	18.82	19.15	20.64	19.36
4	CoLk 16466	18.09	19.33	15.42	19.44	20.10	18.48
5	CoLk 16467	18.45	20.13	17.86	18.88	21.46	19.36
6	CoLk 16468	17.46	19.47	17.08	19.75	20.64	18.88
7	CoSe 16451	18.41	19.69	17.88	19.73	20.79	19.30
8	CoBln 16501	17.02	17.27	14.77	18.93	20.30	17.66
	Standards						
1	CoLk 94184	18.06	20.24	18.78	19.97	20.90	19.59
2	CoSe 95422	18.54	18.80	15.88	19.58	21.30	18.82
3	CoSe 01421	18.22	19.57	18.32	19.40	20.24	19.15
	GM	18.14	19.47	17.23	19.65	20.66	19.03
	SE	0.17	0.48	0.58	-	0.80	
	CD	0.51	1.42	1.75	-	1.65	
	CV	1.67	4.25	5.92	-	4.71	

Table 5.5.17. Purity (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	85.12	87.33	93.23	84.48	77.77	85.59
2	CoP 16437	84.68	87.73	90.26	85.76	70.44	83.77
3	CoP 16438	85.16	88.37	89.39	86.21	78.09	85.44
4	CoLk 16466	85.40	88.20	86.99	85.13	76.45	84.43
5	CoLk 16467	85.08	88.53	88.63	86.07	75.01	84.66
6	CoLk 16468	85.43	88.50	91.67	85.67	74.57	85.17
7	CoSe 16451	85.59	86.93	91.83	84.44	73.48	84.45
8	CoBln 16501	82.88	87.43	90.11	84.36	71.13	83.18
	Standards						
1	CoLk 94184	86.02	87.30	89.49	85.98	75.29	84.82
2	CoSe 95422	85.72	87.40	92.60	84.47	76.21	85.28
3	CoSe 01421	85.87	88.10	91.67	84.64	73.85	84.83
	GM	85.18	87.80	90.45	85.03	74.75	84.64
	SE	0.42	0.60	-	-	2.88	
	CD	1.26	1.77	-	-	6.00	
	CV	0.87	1.18	-	-	4.73	

Table 5.5.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	-	129.00	108.60	117.44	59.57	103.65
2	CoP 16437	-	145.63	99.33	120.09	65.54	107.65
3	CoP 16438	-	151.82	110.45	121.83	65.64	112.44
4	CoLk 16466	-	122.45	135.29	123.51	70.68	112.98
5	CoLk 16467	-	127.33	118.98	120.87	64.30	107.87
6	CoLk 16468	-	119.52	134.36	121.91	61.52	109.33
7	CoSe 16451	-	143.05	106.75	121.05	72.02	110.72
8	CoBln 16501	-	109.32	94.14	96.86	69.65	92.49
	Standards						
1	CoLk 94184	-	143.50	138.81	128.4	62.45	118.29
2	CoSe 95422	-	141.62	150.86	122.37	66.46	120.33
3	CoSe 01421	-	139.90	151.23	98.24	64.30	113.42
	GM	-	133.92	122.62	116.34	65.65	109.63
	SE	-	3.50	5.82	-	6.21	
	CD	-	10.40	17.09	-	12.91	
	CV	-	4.53	8.23	-	11.58	

Table 5.5.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	183.00	104.30	128.25	113.94	51.34	116.17
2	CoP 16437	181.00	110.50	107.12	116.21	60.08	114.98
3	CoP 16438	180.00	112.67	124.35	118.15	57.82	118.60
4	CoLk 16466	188.00	98.76	153.64	118.89	64.09	124.68
5	CoLk 16467	186.00	91.75	137.14	117.36	56.58	117.77
6	CoLk 16468	179.00	102.50	132.14	119.07	55.04	117.55
7	CoSe 16451	195.00	97.60	118.79	118.19	65.84	119.08
8	CoBln 16501	152.00	78.52	105.82	95.10	63.17	98.92
	Standards						
1	CoLk 94184	177.00	120.01	159.57	124.31	55.97	127.37
2	CoSe 95422	178.00	98.10	166.24	118.40	60.18	124.18
3	CoSe 01421	164.00	87.15	169.95	92.05	58.13	114.26
	GM	178.00	100.17	136.64	111.59	58.93	117.07
	SE	2.35	3.61	8.10	-	6.59	
	CD	6.93	10.73	23.77	-	13.70	
	CV	3.42	6.24	10.27	-	13.69	

Table 5.5.20. Germination (%) at 45 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16436	47.08	31.50	21.07	31.97	25.33	31.39
2	CoP 16437	50.14	41.67	20.08	34.23	30.00	35.22
3	CoP 16438	44.03	42.60	26.49	31.93	31.33	35.28
4	CoLk 16466	52.08	33.15	26.20	36.20	36.67	36.86
5	CoLk 16467	48.05	25.21	26.84	34.34	25.00	31.89
6	CoLk 16468	45.97	31.15	25.28	33.16	29.67	33.05
7	CoSe 16451	49.03	33.25	24.59	33.80	34.33	35.00
8	CoBln 16501	34.72	22.10	20.57	26.73	38.00	28.42
	Standards						
1	CoLk 94184	37.08	38.60	25.25	36.14	30.67	33.55
2	CoSe 95422	41.11	36.42	29.73	36.05	42.00	37.06
3	CoSe 01421	38.06	34.17	29.21	32.82	26.00	32.05
	GM	44.30	33.62	25.03	35.00	31.73	33.94
	SE	1.08	1.76	1.20	-	3.14	
	CD	3.20	5.21	3.52	-	6.54	
	CV	10.40	9.04	8.31	-	12.13	

Table 5.5.21. Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entry	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson
CoBln 16501	Poor	Good	Good	Poor	Good
CoLk 16466	Good	Good	Good	Very good	Very good
CoLk 16467	Good	Average	Very good	Good	Very good
CoLk 16468	Average	Very good	Good	Very good	Very good
CoP 16436	Good	Average	Good	Good	Average
CoP 16437	Very good	Excellent	Very good	Very good	Very good
CoP 16438	Very good	Very good	Very good	Very good	Very good
CoSe 16451	Good	Good	Good	Good	Good
Standards					
CoLk 94184	Very good		Very good		Very good
CoSe 95422			Very good	Very good	
CoSe 01421					

5.6. ADVANCED VARIETAL TRIAL (MIDLATE) – II PLANT

Centers (5)	Bethuadahari, Buralikson, Motipur, Pusa and Seorahi
Entries (5)	CoLk 14208, CoLk 14209, CoP 14438, CoP 14439 and CoSe 14455
Standards (3)	BO 91, CoP 9301 and CoP 06436
Design	RBD
Replications	Three
Plot size	Gross : 6 m x 8 rows x 0.90 m Net : 5 m x 6 rows x 0.90 m
Seed rate	12 buds per meter
Date of planting	February - March, 2019
Crop duration	12 months

Results of the previous year:

Five test entries and three standards were evaluated in AVT (Midlate) I plant at four locations of North Central and North East zones during 2018-19 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over the best standard across the zone for CCS yield. CoP 14439 ranked top with 9.74 t/ha of mean CCS yield across locations and recorded 14.92% and 10.57% improvement over the best standards at Pusa and Seorahi centers respectively. For cane yield, none of the test entries recorded >10% improvement in the zone. CoP 14439 ranked top with 80.67 t/ha of mean cane yield and recorded 19.13% and 16.36% improvement over the best standard at Seorahi and Pusa centers respectively. For CCS%, none of the test entries recorded >5% improvement in the zone. The entry CoLk 14208 ranked top in the zone with 12.61% mean CCS across locations. For sucrose%, none of the test entries recorded >5% improvement in the zone. The standard, CoP 9301 ranked top in the zone with 18.60% mean sucrose. The test entries CoLk 14208 and CoLk 14209 ranked second and third respectively in the zone with 18.48% and 18.20% mean sucrose respectively. Though two test entries, viz., CoP 14439 and CoSe 14455 recorded more than 10% improvement for cane yield across the zone, sucrose% recorded were numerically inferior with -5.38% and -2.53% respectively in the zone compared to the best standard. Hence, no qualifying entry was identified in the zone.

Results of the current year:

Five test entries and three standards were evaluated in AVT (Midlate) II plant at five locations of North Central and North East zones during 2019-20 for cane yield and juice quality parameters. The test entry CoSe 14455 ranked top in the zone with 12.46% improvement over the best standard across locations for CCS yield and it also recorded 29.30% and 14.77% improvement over best standard at Seorahi and Buralikson centers respectively. The test entry CoLk 14209 ranked second in the zone with 10.90%, 12.78% and 16.73% improvement over best standard at Seorahi, Buralikson and Pusa centers respectively. For cane yield, the test entry CoSe 14455 ranked top in the zone with 11.02% improvement over the best standard across locations and it also recorded 29.63% improvement over the best standard at Seorahi center. Another test entry CoP 14438 ranked second in the zone with 13.39% and 18.48% improvement over the best standard at Seorahi and Pusa centers respectively. For CCS%, none of the test entries recorded >5% improvement across the zone. The standard CoP 9301 ranked top in the zone with 12.51% mean CCS% across locations. The test entry CoLk 14208 recorded second with 12.30% of mean CCS%. For sucrose%, none of the test entries recorded >5% improvement across the zone. The standard CoP 9301 ranked top in the zone with 18.24% mean sucrose% across locations. The test entry CoLk 14208 recorded second with 18.01% mean sucrose%. Although test entry, CoSe 14455 recorded >10% improvement for CCS yield and cane yield across the locations, it was numerically inferior for CCS% and sucrose% compared to the standards Co 9301 and CoP 06436. Hence, no entry was selected as qualifying in the zone. **The data are presented in table 5.6.1 to 5.6.20.**

Table 5.6.1. CCS (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buraik son	Mean	Overall rank
1	CoLk 14208	10.18*	9.96	11.62*	8.49	7.43	9.54	
2	CoLk 14209	9.16	11.86*	9.57	8.65	11.91	10.23	2
3	CoP 14438	8.94	12.62*	9.24	8.56	11.05	10.08	3
4	CoP 14439	9.41	12.40*	9.63	8.80	8.47	9.74	
5	CoSe 14455	10.68*	10.81	10.77	8.98	12.12	10.67	1
	Standards							
1	BO 91	8.26	8.60	9.09	8.78	10.17	8.98	
2	CoP 9301	8.00	10.11	10.05	8.72	10.56	9.49	
3	CoP 06436	7.91	10.16	9.87	9.20	9.50	9.33	
	GM	9.07	10.82	9.98	8.90	10.15	9.78	
	SE (m)	0.38	0.51	0.34	-	0.84		
	CD	1.18	1.57	1.13	-	1.75		
	CV	6.95	8.18	6.52	-	10.17		
	Top three qualifying entries at each locations							
	1	CoSe 14455	CoP 14438	CoLk 14208		CoSe 14455	CoSe 14455	
	2	CoLk 14208	CoP 14439			CoLk 14209		
	3	CoP 14439	CoLk 14209					

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoLk 14208 (2), CoLk 14209 (2), CoSe 14455 (3), CoP 14438 (1) and CoP 14439 (2)

Performance across the locations: The test entry CoSe 14455 ranked top in the zone with 12.46% improvement over best standard across locations for CCS yield and it also recorded 29.30% and 14.77% improvement over best standard at Seorahi and Buralikson centers respectively. The test entry CoLk 14209 ranked second in the zone with 10.90%, 12.78% and 16.73% improvement over best standard at Seorahi, Buralikson and Pusa centers respectively. Another test entry CoP 14438 ranked third in the zone with 24.21% improvement over best standard at Pusa centre. Test entry CoLk 14208 recorded >10% improvement over best standard at Seorahi and Motipur centers respectively.

Table 5.6.2. Cane yield (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14208	80.99*	77.63	99.40*	67.87	62.67	77.71	
2	CoLk 14209	74.19*	99.14	84.05	68.47	91.20	83.41	3
3	CoP 14438	78.68*	106.87*	78.69	67.60	90.73	84.51	2
4	CoP 14439	82.81*	101.18	85.18	69.45	70.00	81.72	
5	CoSe 14455	89.95*	91.26	92.18	70.49	95.37	87.85	1
	Standards							
1	BO 91	67.54	74.63	79.92	68.25	86.57	75.38	
2	CoP 9301	62.73	78.58	84.87	65.51	89.63	76.26	
3	CoP 06436	69.39	92.30	85.80	71.97	76.20	79.13	
	GM	75.78	90.20	86.26	68.58	82.80	80.72	
	SE (m)	1.29	3.09	2.97	-	6.96		
	CD	3.97	9.45	8.91	-	14.49		
	CV	7.41	5.93	5.97	-	10.30		
	Top three qualifying entries at each locations							
	1	CoSe 14455	CoP 14438	CoLk 14208			CoSe 14455	
	2	CoP 14439	CoP 14439					
	3	CoLk 14208						

* Significantly superior the over best standard.

No. of locations where an entry recorded >10% improvement: CoLk 14208 (2), CoSe 14455 (2), CoP 14438 (1) and CoP 14439 (2)

Performance across the locations: The test entry CoSe 14455 ranked top in the zone with 11.02% improvement over the best standard across locations for cane yield and it also recorded 29.63% improvement over the best standard at Seorahi center. Another test entry CoP 14438 ranked second in the zone with 13.39% and 18.48% improvement over the best standard at Seorahi and Pusa centers respectively. Test entry CoLk 14208 recorded >10% improvement over the best standard at Seorahi and Motipur centers, while CoP 14439 recorded 10% improvement at Seorahi and Pusa centers.

Table 5.6.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14208	12.58	12.83	11.69	12.51	11.87	12.30	2
2	CoLk 14209	12.36	11.95	11.38	12.63	13.06*	12.28	3
3	CoP 14438	11.37	11.82	11.74	12.66	12.19	11.96	
4	CoP 14439	11.38	12.19	11.32	12.68	12.11	11.94	
5	CoSe 14455	11.87	12.00	11.69	12.74	12.71	12.20	
	Standards							
1	BO 91	12.25	11.53	11.35	12.86	11.78	11.95	
2	CoP 9301	12.76	12.88	11.84	13.31	11.76	12.51	1
3	CoP 06436	11.40	11.05	11.50	12.79	12.47	11.84	
	GM	11.99	12.03	11.56	12.99	12.24	12.16	
	SE (m)	0.30	0.29	0.16	-	0.27		
	CD	0.91	0.88	0.49	-	0.56		
	CV	0.59	4.14	2.43	-	2.68		
	Top three qualifying entries at each locations							
	1							
	2							
	3							

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement over the best standard across the zone for CCS%. The standard CoP 9301 ranked top in the zone with 12.51% of mean CCS% across locations. The test entry CoLk 14208 recorded second with 12.30% mean CCS%, followed by CoLk 14209 with 12.28% of mean CCS%.

Table 5.6.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 14208	18.18	18.54	17.09	18.13	18.12	18.01	2
2	CoLk 14209	17.94	17.30	16.22	18.32	18.94	17.74	
3	CoP 14438	16.54	16.37	16.70	18.35	18.44	17.28	
4	CoP 14439	16.62	17.63	16.43	18.37	18.38	17.49	
5	CoSe 14455	18.03	17.39	16.84	18.40	18.86	17.90	3
	Standards							
1	BO 91	17.60	16.73	16.04	18.54	17.97	17.38	
2	CoP 9301	18.54	18.64	16.93	19.14	17.97	18.24	1
3	CoP 06436	16.60	16.01	16.28	18.48	18.62	17.20	
	GM	17.51	17.33	16.56	18.72	18.41	17.71	
	SE (m)	0.27	0.39	0.23	-	0.29		
	CD	0.83	1.20	0.79	-	0.61		
	CV	2.69	3.92	2.75	-	1.96		
	Qualifying entries at each locations							
	1							
	2							
	3							

No. of locations where an entry recorded >5% improvement: Nil.

Performance across the locations: None of the test entries recorded >5% improvement over the best standard across the zone for sucrose%. The standard CoP 9301 ranked top in the zone with 18.24% mean sucrose% across locations. The test entry CoLk 14208 recorded second with 18.01% of mean sucrose%, followed by CoSe 14455 with 17.90% of sucrose%.

Table 5.6.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	20.66	20.97	19.78	20.62	21.40	20.69
2	CoLk 14209	20.46	19.60	17.78	20.87	20.13	19.77
3	CoP 14438	18.89	18.60	18.24	20.86	21.40	19.60
4	CoP 14439	19.19	19.97	18.73	20.88	21.47	20.05
5	CoSe 14455	20.56	19.77	18.91	20.76	21.07	20.21
	Standards						
1	BO 91	20.22	19.07	17.24	20.84	21.20	19.71
2	CoP 9301	21.16	21.17	18.71	21.43	21.27	20.75
3	CoP 06436	19.03	18.33	17.58	20.87	21.07	19.38
	GM	20.02	19.69	18.37	21.05	21.13	20.05
	SE (m)	0.27	0.39	0.44	-	0.14	
	CD	0.81	1.18	1.32	-	0.30	
	CV	3.87	3.40	4.16	-	0.82	

Table 5.6.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	88.01	88.43	86.47	87.92	84.67	87.10
2	CoLk 14209	87.70	88.20	91.27	87.78	94.07	89.80
3	CoP 14438	87.52	88.00	91.57	87.97	86.17	88.25
4	CoP 14439	86.58	88.27	87.73	87.98	85.61	87.23
5	CoSe 14455	87.70	87.97	89.04	88.63	89.52	88.57
	Standards						
1	BO 91	87.02	87.57	93.02	88.96	84.76	88.27
2	CoP 9301	87.62	88.10	90.61	89.31	84.50	88.03
3	CoP 06436	87.26	87.33	92.62	88.55	88.39	88.83
	GM	87.43	87.98	90.29	88.94	87.21	88.37
	SE (m)	0.31	0.50	1.05	-	1.09	
	CD	0.93	1.53	3.16	-	2.26	
	CV	2.65	0.99	2.02	-	1.53	

Table 5.6.7. Pol (%) cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	-	14.35	13.39	-	-	13.87
2	CoLk 14209	-	13.34	12.68	-	-	13.01
3	CoP 14438	-	12.72	12.97	-	-	12.85
4	CoP 14439	-	13.67	12.76	-	-	13.22
5	CoSe 14455	-	13.42	13.15	-	-	13.29
	Standards						
1	BO 91	-	12.92	12.61	-	-	12.77
2	CoP 9301	-	14.80	13.19	-	-	14.00
3	CoP 06436	-	12.31	12.74	-	-	12.53
	GM	-	13.44	12.94	-	-	13.19
	SE (m)	-	0.31	-	-	-	
	CD	-	0.96	-	-	-	
	CV	-	4.04	-	-	-	

Table 5.6.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	-	59.60	60.41	-	-	60.01
2	CoLk 14209	-	59.10	61.04	-	-	60.07
3	CoP 14438	-	61.25	60.16	-	-	60.71
4	CoP 14439	-	61.10	60.81	-	-	60.96
5	CoSe 14455	-	56.12	59.48	-	-	57.80
	Standards						
1	BO 91	-	60.19	59.50	-	-	59.85
2	CoP 9301	-	61.20	60.88	-	-	61.04
3	CoP 06436	-	58.85	59.31	-	-	59.08
	GM	-	59.68	60.20	-	-	59.94
	SE (m)	-	2.01	0.61	-	-	
	CD	-	6.09	1.85	-	-	
	CV	-	5.82	1.77	-	-	

Table 5.6.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	-	12.60	11.68	-	-	12.14
2	CoLk 14209	-	12.90	11.78	-	-	12.34
3	CoP 14438	-	12.30	12.30	-	-	12.30
4	CoP 14439	-	12.45	12.34	-	-	12.40
5	CoSe 14455	-	13.10	11.89	-	-	12.50
	Standards						
1	BO 91	-	12.72	11.36	-	-	12.04
2	CoP 9301	-	12.40	12.10	-	-	12.25
3	CoP 06436	-	13.10	11.75	-	-	12.43
	GM	-	12.70	11.90	-	-	12.30
	SE (m)	-	0.43	0.32	-	-	
	CD	-	1.30	0.97	-	-	
	CV	-	5.82	4.72	-	-	

Table 5.6.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	115.00	91.10	106.19	133.18	66.66	102.43
2	CoLk 14209	93.00	103.22	82.71	123.16	86.68	97.75
3	CoP 14438	103.00	115.80	77.36	124.43	92.43	102.60
4	CoP 14439	97.00	120.05	96.10	128.28	78.89	104.06
5	CoSe 14455	124.00	109.25	99.40	128.28	81.51	108.49
	Standards						
1	BO 91	102.00	106.22	115.57	139.55	86.41	109.95
2	CoP 9301	95.00	107.18	85.49	124.76	78.03	98.09
3	CoP 06436	103.00	107.60	89.09	139.35	79.92	103.79
	GM	104.00	107.55	93.99	134.55	81.32	104.28
	SE (m)	1.18	3.37	8.86	-	5.38	
	CD	3.64	10.32	27.91	-	11.19	
	CV	4.97	5.43	16.34	-	8.10	

Table 5.6.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	215.00	275.56	265.00	231.67	227.00	242.85
2	CoLk 14209	209.00	268.66	263.33	242.00	241.83	244.96
3	CoP 14438	213.00	242.33	250.00	237.33	235.17	235.57
4	CoP 14439	214.00	217.22	250.00	247.00	229.50	231.54
5	CoSe 14455	216.00	244.11	246.66	263.67	254.50	244.99
	Standards						
1	BO 91	183.00	251.00	250.00	223.33	242.00	229.87
2	CoP 9301	165.00	242.56	266.66	236.00	240.17	230.08
3	CoP 06436	189.00	285.44	285.00	253.00	226.83	247.85
	GM	201.00	253.36	259.58	237.44	237.13	237.70
	SE (m)	3.37	10.45	17.13	-	5.68	
	CD	10.28	32.01	-	-	11.81	
	CV	2.92	7.15	11.43	-	2.93	

Table 5.6.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	2.00	2.02	2.06	1.94	2.37	2.08
2	CoLk 14209	2.10	2.52	2.46	2.16	2.57	2.36
3	CoP 14438	1.90	2.09	2.13	2.09	2.40	2.12
4	CoP 14439	2.10	2.60	2.03	2.19	2.30	2.24
5	CoSe 14455	2.20	2.19	2.13	1.95	2.63	2.22
	Standards						
1	BO 91	2.00	2.10	1.90	1.92	2.37	2.06
2	CoP 9301	1.80	2.46	2.33	1.92	2.60	2.22
3	CoP 06436	2.10	2.75	2.13	2.22	2.33	2.31
	GM	2.00	2.34	2.15	2.02	2.45	2.19
	SE (m)	0.06	0.08	0.05	-	0.06	
	CD	0.17	0.24	0.15	-	0.12	
	CV	4.94	5.90	4.13	-	2.84	

Table 5.6.13. Single Cane Weight (kg) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	0.70	0.85	0.93	0.55	0.96	0.80
2	CoLk 14209	0.80	0.96	1.08	0.72	1.07	0.93
3	CoP 14438	0.76	0.92	0.89	0.61	1.00	0.84
4	CoP 14439	0.85	0.87	0.83	0.71	0.90	0.83
5	CoSe 14455	0.73	0.83	0.81	0.71	1.19	0.85
	Standards						
1	BO 91	0.66	0.70	0.73	0.64	1.02	0.75
2	CoP 9301	0.71	0.73	0.90	0.60	1.17	0.82
3	CoP 06436	0.67	0.88	0.97	0.74	0.97	0.85
	GM	0.73	0.84	0.89	0.66	1.03	0.83
	SE (m)	0.01	0.03	0.04	-	0.11	
	CD	0.02	0.09	0.12	-	0.22	
	CV	1.72	5.68	7.98	-	12.67	

Table 5.6.14. CCS (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	11.03	12.74	10.76	10.91	10.22	11.13
2	CoLk 14209	10.85	12.60	10.47	11.07	10.65	11.13
3	CoP 14438	11.91	11.30	10.84	11.00	10.63	11.14
4	CoP 14439	11.37	12.60	10.73	10.83	10.94	11.29
5	CoSe 14455	11.22	12.03	9.39	10.89	11.19	10.94
	Standards						
1	BO 91	11.20	12.18	10.61	10.97	9.79	10.95
2	CoP 9301	11.14	12.77	11.18	11.26	10.28	11.33
3	CoP 06436	10.55	11.04	8.17	10.85	10.54	10.23
	GM	11.16	12.16	10.27	11.03	10.53	11.03
	SE (m)	0.15	0.22	0.36	-	0.31	
	CD	0.46	0.68	1.10	-	0.64	
	CV	2.38	3.15	6.21	-	3.56	

Table 5.6.15. Sucrose (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	15.95	18.51	15.58	16.07	15.47	16.32
2	CoLk 14209	15.74	18.18	14.85	16.31	15.79	16.17
3	CoP 14438	17.15	16.98	15.34	16.20	15.79	16.29
4	CoP 14439	16.41	18.10	15.19	15.95	16.11	16.35
5	CoSe 14455	16.24	17.42	13.53	16.04	16.70	15.99
	Standards						
1	BO 91	16.25	17.53	14.91	16.15	14.92	15.95
2	CoP 9301	16.16	18.51	15.93	16.49	15.31	16.48
3	CoP 06436	15.31	16.12	12.09	15.98	16.05	15.11
	GM	16.15	17.67	14.68	16.21	15.77	16.10
	SE (m)	0.18	0.34	0.51	-	0.33	
	CD	0.56	1.04	1.54	-	0.68	
	CV	1.97	3.34	6.09	-	2.55	

Table 5.6.16. Brix (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	18.08	21.13	17.66	18.89	19.13	18.98
2	CoLk 14209	17.93	20.50	16.11	19.20	18.80	18.51
3	CoP 14438	19.22	19.40	16.59	19.06	18.87	18.63
4	CoP 14439	18.52	20.20	16.39	18.75	18.93	18.56
5	CoSe 14455	18.42	19.80	15.21	18.84	20.13	18.48
	Standards						
1	BO 91	18.52	19.67	15.88	18.98	18.67	18.34
2	CoP 9301	18.39	21.07	17.48	19.18	18.93	19.01
3	CoP 06436	17.46	18.60	14.32	18.79	20.07	17.85
	GM	18.32	20.05	16.20	18.98	19.19	18.55
	SE (m)	0.14	0.36	0.65	-	0.12	
	CD	0.44	1.10	1.97	-	0.24	
	CV	1.30	3.10	7.03	-	0.74	

Table 5.6.17. Purity (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	88.22	87.60	88.47	85.07	80.84	86.04
2	CoLk 14209	87.82	88.67	92.31	84.95	84.00	87.55
3	CoP 14438	89.24	89.53	92.53	84.99	83.70	88.00
4	CoP 14439	86.63	89.63	92.67	85.07	85.10	87.82
5	CoSe 14455	88.20	87.97	88.81	85.14	82.97	86.62
	Standards						
1	BO 91	87.76	89.13	93.92	85.09	79.90	87.16
2	CoP 9301	87.91	87.90	91.24	85.97	82.55	87.11
3	CoP 06436	87.70	86.67	84.47	85.05	79.98	84.77
	GM	88.18	88.39	90.55	85.37	82.38	86.97
	SE (m)	0.47	0.45	-	-	1.52	
	CD	1.46	1.38	-	-	3.16	
	CV	0.96	0.89	-	-	2.26	

Table 5.6.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	-	115.60	117.62	139.27	69.99	110.62
2	CoLk 14209	-	121.25	93.73	128.43	90.04	108.36
3	CoP 14438	-	137.72	85.59	131.32	95.80	112.61
4	CoP 14439	-	145.90	103.73	134.00	82.65	116.57
5	CoSe 14455	-	141.85	107.94	134.62	85.51	117.48
	Standards						
1	BO 91	-	151.10	127.30	145.92	90.63	128.74
2	CoP 9301	-	145.90	117.42	131.38	83.10	119.45
3	CoP 06436	-	140.70	128.03	145.31	83.02	124.27
	GM	-	137.50	110.17	140.87	85.09	118.41
	SE (m)	-	4.28	11.79	-	5.61	
	CD	-	13.09	33.52	-	11.68	
	CV	-	5.39	17.57	-	8.08	

Table 5.6.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 14208	141.00	75.60	132.66	132.97	61.26	108.70
2	CoLk 14209	137.00	86.88	104.95	120.97	78.31	105.62
3	CoP 14438	142.00	103.15	94.76	122.46	83.02	109.08
4	CoP 14439	127.00	107.55	112.88	125.59	70.64	108.73
7	CoSe 14455	152.00	108.17	119.27	126.32	75.01	116.15
	Standards						
1	BO 91	135.00	112.85	149.35	139.35	79.08	123.13
2	CoP 9301	131.00	110.65	130.60	123.01	73.73	113.80
3	CoP 06436	135.00	115.90	144.82	139.12	74.53	121.87
	GM	138.00	102.59	123.66	133.83	74.45	114.51
	SE (m)	0.77	4.16	13.19	-	4.89	
	CD	2.37	12.75	39.55	-	10.17	
	CV	2.04	7.03	18.47	-	8.04	

Table 5.6.20. Germination (%) at 45 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuadahari	Buralikson	Mean
1	CoLk 14208	60.36	38.55	30.21	37.88	31.33	39.67
2	CoLk 14209	50.18	39.10	26.87	38.88	37.67	38.54
3	CoP 14438	59.53	42.50	24.14	35.77	39.00	40.19
4	CoP 14439	59.06	44.60	27.44	35.84	31.67	39.72
5	CoSe 14455	64.35	41.82	28.64	40.43	38.00	42.65
	Standards						
1	BO 91	50.46	45.65	30.41	41.33	40.00	41.57
2	CoP 9301	45.92	43.10	29.28	35.71	40.00	38.80
3	CoP 06436	50.83	52.35	31.14	41.02	35.33	42.13
	GM	55.08	43.46	28.52	39.35	36.63	40.61
	SE (m)	0.35	2.66	2.27	-	2.97	
	CD	1.08	7.90	6.81	-	6.18	
	CV	4.10	10.60	13.78	-	9.94	

Table 5.6.21. Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entry	Seorahi	Pusa	Motipur	Bethuadhari	Buralikson
CoLk 14208	Very good	Very good	Very good	Good	Very good
CoLk 14209	Good	Good	Very good	Very good	Very good
CoP 14438	Very good	Very good	Very good	Very good	Very good
CoP 14439	Very good	Very good	Very good	Very good	Very good
CoSe 14455	Very good	Very good	Very good	Very good	Very good
Standards					
BO 91	Very good	Very good	Very good	Very good	Very good
CoP 9301	Good	Very good	Very good	Very good	Good
CoP 06436	Excellent	Very good	Excellent	Good	Very good

5.7. ADVANCED VARIETAL TRIAL (MIDLATE) – RATOON

Centers (4)	Bethuadahari, Motipur, Pusa and Seorahi
Entries (5)	CoLk 14208, CoLk 14209, CoP 14438, CoP 14439 and CoSe 14455
Standards (3)	BO 91, CoP 9301 and CoP 06436
Design	RBD
Replications	Three
Plot size	Gross : 6 m x 8 rows x 0.90 m Net : 5 m x 6 rows x 0.90 m
Ratooning time	February / March, 2019
Crop duration	11 months

Results of the previous year:

Five test entries and three standards were evaluated in AVT (Midlate) I plant at four locations of North Central and North East zones during 2018-19 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over the best standard across the zone for CCS yield. CoP 14439 ranked top with 9.74 t/ha of mean CCS yield across locations and recorded 14.92% and 10.57% improvement over the best standards at Pusa and Seorahi centers respectively. For cane yield, none of the test entries recorded >10% improvement in the zone. CoP 14439 ranked top with 80.67 t/ha of mean cane yield and recorded 19.13% and 16.36% improvement over the best standard at Seorahi and Pusa centers respectively. For CCS%, none of the test entries recorded >5% improvement in the zone. The entry CoLk 14208 ranked top in the zone with 12.61% mean CCS across locations. For sucrose%, none of the test entries recorded >5% improvement in the zone. The standard, CoP 9301 ranked top in the zone with 18.60% mean sucrose. The test entries CoLk 14208 and CoLk 14209 ranked second and third respectively in the zone with 18.48% and 18.20% mean sucrose respectively. Though two test entries, viz., CoP 14439 and CoSe 14455 recorded more than 10% improvement for cane yield across the zone, sucrose% recorded were numerically inferior with -5.38% and -2.53% respectively in the zone compared to the best standard. Hence, no qualifying entry was identified in the zone.

Results of the current year:

Five test entries and three standards were evaluated in AVT (Midlate) ratoon trial at four locations of North Central and North East zones during 2019-20 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement for CCS yield over the best standard across the locations. CoSe 14455 ranked top with 8.79 t/ha of mean CCS yield in the zone and also recorded 28.53% improvement over the best standards at Seorahi center. The test entries CoP 14438 and CoLk 14208 ranked second and third with 8.45 t/ha and 8.16 t/ha CCS yield respectively in the zone and also recorded 31.03% and 22.19% improvement respectively over the best standard at Seorahi center. For cane yield, none of the test entries recorded >10% improvement in the zone for cane yield. CoSe 14455 ranked top with 71.75 t/ha of cane yield across locations and also recorded 28.53% improvement over the best standard at Pusa center. The standard CoP 06436 and test entry CoP 14438 ranked second and third respectively with 69.22 t/ha and 69.12 t/ha of cane yield respectively. For CCS%, none of the test entries recorded >5% improvement in the zone. The standard CoP 9301 ranked first in the zone with 12.74% mean CCS%. Test entries CoLk 14208 and CoLk 14209 both ranked second in the zone with 12.35% mean CCS%. For sucrose%, none of the test entries recorded >5% improvement across the locations. The standard CoP 9301 ranked top in the zone with 18.26% mean sucrose%. The test entries CoLk 14209 and CoLk 14208 ranked second and third respectively in the zone with 17.85% and 17.83% of mean sucrose% respectively. Based on cane yield and juice quality parameters, none of the test entries recorded >10% improvement over the best standard for CCS yield and cane yield or >5% improvement for CCS% and sucrose% over the best standard CoP 9301. Hence, no qualifying entry was identified in the zone. **The data are presented in table 5.7.1 to 5.7.15.**

Table 5.7.1. CCS (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean	Overall rank
1	CoLk 14208	8.15*	8.22	8.11	8.14	8.16	3
2	CoLk 14209	7.64*	9.74	7.08	8.10	8.14	
3	CoP 14438	8.74*	9.83	7.16	8.08	8.45	2
4	CoP 14439	8.55*	9.24	6.32	8.30	8.10	
5	CoSe 14455	9.12*	9.46	8.09	8.48	8.79	1
	Standards						
1	BO 91	6.56	9.30	7.17	8.20	7.81	
2	CoP 9301	6.67	9.81	7.33	8.08	7.97	
3	CoP 06436	6.57	9.81	7.77	8.42	8.14	
	GM	7.75	9.43	7.41	8.23	8.21	
	SE (m)	0.32	0.24	0.33	-		
	CD	0.98	0.73	0.99	-		
	CV	7.23	4.40	7.73	-		
Top three qualifying entries at each locations							
	1	CoSe 14455					
	2	CoP 14438					
	3	CoP 14439					

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoP 14455 (1), CoSe 14438 (1) and CoP 14439 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard across the zone for CCS yield. CoSe 14455 ranked top with 8.79 t/ha of mean CCS yield across locations and also recorded 28.53% improvement over best standards at Seorahi center. The test entries CoP 14438 and CoLk 14208 ranked second and third with 8.45 t/ha and 8.16 t/ha CCS yield respectively and also recorded 31.03% and 22.19% improvement over best standard at Seorahi center respectively.

Table 5.7.2. Cane yield (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Mean	Overall rank
1	CoLk 14208	72.45*	61.52	69.83	61.85	66.41	
2	CoLk 14209	67.20*	73.68	60.77	61.59	65.81	
3	CoP 14438	73.20*	79.80	62.21	61.25	69.12	3
4	CoP 14439	75.12*	82.67*	54.90	62.22	68.73	
5	CoSe 14455	80.19*	72.71	70.17	63.91	71.75	1
	Standards						
1	BO 91	57.70	71.22	62.31	61.63	63.22	
2	CoP 9301	56.14	71.02	63.75	58.71	62.41	
3	CoP 06436	62.39	77.45	73.03	63.99	69.22	2
	GM	69.72	73.76	64.90	61.44	67.46	
	SE (m)	0.76	1.66	2.27	-		
	CD	2.31	5.08	6.81	-		
	CV	5.24	3.90	6.06	-		
Top three qualifying entries at each locations							
	1	CoSe 14455					
	2	CoP 14439					
	3	CoP 14438					

* Significantly superior the over best standard.

No. of locations where an entry recorded >10% improvement: CoSe 14455 (1), CoP 14439 (1), and CoP 14438 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard in the zone for cane yield. CoSe 14455 ranked top with 71.75 t/ha of cane yield across locations and also recorded 28.53% improvement over best standard at Pusa center. The standard CoP 06436 and test entry CoP 14438 ranked second and third in the zone with 69.22 t/ha and 69.12 t/ha of mean cane yield respectively. The test entries CoP 14438 and CoP 14439 recorded >10 improvement over standard at Seorahi centre.

Table 5.7.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethuad ahari	Mean	Overall rank
1	CoLk 14208	11.29	13.36	11.60	13.15	12.35	2
2	CoLk 14209	11.35	13.22	11.65	13.16	12.35	2
3	CoP 14438	11.94	12.33	11.53	13.19	12.25	
4	CoP 14439	11.39	11.16	11.52	13.33	11.85	
5	CoSe 14455	11.37	13.02	11.37	13.26	12.26	
	Standards						
1	BO 91	11.36	13.07	11.51	13.30	12.31	3
2	CoP 9301	11.90	13.78	11.49	13.77	12.74	1
3	CoP 06436	10.61	12.67	10.76	13.16	11.80	
	GM	11.40	12.83	11.43	13.41	12.27	
	SE (m)	0.26	0.21	0.22	-		
	CD	0.79	0.66	0.96	-		
	CV	3.95	2.89	3.46	-		
	Top three qualifying entries at each locations						
	1						
	2						
	3						

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement for CCS% over best standard in the zone. The standard CoP 9301 ranked first in the zone with 12.74% mean CCS%. Test entries CoLk 14208 & CoLk 14209 both ranked second in the zone with 12.35% mean CCS%.

Table 5.7.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean	Overall rank
1	CoLk 14208	16.31	19.35	16.82	18.85	17.83	3
2	CoLk 14209	16.43	19.12	16.90	18.93	17.85	2
3	CoP 14438	17.21	17.73	16.48	18.83	17.56	
4	CoP 14439	16.44	16.21	16.67	19.02	17.09	
5	CoSe 14455	16.46	18.85	16.32	18.92	17.64	
	Standards						
1	BO 91	16.42	18.92	16.40	19.05	17.70	
2	CoP 9301	17.13	19.86	16.48	19.56	18.26	1
3	CoP 06436	15.34	18.33	15.45	18.86	17.00	
	GM	16.47	18.55	16.44	19.16	17.66	
	SE (m)	0.36	0.28	0.34	-		
	CD	1.09	0.85	1.53	-		
	CV	3.79	2.59	3.62	-		
	Top three qualifying entries at each locations						
	1						
	2						
	3						

No. of locations where an entry recorded >5% improvement: Nil.

Performance across the locations: None of the test entries recorded >5% improvement over best standard for sucrose% across the locations. The standard CoP 9301 ranked top in the zone with 18.26% mean sucrose percent. The test entries CoLk 14209 and CoLK 14208 ranked second and third respectively in the zone with 17.85% and 17.83% mean sucrose percent respectively.

Table 5.7.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoLk 14208	18.38	21.97	19.11	20.93	20.10
2	CoLk 14209	18.62	21.67	19.24	21.21	20.19
3	CoP 14438	19.32	19.83	18.18	20.74	19.52
4	CoP 14439	18.52	18.53	18.91	20.91	19.22
5	CoSe 14455	18.65	21.40	18.18	20.81	19.76
	Standards					
1	BO 91	18.55	21.47	17.98	21.12	19.78
2	CoP 9301	19.19	22.33	18.31	21.31	20.29
3	CoP 06436	17.36	20.77	17.20	20.94	19.07
	GM	18.57	21.00	18.39	21.12	19.77
	SE (m)	0.37	0.25	0.50	-	
	CD	1.14	0.76	2.19	-	
	CV	3.51	2.04	4.71	-	

Table 5.7.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoLk 14208	88.67	88.07	88.00	90.06	88.70
2	CoLk 14209	88.26	88.07	87.85	89.25	88.36
3	CoP 14438	89.09	89.40	90.76	90.79	90.01
4	CoP 14439	88.78	87.43	88.25	90.96	88.86
5	CoSe 14455	88.27	88.07	89.78	90.92	89.26
	Standards					
1	BO 91	88.50	88.10	91.24	90.20	89.51
2	CoP 9301	89.29	88.93	90.10	91.79	90.03
3	CoP 06436	88.39	88.30	89.77	90.07	89.13
	GM	88.66	88.30	89.47	90.69	89.28
	SE (m)	0.33	0.46	1.12	-	
	CD	1.02	1.38	3.37	-	
	CV	0.65	0.89	2.17	-	

Table 5.7.7. Pol (%) cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoLk 14208	-	14.93	13.02	-	13.98
2	CoLk 14209	-	14.70	13.10	-	13.90
3	CoP 14438	-	13.71	12.77	-	13.24
4	CoP 14439	-	12.53	13.02	-	12.78
5	CoSe 14455	-	14.45	12.74	-	13.60
	Standards					
1	BO 91	-	14.57	12.85	-	13.71
2	CoP 9301	-	15.35	12.66	-	14.01
3	CoP 06436	-	14.12	12.04	-	13.08
	GM	-	14.30	12.77	-	13.54
	SE (m)	-	0.23	-	-	
	CD	-	0.71	-	-	
	CV	-	2.79	-	-	

Table 5.7.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoLk 14208	-	56.10	51.46	-	53.78
2	CoLk 14209	-	57.80	61.09	-	59.45
3	CoP 14438	-	59.20	60.93	-	60.07
4	CoP 14439	-	59.10	56.14	-	57.62
5	CoSe 14455	-	55.30	60.51	-	57.91
	Standards					
1	BO 91	-	58.90	60.89	-	59.90
2	CoP 9301	-	59.70	61.26	-	60.48
3	CoP 06436	-	56.45	60.50	-	58.48
	GM	-	57.82	59.09	-	58.46
	SE (m)	-	1.90	0.72	-	
	CD	-	5.75	2.16	-	
	CV	-	5.68	2.11	-	

Table 5.7.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoLk 14208	-	12.85	12.57	-	12.71
2	CoLk 14209	-	13.15	12.49	-	12.82
3	CoP 14438	-	12.65	12.51	-	12.58
4	CoP 14439	-	12.70	11.94	-	12.32
5	CoSe 14455	-	13.30	11.96	-	12.63
	Standards					
1	BO 91	-	12.92	11.66	-	12.29
2	CoP 9301	-	12.72	13.19	-	12.96
3	CoP 06436	-	13.65	12.07	-	12.86
	GM	-	12.99	12.30	-	12.65
	SE (m)	-	0.43	0.34	-	
	CD	-	1.30	1.04	-	
	CV	-	5.73	4.87	-	

Table 5.7.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoLk 14208	115.00	81.20	131.94	124.70	113.21
2	CoLk 14209	98.00	89.14	111.96	116.57	103.92
3	CoP 14438	105.00	98.70	115.05	116.98	108.93
4	CoP 14439	99.00	103.75	114.84	119.44	109.26
5	CoSe 14455	125.00	97.23	135.13	120.27	119.41
	Standards					
1	BO 91	102.00	105.33	137.30	129.00	118.41
2	CoP 9301	97.00	101.72	110.31	117.08	106.53
3	CoP 06436	104.00	103.60	116.70	130.73	113.76
	GM	106.00	97.58	121.65	125.60	112.71
	SE (m)	1.21	3.39	6.70	-	
	CD	3.68	10.39	20.08	-	
	CV	5.37	6.02	9.54	-	

Table 5.7.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoLk 14208	201.00	172.60	233.33	207.33	203.57
2	CoLk 14209	192.00	205.77	213.33	220.00	207.78
3	CoP 14438	184.00	215.00	213.33	213.67	206.50
4	CoP 14439	185.00	242.10	226.66	218.33	218.02
5	CoSe 14455	208.00	243.67	230.00	221.67	225.84
	Standards					
1	BO 91	161.00	231.81	246.66	198.33	209.45
2	CoP 9301	165.00	199.44	226.66	206.67	199.44
3	CoP 06436	173.00	240.00	250.00	219.67	220.67
	GM	184.00	218.80	230.00	208.22	210.26
	SE (m)	4.52	7.58	11.72	-	
	CD	13.71	23.23	35.15	-	
	CV	4.26	6.00	8.83	-	

Table 5.7.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoLk 14208	1.90	2.18	2.06	1.75	1.97
2	CoLk 14209	1.80	2.41	2.56	1.92	2.17
3	CoP 14438	1.70	2.07	2.20	1.87	1.96
4	CoP 14439	1.80	2.29	2.30	1.95	2.09
5	CoSe 14455	2.00	1.71	2.26	1.78	1.94
	Standards					
1	BO 91	1.70	1.98	2.13	1.78	1.90
2	CoP 9301	1.70	1.89	2.36	1.70	1.91
3	CoP 06436	1.90	2.27	2.36	1.94	2.12
	GM	1.80	2.10	2.28	1.81	2.00
	SE (m)	0.06	0.07	0.08	-	
	CD	0.18	0.22	0.25	-	
	CV	5.80	5.99	6.38	-	

Table 5.7.13. Single Cane Weight (kg) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Mean
1	CoLk 14208	0.63	0.76	0.67	0.48	0.63
2	CoLk 14209	0.68	0.85	1.08	0.58	0.80
3	CoP 14438	0.70	0.81	0.86	0.52	0.72
4	CoP 14439	0.76	0.80	1.00	0.56	0.78
5	CoSe 14455	0.64	0.75	0.86	0.55	0.70
	Standards					
1	BO 91	0.59	0.68	0.96	0.51	0.68
2	CoP 9301	0.58	0.70	0.98	0.48	0.68
3	CoP 06436	0.60	0.75	1.10	0.59	0.76
	GM	0.65	0.76	0.93	0.52	0.71
	SE (m)	0.01	0.04	0.04	-	
	CD	0.02	0.12	0.13	-	
	CV	1.93	9.14	8.16	-	

Table 5.7.14. Number of Shoots ('000/ha) at 180 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuadahari	Mean
1	CoLk 14208	-	105.60	149.76	128.89	128.08
2	CoLk 14209	-	114.80	112.27	121.60	116.22
3	CoP 14438	-	127.85	121.02	123.56	124.14
4	CoP 14439	-	135.85	121.33	125.26	127.48
5	CoSe 14455	-	128.65	141.83	126.70	132.39
	Standards					
1	BO 91	-	130.66	145.54	135.68	137.29
2	CoP 9301	-	132.18	116.59	123.41	124.06
3	CoP 06436	-	129.75	123.39	137.93	130.36
	GM	-	125.67	128.97	132.34	128.99
	SE (m)	-	3.73	7.05	-	
	CD	-	11.42	21.14	-	
	CV	-	5.14	9.47	-	

Table 5.7.15. Number of Tillers ('000/ha) at 90 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuadahari	Mean
1	CoLk 14208	153.00	101.15	154.81	137.79	136.69
2	CoLk 14209	132.00	103.65	129.98	129.49	123.78
3	CoP 14438	145.00	118.95	129.16	131.56	131.17
4	CoP 14439	129.00	123.80	128.95	134.40	129.04
5	CoSe 14455	159.00	115.70	150.99	134.72	140.10
	Standards					
1	BO 91	139.00	118.73	168.30	145.65	142.92
2	CoP 9301	133.00	110.78	125.14	132.38	125.33
3	CoP 06436	141.00	121.55	135.96	146.46	136.24
	GM	142.00	114.29	140.41	141.50	134.55
	SE (m)	1.32	4.49	6.54	-	
	CD	4.01	13.75	19.62	-	
	CV	4.37	6.80	8.07	-	

Table 5.7.16. Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entry / Locations	Seorahi	Pusa	Motipur	Bethuadahari
CoLk 14208	Very good	Good	Very good	Good
CoLk 14209	Good	Very good	Very good	Very good
CoP 14438	Very good	Very good	Very good	Very good
CoP 14439	Very good	Very good	Very good	Very good
CoSe 14455	Very good	Very good	Good	Very good
Standards				
BO 91	Very good	Very good	Very good	Very good
CoP 9301	Good	Good	Very good	Good
CoP 06436	Excellent	Excellent	Excellent	Very good

**5.8. ADVANCED VARIETAL TRIAL (Midlate)
Mean of two plant and one ratoon crops (2018-20)**

In the North Central and North East zones, five midlate clones were evaluated along with three standards during the crop seasons 2018 – 20. The trial was conducted by five centres across the zone. Buralikson centre did not conduct AVT (I Plant) and AVT (Ratoon) trials. Pooled data of two plant and one ratoon trials of five centres are presented in tables **5.8.1. to 5.8.4.** and in figures **5.8.1. to 5.8.4.** The salient results pertaining to CCS (t/ha), cane yield (t/ha), CCS% and sucrose% are given below.

Commercial Cane Sugar (t/ha):

None of the test entries recorded >10% improvement over the best standard for CCS yield across locations based on weighted mean. The test entry CoSe 14455 (9.33 t/ha) ranked first in the zone and recorded 31.85% and 14.77% improvement over the best standard at Seorahi and Buralikson locations respectively. Another test entry CoP 14439 (8.98 t/ha) ranked second in the zone and recorded 19.80% and 10.83% improvement over the best standard at Seorahi and Pusa locations respectively. The standard CoP 06436 (8.85 t/ha) ranked third in the zone for commercial sugar yield.

Cane Yield (t/ha):

For cane yield, none of the test entries recorded >10% improvement over the best standard based on weighted mean. The entry CoSe 14455 (82.78 t/ha) ranked first in the zone with 33.36% improvement over the best standard at Seorahi center. The standard CoP 06436 (80.32 t/ha) ranked second in the zone. Another test entry CoP 14439 (80.14 t/ha) ranked third in zone and recorded 25.14% and 24.04% improvement over the best standard at Seorahi and Pusa centers respectively.

Commercial Cane Sugar (%):

None of the test entries recorded >5% improvement over the best standard for CCS% across locations based on weighted mean. The standard CoP 9301 ranked top in the zone with 13.60 mean CCS%. The test entries CoLk 14208 (13.39%) and CoLk 14209 (13.29%) ranked second and third in the zone.

Sucrose%:

For sucrose%, none of the test entries recorded >5% improvement over the best standard based on weighted mean. The standard CoP 9301 ranked top in the zone with 19.77% mean sucrose%. The test entries CoLk 14208 (19.46%) and CoLk 14209 (19.25%) ranked second and third in the zone.

Overall performance:

Based on the pooled mean of two plant and one ratoon crops none of the entries was identified as qualifying entry compared to the standards CoP 9301 and CoP 06436 in the zone. Hence, none of the test entries were identified as qualifying entry in the zone.

Table 5.8.1. CCS at harvest (t/ha) - Pooled data of two plant and one ratoon crops

Sl No.	Entries	Seorahi				Pusa				Motipur				Bethuadahari			
		IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean
1	CoLk 14208	10.18	10.26	8.15	9.53	8.61	9.96	8.22	8.93	9.18	11.62	8.11	9.64	8.01	8.49	8.14	8.21
2	CoLk 14209	9.16	9.02	7.64	8.61	9.00	11.86	9.74	10.20	8.23	9.57	7.08	8.29	8.45	8.65	8.10	8.40
3	CoP 14438	8.94	10.34	8.74	9.34	9.65	12.62	9.83	10.70	8.46	9.24	7.16	8.29	8.17	8.56	8.08	8.27
4	CoP 14439	9.41	10.04	8.55	9.33	11.94	12.40	9.24	11.19	8.76	9.63	6.32	8.24	8.22	8.80	8.30	8.44
5	CoSe 14455	10.68	11.25	9.12	10.35	10.11	10.81	9.46	10.13	8.46	10.77	8.09	9.11	8.19	8.98	8.48	8.55
Standards																	
1	BO 91	8.26	8.72	6.56	7.85	9.75	8.60	9.30	9.22	8.34	9.09	7.17	8.20	8.16	8.78	8.20	8.38
2	CoP 9301	8.00	8.53	6.67	7.73	10.39	10.11	9.81	10.10	7.57	10.05	7.33	8.32	8.16	8.72	8.08	8.32
3	CoP 06436	7.91	9.08	6.57	7.85	10.31	10.16	9.81	10.09	8.53	9.87	7.77	8.72	8.23	9.20	8.42	8.62
	GM	9.07	9.66	7.75	8.82	9.66	10.82	9.43	10.07	8.44	9.98	7.38	8.60	8.20	8.77	8.23	8.40
Sl No.	Entries	Buralikson				GM (Wt. Avg)	Rank										
		IP*	IIP	R*	Mean												
1	CoLk 14208	-	7.43	-	7.43	8.70											
2	CoLk 14209	-	11.91	-	11.91	8.70											
3	CoP 14438	-	11.05	-	11.05	8.69											
4	CoP 14439	-	8.47	-	8.47	8.98	2										
5	CoSe 14455	-	12.12	-	12.12	9.33	1										
Standards																	
1	BO 91	-	10.17	-	10.17	8.43											
2	CoP 9301	-	10.56	-	10.56	8.68											
3	CoP 06436	-	9.50	-	9.50	8.85	3										
	GM	-	10.15	-	10.15												

* Trials not conducted

Table 5.8.2. Cane yield at harvest (t/ha) - Pooled data of two plant and one ratoon crops

Sl No.	Entries	Seorahi				Pusa				Motipur				Bethuadahari			
		IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean
1	CoLk 14208	80.86	80.99	72.45	78.10	61.03	77.63	61.52	66.73	78.84	99.40	69.83	82.69	66.32	67.87	61.85	65.35
2	CoLk 14209	74.94	74.19	67.20	72.11	64.16	99.14	73.68	78.99	70.10	84.05	60.77	71.64	68.91	68.47	61.59	66.32
3	CoP 14438	79.63	78.68	73.20	77.17	75.69	106.87	79.80	87.45	73.27	78.69	62.21	71.39	67.09	67.60	61.25	65.31
4	CoP 14439	84.56	82.81	75.12	80.83	95.17	101.18	82.67	93.01	74.34	85.18	54.90	71.47	68.62	69.45	62.22	66.76
5	CoSe 14455	88.27	89.95	80.19	86.14	77.82	91.26	72.71	80.60	72.54	92.18	70.17	78.30	69.68	70.49	63.91	68.03
Standards																	
1	BO 91	68.52	67.54	57.70	64.59	79.09	74.63	71.22	74.98	72.90	79.92	62.31	71.71	69.01	68.25	61.63	66.30
2	CoP 9301	66.05	62.73	56.14	61.64	73.39	78.58	71.02	74.33	70.67	84.87	63.75	73.10	66.14	65.51	58.71	63.45
3	CoP 06436	70.98	69.39	62.39	67.59	81.79	92.30	77.45	83.85	73.99	85.80	73.03	77.61	72.00	71.97	63.99	69.32
	GM	76.73	75.79	68.05	73.52	76.02	90.20	73.76	79.99	73.33	86.26	64.62	74.74	68.47	68.70	61.89	66.36
Sl No.	Entries	Buralikson				GM (Wt. Avg)	Rank										
		IP*	IIP	R*	Mean												
1	CoLk 14208	-	62.67	-	62.67	74.83											
2	CoLk 14209	-	91.2	-	91.20	78.79											
3	CoP 14438	-	90.73	-	90.73	76.94											
4	CoP 14439	-	70	-	70.00	80.14	3										
5	CoSe 14455	-	95.37	-	95.37	82.78	1										
Standards																	
1	BO 91	-	86.57	-	86.57	74.50											
2	CoP 9301	-	89.63	-	89.63	73.30											
3	CoP 06436	-	76.2	-	76.20	80.32	2										
	GM	-	82.80	-	82.80												

* Trial not conducted

Table 5.8.3. CCS (%) at harvest - Pooled data of two plant and one ratoon crops

Sl No.	Entries	Seorahi				Pusa				Motipur				Bethuadahari			
		IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean
1	CoLk 14208	12.69	12.58	11.29	12.19	14.01	12.83	13.36	13.40	11.64	11.69	11.60	11.64	12.09	12.51	13.15	12.58
2	CoLk 14209	12.03	12.36	11.35	11.91	14.02	11.95	13.22	13.06	11.74	11.38	11.65	11.59	12.27	12.63	13.16	12.69
3	CoP 14438	12.99	11.37	11.94	12.10	12.75	11.82	12.33	12.30	11.55	11.74	11.53	11.61	12.18	12.66	13.19	12.68
4	CoP 14439	11.88	11.38	11.39	11.55	12.55	12.19	11.16	11.97	11.79	11.32	11.52	11.54	11.99	12.68	13.33	12.67
5	CoSe 14455	13.61	11.87	11.37	12.28	12.97	12	13.02	12.66	11.66	11.69	11.37	11.57	11.76	12.74	13.26	12.59
Standards																	
1	BO 91	12.73	12.25	11.36	12.11	12.33	11.53	13.07	12.31	11.45	11.35	11.51	11.44	11.83	12.86	13.3	12.66
2	CoP 9301	12.92	12.76	11.9	12.53	14.16	12.88	13.78	13.61	10.74	11.84	11.49	11.36	12.35	13.31	13.77	13.14
3	CoP 06436	12.8	11.4	10.61	11.60	12.61	11.05	12.67	12.11	11.52	11.5	10.76	11.26	11.44	12.79	13.16	12.46
	GM	12.71	12.00	11.40	12.03	13.18	12.03	12.83	12.68	11.51	11.56	11.43	11.50	11.99	12.77	13.29	12.68
Sl No.	Entries	Buralikson				GM (Wt. Avg)	Rank										
		IP*	IIP	R*	Mean												
1	CoLk 14208	-	11.87	-	11.87	13.39	2										
2	CoLk 14209	-	13.06	-	13.06	13.29	3										
3	CoP 14438	-	12.19	-	12.19	13.03											
4	CoP 14439	-	12.11	-	12.11	12.86											
5	CoSe 14455	-	12.71	-	12.71	13.09											
Standards																	
1	BO 91	-	11.78	-	11.78	13.00											
2	CoP 9301	-	11.76	-	11.76	13.60	1										
3	CoP 06436	-	12.47	-	12.47	12.68											
	GM	-	12.24	-	12.24												

* Trial not conducted

Table 5.8.4. Sucrose (%) at harvest - Pooled data of two plant and one ratoon crops

Sl No.	Entries	Seorahi				Pusa				Motipur				Bethuadahari			
		IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean	IP	IIP	R	Mean
1	CoLk 14208	18.47	18.18	16.31	17.65	20.39	18.54	19.35	19.43	17.52	17.09	16.82	17.14	17.53	18.13	18.85	18.17
2	CoLk 14209	17.49	17.94	16.43	17.29	20.19	17.3	19.12	18.87	17.44	16.22	16.9	16.85	17.68	18.32	18.93	18.31
3	CoP 14438	18.95	16.54	17.21	17.57	18.51	16.37	17.73	17.54	16.9	16.7	16.48	16.69	17.53	18.35	18.83	18.24
4	CoP 14439	17.33	16.62	16.44	16.80	18.41	17.63	16.21	17.42	17.34	16.43	16.67	16.81	17.32	18.37	19.02	18.24
5	CoSe 14455	19.67*	18.03	16.46		18.82	17.39	18.85		17.04	16.84	16.32		16.99	18.4	18.92	
Standards																	
1	BO 91	18.58	17.6	16.42	17.53	18.42	16.73	18.92	18.02	16.85	16.04	16.4	16.43	17.06	18.54	19.05	18.22
2	CoP 9301	18.79	18.54	17.13	18.15	20.39	18.64	19.86	19.63	17.42	16.93	16.48	16.94	17.78	19.14	19.56	18.83
3	CoP 06436	18.61	16.6	15.34	16.85	18.29	16.01	18.33	17.54	16.82	16.28	15.45	16.18	16.58	18.48	18.86	17.97
	GM	18.32	17.51	16.47	17.41	19.18	17.33	18.55	18.35	17.17	16.57	16.44	16.72	17.31	18.47	19.00	18.28
Sl No.	Entries	Buralikson				GM (Wt. Avg)	Rank										
		IP*	IIP	R*	Mean												
1	CoLk 14208	-	18.12	-	18.12	19.46	2										
2	CoLk 14209	-	18.94	-	18.94	19.25	3										
3	CoP 14438	-	18.44	-	18.44	18.72											
4	CoP 14439	-	18.38	-	18.38	18.65											
5	CoSe 14455	-	18.86	-	18.86	19.00											
Standards																	
1	BO 91	-	17.97	-	17.97	18.80											
2	CoP 9301	-	17.97	-	17.97	19.77	1										
3	CoP 06436	-	18.62	-	18.62	18.32											
	GM	-	18.41	-	18.41												

* Trial not conducted

Fig: 5.8.1. Mean performance of entries in two plant and one ratoon crops – CCS (t/ha)

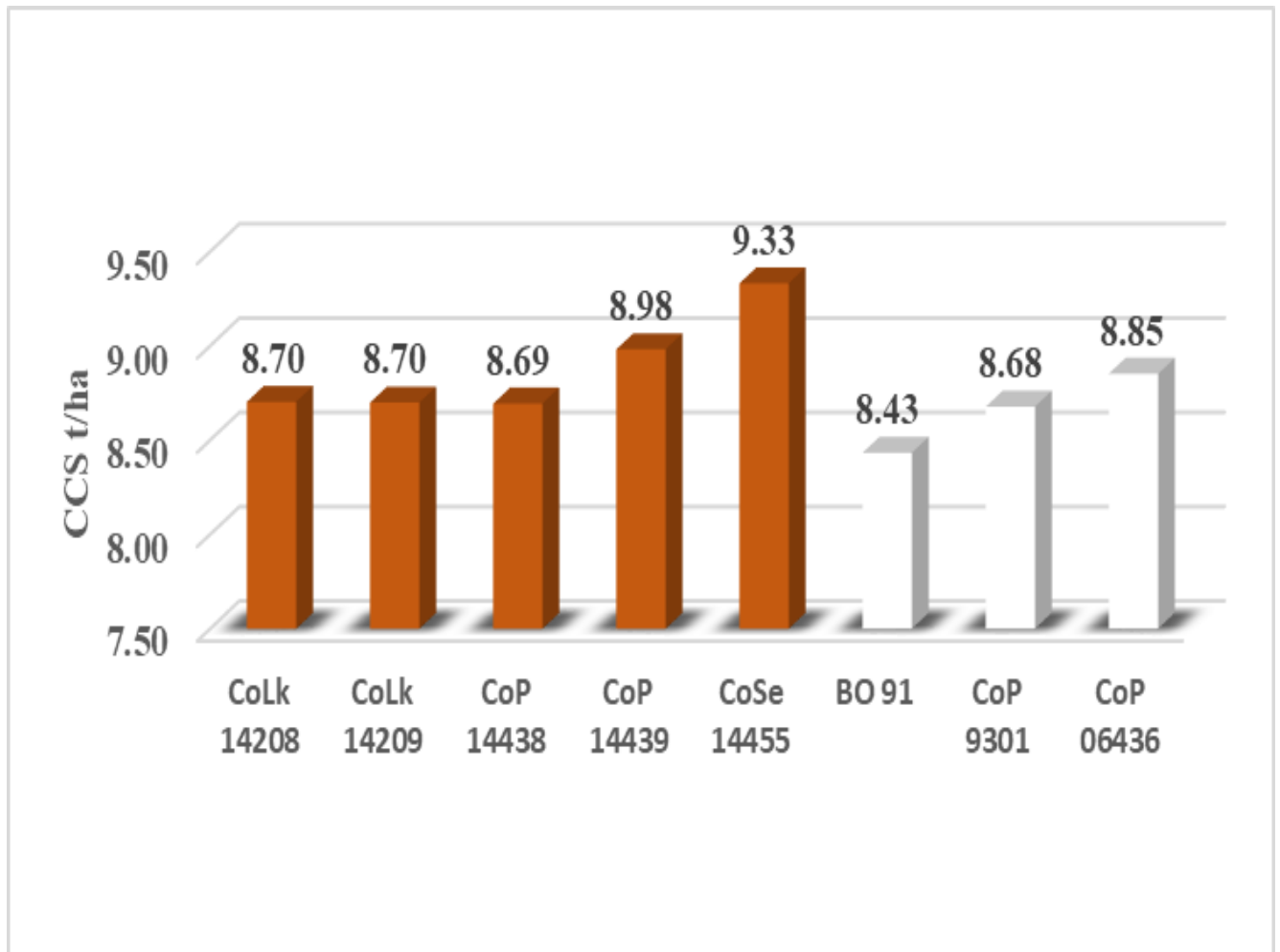


Fig: 5.8.2.Mean performance of entries in two plant and one ratoon crops- Cane yield at harvest t/ha

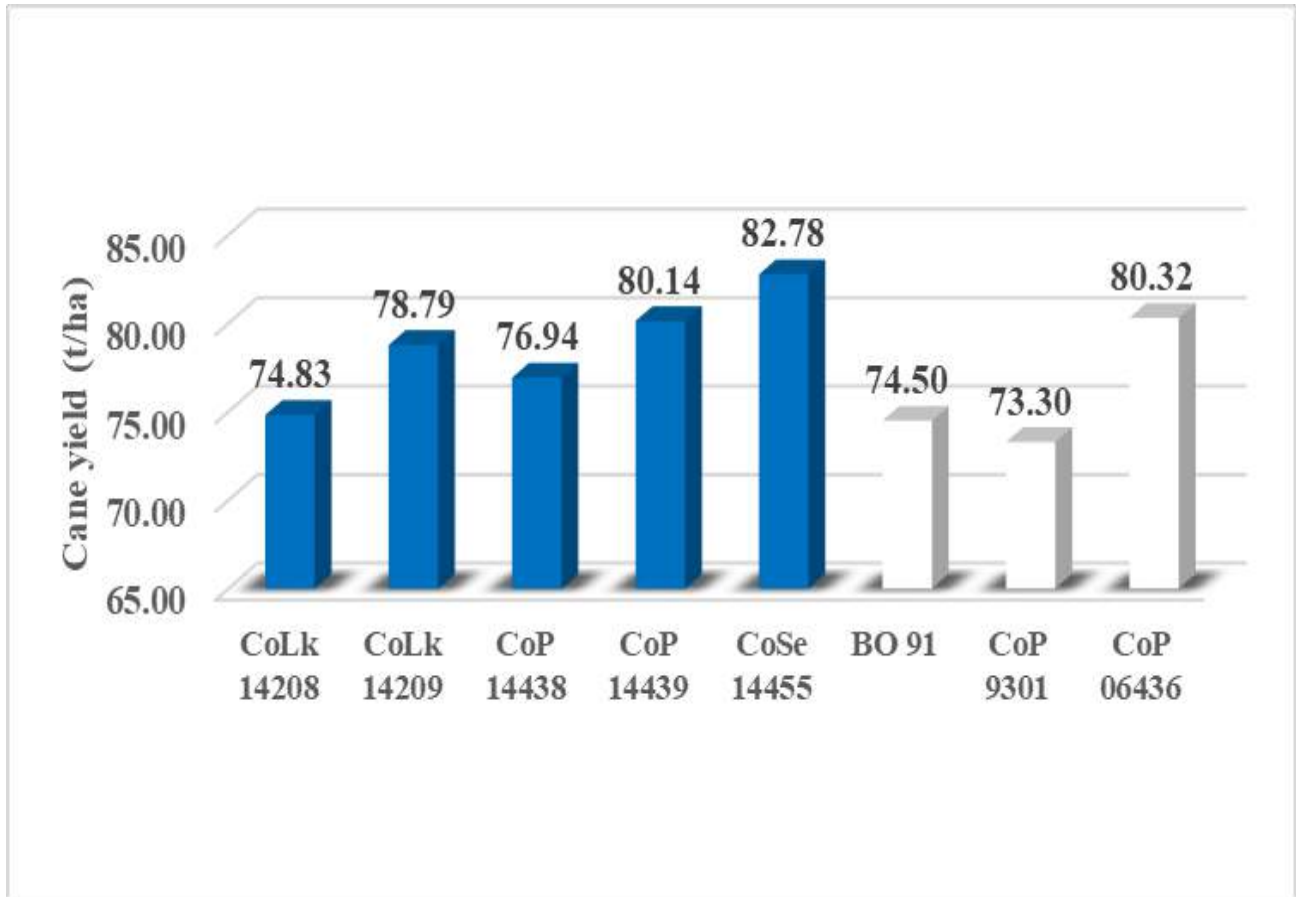


Fig 5.8.3. Mean performance of entries in two plant and one ratoon crops - CCS% at harvest

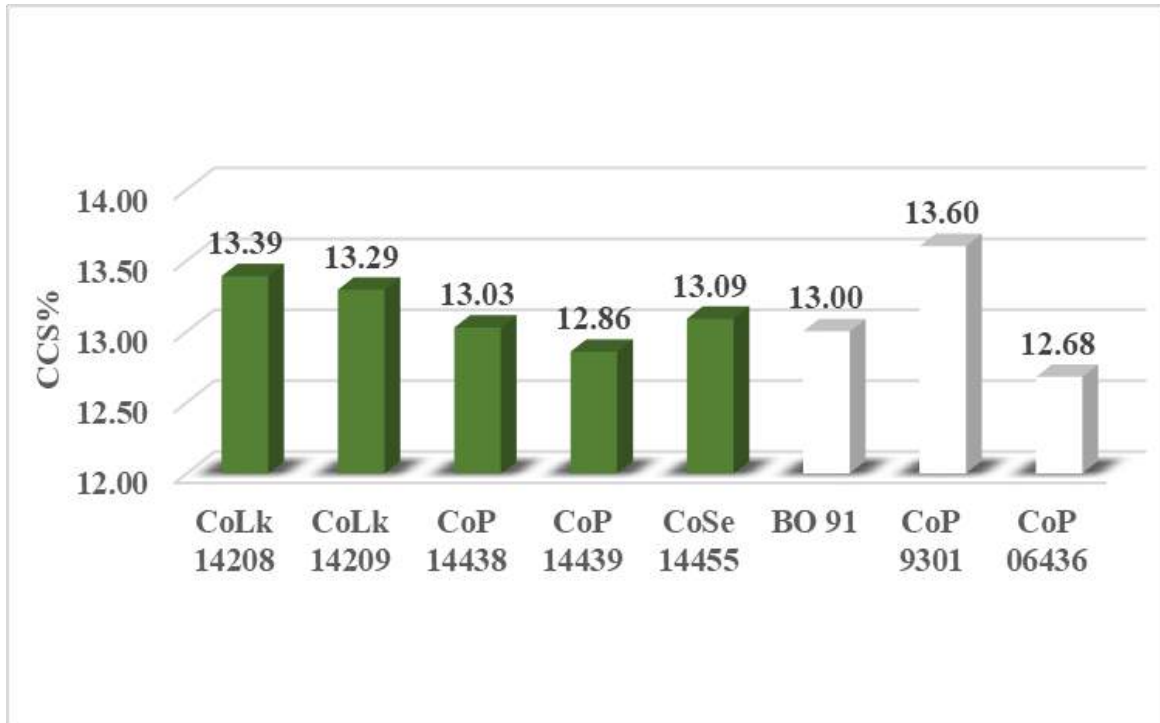
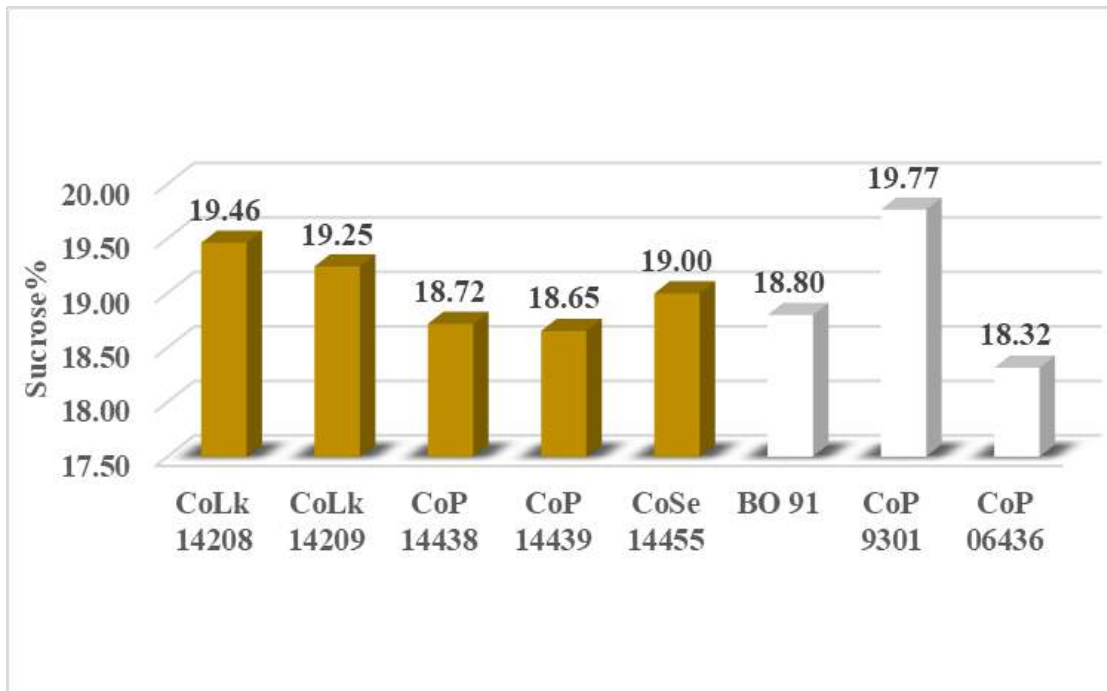


Fig 5.8.4. Mean performance of entries in two plant and one ratoon crops - Sucrose% at harvest



5.9. ADVANCED VARIETAL TRIAL (MIDLATE) – I PLANT

Centers (5)	Bethuadahari, Buralikson, Motipur, Pusa and Seorahi
Entries (7)	CoLk 15468, CoLk 15469, CoP 15438, CoP 15439, CoP 15440, CoSe 15453 and CoSe 15454
Standards (3)	BO 91, CoP 9301 and CoP 06436
Design	RBD
Replications	Three
Plot size	Gross : 6 m x 8 rows x 0.90 m Net : 5 m x 6 rows x 0.90 m
Seed rate	12 buds per meter
Date of planting	February - March, 2019
Crop duration	12 months

Results of the previous year:

Ten test entries and three standards were evaluated in IVT (Midlate) trial at four locations of North Central and North East zones during 2018-19 for cane yield and juice quality parameters. The test entry CoSe 15453 ranked top in the zone with 11.57% improvement over the best standard CoP 06436 (9.25 t/ha) for mean CCS yield across locations. For cane yield, the test entry CoSe 15453 ranked top in the zone with 15.94% improvement over popular standard CoP 9301 (72.33 t/ha) for mean cane yield across locations. For CCS%, none of the test entries recorded >5% improvement in the zone. The entry CoLk 15469 (12.84%) ranked top in the zone and recorded 10.51% improvement over the best standard at Pusa centre. For sucrose%, none of the test entries recorded >5% improvement in the zone. The test entry CoLk 15469 (18.63%) ranked top in the zone with 9.63% improvement over the best standard BO 91 (18.89%) at Pusa centre. Based on cane yield and juice quality parameters, the entry CoSe 15454 was the only qualifying entry which recorded >10% improvement over best standard CoP 9301 for cane yield across locations and it also recorded on-par values for sucrose% across zone.

Results of the current year:

Seven test entries and three standards were evaluated in AVT (Midlate) I plant at five locations of North Central and North East zones during 2019-20 for cane yield and juice quality parameters. The test entry CoP 15453 ranked top in the zone with 13.93% improvement for CCS yield over the best standard across the locations and it also recorded 37.49% and 21.88% improvement over the best standard at Seorahi and Motipur centers respectively. For cane yield, the test entry CoP 15453 ranked top in the zone with 15.43% improvement for cane yield over best standard across the locations and it also recorded 28.32%, 11.05% and 24.75% improvement over best standard at Seorahi, Motipur and Pusa centers respectively. For CCS%, none of the test entries recorded >5% improvement in the zone. The standard CoP 9301 recorded top in the zone with 12.72% of mean CCS% across locations. The entry CoP 15439 and CoP 15438 ranked second and third in the zone with 12.59% and 12.55% of mean CCS% respectively. For sucrose%, none of the test entries recorded >5% improvement in the zone. The standard CoP 9301 ranked top in the zone with 18.48% mean sucrose%. The entries CoLk 15468 and CoLk 15469 ranked second and third in the zone with 18.32% and 18.29% mean sucrose% respectively. Considering both cane yield and juice quality, CoSe 15453 recorded >10% improvement for cane yield and found to be numerically superior compared to best standard CoP 06436 and it is identified as qualifying entry in the zone. **The data are presented in table 5.9.1 to 5.9.20.**

Table 5.9.1. CCS (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuahari	Buralikson	Mean	Overall rank
1	CoLk 15468	8.81	8.44	11.85*	8.80	9.48	9.48	
2	CoLk 15469	8.35	10.71	7.86	8.58	9.46	8.99	
3	CoP 15438	9.78	10.59	10.98*	8.38	9.16	9.78	
4	CoP 15439	9.98	14.93*	10.76*	8.89	9.28	10.77	2
5	CoP 15440	9.14	15.30*	9.61	8.58	10.07	10.54	3
6	CoSe 15453	14.12*	12.91	11.53*	9.05	9.30	11.38	1
7	CoSe 15454	10.64	11.26	8.77	8.94	-	9.90	
Standards								
1	BO 91	10.27	11.36	8.68	9.18	10.48	9.99	
2	CoP 9301	8.67	10.81	9.46	8.95	10.50	9.68	
3	CoP 06436	8.66	12.66	8.37	9.49	9.32	9.70	
	GM	9.85	11.90	9.79	9.21	9.67	10.08	
	SE (m)	0.24	0.73	0.36	-	0.87		
	CD	0.71	2.19	1.07	-	1.80		
	CV	4.17	10.65	6.41	-	10.97		
Top three qualifying entries at each locations								
	1	CoSe 15453	CoP 15440	CoLk 15468			CoSe 15453	
	2		CoP 15439	CoSe 15453				
	3			CoP 15438				

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoSe 15453 (3), CoP 15440 (1), CoP 15439 (1), CoLk 15468 (1), CoP 15438 (1).

Performance across the locations: The test entry CoP 15453 ranked top in the zone with 13.93% improvement for CCS yield over the best standard across the locations and it also recorded 37.49% and 21.88% improvement over the best standard at Seorahi and Motipur centers respectively. The test entry CoP 15439 ranked second in the zone with 17.93% and 13.74% improvement for CCS yield over best standard at Pusa and Motipur centers respectively. CoP 15440 ranked third with 20.85% improvement over the best standard at Pusa centre. Other test entries CoLk 15468 and CoP 15438 recorded >10% improvement over the best standard at Motipur center respectively.

Table 5.9.2. Cane yield (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuahari	Buralikson	Mean	Overall rank
1	CoLk 15468	72.36	63.61	99.40*	69.89	74.50	75.95	
2	CoLk 15469	70.45	85.51	66.74	66.67	74.77	72.83	
3	CoP 15438	76.34	82.18	93.73*	66.01	72.53	78.16	
4	CoP 15439	82.31	113.75	93.42*	66.75	72.00	85.65	2
5	CoP 15440	67.64	118.85	82.71	67.86	86.00	84.61	3
6	CoSe 15453	102.73*	113.04	99.20*	69.02	79.40	92.67	1
7	CoSe 15454	94.22*	90.81	77.76	70.36	-	83.29	
Standards								
1	BO 91	80.06	90.25	75.50	69.34	86.30	80.29	
2	CoP 9301	68.01	82.15	79.52	66.56	85.40	76.33	
3	CoP 06436	71.36	101.79	78.90	72.33	73.40	79.56	
	GM	78.55	94.19	84.73	69.41	78.26	81.03	
	SE (m)	0.67	5.99	2.35	-	6.87		
	CD	1.99	17.92	6.95	-	14.29		
	CV	3.99	11.12	4.81	-	10.75		
Top three qualifying entries at each locations								
	1	CoSe 15453	CoP 15440	CoLk 15468			CoSe 15453	
	2	CoSe 15454	CoP 15439	CoSe 15453				
	3		CoSe 15453	CoP 15438				

* Significantly superior the over best standard.

No. of locations where an entry recorded >10% improvement: CoSe 15453 (4), CoSe 15454 (1), CoP 15440 (1), CoP 15438 (1), CoP 15439 (1) and CoLk 15468 (1).

Performance across the locations: The test entry CoP 15453 ranked top in the zone with 15.43% improvement for cane yield over the best standard across the locations and it also recorded 28.32%, 11.05% and 24.75% improvement over the best standard at Seorahi, Motipur and Pusa centers respectively. The test entry CoP 15439 ranked second in the zone with 17.48% and 11.48% improvement over the best standard at Pusa and Motipur centers respectively. CoP 15440 ranked third with 16.76% improvement over the best standard at Pusa centre. Other test entries CoLk 15468 and CoP 15438 recorded >10% improvement over the best standard at Motipur, CoSe 15454 at Seorahi center.

Table 5.9.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 15468	12.18	13.29	11.92	12.59	12.70	12.54	
2	CoLk 15469	11.89	12.52	11.77	12.87	12.65	12.34	
3	CoP 15438	12.83	12.89	11.71	12.70	12.64	12.55	3
4	CoP 15439	12.13	13.12	11.51	13.32*	12.88	12.59	2
5	CoP 15440	13.53*	12.85	11.61	12.64	11.74	12.47	
6	CoSe 15453	13.75*	12.51	11.57	13.12	11.72	12.53	
7	CoSe 15454	11.30	12.40	11.27	12.71	-	11.92	
Standards								
1	BO 91	12.83	12.64	11.48	13.24	12.17	12.47	
2	CoP 9301	12.77	13.20	11.90	13.45	12.27	12.72	1
3	CoP 06436	12.15	12.41	10.60	13.11	12.73	12.20	
	GM	12.53	12.78	11.53	13.27	12.39	12.50	
	SE (m)	0.15	0.17	0.23	-	0.27		
	CD	0.46	0.50	0.69	-	0.56		
	CV	0.31	2.26	3.49	-	2.68		
Top three qualifying entries at each locations								
	1	CoSe 15453						
	2	CoP 15440						
	3							

* Significantly superior over the best standard.

No. of locations where an entry recorded >5% improvement: CoSe 15453 (1) and CoP 15440 (1).

Performance across the locations: None of the test entries recorded >5% improvement over the best standard across the zone for CCS%. The standard CoP 9301 ranked top in the zone with 12.72% of mean CCS% across locations. The entry CoP 15439 and CoP 15438 ranked second and third in the zone with 12.59% and 12.55% mean CCS% respectively. The entries CoSe 15453 and CoP 15440 recorded 7.17% and 5.46% improvement respectively over the best standard at Seorahi centre.

Table 5.9.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoLk 15468	17.78	19.24	17.62	18.25	18.71	18.32	2
2	CoLk 15469	17.30	18.12	16.98	18.63	18.76	17.96	
3	CoP 15438	18.65	18.71	16.82	18.41	18.46	18.21	
4	CoP 15439	17.74	18.97	16.48	19.20	18.96	18.27	
5	CoP 15440	19.58*	19.09	16.70	18.33	17.75	18.29	3
6	CoSe 15453	19.95*	18.24	15.56	19.00	17.56	18.06	
7	CoSe 15454	16.46	17.96	16.11	18.33	-	17.22	
Standards								
1	BO 91	18.63	18.24	16.32	19.03	18.28	18.10	
2	CoP 9301	18.54	19.07	17.18	19.25	18.34	18.48	1
3	CoP 06436	17.64	18.03	15.06	18.90	18.74	17.67	
	GM	18.23	18.57	16.58	19.06	18.40	18.17	
	SE (m)	0.14	0.17	0.34	-	0.28		
	CD	0.42	0.49	1.02	-	0.57		
	CV	1.32	1.54	3.62	-	1.84		
Qualifying entries at each locations								
	1	CoSe 15453						
	2	CoP 15440						
	3							

* Significantly superior over the best standard.

No. of locations where an entry recorded >5% improvement: CoSe 15453 (1) and CoP 15440 (1).

Performance across the locations: None of the test entries recorded >5% improvement over best standard for sucrose% in the zone. The standard CoP 9301 ranked top in the zone with 18.48% mean sucrose%. The entries CoLk 15468 and CoLk 15469 ranked second and third in the zone with 18.32% and 18.29% mean sucrose% respectively. The entries CoSe 15453 and CoP 15440 recorded >5% over the best standard at Seorahi center.

Table 5.9.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	20.47	21.83	20.84	20.76	22.00	21.18
2	CoLk 15469	19.79	20.60	19.11	21.14	22.33	20.59
3	CoP 15438	21.32	21.37	18.78	20.96	21.33	20.75
4	CoP 15439	20.49	21.50	18.24	21.61	22.27	20.82
5	CoP 15440	22.19	21.80	18.68	20.88	21.93	21.10
6	CoSe 15453	22.73	21.03	18.31	21.58	21.33	21.00
7	CoSe 15454	18.89	20.43	17.80	20.63		19.44
Standards							
1	BO 91	21.22	20.57	17.80	21.28	22.33	20.64
2	CoP 9301	21.16	21.57	19.38	21.32	22.20	21.13
3	CoP 06436	20.26	20.50	16.42	21.25	22.00	20.09
	GM	20.85	21.12	18.53	21.28	21.97	20.75
	SE (m)	0.08	0.17	0.52	-	0.10	
	CD	0.26	0.52	1.54	-	0.21	
	CV	1.23	1.42	4.89	-	0.55	

Table 5.9.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	86.78	88.10	84.52	87.91	85.04	86.47
2	CoLk 15469	87.46	87.97	88.84	88.13	84.02	87.28
3	CoP 15438	87.48	87.53	89.58	87.83	86.54	87.79
4	CoP 15439	86.55	88.23	90.41	88.85	85.17	87.84
5	CoP 15440	88.25	87.57	89.52	87.79	80.92	86.81
6	CoSe 15453	87.79	86.73	90.56	88.04	82.31	87.09
7	CoSe 15454	87.13	87.87	90.55	88.85	-	88.60
Standards							
1	BO 91	87.77	88.67	91.80	89.43	81.87	87.91
2	CoP 9301	87.64	88.43	88.65	90.29	82.63	87.53
3	CoP 06436	87.19	88.93	91.69	88.94	85.18	88.39
	GM	87.40	88.00	89.61	89.55	83.74	87.66
	SE (m)	0.14	0.32	1.13	-	1.17	
	CD	0.42	0.96	3.33	-	2.44	
	CV	1.18	0.63	2.18	-	1.71	

Table 5.9.7. Pol (%) cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	-	14.80	13.74	-	-	14.27
2	CoLk 15469	-	13.24	13.20	-	-	13.22
3	CoP 15438	-	14.56	13.12	-	-	13.84
4	CoP 15439	-	14.75	12.85	-	-	13.80
5	CoP 15440	-	15.07	12.93	-	-	14.00
6	CoSe 15453	-	14.04	12.90	-	-	13.47
7	CoSe 15454	-	13.81	12.55	-	-	13.18
	Standards	-					
1	BO 91	-	14.11	12.67	-	-	13.39
2	CoP 9301	-	14.80	13.40	-	-	14.10
3	CoP 06436	-	13.91	11.58	-	-	12.75
	GM	-	14.31	12.89	-	-	13.60
	SE (m)	-	0.28	-	-	-	
	CD	-	0.83	-	-	-	
	CV	-	3.35	-	-	-	

Table 5.9.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	-	55.60	59.45	-	-	57.53
2	CoLk 15469	-	57.30	59.66	-	-	58.48
3	CoP 15438	-	61.22	59.68	-	-	60.45
4	CoP 15439	-	60.55	59.84	-	-	60.20
5	CoP 15440	-	62.15	58.79	-	-	60.47
6	CoSe 15453	-	55.30	58.94	-	-	57.12
7	CoSe 15454	-	53.85	57.37	-	-	55.61
	Standards	-					
1	BO 91	-	59.12	63.47	-	-	61.30
2	CoP 9301	-	61.15	60.20	-	-	60.68
3	CoP 06436	-	58.23	58.35	-	-	58.29
	GM	-	58.45	59.57	-	-	59.01
	SE (m)	-	2.00	1.00	-	-	
	CD	-	5.93	2.95	-	-	
	CV	-	5.92	2.91	-	-	

Table 5.9.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	-	13.09	12.02	-	-	12.56
2	CoLk 15469	-	12.85	12.28	-	-	12.57
3	CoP 15438	-	12.15	11.97	-	-	12.06
4	CoP 15439	-	12.21	12.00	-	-	12.11
5	CoP 15440	-	12.30	12.56	-	-	12.43
6	CoSe 15453	-	12.92	12.10	-	-	12.51
7	CoSe 15454	-	13.10	12.09	-	-	12.60
	Standards	-					
1	BO 91	-	12.60	12.35	-	-	12.48
2	CoP 9301	-	12.10	12.03	-	-	12.07
3	CoP 06436	-	12.85	13.10	-	-	12.98
	GM	-	12.62	12.25	-	-	12.44
	SE (m)	-	0.53	0.36	-	-	
	CD	-	1.58	1.09	-	-	
	CV	-	7.31	5.22	-	-	

Table 5.9.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	99.00	95.30	88.07	133.17	75.52	98.21
2	CoLk 15469	93.00	97.21	57.06	139.44	79.36	93.21
3	CoP 15438	105.00	107.15	111.74	138.80	76.56	107.85
4	CoP 15439	104.00	111.25	87.03	125.14	70.92	99.67
5	CoP 15440	101.00	115.23	87.86	128.89	84.65	103.53
6	CoSe 15453	109.00	105.18	94.23	138.04	79.04	105.10
7	CoSe 15454	100.00	103.80	72.40	139.12	-	103.83
	Standards						
1	BO 91	106.00	109.23	104.24	140.00	79.76	107.85
2	CoP 9301	94.00	112.82	69.73	123.50	77.40	95.49
3	CoP 06436	101.00	110.15	87.24	142.00	79.76	104.03
	GM	101.00	106.73	85.96	135.17	78.11	101.39
	SE (m)	0.91	4.18	3.89	-	6.87	
	CD	2.72	12.43	11.49	-	14.29	
	CV	4.23	6.79	7.85	-	10.77	

Table 5.9.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	177.00	271.67	231.66	243.33	228.33	230.40
2	CoLk 15469	172.00	224.22	223.33	232.33	215.67	213.51
3	CoP 15438	179.00	260.45	245.00	242.00	259.00	237.09
4	CoP 15439	200.00	310.53	305.00	246.00	236.67	259.64
5	CoP 15440	177.00	288.78	246.66	252.67	241.67	241.36
6	CoSe 15453	261.00	311.56	283.33	245.00	252.33	270.64
7	CoSe 15454	212.00	273.78	310.00	245.33	-	260.28
	Standards						
1	BO 91	202.00	262.56	260.00	231.67	280.00	247.25
2	CoP 9301	163.00	241.00	261.66	229.67	264.33	231.93
3	CoP 06436	188.00	299.11	273.33	260.00	217.67	247.62
	GM	193.00	274.37	264.00	240.45	243.96	243.16
	SE (m)	0.01	10.42	11.25	-	5.61	
	CD	0.02	31.01	33.20	-	11.68	
	CV	1.75	6.58	7.38	-	2.82	

Table 5.9.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	2.00	2.98	2.63	2.15	2.33	2.42
2	CoLk 15469	2.30	2.81	3.20	2.10	2.40	2.56
3	CoP 15438	2.00	2.31	2.46	2.10	2.37	2.25
4	CoP 15439	1.80	2.34	2.20	2.21	2.50	2.21
5	CoP 15440	2.10	2.62	2.26	2.17	2.43	2.32
6	CoSe 15453	2.40	2.74	2.46	2.23	2.53	2.47
7	CoSe 15454	2.10	2.60	2.23	2.22	-	2.29
	Standards						
1	BO 91	2.00	2.16	1.83	2.17	2.50	2.13
2	CoP 9301	1.90	2.18	2.26	1.97	2.60	2.18
3	CoP 06436	2.20	2.57	2.10	2.30	2.33	2.30
	GM	2.10	2.53	2.33	2.15	2.44	2.31
	SE (m)	0.05	0.09	0.17	-	0.07	
	CD	0.18	0.26	0.51	-	0.15	
	CV	5.05	5.93	12.86	-	3.70	

Table 5.9.13. Single Cane Weight (kg) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	0.73	0.67	1.23	0.65	1.02	0.86
2	CoLk 15469	0.75	0.88	1.40	0.55	0.96	0.91
3	CoP 15438	0.73	0.77	0.84	0.62	0.97	0.79
4	CoP 15439	0.79	1.02	1.18	0.66	1.04	0.94
5	CoP 15440	0.67	1.03	0.96	0.60	1.03	0.86
6	CoSe 15453	0.94	0.98	1.12	0.65	1.04	0.95
7	CoSe 15454	0.94	0.87	1.06	0.64	-	0.88
Standards							
1	BO 91	0.76	0.83	0.68	0.63	1.11	0.80
2	CoP 9301	0.72	0.73	1.02	0.60	1.15	0.84
3	CoP 06436	0.71	0.93	1.00	0.71	0.94	0.86
	GM	0.77	0.87	1.05	0.65	1.03	0.87
	SE (m)	4.25	0.04	0.05	-	0.10	
	CD	12.91	0.10	0.15	-	0.21	
	CV	4.38	6.90	8.38	-	12.13	

Table 5.9.14. CCS (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	10.94	12.79	11.74	11.17	10.63	11.45
2	CoLk 15469	11.77	12.59	11.76	11.47	11.07	11.73
3	CoP 15438	10.51	12.53	10.69	11.37	9.64	10.95
4	CoP 15439	10.79	14.22	11.43	11.69	10.48	11.72
5	CoP 15440	11.19	12.88	11.61	11.34	10.14	11.43
6	CoSe 15453	11.87	12.50	10.89	11.83	9.99	11.42
7	CoSe 15454	10.62	12.78	11.70	11.40	-	11.63
Standards							
1	BO 91	10.88	11.74	10.94	11.71	9.84	11.02
2	CoP 9301	11.86	12.65	11.76	12.10	10.74	11.82
3	CoP 06436	10.46	11.80	9.66	11.68	10.40	10.80
	GM	11.09	12.65	11.22	11.83	10.33	11.42
	SE (m)	0.13	0.58	0.34	-	0.30	
	CD	0.41	1.72	1.01	-	0.62	
	CV	2.17	7.93	5.30	-	3.56	

Table 5.9.15. Sucrose (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	15.89	18.62	16.98	16.45	15.85	16.76
2	CoLk 15469	16.94	18.18	16.92	16.89	16.87	17.16
3	CoP 15438	15.29	18.09	15.65	16.75	14.98	16.15
4	CoP 15439	15.67	18.21	16.33	17.22	15.65	16.62
5	CoP 15440	16.22	18.68	16.78	16.70	15.79	16.83
6	CoSe 15453	17.19	18.28	15.45	17.40	15.22	16.71
7	CoSe 15454	15.39	18.52	16.74	16.78	-	16.86
Standards							
1	BO 91	15.79	16.98	15.73	17.26	15.40	16.23
2	CoP 9301	17.13	18.34	17.12	17.75	16.15	17.30
3	CoP 06436	15.19	16.74	13.91	17.20	15.89	15.79
	GM	16.07	18.06	16.17	17.40	15.76	16.69
	SE (m)	0.20	0.26	0.59	-	0.29	
	CD	0.60	0.78	1.76	-	0.61	
	CV	2.17	2.51	4.93	-	2.29	

Table 5.9.16. Brix (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	18.15	21.37	19.22	19.30	19.07	19.42
2	CoLk 15469	18.97	20.50	18.95	19.85	21.13	19.88
3	CoP 15438	17.49	20.40	18.15	19.70	19.40	19.03
4	CoP 15439	17.86	20.73	18.04	20.24	20.13	19.40
5	CoP 15440	18.45	21.27	18.95	19.62	19.13	19.48
6	CoSe 15453	19.50	21.17	16.77	20.39	19.07	19.38
7	CoSe 15454	17.47	21.07	18.85	19.69	-	19.27
Standards							
1	BO 91	17.98	19.20	17.57	20.31	20.20	19.05
2	CoP 9301	19.32	20.87	19.62	20.70	19.73	20.05
3	CoP 06436	17.17	19.00	15.59	20.22	20.00	18.40
	GM	18.23	20.56	18.17	20.41	19.76	19.43
	SE (m)	0.24	0.26	0.46	-	0.21	
	CD	0.72	0.76	1.36	-	0.44	
	CV	2.29	2.15	5.70	-	1.30	

Table 5.9.17. Purity (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	87.57	87.13	88.35	85.23	83.13	86.28
2	CoLk 15469	88.69	88.67	89.27	85.09	79.81	86.31
3	CoP 15438	87.42	88.63	86.44	85.03	77.22	84.95
4	CoP 15439	87.74	87.83	90.75	85.08	77.73	85.83
5	CoP 15440	87.91	87.87	88.62	85.12	82.52	86.41
6	CoSe 15453	88.15	87.17	92.20	85.34	79.84	86.54
7	CoSe 15454	88.12	87.90	89.33	85.22	-	87.64
Standards							
1	BO 91	87.78	88.40	89.46	84.98	76.24	85.37
2	CoP 9301	88.68	87.87	87.29	85.75	81.87	86.29
3	CoP 06436	87.62	88.07	89.29	85.06	79.44	85.90
	GM	87.96	87.95	89.61	85.26	79.76	86.11
	SE (m)	0.27	0.60	-	-	1.36	
	CD	0.81	1.77	-	-	2.84	
	CV	0.54	1.18	-	-	2.09	

Table 5.9.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	-	121.70	88.88	141.35	78.33	107.57
2	CoLk 15469	-	123.25	63.96	146.33	82.15	103.92
3	CoP 15438	-	139.22	118.65	145.07	79.61	120.64
4	CoP 15439	-	147.70	97.64	131.40	74.32	112.77
5	CoP 15440	-	155.90	94.04	134.92	87.79	118.16
6	CoSe 15453	-	129.72	108.76	144.27	82.17	116.23
7	CoSe 15454	-	127.65	81.06	145.64	-	118.12
Standards							
1	BO 91	-	148.30	115.15	146.68	82.77	123.23
2	CoP 9301	-	151.69	80.34	130.01	81.06	110.78
3	CoP 06436	-	152.65	114.43	149.93	84.34	125.34
	GM	-	139.78	96.30	142.21	81.39	114.92
	SE (m)	-	2.86	4.87	-	7.01	
	CD	-	8.56	14.35	-	14.57	
	CV	-	3.54	8.75	-	10.54	

Table 5.9.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	130.00	98.15	99.39	135.35	71.42	106.86
2	CoLk 15469	116.00	96.30	70.66	141.09	74.54	99.72
3	CoP 15438	144.00	103.17	128.34	139.17	72.77	117.49
4	CoP 15439	130.00	105.85	100.74	126.13	67.22	105.99
5	CoP 15440	149.00	109.70	101.04	128.34	81.59	113.93
6	CoSe 15453	185.00	101.30	115.25	139.36	74.84	123.15
7	CoSe 15454	131.00	98.60	89.30	140.73	-	114.91
Standards							
1	BO 91	117.00	107.80	126.69	143.56	75.81	114.17
2	CoP 9301	139.00	105.76	84.87	125.42	73.36	105.68
3	CoP 06436	141.00	110.12	121.54	147.13	75.24	119.01
	GM	138.00	103.68	103.78	138.70	74.09	111.65
	SE (m)	1.74	4.90	6.02	-	6.91	
	CD	5.17	14.40	17.76	-	14.36	
	CV	5.90	8.21	10.05	-	11.41	

Table 5.9.20. Germination (%) at 45 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoLk 15468	44.72	36.40	34.04	34.65	34.00	36.76
2	CoLk 15469	44.53	38.65	33.91	38.47	36.00	38.31
3	CoP 15438	49.62	43.90	23.90	39.32	35.00	38.35
4	CoP 15439	50.64	45.60	20.54	33.71	34.67	37.03
5	CoP 15440	38.33	40.92	29.28	33.57	34.67	35.35
6	CoSe 15453	54.90	38.65	24.78	39.19	32.33	37.97
5	CoSe 14455	51.94	39.85	29.12	40.71	-	40.41
Standards							
1	BO 91	45.83	42.10	23.74	40.88	40.00	38.51
2	CoP 9301	43.05	43.50	28.84	37.81	38.00	38.24
3	CoP 06436	46.47	44.65	29.60	42.56	32.00	39.06
	GM	47.01	274.37	27.77	40.42	35.19	84.95
	SE (m)	0.71	2.36	1.40	-	2.81	
	CD	2.12	6.92	4.15	-	5.85	
	CV	9.47	9.86	8.79	-	9.80	

Table 5.9.21. Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entry	Seorahi	Pusa	Motipur	Bethuadahari	Buralikson*
CoLk 15468	Very good	Average	Very good	Good	Very good
CoLk 15469	Good	Very good	Very good	Very good	Very good
CoP 15438	Very good	Good	Very good	Very good	Good
CoP 15439	Very good	Very good	Very good	Very good	Very good
CoP 15440	Very good	Very good	Very good	Very good	Very good
CoSe 15453	Excellent	Very good	Excellent	Excellent	Not planted
CoSe 15454	Very good	Good	Very good	Very good	Not planted
Standards					
BO 91	Very good	Very good	Very good	Very good	Very good
CoP 9301	Good	Good	Very good	Good	Good
CoP 06436	Excellent	Excellent	Excellent	Very good	Very good

5.10. INITIAL VARIETAL TRIAL (MIDLATE)

Centers (5)	Bethuadahari, Buralikson, Motipur, Pusa and Seorahi
Entries (9)	CoP 16439 (CoSe 92423 x CoS 8436) CoP 16440 (CoS 86216 GC) BO 156 (BO 150 Self) CoLk 16469 (CoJ 83 x CoPant 97222) CoLk 16470 (CoS 8436 x CoSe 92423) CoLk 16471 (CoH 56 GC) CoSe 16452 (CoSe 92423 x Co 89003) CoSe 16453 (Co 86002 GC) CoBln 16502 (CoS 8436 GC)
Standards (3)	BO 91, CoP 9301 and CoP 06436
Design	RBD
Replications	Three
Plot size	Gross : 6 m x 6 rows x 0.90 m Net : 5 m x 4 rows x 0.90 m
Seed rate	12 buds per meter
Date of planting	February - March, 2019
Crop duration	12 months

Results of the previous year:

The test entries CoP 16439, CoP 16440, BO 156, CoLk 16469, CoLk 16470, CoLk 16471, CoSe 16452, CoSe 16453 and CoBln 16502 along with standards BO 91, CoP 9301 and CoP 06436 were under multiplication during 2018-19.

Results of the current year:

Nine entries and three standards were evaluated in IVT (Midlate) at five locations of North Central and North East zones during 2019-20 for cane yield and juice quality parameters. None of the test entries recorded >10% improvement over the best standard for CCS yield across locations. Test entry CoP 16440 ranked top in the zone with 7.25% improvement over the best standard across locations and also recorded 44.65% improvement over the best standard at Pusa center. Another test entry CoLk 16470 ranked second with 9.80% of mean CCS yield and recorded 19.21% improvement over the best standard at Pusa center. For cane yield, none of the test entries recorded >10% improvement in the zone. The test entry CoP 16440 ranked top with 6.08% improvement over the best standard across locations and also recorded 39.53% improvement for cane yield over the best standard at Pusa center. Another test entry CoLk 16470 ranked second in the zone and recorded 14.17% improvement over the best standard at Pusa center. For CCS%, none of the test entries recorded >5% improvement across locations. Standard CoP 9301 ranked top in the zone with 12.55% mean CCS% across the locations. The test entry CoSe 16452 ranked second in the zone with 12.53% of mean CCS% and recorded 6.05% improvement over the best standard at Seorahi center. For sucrose%, none of the test entries recorded >5% improvement across locations. Standard CoP 9301 ranked top in the zone with 18.30% of mean sucrose%. Test entry CoP 16439 ranked second in the zone with 18.26% sucrose. Based on cane yield and juice quality parameters, none of the test entries recorded >10% improvement over best standard for CCS yield and cane yield or >5% improvement for CCS% and sucrose%. Hence, no test entry was identified as qualifying entry in the zone. **The data are presented in table 5.10.1 to 5.10.20.**

Table 5.10.1. CCS (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethuada hari	Burali kson	Mean	Overall rank
1	CoP 16439	11.10*	13.88*	7.59	8.09	6.61	9.45	
2	CoP 16440	9.87	13.93*	10.91	8.17	7.85	10.15	1
3	BO 156	9.29	9.07	9.60	7.89	5.63	8.30	
4	CoLk 16469	8.91	10.18	12.18	8.29	7.33	9.38	
5	CoLk 16470	9.46	11.48*	11.89	8.51	7.65	9.80	2
6	CoLk 16471	8.62	8.85	5.88	8.12	5.14	7.32	
7	CoSe 16452	12.20*	9.87	8.18	8.30	7.76	9.26	
8	CoSe 16453	12.51*	10.21	6.47	7.90	7.88	8.99	
9	CoBln 16502	6.40	8.62	8.32	6.42	11.37	8.23	
Standards								
1	BO 91	8.31	8.75	9.52	8.83	9.40	8.96	
2	CoP 9301	8.52	9.39	10.41	8.03	10.33	9.34	
3	CoP 06436	9.08	9.63	10.95	9.07	8.70	9.49	3
	GM	9.53	10.32	9.33	8.64	7.97	9.16	
	SE(m)	0.27	0.47	0.42	-	0.70		
	CD	0.79	1.39	1.24	-	1.45		
	CV	4.94	7.92	7.83	-	10.69		
Top three qualifying entries at each locations								
	1	CoSe 16453	CoP 16440	CoLk 16469				
	2	CoSe 16452	CoP 16439					
	3	CoP 16439	CoLk 16470					

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoSe 16453 (1), CoSe 16452 (1), CoP 16439 (2), CoP 16440 (1), CoLk 16470 (1) and CoLk 16469 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard for CCS yield across locations. The test entry CoP 16440 ranked top in the zone with 7.25% improvement over the best standard across locations and also recorded 44.65% improvement over the best standard at Pusa center. Another test entry CoLk 16470 ranked second with 9.80 t/ha of mean CCS yield and recorded 19.21% improvement over the best standard at Pusa centre. Other test entries CoSe 16453 and CoSe 16452 at Seorahi centre, CoLk 16469 at Motipur and CoP 16439 at Seorahi and Pusa centers recorded >10% improvement over best standard.

Table 5.10.2. Cane yield (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoP 16439	82.64*	108.52*	65.92	64.54	54.17	75.16	
2	CoP 16440	77.34	110.77*	95.98	65.85	65.90	83.17	1
3	BO 156	74.54	73.93	82.62	64.18	45.40	68.13	
4	CoLk 16469	68.58	80.96	106.03	65.06	63.87	76.90	
5	CoLk 16470	73.99	90.64	105.87	66.00	62.83	79.87	2
6	CoLk 16471	71.95	71.36	50.01	66.12	47.17	61.32	
7	CoSe 16452	89.21*	78.56	71.25	66.51	62.50	73.61	
8	CoSe 16453	91.43*	81.76	57.10	62.91	64.67	71.57	
9	CoBln 16502	55.67	76.08	76.39	53.47	93.80	71.08	
Standards								
1	BO 91	67.45	71.33	83.64	68.20	76.83	73.49	
2	CoP 9301	66.11	74.38	87.97	61.22	84.10	74.76	
3	CoP 06436	72.95	79.39	98.93	71.21	69.50	78.40	3
	GM	74.32	83.14	81.81	66.88	65.89	74.41	
	SE(m)	0.75	3.86	3.48	-	5.80		
	CD	2.22	11.40	10.21	-	12.06		
	CV	4.78	8.05	7.37	-	10.78		
Top three qualifying entries at each locations								
	1	CoSe 16453	CoP 16440					
	2	CoSe 16452	CoP 16439					
	3	CoP 16439	CoLk 16470					

* Significantly superior over the best standard.

No. of locations where an entry recorded >10% improvement: CoSe 16452 (1), CoSe 16453 (1), CoP 16439 (2), CoP 16440 (1) and CoLk 16470 (1).

Performance across the locations: None of the test entries recorded >10% improvement over the best standard for cane yield across locations. The test entry CoP 16440 ranked top with 6.08% improvement over the best standard across locations in the zone and also recorded 39.53% improvement for cane yield over best standard at Pusa center. Another test entry CoLk 16470 ranked second in the zone and recorded 14.17% improvement over the best standard at Pusa center. Other test entries CoSe 16453 and CoSe 16452 at Seorahi, CoP 16439 at Seorahi and Pusa centers recorded >10% improvement over the best standard.

Table 5.10.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoP 16439	13.44	12.79	11.47	12.54	12.20	12.49	3
2	CoP 16440	12.77	12.58	11.36	12.41	11.90	12.20	
3	BO 156	12.47	12.27	11.61	12.30	12.35	12.20	
4	CoLk 16469	12.99	12.57	11.49	12.75	11.50	12.26	
5	CoLk 16470	12.80	12.66	11.23	12.89	12.19	12.35	
6	CoLk 16471	12.00	12.40	11.74	12.29	10.92	11.87	
7	CoSe 16452	13.68*	12.57	11.48	12.48	12.43	12.53	2
8	CoSe 16453	13.68*	12.49	11.33	12.56	12.20	12.45	
9	CoBlN 16502	11.51	11.32	10.90	12.01	12.09	11.57	
Standards								
1	BO 91	12.33	12.36	11.39	12.94	12.25	12.25	
2	CoP 9301	12.90	12.62	11.83	13.11	12.30	12.55	1
3	CoP 06436	12.44	12.14	11.07	12.74	12.52	12.18	
	GM	12.75	12.40	11.41	12.93	12.07	12.31	
	SE(m)	0.09	0.11	0.18	-	0.28		
	CD	0.28	0.34	0.53	-	0.57		
	CV	1.28	1.59	2.77	-	2.79		
Top three qualifying entries at each locations								
	1	CoSe 16452						
	2	CoSe 16453						
	3							

* Significantly superior over the best standard.

No. of locations where an entry recorded >5% improvement: CoSe 16452 (1) and CoSe 16453 (1).

Performance across the locations: None of the test entries recorded >5% improvement over the best standard for CCS% across locations. The standard CoP 9301 ranked top in the zone with 12.55% mean CCS% across the locations. The test entry CoSe 16452 ranked second in the zone with 12.53% of mean CCS% and recorded 6.05% improvement over the best standard at Seorahi centre. Another test entry CoSe 16543 recorded >5% improvement for CCS% over the best standard at Seorahi center.

Table 5.10.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoP 16439	19.48	18.51	16.68	18.16	18.48	18.26	2
2	CoP 16440	18.56	18.23	16.46	17.89	17.91	17.81	
3	BO 156	18.19	17.80	16.76	17.78	18.39	17.78	
4	CoLk 16469	18.89	18.10	16.78	18.45	17.31	17.91	
5	CoLk 16470	18.63	18.30	16.34	18.59	18.54	18.08	
6	CoLk 16471	17.50	17.94	17.04	17.75	16.83	17.41	
7	CoSe 16452	19.74*	18.19	16.74	18.07	18.48	18.24	3
8	CoSe 16453	19.76*	18.12	16.12	18.13	18.42	18.11	
9	CoBln 16502	16.64	16.50	15.51	17.37	18.08	16.82	
Standards								
1	BO 91	17.93	17.51	16.62	18.67	18.36	17.82	
2	CoP 9301	18.84	18.25	17.26	18.93	18.24	18.30	1
3	CoP 06436	18.17	17.60	15.68	18.37	18.67	17.70	
	GM	18.52	17.90	16.49	18.66	18.14	17.94	
	SE(m)	0.11	0.17	0.25	-	0.28		
	CD	0.33	0.50	0.74	-	0.59		
	CV	1.05	1.64	2.67	-	1.91		
Top three qualifying entries at each locations								
	1							
	2							
	3							

*Significantly superior over the best standard.

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations: None of the test entries recorded >5% improvement over the best standard for sucrose% across locations. Standard CoP 9301 ranked top in the zone with 18.30% of mean sucrose%. The test entry CoP 16439 ranked second in the zone with 18.26% sucrose, followed by another test entry CoSe 16452 with 18.24% sucrose. CoSe 16452 and CoSe 16453 recorded significantly superior sucrose percent over best standard CoP 9301 at Seorahi centre.

Table 5.10.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	22.13	20.99	19.08	20.63	22.93	21.15
2	CoP 16440	21.22	20.70	18.68	20.14	21.93	20.53
3	BO 156	20.92	20.26	18.88	20.11	22.07	20.45
4	CoLk 16469	21.60	20.58	19.38	20.93	21.20	20.74
5	CoLk 16470	21.35	20.68	18.71	20.92	23.13	20.96
6	CoLk 16471	20.15	20.32	19.31	20.05	21.53	20.27
7	CoSe 16452	22.23	20.59	19.24	20.48	22.13	20.93
8	CoSe 16453	22.30	20.64	17.62	20.41	22.67	20.73
9	CoBln 16502	18.82	18.96	16.98	19.65	21.87	19.26
Standards							
1	BO 91	20.50	20.18	19.14	21.03	22.33	20.64
2	CoP 9301	21.75	20.64	19.88	21.37	21.73	21.07
3	CoP 06436	20.95	20.03	16.98	20.69	22.47	20.22
	GM	21.16	20.38	18.65	21.03	22.17	20.68
	SE(m)	0.09	0.20	0.35	-	0.12	
	CD	0.28	0.58	1.02	-	0.25	
	CV	0.78	1.66	3.26	-	0.67	

Table 5.10.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	88.02	88.17	87.44	88.03	80.60	86.45
2	CoP 16440	87.47	88.10	88.11	88.83	81.66	86.83
3	BO 156	86.94	87.83	88.76	88.41	83.34	87.06
4	CoLk 16469	87.44	87.97	86.57	88.15	81.63	86.35
5	CoLk 16470	87.26	88.50	87.38	88.86	80.13	86.43
6	CoLk 16471	86.86	88.30	88.16	88.53	78.17	86.00
7	CoSe 16452	88.80	88.33	87.01	88.23	83.50	87.17
8	CoSe 16453	88.62	87.77	91.55	88.83	81.26	87.61
9	CoBln 16502	88.44	87.00	91.38	88.40	82.70	87.58
Standards							
1	BO 91	87.46	88.27	86.80	88.78	82.22	86.71
2	CoP 9301	86.61	88.40	86.83	88.58	83.94	86.87
3	CoP 06436	86.72	87.83	92.34	88.79	83.10	87.76
	GM	87.55	88.04	88.53	88.72	81.85	86.94
	SE(m)	0.31	0.22	0.88	-	1.15	
	CD	0.92	0.66	2.58	-	2.40	
	CV	0.62	0.44	1.73	-	1.72	

Table 5.10.7. Pol (%) cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	-	13.71	12.83	-	-	13.27
2	CoP 16440	-	14.19	12.82	-	-	13.51
3	BO 156	-	13.66	12.89	-	-	13.28
4	CoLk 16469	-	13.84	13.15	-	-	13.50
5	CoLk 16470	-	13.87	12.67	-	-	13.27
6	CoLk 16471	-	13.65	13.09	-	-	13.37
7	CoSe 16452	-	14.03	13.16	-	-	13.60
8	CoSe 16453	-	13.93	12.45	-	-	13.19
9	CoBln 16502	-	12.86	11.95	-	-	12.41
Standards							
1	BO 91	-	13.78	12.81	-	-	13.30
2	CoP 9301	-	14.20	13.32	-	-	13.76
3	CoP 06436	-	13.58	12.37	-	-	12.98
	GM	-	13.78	12.79	-	-	13.29
	SE(m)	-	0.19	-	-	-	
	CD	-	0.55	-	-	-	
	CV	-	2.33	-	-	-	

Table 5.10.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	-	58.15	56.65	-	-	57.40
2	CoP 16440	-	61.32	59.21	-	-	60.27
3	BO 156	-	54.62	57.26	-	-	55.94
4	CoLk 16469	-	53.54	58.98	-	-	56.26
5	CoLk 16470	-	56.12	58.22	-	-	57.17
6	CoLk 16471	-	56.83	20.82	-	-	38.83
7	CoSe 16452	-	55.60	58.04	-	-	56.82
8	CoSe 16453	-	57.12	51.47	-	-	54.30
9	CoBln 16502	-	50.15	58.77	-	-	54.46
Standards							
1	BO 91	-	58.54	52.49	-	-	55.52
2	CoP 9301	-	59.32	59.27	-	-	59.30
3	CoP 06436	-	58.50	55.10	-	-	56.80
	GM	-	56.65	56.36	-	-	56.51
	SE(m)	-	1.66	1.38	-	-	
	CD	-	4.89	4.04	-	-	
	CV	-	5.07	4.26	-	-	

Table 5.10.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	-	12.30	13.08	-	-	12.69
2	CoP 16440	-	12.15	12.13	-	-	12.14
3	BO 156	-	13.23	13.08	-	-	13.16
4	CoLk 16469	-	13.55	11.63	-	-	12.59
5	CoLk 16470	-	14.20	12.46	-	-	13.33
6	CoLk 16471	-	13.90	13.05	-	-	13.48
7	CoSe 16452	-	12.86	11.36	-	-	12.11
8	CoSe 16453	-	13.10	12.78	-	-	12.94
9	CoBln 16502	-	12.02	12.95	-	-	12.49
Standards							
1	BO 91	-	12.60	12.92	-	-	12.76
2	CoP 9301	-	12.18	12.83	-	-	12.51
3	CoP 06436	-	12.85	11.10	-	-	11.98
	GM	-	12.91	12.44	-	-	12.68
	SE(m)	-	0.39	0.18	-	-	
	CD	-	1.16	0.54	-	-	
	CV	-	5.26	2.58	-	-	

Table 5.10.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	94.00	99.80	70.83	120.56	73.63	91.76
2	CoP 16440	111.00	97.60	95.22	122.16	75.21	100.24
3	BO 156	104.00	66.95	98.93	122.51	81.71	94.82
4	CoLk 16469	95.00	78.85	81.64	122.83	80.84	91.83
5	CoLk 16470	104.00	79.50	103.40	122.50	79.08	97.70
6	CoLk 16471	107.00	108.20	89.51	122.55	71.86	99.82
7	CoSe 16452	108.00	75.20	94.45	124.27	84.49	97.28
8	CoSe 16453	115.00	95.10	57.71	121.52	84.81	94.83
9	CoBln 16502	64.00	70.50	59.72	111.33	74.86	76.08
Standards							
1	BO 91	93.00	81.85	120.38	131.52	69.68	99.29
2	CoP 9301	92.00	100.75	97.07	122.30	68.51	96.13
3	CoP 06436	102.00	84.50	101.55	134.11	67.82	98.00
	GM	99.00	86.57	89.20	129.31	76.04	96.02
	SE(m)	0.96	4.32	4.33	-	3.43	
	CD	0.82	12.74	12.66	-	7.13	
	CV	4.54	8.64	8.42	-	5.52	

Table 5.10.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	188.00	308.45	256.66	225.33	172.00	230.09
2	CoP 16440	197.00	321.89	243.33	229.67	184.33	235.24
3	BO 156	206.00	262.44	236.66	229.33	157.40	218.37
4	CoLk 16469	181.00	254.07	300.00	226.00	174.17	227.05
5	CoLk 16470	180.00	270.18	283.33	235.00	177.33	229.17
6	CoLk 16471	188.00	253.22	206.66	242.00	165.57	211.09
7	CoSe 16452	204.00	229.67	270.00	236.67	179.50	223.97
8	CoSe 16453	216.00	238.56	256.66	231.67	177.67	224.11
9	CoBln 16502	162.00	311.55	280.00	224.33	265.33	248.64
Standards							
1	BO 91	182.00	257.00	263.33	232.00	248.17	236.50
2	CoP 9301	166.00	240.68	260.00	225.00	256.67	229.67
3	CoP 06436	196.00	288.44	296.66	242.00	211.83	246.99
	GM	189.00	269.68	262.77	233.00	197.50	230.39
	SE(m)	5.17	8.42	1.38	-	3.87	
	CD	15.17	24.87	4.04	-	8.04	
	CV	4.74	5.41	7.00	-	2.40	

Table 5.10.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	2.20	2.43	2.23	1.87	2.23	2.19
2	CoP 16440	1.90	2.72	2.33	2.08	2.30	2.27
3	BO 156	2.10	2.71	2.20	1.96	2.17	2.23
4	CoLk 16469	2.00	2.63	2.43	2.10	2.30	2.29
5	CoLk 16470	2.10	2.96	2.16	2.22	2.37	2.36
6	CoLk 16471	2.00	2.68	1.96	2.09	2.13	2.17
7	CoSe 16452	2.20	2.41	2.16	2.09	2.40	2.25
8	CoSe 16453	2.10	2.26	2.26	2.21	2.47	2.26
9	CoBln 16502	1.80	2.48	2.50	2.14	2.77	2.34
Standards							
1	BO 91	2.00	2.15	1.80	2.11	2.47	2.11
2	CoP 9301	1.90	2.49	2.30	1.91	2.63	2.25
3	CoP 06436	2.10	2.77	2.10	2.31	2.40	2.34
	GM	2.00	2.56	2.21	2.11	2.39	2.25
	SE(m)	0.06	0.08	0.05	-	0.04	
	CD	0.19	0.24	0.17	-	0.08	
	CV	5.81	5.48	4.64	-	1.99	

Table 5.10.13. Single Cane Weight (kg) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	0.87	1.09	0.95	0.50	0.75	0.83
2	CoP 16440	0.70	1.14	1.02	0.55	0.89	0.86
3	BO 156	0.71	1.12	0.88	0.52	0.57	0.76
4	CoLk 16469	0.72	1.03	1.32	0.59	0.81	0.89
5	CoLk 16470	0.71	1.15	1.07	0.59	0.81	0.87
6	CoLk 16471	0.67	0.66	0.56	0.57	0.67	0.63
7	CoSe 16452	0.83	1.05	0.78	0.60	0.77	0.81
8	CoSe 16453	0.79	0.86	1.01	0.61	0.78	0.81
9	CoBln 16502	0.86	1.08	1.16	0.57	1.28	0.99
Standards							
1	BO 91	0.73	0.87	0.78	0.58	1.18	0.83
2	CoP 9301	0.72	0.74	1.00	0.54	1.25	0.85
3	CoP 06436	0.72	0.94	1.14	0.72	1.05	0.91
	GM	0.75	0.98	0.98	0.61	0.90	0.84
	SE(m)	0.01	0.04	0.04	-	0.08	
	CD	0.02	0.13	0.12	-	0.16	
	CV	1.82	7.56	7.80	-	10.61	

Table 5.10.14. CCS (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	10.92	12.57	11.60	11.09	9.95	11.23
2	CoP 16440	10.20	10.81	11.11	11.25	9.68	10.61
3	BO 156	11.77	11.52	11.85	11.20	10.18	11.30
4	CoLk 16469	11.40	11.56	11.51	11.70	9.21	11.08
5	CoLk 16470	10.16	12.66	10.80	11.92	10.43	11.19
6	CoLk 16471	11.19	11.53	11.85	11.38	9.19	11.03
7	CoSe 16452	11.89	13.08	11.77	11.38	9.95	11.61
8	CoSe 16453	10.69	12.33	10.91	11.14	10.06	11.03
9	CoBln 16502	10.62	10.90	11.25	10.91	9.76	10.69
Standards							
1	BO 91	9.76	11.94	10.52	11.85	9.84	10.78
2	CoP 9301	11.12	12.49	11.86	12.00	10.40	11.57
3	CoP 06436	10.13	10.69	9.56	11.60	9.80	10.36
	GM	10.83	11.84	11.21	11.82	9.87	11.11
	SE(m)	1.83	0.36	0.29	-	0.28	
	CD	0.53	1.05	0.86	-	0.59	
	CV	2.94	5.22	4.58	-	3.53	

Table 5.10.15. Sucrose (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	15.90	18.12	16.64	16.34	15.88	16.58
2	CoP 16440	14.81	15.76	15.98	16.57	15.24	15.67
3	BO 156	16.97	16.64	16.86	16.51	15.92	16.58
4	CoLk 16469	16.51	16.70	16.54	17.29	14.83	16.37
5	CoLk 16470	14.78	18.34	15.23	17.62	16.38	16.47
6	CoLk 16471	16.27	16.70	17.14	16.75	14.48	16.27
7	CoSe 16452	17.17	18.96	16.94	16.78	15.88	17.15
8	CoSe 16453	15.51	17.76	15.64	16.40	15.90	16.24
9	CoBln 16502	15.39	15.81	15.96	16.05	15.32	15.71
Standards							
1	BO 91	14.18	17.24	15.34	17.49	15.53	15.96
2	CoP 9301	16.15	18.15	17.08	17.73	15.89	17.00
3	CoP 06436	14.72	15.60	13.82	17.12	15.46	15.34
	GM	14.45	17.15	16.09	17.45	15.56	16.14
	SE(m)	0.23	0.46	0.35	-	0.30	
	CD	0.69	1.37	1.03	-	0.63	
	CV	2.58	4.69	3.79	-	2.39	

Table 5.10.16. Brix (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	18.22	20.37	18.48	19.20	21.50	19.55
2	CoP 16440	16.89	18.13	17.87	19.48	20.20	18.51
3	BO 156	19.05	18.80	18.75	19.43	20.87	19.38
4	CoLk 16469	18.72	18.97	18.45	20.45	20.37	19.39
5	CoLk 16470	16.93	20.87	16.32	20.85	21.60	19.31
6	CoLk 16471	18.57	19.07	19.42	19.67	19.20	19.19
7	CoSe 16452	19.35	21.53	18.97	19.75	21.50	20.22
8	CoSe 16453	17.65	19.93	17.26	19.26	21.20	19.06
9	CoBln 16502	17.49	18.13	17.32	18.84	20.20	18.40
Standards							
1	BO 91	16.19	19.47	17.66	20.63	20.67	18.92
2	CoP 9301	18.42	20.73	19.15	20.97	20.00	19.85
3	CoP 06436	16.84	18.00	15.64	20.19	20.53	18.24
	GM	17.86	19.50	17.94	20.60	20.65	19.31
	SE(m)	0.20	0.42	0.31	-	0.23	
	CD	0.59	1.24	0.90	-	0.48	
	CV	1.96	3.74	3.00	-	1.37	

Table 5.10.17. Purity (%) at 300 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	87.26	88.97	90.05	85.10	73.84	85.04
2	CoP 16440	87.61	86.67	89.41	85.06	75.44	84.84
3	BO 156	89.06	88.53	89.91	84.97	76.29	85.75
4	CoLk 16469	88.18	88.03	89.65	84.55	72.81	84.64
5	CoLk 16470	87.30	87.93	93.33	84.51	75.83	85.78
6	CoLk 16471	87.56	87.57	88.28	85.16	75.42	84.80
7	CoSe 16452	88.75	87.80	89.33	84.96	73.83	84.93
8	CoSe 16453	87.87	89.13	90.61	85.15	75.22	85.60
9	CoBln 16502	88.01	87.43	92.17	85.19	75.85	85.73
Standards							
1	BO 91	87.56	88.57	86.86	84.78	75.16	84.59
2	CoP 9301	87.67	87.53	89.17	84.55	79.45	85.67
3	CoP 06436	87.43	86.80	88.19	84.79	75.31	84.50
	GM	87.85	87.91	89.75	84.71	75.37	85.12
	SE(m)	0.45	0.73	-	-	1.30	
	CD	1.34	2.15	-	-	2.71	
	CV	0.90	1.44	-	-	2.11	

Table 5.10.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	-	145.10	74.54	126.61	76.32	105.64
2	CoP 16440	-	129.80	99.85	128.43	77.90	109.00
3	BO 156	-	141.70	102.78	129.17	84.22	114.47
4	CoLk 16469	-	123.08	86.73	128.69	84.68	105.80
5	CoLk 16470	-	115.18	117.29	128.46	83.33	111.07
6	CoLk 16471	-	126.20	97.07	128.70	76.31	107.07
7	CoSe 16452	-	133.15	98.77	131.15	88.71	112.95
8	CoSe 16453	-	109.90	59.72	128.64	90.02	97.07
9	CoBln 16502	-	115.25	63.43	117.75	79.59	94.01
Standards							
1	BO 91	-	121.30	124.85	138.08	73.08	114.33
2	CoP 9301	-	138.91	99.85	129.71	73.36	110.46
3	CoP 06436	-	125.25	106.18	141.56	72.14	111.28
	GM	-	127.07	94.25	136.45	79.97	109.44
	SE(m)	-	5.56	9.37	-	3.54	
	CD	-	16.41	27.35	-	7.35	
	CV	-	7.58	8.95	-	5.41	

Table 5.10.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	121.00	111.90	70.83	118.64	62.91	97.06
2	CoP 16440	137.00	115.70	95.22	121.01	61.53	106.09
3	BO 156	136.00	118.73	98.93	120.62	72.11	109.28
4	CoLk 16469	122.00	98.25	81.64	119.87	73.31	99.01
5	CoLk 16470	130.00	87.90	103.40	119.13	68.34	101.75
6	CoLk 16471	142.00	103.85	89.51	119.60	63.08	103.61
7	CoSe 16452	143.00	101.85	94.45	123.31	75.03	107.53
8	CoSe 16453	140.00	102.28	57.71	120.07	76.04	99.22
9	CoBln 16502	91.00	72.60	59.72	108.62	65.78	79.54
Standards							
1	BO 91	126.00	112.92	120.38	130.39	60.02	109.94
2	CoP 9301	124.00	115.85	97.07	121.24	59.24	103.48
3	CoP 06436	136.00	113.80	101.55	133.44	59.12	108.78
	GM	129.00	104.64	89.20	128.36	66.38	103.52
	SE(m)	1.83	4.00	4.33	-	3.43	
	CD	5.39	11.81	12.66	-	7.13	
	CV	6.67	6.62	8.42	-	6.32	

Table 5.10.20. Germination (%) at 45 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean
1	CoP 16439	46.38	42.60	20.92	30.37	36.67	35.39
2	CoP 16440	49.72	41.90	28.99	30.80	42.33	38.75
3	BO 156	40.13	44.10	31.57	32.00	36.33	36.83
4	CoLk 16469	38.33	32.11	27.78	29.05	38.67	33.19
5	CoLk 16470	44.16	36.65	29.82	29.83	36.67	35.43
6	CoLk 16471	53.19	38.85	29.14	29.83	38.67	37.94
7	CoSe 16452	47.91	38.90	30.15	32.71	41.33	38.20
8	CoSe 16453	58.05	36.85	21.44	31.93	40.33	37.72
9	CoBln 16502	41.38	26.10	21.57	26.80	42.67	31.70
Standards							
1	BO 91	46.80	44.53	32.16	34.48	44.67	40.53
2	CoP 9301	44.71	42.80	29.61	32.37	44.67	38.83
3	CoP 06436	49.58	36.90	26.98	36.09	45.33	38.98
	GM	46.49	38.52	27.51	34.31	40.69	37.50
	SE(m)	0.65	1.87	1.50	-	3.41	
	CD	1.92	5.51	4.40	-	7.08	
	CV	8.75	8.39	9.49	-	10.25	

Table 5.10.21. Assessment of the performance of entries compared to the best standard by monitoring team constituted by AICRP(S)

Entry	Seorahi	Pusa	Motipur	Bethuadahari	Buralikson*
CoBIn 16502	Poor	Good	Average	Average	Very good
CoLk 16469	Good	Good	Very good	Good	Very good
CoLk 16470	Very good	Very good	Very good	Very good	Good
CoLk 16471	Very good	Average	Good	Good	Good
CoP 16439	Very good	Very good	Very good	Good	Good
CoP 16440	Very good	Very good	Very good	Very good	Very good
BO156	Good	Good	Good	Good	Good
CoSe 16452	Very good	Good	Very good	Good	Very good
CoSe 16453	Very good	Good	Good	Good	Good
Standards					
BO 91	Good	Very good	Very good	Good	Very good
CoP 9301	Good	Good	Very good	Very good	Very good
CoP 06436	Good	Very good	Excellent	Very good	Very good

6. Fluff Supply and National Hybridization Programme

Maintenance of parents and their database: National breeding gene pool of sugarcane having 617 parental clones was maintained at National Hybridization Garden (NHG) - 2019 in healthy and pest and disease free condition. Database on parents in NHG were updated by adding the information on red rot resistance of 36 parental clones with respect to their reaction to *cf 06* isolate of *Collectotrichum falcatum*. All the parental clones in NHG were observed for their flowering behaviour. The flowering was found earlier by a week when compared to the years of normal flowering and the first flowering was noticed in LG 99122 on 16th October, 2019 followed by NCo 310 on 20th October 2019. Data collected on flowering of parental clones in NHG were uploaded and updated at weekly intervals in ICAR-Sugarcane Breeding Institute website. Out of 617 parents, 567 flowered and the per cent of clones flowered during 2019 was 91.90 % against 67.90 % during 2018 flowering season.

Hybridization: Among 24 participating centers of Fluff supply / National Hybridization programme, 23 attended the crossing programme 2019. Hybridization work was initiated on 26th October 2019 and concluded on 5th December 2019. Out of 567 parents flowered during 2019 flowering season, 146 females and 104 male parents were utilised for generating genetic variability for different agronomic traits. Co 775 was the frequently used male parent in the crossing programme which was involved in 42 cross combinations. This was followed by CoPant 97222 (34 crosses) and Co 1148 (31 crosses). Other male parents which were used in more than 10 crosses were Co 94008 (28), Co 97015 (22), Co 62198 (21), CoSe 92423 (17), ISH 69 (17), CoA 7602 (15), CoS 96260 (14), Co 86011 (13), Co 89003 (13) and CoC 671 (12). CoH 70 (12), CoVC 14061 (12), 85 R 186 (11), Co 12014 (10), CoT 8201 (10) and ISH 307 (10). Similarly Co 86032 was the most frequently used female parent in 34 cross combinations and that was followed by CoC 671 (33), Co 0238 (16), CoVC 14062 (16), MS 68/47 (14), CoLk 8102 (13), Co 11015 (12), Co 2000-10 (12), CoS 8436 (12), CoV 89101 (12), Co 06022 (11), Co 8371 (10), Co 94012 (10) and CoH 119 (10).

Utilization pattern of parental clones in NHG: The Parental Diversity Index (PDI) and Parental Utilization Index (PUI) of crosses effected by the 23 centers were analyzed by classifying the source of the parental clones in to eight categories viz., Parents developed by ICAR-SBI (Coimbatore Canes), parents from the particular center, parental from the zone in which the respective center is located, parents from others four zones, exotic parents and interspecific hybrids. Accordingly, the PDI was found ranged from 45.59 % (Lucknow) to 89.13 % (Pune). Overall the PDI of the crosses effected during 2019 flowering seasons was significantly higher than that of crosses effected during the normal years of flowering. Pattern of utilization of parents by the Perumapalle with higher PDI (84.62) and PUI equal to PDI is depicted in Fig. 1. Five centers viz., Anakapalle, Faridkot, Navsari, Perumallapalle and Pusa had PUI equal to PDI which indicated utilization of all the classes of parents by these centers.

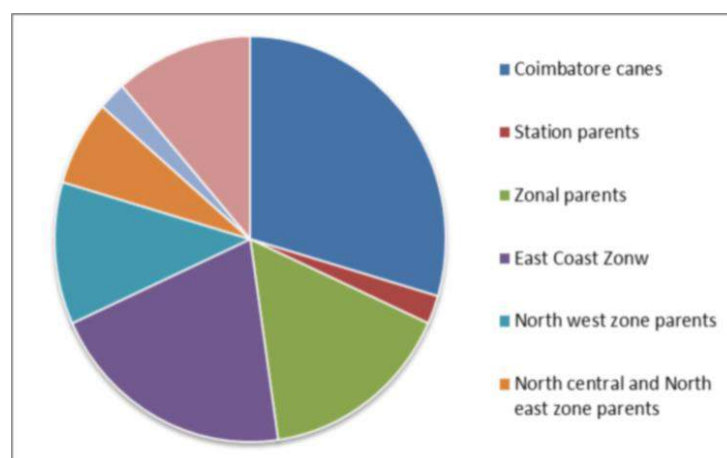


Fig. 1 Utilization of different sources of parents in NHG by Perumallapalle centre

Supply of fluff: Fluff weighing 29.29 kg of crosses made at NHG during 2019 flowering season along with the particulars on germination was supplied to the 24 participating centers of fluff supply programme. Fluff of 27 general collections was sent to Bathudahari center based on special request. Apart from this, 864.2 g of fluff of 42 bi-parental crosses effected at National Distant Hybridization Facility (NDHF), ICAR-SBI, Research Centre, Agali were also sent to the nine participating centers attending crossing programme at Agali. Altogether 30.15kg of fluff was supplied to the 24 participating centers of fluff supply programme. Number of crosses made at NHG, quantity of fluff supplied and PDI and PUI of the crosses for the participating centers of fluff supply programme during 2019-20 is given in the table 1.

Table 1. Details of crosses made and fluff supplied and parental diversity and utilization index

Centre	Bi-parental crosses		General collections		Polycrosses		Total fluff weight (g)	PDI	PUI
	No	Fl.wt (g)	No	Fl.wt. (g)	No.	Fl.wt.(g)			
Peninsular Zone									
Mandya	21	544.0	20	299.0	13	193.0	1036.0	69.05	51.79
Navsari	22	580.0	30	525.0	13	184.0	1289.0	79.55	79.55
Padegaon	21	513.4	12	231.5	13	281.0	1025.9	69.05	51.79
Perumalapalle	26	556.0	21	572.0	13	183.0	1311.0	84.62	84.62
Powarhkheda	15	274.0	23	430.0	12	151.0	855.0	75.00	65.63
Pune	23	577.0	14	259.5	13	197.0	1033.5	89.13	66.85
Rudrur	31	732.0	22	351.0	13	201.0	1284.0	64.52	56.45
Sankeshwar	26	289.6	18	421.0	13	198.0	908.6	64.81	56.71
Thiruvalla	21	432.0	29	745.0	13	181.0	1358.0	61.90	54.17
Subtotal	206	4498.0	189*	3834.0	13*	1769.0	10101.0		
East Coast Zone									
Anakapalle	30	727.7	29	502.0	13	208.0	1437.7	66.07	66.07
Cuddalore	26	666.0	21	449.0	13	192.0	1307.0	57.69	50.48
Nayagarh	22	539.0	20	560.4	13	194.0	1293.4	79.55	69.60
Vuyyuru	21	510.0	16	329.0	13	225.0	1064.0	81.82	71.59
Subtotal	99	2442.7	86*	1840.4	13*	819.0	5102.1		
North West Zone									
Faridkot	19	293.9	47	844.7	5	137.8	1276.4	68.42	68.42
Kapurthala	34	730.3	30	647.9	5	136.9	1515.1	76.47	66.91
Lucknow	34	852.1	45	794.1	5	144.8	1791.0	45.59	28.49
Pantnagar	15	299.0	32	624.5	5	125.0	1048.5	83.33	52.08
Shahjahanpur	33	759.0	56	1140.0	5	123.0	2022.0	65.15	57.01
Uchani	24	477.5	27	465.9	5	117.6	1061.0	70.83	61.98
Subtotal	159	3411.8	237*	4517.1	5*	785.1	8714.0		
North Central and North East Zone									
Bathudahari	-	-	27	343.0	-	-	343.0	-	-
Buralikson	16	395.0	25	550.8	5	110.3		75.00	65.63
Motipur	20	432.0	21	472.0	5	125.0	1029.0	77.27	48.30
Pusa	36	802.0	28	677.5	5	102.0	1581.5	69.44	69.44
Seorahi	26	854.0	10	372.0	5	139.4	1365.4	66.67	50.00
Subtotal	98	2483	84	2415.3	5*	476.5	5375.0		
Total	562	12835.5	245**	12606.8	13**	3849.8	29292.1		

*including duplicates; ** excluding duplicates

6.1. Receipt of fluff and seedling generation by the participating centres (2019-20)

Among the 24 centers that received the fluff from ICAR-SBI, Coimbatore, 19 centers reported the seedlings production. Details on seedlings generated by the participating centers from the crosses made during 2019-20 flowering season are presented below.

6.1.1 Peninsular Zone

All the nine participating centres of fluff supply programme attended crossing programme and made 206 biparental crosses. Apart from these crosses, 13 poly crosses and 189 general collections were also made and 10.10 kg of fluff was supplied. Particulars on the seedlings produced from the fluff received from ICAR-SBI during 2019-20 are presented below.

6.1.1.1 Mandya

Crosses	No. of crosses	Quantity sown (g)	No. of seedlings obtained	No of seedlings transplanted	No. of seedlings/g	No. of seedlings survived	Survival percentage
Bi-parental crosses	21	544	3071	2756	5.65	1898	68.87
General Collection	20	299	2350	2202	7.86	1750	79.47
Poly cross	13	193	809	716	4.19	605	84.50
Agali crosses	1	19	0	0	0.00	0	0.00
Total	55	1055	6230	5674	5.91	4253	74.96

6.1.1.2 Navsari

Crosses	Fluff sown (g)	No. of seedlings obtained	No. seedlings per gram of fluff	No. of seedlings planted in the field	Survival percentage
Bi-parental crosses	580	-	-	1505	-
Poly crosses	184	-	-	1035	-
General collections	525	-	-	1676	-
Total	1289	-	-	4216	-

6.1.1.3 Padegaon

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings obtained	No. of seedlings per gram of fluff	No. of seedlings planted in the field	Survival percentage
Bi-parental crosses	18	395.5	3098	7.83	2182	70.43
Poly crosses	7	44.5	439	9.87	316	71.98
General collections	8	259.0	2363	9.12	1177	49.80
Agali crosses	6	81.5	469	5.75	271	57.78
Total	39	780.5	6369	8.16	3946	61.96

6.1.1.4. Powarkheda Fluff is stored and will be sown just after the monsoon.

6.1.1.5 Perumallapalle

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	6	51.93	2937	71.63	1914	58.15
General collections	10	46.23	3899	136.4	2525	58.69
Poly crosses	1	10.5	220	23	143	65.0
Total	17	108.66	7056	91.0	4582	64.9

6.1.1.6 Pune

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	23	577.0	4715	8.17	-	-
General collections	14	259.5	1909	7.36	-	-
Poly crosses	13	196.0	1648	8.41	-	-
Agali crosses	5	112.0	10	0.09	-	-
Total	55	1144.5	8282	7.23	-	--

6.1.1.7 Rudrur

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings germinated	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	31	1821	3412	1.87	3261	95.57
Poly crosses	13	201	896	4.46	864	96.43
General collections	22	351	2856	8.14	2804	98.18
Total	66	2373	7164	3.02	6929	96.72

6.1.1.8 Sankeshwar

Fluff of the crosses was sown during June 2020.

6.1.1.9 Thiruvalla

Crosses	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff
Bi-parental crosses	235	1700	7.23
General collections	745	2926	3.93
Poly crosses	181	1068	5.90
Total	1161	5694	4.90

Among the nine centres in Peninsular Zone, Powarkheda stored the fluff. The fluff was sown and seedlings data are to be taken at Sankeshwar centre. Among the seven centres who reported the data on seedlings, Pune raised the highest number of seedlings (8,282) followed by Rudrur (7,164) and Perumalapalle (7,056). Altogether 45,011 seedlings have been raised at the seven centres during 2019-20.

6.1.2 East Coast Zone

All the four participating centres of fluff supply programme in this zone attended crossing programme 2019-20. They made 99 bi-parental crosses. Apart from these crosses, 13 poly crosses and 86 general collections were made and 5.10 kg of fluff was sent. Particulars on the seedlings produced from the fluff received from ICAR-SBI, Coimbatore during 2019-20 are given below.

6.1.2.1 Anakapalle

Crosses	Total crosses	Quantity of fluff sown	No. of seedlings obtained	No. of seedlings/gram of fluff	No. of seedlings survived	Survival per cent
Bi-parental crosses	30 (29)	727.70	2297	3.16	1793	78.06
General collections	29 (28)	502.00	7178	14.30	5447	75.88
Poly crosses	13 (10)	208.00	2042	9.82	1700	83.25
Total	72 (67)	1437.70	11517	8.01	8940	77.62

Values in parentheses indicate number of crosses germinated.

6.1.2.2 Cuddalore

Crosses	No. of crosses*	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	26 (23)	-	3247	-	-	-
General collections	21 (18)	-	2186	-	-	-
Poly crosses	13 (10)	-	763	-	-	-
Total		-	6196	-	-	-

Values in parentheses indicate number of crosses germinated.

6.1.2.3. Nayagarh

Total number of seedlings produced from the fluff received during March 2020 was 6281.

6.1.2.4 Vuyyuru

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	21	510	4781	9.37	3155	65.99
General collections	13	256	2361	9.22	1267	53.66
Poly crosses	14	242	2020	8.35	1215	60.15
Total	48	1008	9162	9.09	5637	51.53

Among four participating centres in East Coast Zone who received the fluff, Anakapalle (11517), raised the highest number of seedlings followed by Vuyyuru (9162), Nayagarh (6281) and Cuddalore (6196). Altogether 33, 156 seedlings were raised at the four centres in East Coast Zone during 2019.

6.1.3. North West Zone

All the six participating centres of fluff supply programme in this zone, attended crossing programme and effected 159 bi-parental crosses, 237 general collections and five poly-crosses during 2019-20 and 8.71 kg of fluff was sent. Particulars on the seedlings produced from the fluff received from ICAR-SBI, Coimbatore during 2019-20 are given below.

6.1.3.1 Faridkot

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	15	216.5	864	3.99	-	-
General collections	8	308.5	771	2.50	-	-
Poly crosses	4	43.5	232	5.33	-	-
Total		568.5	1867*	3.28	-	-

*Germination count of part of the fluff is reported.

6.1.3.2. Kapurthala

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	30	715	3604	5.04	-	-
General collections	26	676	7266	10.75	-	-
Poly crosses	8	56.5	497	8.80	-	-
Total	64	1447.5	11367	7.85	-	-

6.1.3.3 Lucknow

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings produced	No. of seedlings per gram of fluff	No. of seedlings transplanted	Survival percentage
Bi-parental crosses	24	-	6916	-	-	-
General collections	47	-	22845	-	-	-
Poly crosses	5	-	249	-	-	-
Total	76	-	30010	-	-	-

6.1.3.4 Pantnagar

The fluff received during 2020 was not sown due to COVID 19 pandemic and the same was kept in a deep freezer to be utilized next year.

6.1.3.5. Shahjahanpur

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings produced	No. of seedlings per gram of fluff	No. of seedlings transplanted	Survival percentage
Bi-parental crosses	33	759	236	0.34	227-	-
General collections	56	1140	382	0.06	364	-
Poly crosses	5	123	7	0.57	7	-
Agali crosses	6	122	69	0.32	67	
Total	144	2144	694	-	664	-

6.1.3.6 Uchani

Crosses	No. of crosses	Weight of fluff sown(g)	No. of seedlings transplanted	No of seedlings obtained / g of fluff	No. of seedlings survived	Survival (%)
Bi-parental crosses	24	477.5	6333	13.26	4392	69.30
Poly Crosses	6	117.6	109	0.93	89	81.65
General Collections	27	465.9	5557	11.93	3446	62.01
Agali crosses	6	129.2	26	0.20	-	-
Total	63	1190.2	12028	10.11	7944	66.05

Among six participating centres in North West Zone, Lucknow raised the highest number of seedlings (30010) followed by Uchani (12028) and Kapurthala (11367). Altogether 55,966 seedlings were raised at the five centres in this zone during 2019.

6.1.4. North Central and North East Zone

Among five centres in this zone, four attended crossing programme and made 98 bi-parental crosses during 2019-20. Apart from these crosses, five poly crosses and 84 general collections were made and 5.38 kg of fluff was sent. Particulars on the seedlings produced from the fluff received from ICAR-SBI, Coimbatore are given below.

6.1.4.1. Bathuahahari

The Fluff of the general collections from ICAR-SBI, Coimbatore was received at Sugarcane Research Station, Bethuahahari on 12.05.2020 and was sown on 13.05.2020. None of the fluff of these 27 general collections germinated.

6.1.4.2 Burlikson

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	16	395.0	1104	2.79	1031	93.39
General collections	25	550.8	2094	3.80	1938	92.55
Poly crosses	7	100.1	417	4.16	370	88.73
Total	48	1045.9	3615	3.46	3339	92.37

6.1.4.3 Pusa

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	36	802.0	3051	3.80	-	-
General collections	28	877.5	3927	4.48	-	-
Poly crosses	7	102.0	532	5.22	-	-
Agali crosses	3	64.7	77	1.19	-	-
Total	76	1846.2	7587	4.11	-	-

6.1.4.4 Seorahi

Crosses	No. of crosses	Fluff sown (g)	No. of seedlings transplanted	No. of seedlings per gram of fluff	No. of seedlings survived	Survival percentage
Bi-parental crosses	26	854.0	2938	3.44	-	-
General collections	11	392.0	5291	13.49	-	-
Poly crosses	7	144.9	884	6.10-	-	-
Agali crosses	4	70.4	1527	21.69	-	-
Total	48	1461.3	10640	7.28	-	-

All the five participating centres in North Central and North East Zone received the fluff and the data on seedling production were sent by Buralikson, Pusa and Seorahi centres. Seorahi raised the highest number of seedlings (10,640) followed by Pusa (7587) and Buralikson (3615). Altogether 21,842 seedlings have been raised at these three centres in this zone during 2019.

Among the 24 centres which received fluff from the crosses made at NHG 2019-20, eighteen centres generated 1,42,080 seedlings. Apart from these, Kapurthala centre raised 11,367 seedlings from the fluff of the crosses made during the year 2019-20. Totally, 1,53,447 seedlings were produced by 19 centres in 2019-20 (Fig.6.1).

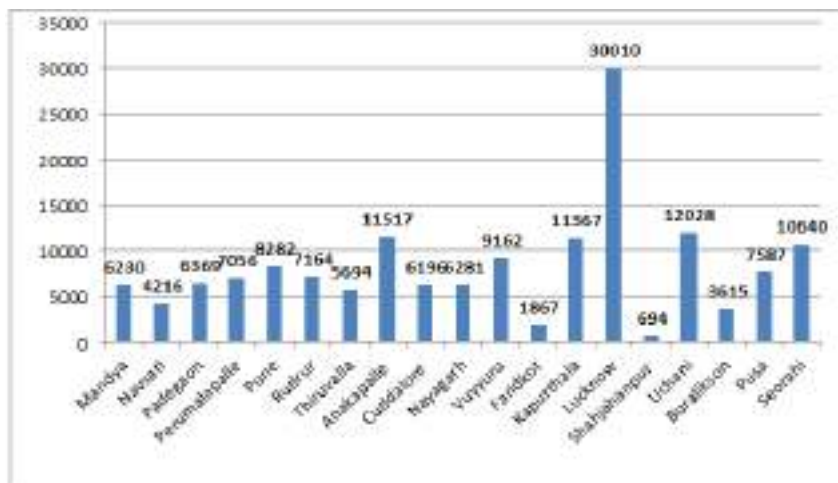


Fig. 6.1 Number of seedlings produced by the participating centres of fluff supply programme

6.2 Evaluation of station crosses and Identification of proven crosses

6.2.1 Peninsular Zone

6.2.1.1 Mandya

Performance of crosses in ground nursery: One thousand five hundred and ten seedlings of the 19 bi-parental crosses, six poly-crosses and 8 general collections were evaluated in ground nursery and 823 selections were made. Crosses which had more than 10 selections are presented in the following table.

Cross combination	Quantity of fluff sown (g)	No of seedlings produced	Total number of seedlings evaluated	No. of seedlings selected
Co98008 X Co 775	28.0	40	40	19
Co 8371 X Co Pant 97222	22.0	168	168	101
Co 8371 X CoA 7602	17.5	18	18	11
Co 98010 X Co 97015	24.5	74	74	39
Co 2000-10 X CoVC 14061	17.5	32	32	14
Co 86002 X Co 1148	18.0	72	72	52
Co 86002 X CoPant 97222	17.5	36	36	19
Co92006 X Co 62198	42.0	290	290	143
CoVC 14061 X Co 89003	25.0	180	180	104
Co 86032 X CoVC 14061	7.0	46	46	27
ISH 228 GC	27.0	383	383	215
ISH 287GC	20.5	53	53	26
ISH 176GC	10.0	26	26	15

Data on HR brix NMC and cane diameter were not reported

Performance of crosses in first clonal trial: Eighty nine clones 13 biparental crosses were evaluated in first clonal trial. Selections were made based on HR brix (%) at 12th month. Among the 89 clones evaluated, 20 were selected. No selections were effected in the five crosses viz., Co 8371 X CoN 98133, CoM 9220 X ISH 41, CoN 98133 X CoPb 10183, Co 11001 X CoPant 97222 and Co 0238 X CoH 104.. Performance of crosses where selections were effected is given in the table.

Cross combination	No of clones planted	HR brix at 12 th month		No. of clones selected
		Mean	Range	
CoV 89101 X CoS 8436	17	19.30	15.0-22.4	5
CoM 6806 X Co 0209	10	18.30	16.0-20.6	3
Co 98010 X CoPant 97222	06	16.70	14.8-21.0	1
Co 89036 X Co 775	07	18.90	16.0-21.0	2
Co 98008 X CoPant 97222	10	17.70	14.0-20.0	1
Co 8353GC	07	18.80	14.0-22.0	2
CoC 671 X CoPant 97222	08	18.20	16.0-24.0	4
CoC 671 X Co 94008 (Agali)	06	20.7	20.0-21.0	2
Grand total	89	-	-	20

Data on cane diameter and NMC were not reported

Performance of crosses in second clonal trial: Six clones of three crosses CoC 671 x Co 94008 (1), Co 8371 x Co 775 (3) and CoV 89101 PC (2) were evaluated in second clonal trial. Two clones one each from the crosses Co 8371 x Co 775 and CoV 89101 PC were selected. The progenies of Co 8371x Co775 and CoV 89101 PC had more than 70 NMC per row and all the six clones recorded cane thickness of 2.5cm

6.2.1.2 Navsari

Performance of crosses in ground nursery (2019)

Cross combination	Quantity of fluff sown	No of seedlings produced	Total number of seedlings evaluated	HR brix (%)		Number of millable canes (NMC)		Cane diameter (cm)		No. of seedlings selected
				Mean	Range	Mean	Range	Mean	Range	
CoS 8119 GC	141.5	979	820	20.6	17-23	92	85-122	2.15	1.86-2.40	31
Co 8371 X Co 97015	21.0	896	802	21.2	16-22	101	82-136	2.29	1.93-2.80	50
BO 92 X CoVC 14061	25.0	871	791	20.4	16-23	96	79-128	2.20	1.97-2.60	38

Performance of crosses in first clonal trial (2018)

Cross combination	No of clones planted	HR brix at 8 th month		HR brix at 10 th month		HR brix at 12 th month		Number of millable canes (NMC)			Cane diameter (cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range		
CoA 13327 x Co 62198	157	14.3	12-17	16.8	13-19.5	18.3	17-24	92.5	85-102	2.50	2.26-2.73	56	
Co 98008 x CoH 104	40	14.2	12.5-17.5	17.1	13.5-19.5	18.4	18-24	96.4	88-110	2.48	2.25-2.67	20	
CoH 110 x LG 05434	23	13.8	12.0-17.0	16.8	13-19	18.0	16-23	100.3	92-118	2.24	2.10-2.40	9	

Performance of crosses in second clonal trial-II (2017)

Cross combination	No. of clones planted	No. of clones with > 20% sucrose at 240 days	No. of clones with > 22% sucrose at 300 days	No. of clones with > 22% sucrose at 360 days	No. of clones with > 70NM C /20'row	No. of clones with > 2.5 cm cane thickness	No. of red rot resistant clones	Superiority of the cross (Sucrose /NMC/ cane dia / Red rot resistance)	No. of clones selected
CoV 89101 PC	122	1	8	15	11	10	1	Sucrose	33
Co 8371 PC	54	0	1	4	13	12	1	NMC	7
Co 92013 X CoS 510	39	0	1	2	11	11	1	Red rot resistance	6

6.2.1.3 Padegaon

Performance of crosses in Ground Nursery (2018-2019): Seven thousand one hundred and sixty nine seedlings of 28 crosses including 20 biparental crosses, five general collections and a poly cross effected at NHG and two biparental crosses and three general collections from SBIRC Agali were evaluated in ground nursery. Seven hundred and thirty four clones were selected for further evaluation. CoM 9220 x BO 91 Co 976 x CoH 104, Co 0238 x LG 5434, CoV 89101 GC, CoM 9217 GC, Co 94012 PC, CP-92-1641 X ISH-229 (Agali) and ISH-12 (Agali GC). Less than 10 selections were effected in Co 8353 x Co 62198 (1), CoSnK 03044 x BO 154 (3), CoC 671 x ISH 228 (6), NB-94-545 x Co 1148 (4), CoM-6806 GC (1), Co 2000-10 GC (1), NB 94-545 GC (1), NB-94-545 Agali GC (1) and Co 2000-10 Agali GC (1). Performance of crosses having more than 10 selections is presented in the following table.

Cross combination	No. of seedling evaluated	HR brix at 8 month		No. of millable canes		cane diameter (cm)		No. of seedling selected
		Mean	Range	Mean	Range	Mean	Range	
Co 87268 x BO 154	300	19.63	16.0-23.0	11.47	5-18	2.39	1.93-2.82	18
CoA 13327 x Co 8353	300	20.05	18.0-23.0	8.30	2-14	2.89	2.24-3.96	20
CoSnk 05103 x Co 87268	1260	21.27	16.5-21.0	11.84	4-33	2.60	2.54-3.65	125
Co 89036 x CoH 13	720	19.58	17.0-23.0	7.71	3-16	2.71	2.11-3.89	45
Co 86002 x CoH 70	120	19.32	16.0-23.0	9.47	4-18	2.81	2.06-3.66	32
CoSnk 03044 x Co 62198	180	20.38	18.0-22.0	7.85	4-11	2.57	1.91-3.00	13
Co 98008 x CoA 13327	360	19.98	18.0-22.0	7.76	4-17	2.85	2.13-3.39	43
Co 98008 x Co 1148	660	22.12	17.0-23.1	13.1	9-17	2.81	2.11-3.12	96
CoM 6806 x Co 1148	660	19.76	16.0-24.0	13.25	3-27	2.46	1.67-3.63	96
Co 98008 x CoS 8436	2	19.70	16.0-22.0	7.04	2-17	2.76	2.08-3.59	72
CoN 07072 x CoBlN 05501	150	20.67	16.0-24.0	8.48	3-18	2.84	1.86-4.00	154
Co 10033 x Baragua (Agali)	6	19.94	18.0-22.0	9.47	5-16	2.68	2.03-3.53	17
Total	7169							734

Performance of crosses in first clonal trial: Four hundred and ninety four clones selected from ground nursery were planted during the year 2018-2019 in first clonal trial and 57 lines were selected. Ten crosses viz., CoA 5321 GC (1), CoM 0265 x CoC 671 (1), ISH 100 x Co 62198 (1), CoA7602 PC (1), Co 8371 x Co 97015 (1), Co 88007 x ISH 70 (1), Co 98001 x Co Pant 97222 (2), CoM 0265 GC (2), 86 V 96 PC (2), Co 92006 x Co 775 (2) had either one or two selections each. Crosses with more than two selections are presented in the following table.

Parentage	Clones planted	Brix% at harvest (12 month)		NMC		Cane girth (cm)		HR Brix (10 month)		No. of lines Selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	
Co 8371 x CoC 8001		19.8	24-25	7.8	5-13	3.91	3.76-4.04	15.7	13.4-18.4	4
BO 91 x Co 62198		20.7	16-24	8.64	6-14	3.82	3.44-4.14	16.2	13.2-19.6	3
Co 86002 x BO 130	54	21.39	14.5-24	7.6	3-14	3.46	3.24-3.88	18.6	17.4-19.4	5
Co 8371 PC	57	20.11	16.5-23	7.22	5-10	4.39	3.70-5.08	18.5	17.5-19.5	5
Co 98006 GC	7	22.29	20-24	8.57	5-11	3.11	2.12-3.72	17	16.3-18.5	4
CoV 89101 PC	38	23.6	18.5-25	8.25	5-13	3.60	3.20-3.80	22.2	17.5-24.2	4
Co 86002 x Co 87268	29	22.66	16.5-25	6.31	4-13	4.66	1.86-11.08	20	18.4-21.5	7
MS 6847 x Co 86011	15	21.77	19-25	8.4	4-13	5.16	1.23-10.12	19.1	17-22.2	3

Co 8353 x Co 06037	11	21.5	16-24	9.1	6-12	5.62	3.48-10.64	20	19.5-21.5	4
CoM 0238 x CoM 0254	6	19.1 7	17-21.5	9.17	7-11	3.94	3.66-4.12	18.5	17.2-19.8	4

6.2.1.4 Perumalapalle

Performance of crosses in first clonal trial: 587 clones of 43 crosses including 21 GCs, three Pcs and 19 biparental crosses were evaluated in first clonal trial. No selections were effected in the 14 crosses CoV 94101 PC, 97 R 129 x 97 R 401, BO 91 GC, Co 8213 x Co 97222, Co 86032 GC, Co 94008 GC, Co 98006 GC, CoA 11326 GC, CoA 7602 GC, CoH 70 GC, CoH 70 X Co 87298, CoSnk 05103 GC, and CoLk 8102 X Co 62198. One each was selected from four crosses viz., 70 A 2 GC, Co 98008 X Co 1148, Co T 8201 GC and CoV 89101 GC. Four crosses viz., CoH 110 GC, CoSnk 03044 x Co 87298, ISH 28 GC and NCo 310 GC gave two selections each and five other crosses viz., 69 A 591 GC, 93 V 297 GC, Co 0209 x Co 1148, Co 86002 x Co 1158 and CoSnk 03044 x ISH 69 gave three selections each. Totally 148 clones were selected from first clonal trial for further evaluation.

Cross combination	No. of clones planted	HR brix at 8th month		HR brix at 10th month		HR brix at 12th month		Number of millable canes (NMC)		Cane diameter (cm)		No. of clones selected
C 81615 x Co 775	20	13.5	10.8-16	15.4	13.3-16.8	17.2	14-22	94.165	62.9-135.6	2.3	1.4-3.0	4
Co 92006 x Co C 8001	47	12.9	8.5-15.8	15	12.4-17.0	17.4	13-25.3	99.6	64.8-137	2	1.6-3.0	4
CoH 9220 GC	6	12.4	9.8-14.8	16	13.3-17.8	18.3	14-21	94.7	55.5-129.5	2.6	1.8-3.3	4
CoM 9220 GC	13	16.6	14.7-18.8	17.1	15.4-18.3	18.1	14-22	100.8	62.9-129.5	2.1	1.4-3.0	4
CoA 12321 GC	24	15.6	12.6-20.5	16.1	13.7-17.5	17.1	9.6-21.5	100.2	64.8-135.8	2.1	1.4-3.3	5
CoN 98112 x 97 R 129	14	14.9	8.4-18	17	14.4-18.4	19	14-23	89.5	55.5-137.2	2.4	1.6-3.4	7
HR 83144 x Co 92008	15	15.7	14-17.3	17	15.3-18.6	18.4	15.1-21.4	88.5	62.8-135.5	2.2	1.4-3.1	7
97 R 401 GC	44	12.6	8.9-18.0	15	12.3-17.4	16.9	12-23.7	102.5	64.8-131.3	2.1	1.4-3.2	8
Co 98005 x 97 R 401	40	12.2	8.0-16.5	16.8	14.4-17.8	20.8	11-17.8	96.2	55.5-134.8	2.3	1.6-3.6	11
Co 8371 PC	29	14.3	10-16.5	17	15.4-18.2	18.5	13-23.4	100.7	64.8-133.6	2.2	1.4-3.2	12
Co 86002 x Co 06037	16	17.1	14-19.2	18.8	15.5-19.2	21.3	10.8-23.8	97.4	51.8-137	2.6	1.9-3	12

CoV 89101 PC	23	14.5	7.7-17.2	16.2	11.1-18.4	19.1	13-24	108.2	74-164.7	2.5	1.9-3.3	12
CoV 89101 x Co 1148	40	13.7	10.1-17.8	15.1	12.6-16.9	18	13-23	100	64.8-136.9	2.3	1.6-3.1	13
CoM 6806 x Co 97015	46	12.9	8-15.8	16	12.8-17.3	17.9	13.0-22.0	102.1	64.8-134.7	2.2	1.4-3.2	17
Total	587											148

Performance of crosses in second clonal trial: 116 clones of 43 crosses were evaluated in second clonal; trial. Twenty four crosses viz., Co 8371 x Co 99006, Co 8371 PC, CoM 6806 x 85 R 186, ISH 100 x ISH 229, Co 98007 x CoC 8001, CoA 7602 GC, CoC 671 x CoT 8201, Co 85002 x CoH 13, Co 85002 X Co H 106, Co 8371 x Co C 92061, CoSnk 03044 x Co 3091, ISH 41 x Co 94008, Co 97009 x CoH 106, ISH 20 x Co H70, Co 8213 x ISH 69, ISH 100 x Co 775, CoS 07231 GC, Co 85002 PC, Co 89101 PC, Co 0635 X Co 1148, CoJ 87 GC, CoA 7602 PC, Co 94012 PC and CoH 111 GC did not show superiority for any of the cane and quality characters. Crosses showing superiority for the different studies were given in the table. No selection with sucrose content more than 20 % at 240 days and that of more than 22 % at 300 days was effected. Red rot resistance of the clones was not reported

Cross combination	No. of clones planted	No. of clones with >22% sucrose at 360 days	No. of clones with > 70 NMC /20' row	No. of clones with > 2.5 cm cane thickness	Superiority of the cross (sucrose/ NMC/ cane dia/ Red rot resistance)	No.of clones selected
Co 8371 X Co 94008	1	1	0	1	/sucrosecane dia	1
CoH 110 GC	1	0	0	1	cane dia	1
ISH 100 GC	2	0	0	1	cane dia	1
Co 86032 GC	1	0	0	1	cane dia	1
CoM 6806 GC	4	0	0	1	cane dia	1
CoC 671 x Co 86249	3	1	0	1	sucros/cane dia	1
97 R 401 GC	5	1	0	1	sucros/cane dia	1
Co 85002 PC	2	1	0	1	sucrose/cane dia	1
Co 8213 x Co 86011	7	5	0	5	sucrose/cane dia	5
Co 06022 GC	1	1	0	1	sucrose/cane dia	1
Co 8213 x CoH 12	1	1	0	1	sucrose/cane dia	1
Co N 05071 x Co 0331	3	1	0	1	sucrose/cane dia	1

Co 0312 x Co 0209	1	1	0	1	sucrose/cane dia	1
Co 8371 PC	2	1	0	1	sucrose/cane dia	1
CoV 89101 PC	22	7	0	11	sucrose/cane dia	12
97 R129 GC	4	1	0	1	Sucrose/cane dia	1

6.2.1.5 Pune

Performance of crosses in ground nursery: Two thousand seven hundred and eighty three seedlings were evaluated in ground nursery. Selections were effected only from two crosses viz., Co 8371 x CoH 13 and CoV 89101 x CoPant 97222.

Cross Combination	Total number of seedlings evaluated	HR brix % (12 M)		Number of millable canes (NMC)		Cane diameter (cm)		No. of seedlings selected
		Mean	Range	Mean	Range	Mean	Range	
Co 09021 x Co 87268	00	18.8	14.2-21.5	8.33	5-12	2.87	2.4-3.4	0
Co 09022 x ISH 150	48	16.8	12.0-18	9.33	6-18	2.45	2.1-2.8	0
Co 86002 x CoS 8436	318	15.4	13.8-21.6	6.89	5-14	2.32	2.1-2.8	0
CoSnk 05103 x Co 62198	25	15.2	14.2-21.8	6.27	4-8	2.40	2.2-2.6	0
CoLk 8102 x Bo 154	15	16.2	9.0-14	10.67	8-16	2.35	2.2-2.9	0
Co 86002 x Co 62198	101	16.8	14.8-20.4	9.27	4-14	2.56	2.2-3.3	0
CoA 13327 x CoS 07233	18	14.4	12.8-19.6	7.67	6-10	2.36	2.3-2.7	0
Co 0238 x Co 89003	90	19.4	16.6-22.2	7.33	5-9	2.30	2.1-2.9	0
Co 98008 x Co 0327	43	17.6	15.2-20.8	6.78	5-12	2.62	2.4-3.2	0
CoM 9220 x Co 775	629	16.8	14.4-20.4	8.33	7-13	2.55	2.6-3.4	0
Co 98010 x Bo 154	172	17.4	14.0-19.5	10.33	9-14	2.67	2.3-3.1	0
Co 8371 x CoH 13	64	19.2	18.6-21.4	10.5	07-14	3.11	03-3.2	02
CoV 89101 x CoPant 97222	136	18.6	14.2-21.6	15	5-13	3.18	2.4-3.4	01
Co 06022 x Co 0209	09	17.4	14.6-21.6	7.33	6-11	2.45	2.5-3.3	0
CoN 05071 x Co 1148	131	16.8	13.8-20.8	7.86	4-13	2.55	2.2-2.7	0
28 NG 288 x Co 62198 (Agali)	29	16.6	11.8-19.2	8.78	7-14	2.40	2.1-2.55	0
IK 76-99 x CoC 671 (Agali)	320	14.4	10.2-17.4	11.33	9-19	2.55	2.0-2.8	0
Laukona 15 x CoC 671 (Agali)	40	15.2	10.8-18.4	7.67	6-11	2.78	2.3-3.3	0
E. procerus x Co 775 (Agali)	26	13.2	10.2-16.8	9.67	8-15	2.18	2.0-2.55	0
CoV 89101 PC	31	16.4	14.2-19.4	9.44	4-11	2.46	2.2-2.7	0
Co 0327 GC	43	16.4	16.2-22.2	8.67	7-13	2.45	2.3-3.1	0
Co 09022 GC	12	17.2	15.6-21.4	7.33	5-10	2.35	2.0-2.44	0
Co 2000-10 GC	44	17.4	16.6-21.8	6.78	5-14	2.60	2.2-2.9	0

Performance of crosses in first clonal trial: Among the 11 crosses evaluated, no selection was done in Co 06022 x Co 97015. Performance of the other crosses is given below.

Cross Combination	No. of clones planted	HR brix % at 12 th month		Number of millable canes/ha (*000) (NMC)		Cane diameter (cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	
Co 92013 x Co 62198	01	22.2	-	68.17	-	2.63	-	01
Co 98006 x CoT 8201	02	22.5	21.6-23.3	64.17	58.33-70.0	3.25	3.2-3.3	02
Co 92006 x Co 89003	05	19.8	17.4-21.0	62.78	55.0-69.0	3.26	2.8-3.4	01
Co 8371 x Co 775	02	18.2	18.86-17.52	78.4	77.05-79.76	3.23	3.13-3.3	02
Co 92006 x Co 89003	03	22.2	20.8-23.2	79.32	72.69-92.36	3.21	3.17-3.3	03

Co 98006 x Co 88013	04	23.0	22.4-23.6	74.63	66.11-80.0	3.09	3.03-3.1	03
Co 92002 x Co 97015	04	21.9	20.8-22.6	84.33	80.75-86.90	3.1	2.8-3.5	03
MS 6847 x Co 92008	04	20.4	19.6-21.2	81.55	77.52-86.67	2.93	2.6-3.1	01
CoV 89101 PC		20.8	-	75.0	-	2.83	-	01

Performance of crosses in second clonal trial: Among the five clones of the three crosses evaluated in second clonal trial, Co 98010 x Co 0331 was found best for cane diameter and Co 8208 X Co 775 for Sucrose content. However only one selection was made from the cross CoC 671 x Co 94008 which was the best cross for cane thickness.

6.2.1.6 Rudrur*

Performance of crosses in first clonal trial: Seven thousand one hundred and eighty eight seedlings were evaluated in ground nursery. Performance of the crosses is given below.

Crosses	No of seedlings transplanted	Cane length (cm)	Cane girth (cm)	HR Brix (%)
Co 94007 x 85 R 186	10	212-274	3.0-3.2	17.8-21.2
Co TI 1153 x Co C 8001	8	204-278	2.8-3.3	18.5-21.4
Co Snk 05103 x Co 1148	352	215-266	3.2-3.5	19.4-22.5
Co Snk 05103 x Co Pant 97222	3	222-282	2.7-3.4	19.2-22.6
Co V 89101 x Co 775	558	210-260	2.8-3.3	18.9-21.2
Co V 89101 x Co Se 92423	432	208-288	2.9-3.8	19.0-21.0
Co V 89101 x ISH 69	359	200-276	3.0-3.4	17.8-23.2
Co 98008 x Co H 70	664	220-268	2.9-3.4	20.2-21.8
Co 0238 x Co Se 92423	2	200-246	2.8-3.2	22.2-23.4
Co 98010 x Co C 8001	45	218-284	2.9-3.4	21.8-22.4
Co 2000-10 x Co 89003	36	246-284	3.2-3.6	22.0-23.2
Co 2000-10 x Co 1148	82	234-278	2.7-3.5	19.2-22.4
Co J 64 x Co C 8001	6	220-276	2.4-3.6	19.6-22.0
Co C 671 x Co 775	134	218-273	2.5-3.4	20.2-21.8
Co 92006 x Co 62198	225	246-289	2.6-3.6	19.2-22.0
Co Or 03152 x Co 775	623	221-256	2.8-3.8	20.6-22.2
Co C 8201 x Co A 7602	114	246-288	2.7-3.8	21.0-22.8
Co 7201 x Co H 70	149	254-278	3.0-3.5	19.2-22.6
Co 7201 x ISH 127	11	234-284	2.9-3.4	18.8-20.2
85 R 186 x Co T 8201	90	264-276	2.8-3.6	18.6-19.8
Co 11004 x 85 R 186	83	228-284	2.9-3.8	19.2-21.2
Co 8371 x Co T 8201	99	212-287	2.4-3.9	19.2-22.6
Co 8371 x Co 97015	152	225-289	2.5-4.0	18.8-19.8
Co 740 x Co 775	11	240-278	2.8-3.7	19.2-20.2
Co 98008 x Co Pant 97222	271	252-268	2.5-4.0	18.2-20.8
97 R 129 x Co 1148	356	244-275	2.6-3.8	18.0-22.8
Co A 13327 x Co 1148	51	234-287	2.8-3.6	19.2-22.6
Co 86032 x Co VC 14061	189	238-274	2.9-3.7	18.4-22.8
Co C 90063 PC	28	245-278	2.9-3.4	18.6-22.4
Co A 7602 PC	38	244-276	2.8-3.6	19.2-22.4
Co 2000-10 PC	61	246-272	2.9-3.5	22.4-23.2
ISH 100 PC	74	252-286	3.0-3.6	21.2-23.0
Co 85002 PC	2	246-276	2.7-3.8	18.8-23.0
Co 8371 PC	104	234-278	2.8-3.5	20.6-22.6
Co 62198 GC	61	236-289	2.9-3.4	18.4-20.4
85 R 186 GC	17	232-284	3.0-3.5	19.6-23.2

Co 98015 GC	176	246-272	3.1-3.5	19.4-21.4
ISH 306 GC	856	248-288	3.2-3.4	19.2-22.6
Co 8318 GC	310	236-284	2.8-3.6	18.6-22.8
Co 0312 GC	27	252-288	3.1-3.5	19.2-23.2
SP 89-185 GC	31	256-289	2.7-3.4	18.8-20.6
97 R 129 GC	84	247-274	2.5-3.5	18.4-21.2
Co 0424 GC	9	244-274	2.6-3.6	20.2-22.8
97 R 129 GC	284	214-269	2.8-3.4	18.4-22.8
87 R 40 GC	11	232-288	2.9-3.6	21.2-23.2
85 R 58 GC	8	242-288	2.9-3.2	21.8-23.6
Co N 91132 GC	1	245	3.4	22.2
Total	7188			

Performance of crosses in first clonal trial

Cross	Range		
	Cane length (cm)	Cane girth (cm)	HR Brix (%)
CoSnk 05103 × CoH 70	200-278	2.8-3.1	19.4-21.1
Co 1158 GC	201-260	2.5-3.2	20.0-21.8
CoA 13327 × Co 87268	225-275	2.2-2.5	20.7-23.2
CoSnk 03-044 GC	160-265	2.5- 3.1	19.6-22.2
Co 89036 GC	200-278	2.2-3.1	17.8-22.5
Co 06036 × Co 1148	260	2.7	23.1
CoPant 84212 × CoS 88216	214-277	2.8-3.2	19.2-22.35
97 R 129 × CoH 70	211-258	2.2-2.5	18.2-24.8
Co 8353 × Co 87268	244-265	2.6 - 3.0	18.3-22.4
Co 06033 GC	220-255	2.7 – 3.1	20.1-20.9
Co 1158 × Co 7717	210-275	2.8-3.2	19.2-22.5
Co 86002 × CoA 13327	244-265	2.6-3.1	18.8-23.5
CoC 671 × Co Pant 97222	255-264	3.1-3.4	20.9-21.4
97 R 129 GC	265-270	2.8-2.9	19.4-21.3
Co 8371 PC	240-244	3.0-3.4	19.8-20.7
CoSnk 05103 × Co 62198	245-285	2.9-3.2	20.0-20.9
CoV 89101 PC	245-265	2.8-3.0	20.4-21.8

6.2.1.7 Sankeshwar

Performance of crosses in ground nursery (2017-18): Sixteen bi-parental crosses effected in NHG viz., CoC 671 x Co 1148, Co 0238 x CoBln 03- 174, Co 98008 x CoPant 97222, Co 98010 x CoS8436, Co 06022 x CoPant 97222, Co 06036 x CoH 70, CoC 671 x Co 97015, CoJ 64 x Co 97015, Co 94007 x LG 05434, Co 2000-10 x Co 1148, CoTI 1153 x CoH 70, NB 94-545 x CoH 104, CoC 24 x ISH 41, Co 06022 x Co 1148, Co 2000-10 x CoH 70, LG 01014 x CoBln 05-501, two from SBIRC, Agali viz., Seleni x ISH 229 and Fiji B x Co 12001, five GCs from NHG viz., CoOr 03152GC, Co 2000-10GC, CoV 89101GC, CoPb 10181GC and Co 88025GC and four GCs from SBIRC, Agali viz., NB 94-545GC, ISH 100 GC, Co 2000-10 GC and Co 7201GC and three polycrosses viz., CP 52-68 PC, CoV 89101 PC and Co 94012 PC were not germinated.

Cross combination	Quantity of fluff sown	No of seedlings produced	Total number of seedlings evaluated	Number of millable canes (NMC)		Cane Diameter (cm)		No. of seedlings selected
				Mean	Range	Mean	Range	
CoSnk 03632 GC (Agali)	9.0	109	99	5.2	2-8	3.1	1.5-3.7	1
CoC (SC) 24 GC, (A Agali)	9.0	160	135	6.1	1-13	2.8	1.4-3.2	3
Co 0238 GC (Agali)	6.0	387	350	11.5	3-16	2.2	1.3-3.1	6

Note: Seedlings were obtained only from fluff of 3GCs collected from SBI RC, Agali; HR brix data were not reported

Performance of crosses in first clonal trial (2016-17): Among the nine crosses evaluated no selection was effected in three crosses viz., CoA 92081 x UP 05125, CP 52-1 x Co 97015 and Co 0238 x Co 775. Only one clone was selected from the cross Co 06022 x CoC 671. Performance of crosses with more than one selection is presented below.

Cross combination	No of clones planted	Juice brix at 8 th month		Juice brix at 10 th month		Number of millable canes		Cane diameter (cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	
Co 8213 x CoH 119	22	13.3	9-18.5	20.5	14.5-24	60	12-98	2.61	2.3-2.9	2
Co 6304 x Co 1148	37	13.4	11.5-16.8	21.5	14.5-24.5	98	62-125	2.82	2.1-3.2	19
ISH 1 x Co 775	30	14.1	13-19	21.5	18.5-24.0	92	40-119	2.94	2.2-3.2	16
MS 68/47 x CoPant 97222	6	15.2	13.5-16.5	21.1	18.5-22.5	51	43-69	3.12	2.5-3.6	4
CoC 90063 x CoT 8201	7	15.5	13.5-18.5	21.5	20-23	62	37-71	2.92	2.2-3.5	4

6.2.1.8 Thiruvalla

Performance of crosses in ground nursery (2016-17 series): Among the 16 crosses evaluated in ground nursery two crosses viz., ISH 100 X CoC 8001 and CoTl 1153 X Co 1148 and a self of Co 94007 did not yield any selection.

Cross combination	Quantity of fluff sown	No of seedlings produced	Total number of seedlings evaluated	HR brix (%)		Number of millable canes		Cane diameter (cm)		*No. of seedlings selected
				Mean	Range	Mean	Range	Mean	Range	
Co 2000-10 X Co 1148	14.5	318	20	19.2	17.1-21.6	5.0	2-10	2.4	1.9-3	20
CoV 89101 X Co 775	32.5	192	20	18.0	17.0-19.7	9.0	3-22	2.2	1.7-3.1	20
Co 98010 X Co 97015	8.5	238	11	18.0	17.0-20.0	6.6	3-13	2.3	1.5-3.1	11
CoN 05072 X CoC 8001	27	22	10	18.7	17.0-23.0	7.1	3-18	2.6	2.2-3	10
CoC 90063 X Co 8340	11.5	81	26	20.0	18.3-23.6	6.3	2--12	2.6	2.0-3.8	26
Co 6304 X CoA 7602	12.5	121	7	20.1	17.0-22.1	6.0	2-13	2.5	1.9-3.3	7
Co Or 03152 X Co 97015	38	76	9	18.5	17.1-20.5	7.1	2-17	2.5	1.7-3.1	9
Co 2000-10 X CoA 7802	13.5	147	33	19.5	17.0-22.3	5.3	2-12	2.3	1.6-3	33
Co 92007 X Co 775	15	125	32	19.9	17.1-23.1	5.4	2-18	2.2	1.6-2.7	32
Co 98006 X CoT 8201	48	206	13	19.1	17.1-22.4	7.2	3-15	2.2	1.4-2.4	13
Co 88025 X Co 775	13	120	8	19.0	17.5-20.5	5.8	3-14	2.7	2.3-3.0	8
Ms 68/47 X CoT 8201	27	207	9	19.9	18.2-22.1	4.4	3-7	2.1	1.8-2.3	9
Co 2000-10 X Co 775	19	54	10	19.9	18.0-21.8	4.9	3-8	2.4	1.7-2.7	10
CoC 671 X Co 88013	33.5	234	6	19.9	18.2-21.5	5.3	4-7	2.5	2.2-2.8	6

* Observations on seedlings with low HR brix were not recorded.

Performance of crosses in first clonal trial (2016-17): Four crosses viz., CoV 89101 X Co 775, Co 98010 X Co 97015, Co 88025 X Co 775, MS 68/47 X CoT 8201 planted in first clonal trial did not give any selection. Selections which give better selections are presented in the following table.

Cross combination	No of clones planted	HR brix at 12 th month			Number of millable canes (NMC)			Cane diameter (cm)			No. of clones selected
		Mean	Range		Mean	Range		Mean	Range		
Co 2000-10 X Co 1148	20	18.4	17.0	20.2	17.1	11	24	2.5	2.1	3.2	2
CoN 05072 X CoC 8001	10	18.6	17.7	20.2	15.4	13	21	2.8	2.4	3.2	1
CoC 90063 X Co 8340	26	18.7	17.7	20.5	18.0	11	23	2.7	2.1	3.3	2
Co 6304 X CoA 7602	7	20.0	18.5	20.8	16.0	12	22	2.7	2.0	3.4	5
Co Or 03152 X Co 97015	9	19.0	18.0	20.5	16.4	13	24	2.5	1.9	3.2	2
Co 2000-10 X CoA 7802	33	18	17.3	21.2	16	10	27	2.6	2.0	3.2	4
Co 92007 X Co 775	32	18.6	17.0	21.2	18.4	13	24	2.5	2.0	3.4	5
Co 98006 X CoT 8201	13	18.3	17.2	20.8	19.3	15	24	2.6	2.0	3.5	1
Co 2000-10 X Co 775	10	18.8	17.3	21.3	20.4	17	24	2.8	2.3	3.5	2
CoC 671 X Co 88013	6	18.8	16.8	21.5	19.0	16	22	2.6	2.1	3.4	3

6.2.2 East Coast Zone

6.2.2.1 Anakapalle

Performance of crosses in ground nursery: Thirty crosses were evaluated in ground nursery. Fifteen crosses viz., CoC 90063 x CoA 7602 (6), ISH 100 x CoA 7602 (8), Co 2000-10 x CoA 7602 (2), Co 1158 x Bo 91(8), CoA 92081 x Co 94008 (4), Co 86249 x 85 R 186 (1), CoA 10321 x CoSe 92423 (3), CoA 11324 x CoH 70 (5), Co 98008 x Co 8353 (2), Co 0240 x Co 62198 (4), Co 7201 x 97 R 401 (6), Co 2000-10 GC (9), Co 8371 (8), Co 92020 x CoA 7602 (6) and CoA 99081 x ISH 100 (4) had less than 10 selections. Performance of crosses with more than 10 selections was presented below.

Cross combination	Total number of seedlings evaluated	HR brix (%)		Number of millable canes (NMC)		Cane diameter (cm)		No. of seedlings selected
		Mean	Range	Mean	Range	Mean	Range	
Bo 91 x Co 62198	119	22.38	21.8-23	3.90	2-6	2.18	2-2.3	10
Co 8353 x Co 62198	189	22.58	20-24	3.85	2-7	2.15	2-2.3	20
CoA 92081 x Co Pant 97222	43	24.25	23-25.6	5.10	3-6	2.26	2.1-2.4	10
CoA 11323 x Co 62198	44	22.80	22-24	3.40	2-4	2.18	2.1-2.3	10
CoA 11324 x Bo 154	159	23.09	22-24.2	4.70	3-8	2.15	2.0-2.4	20
CoA 13327 x CoS 96260	266	21.75	20-23	3.80	2-5	2.22	2.1-2.3	20
CoA 13327 x CoS 96275	532	21.82	20-23	4.10	3-5	2.15	2.0-2.3	20
Co 86002 x CoS 96260	582	22.81	22-24	4.65	2-6	2.21	2.0-2.3	20
CoA 13327 x ISH 69	248	22.19	21-23	3.20	2-4	2.12	2.0-2.3	15
Co 86032 x Co 11015	88	22.61	22-23.2	2.93	2-4	2.17	2.0-2.3	15
Co 8353 GC	241	23.05	22-24	4.79	3-7	2.17	2.0-2.3	19
Co 1148 GC	262	23.05	22-24	4.58	3-6	2.17	1.9-2.2	21
Co 94008 GC	241	22.75	22-24	5.05	3-6	2.14	2.0-2.4	20
CoV 89101 GC	421	23.29	23-24	5.36	4-7	2.09	1.9-2.4	14
CoA 12321 GC	142	23.29	22.6-24	5.18	4-6	2.24	2.1-2.3	10
2003 V 46 GC	45	23.89	23.4-24	4.27	3-5	2.2	2.2-2.4	15
CoA 99081 GC	192	23.64	22.6-24.2	5.60	5-7	2.37	2.3-2.5	10

Performance of crosses in first clonal trial : Among the 42 crosses planted in first clonal trial, 13 crosses viz., Co 98010 x Co 1148, CoM 9220 x Co 62198, Co 20010 x BO 91, Co 94007 x Co 1148, CoS 92268 x CoA 10321, Co 87268 GC, Co 98010 x BO130, CoV 89101PC, Co 62198 GC, Co 2000-10 x Co 1148, Co 8340 GC, Co 94005 GC, Co 89269 GC, CoA 10321 x CoPant 92423 could not be established in the field. 100 clones of 39 crosses were evaluated in first clonal trial. Sixteen crosses viz., CoH119 x LG 07482 (1), CoA92081 GC (2), Co S90269 x BO155 (2), Co238 x Co 62198 (2), Co 9701GC (1), Co 94007 x Co97015 (1), Co88025 x CoH80 (1), CoA 13327 x Co1148 (2), CoA11324 GC (2), Co 911019 x BO91(1), CoH 106GC (1), CoH 7803 GC (1), ISH147XISH104 (2), CoA10321GC (1), Co0238XISH

69 (1) and Co98010 x Co1148 had either one or two selections each. Crosses with more than two selections are listed below with their cane and quality characters.

Cross combination	No of clones planted	HR brix at 10 th month		HR brix at 12 th month		Number of millable canes (NMC)		Cane diameter (cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	
CoH92GC	20	19.20	18.00-20.80	23.80	21.00-24.60	126.04	118.00-138.00	2.82	1.90-3.30	9
Co89036GC	23	20.80	18.00-21.00	23.14	22.00-24.00	124.21	121.00-130.67	3.10	2.00-3.20	8
BO91GC	9	20.40	18.00-21.00	23.40	23.00-24.00	226.16	122.67-130.33	3.30	3.00-3.30	4
CoM6806X ISH69	28	21.80	20.00-22.00	23.00	22.20-24.20	126.21	116.67-134.33	3.30	3.10-3.40	9
CoC671XCoSe92423	5	21.60	20.00-22.00	23.00	22.60-24.00	125.22	112.33-138.33	3.20	3.00-3.80	3
C79218XCoPant90223	5	20.60	19.00-21.80	23.03	22.30-23.80	126.22	118.67-136.00	3.30	3.00-3.60	3
CoH76X Co97015	8	19.80	18.20-20.00	24.75	23.50-26.00	127.67	118.00-136.33	3.20	3.10-3.80	3
Co06035X CO88013	8	19.38	17.00-19.80	23.47	22.00-24.00	128.33	124.33-132.00	3.00	2.80-3.40	8
C81615GC	22	19.20	18.00-21.00	23.00	22.00-24.00	122.00	108.00-130.33	3.00	2.80-3.40	6
CoT8201XCoSe92423	12	19.00	18.00-20.00	22.66	22.30-24.00	125.33	120.00-125.67	3.10	3.00-3.60	5
CoS8436X Co62198	6	19.00	18.00-20.50	23.90	23.00-25.20	118.00	112.50-132.00	3.00	3.10-3.60	3
Co88025XCoH7803	5	18.80	18.00-19.60	23.50	23.20-24.00	120.67	116.67-134.37	3.00	2.70-3.20	4
CoM 6806GC	17	18.60	19.00-20.00	23.49	22.60-25.20	126.07	113.00-134.67	3.00	2.90-3.60	12

Performance of crosses in second clonal trial: Seventy six clones of 24 crosses were evaluated in second clonal trial. No selection was effected in seven crosses viz., CoA10321x CoH119, Co8371 x CoA 7602, CoA 11324 x Co 1158, Co 98008 GC, Co 85002 PC, CoA 92081 x Co 62198 and CP 52-1 x Co 62198. The clones were not tested for red rot resistance. Crosses with only one selection were CoA 7602 PC CoA 09321 x Co 775 CoA 92081 x Co 97015, CoN 05072 x Co 89003, CoA 11324 x Co 62198 CoV 89101 x BO91 and CoV 89101 x Co1158. Pperformances of crosses with higher number of selection are given below.

Cross combination	No. of clones planted	No. of clones with > 22 % sucrose at 300 days	No of clones with > 22% sucrose at 360 days	No. of clones with > 70NMC /20'row	No. of clones with > 2.5 cm cane thickness	Superiority of the cross (Sucrose /NMC/ cane dia / Red rot resistance)	No. of clones selected
CoS 87216 x CoH 70	9	4	6	9	9	Sucrose/ NMC/ CD	3
CoTl 1153 x BO 91	3	2	3	3	3	Sucrose/NMC/ CD	2
Co 8371 x CoH 70	23	-	3	3	3	Sucrose/NMC/ CD	3
CoA 11324 x CoH 15	3	3	3	3	3	Sucrose/NMC/ CD	3
Co 89036 x CoS 88216	4	-	-	2	2	NMC/ CD	2
Co 8371PC	2	-	-	2	2	NMC/ CD	2
CoV 89101 x Co 62198	3	2	2	2	2	Sucrose/NMC/ CD	2
BO 91 x Co 62198	4	-	-	2	2	NMC/ CD	3
CoV 89101x ISH 69	3	3	3	3	3	Sucrose/NMC/ CD	3
CoV 89101PC	2	2	2	2	2	Sucrose/NMC/ CD	2
Total	76						32

No clone was found with > 20% sucrose at 240 days

6.2.2.2 Cuddalore

Performance of crosses in ground nursery (2019-20)

Cross combination	Total number of seedlings evaluated	HR brix (%)		Number of millable canes (NMC)		Cane diameter (cm)		No. of seedlings selected
		Mean	Range	Mean	Range	Mean	Range	
CoTl 1153 X CoC 8001	90	20.51	18.6-22.2	5.41	4-9	2.71	2.4-3.3	3
Co 8371 X Co 11015	93	20.26	19.2-22.0	5.55	4-10	2.67	2.3-3.3	6
Co 2000-10 X Co 94008	25	21.28	20.2-23.2	5.68	3-9	2.77	2.4-3.4	5
Co 86002 X ISH 69	94	20.65	18.8-22.6	4.89	3-8	2.51	2.5-3.2	8
Co 86002 X Co 775	450	20.18	18.8-23.2	4.77	3-9	2.47	2.1-3.0	6
Co 06022 X Co 94008	41	20.84	20.4-23.4	5.04	4-10	2.55	2.2-3.1	3
CoC 671 X 85 R 186	56	20.67	20.2-23.0	4.91	4-8	2.68	2.3-3.1	3
CoA 92081 X Co 62198	49	20.86	20.4-22.8	5.17	4-9	2.88	2.5-3.3	6
Co 94008 X Co 12014	57	21.04	19.8-21.8	5.24	4-10	2.55	2.3-3.1	3
Co 86032 X Co 0233	139	20.76	19.6-22.2	4.96	4-9	2.67	2.2-3.2	4
CoTl 1358 X CoC 8001	31	21.28	20.2-23.2	5.10	3-9	2.55	2.4-3.1	5
Co 86032 X Co 11015	124	20.88	19.6-22.8	4.58	3-9	2.67	2.5-3.0	8
Co 0235 GC	58	20.28	19.4-22.6	5.07	3-8	2.48	2.2-2.9	4
Co 62198 GC	59	20.67	19.8-23.0	5.17	4-11	2.69	2.4-3.3	3
Co 86002 GC	35	21.18	20.4-23.4	5.28	4-10	2.52	2.5-3.4	2
CoA 13327 GC	42	20.84	20.2-23.2	4.98	4-9	2.66	2.4-3.2	2
Co 0212 GC	11	21.17	20.6-23.4	4.72	4-10	2.91	2.5-3.2	3
CoC 08336 GC	249	20.46	19.4-23.6	4.66	3-9	2.57	2.4-3.3	3
CoA 7602 PC	22	20.61	20.2-23.2	4.73	3-8	2.51	2.3-2.9	2
Co 2000-10 PC	18	21.43	20.8-23.2	4.66	4-9	2.68	2.4-3.0	2
Co 8371 PC	30	20.88	20.2-23.4	4.82	3-8	2.59	2.2-2.9	4

Performance of crosses in first clonal trial (2019-20)

Cross combination	No. of clones planted	HR brix at 8 th month		HR brix at 10 th month		HR brix at 12 th month		Number of millable canes (NMC)		Cane diameter (cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
Co 0238 X Co 97015	9	16.02	15.2-16.8	19.34	17.8-19.6	22.33	20.6-23.2	5.21	4-7	2.88	2.5-3.2	4
Co 85002 X CoH 70	30	15.88	14.8-17.2	17.36	16.4-18.6	21.28	20.2-22.8	5.08	4-8	2.71	2.4-3.3	7
NB 94545 X CoA 13327	86	15.92	15.2-17.8	17.81	16.2-19.4	21.06	20.4-23.4	5.40	3-8	2.77	2.5-3.4	20
CoOr 0315 X CoH 70	2	17.1	16.8-17.4	19.8	19.4-20.2	23.2	22.8-23.6	6.50	6-7	3.20	3.1-3.3	1
BO 102 X Co 97015	21	16.08	15.4-16.8	18.11	16.6-19.6	21.37	20.2-23.0	5.33	3-9	2.93	2.7-3.5	4
CoM 6806 X CoPant 90233	23	16.14	15.8-17.4	18.06	16.8-19.4	21.53	20.4-23.4	5.20	3-9	2.85	2.5-3.5	3

Performance of crosses in second clonal trial (2019-20)

Cross combination	No. of clones planted	No. of clones with > 20% sucrose at 240 days	No. of clones with > 22 % sucrose at 300 days	No of clones with > 22% sucrose at 360 days	No. of clones with > 70NMC /20 ² row	No. of clones with > 2.5 cm cane thickness	Superiority of the cross (Sucrose (a) /NMC (b)/ cane dia (c) / Red rot resistance (d)	No. of clones selected
CoC 90063 X Co 97015	14	2	3	4	5	9	a, b & c	5
CoC 90063 X Co 1148	11	-	2	3	5	7	a, b & c	2
MS 68/47 X Co 94008	5	-	1	-	2	3	a, b & c	1
Co 2000-10 X CoH 70	7	-	2	2	3	3	a, b & c	3
ISH 100 X Co 89003	8	-	2	2	2	4	a, b & c	4
Co 89003 X Co 0233	1	-	-	-	1	1	b & c	1
Co 98008 X CoC 8001	2	-	-	-	1	2	b & c	0
CoC 8201 X Co 97015	5	-	1	2	2	3	a, b & c	0
Co 06022 X Co 97015	2	1	-	1	2	2	a, b & c	1

* - Red rot resistance of the test clones was not tested

6.2.2.3 Nayagarh

Performance of crosses in ground nursery: Two thousand five hundred and five seedlings of the 44 crosses were evaluated in ground nursery. Less than seven selection per cross was effected in 17 crosses viz., CoSnk 05103x ISH 69 (5), Co 2000-10 x CoPant97222 (5), Co 06022 x Co 97015 (4), Co 86032 x Co11015 (5), CoS 96268GC (6), Co 89036GC , (6), , Co 92013GC (6), CoOr 05346GC (5), CoM 07072 GC (3), CoOr 10346GC (4), ISH 139GC (6), Co 7910GC (3), CoC 90063PC (5), CoA 7602PC (2), Co 2000-10PC (3), ISH 100PC (5) and Co 8371PC (6). Performance of the crosses with more than seven selections was presented in the table below.

Cross combination	No. of seedlings evaluated	HR brix%		NMC		Cane diameter (cm)		No. of seedling selected
		Mean	Range	Mean	Range	Mean	Range	
CoV 89101 x Co 1148	104	22.5	18.0-25.2	3.6	3-9	2.2	1.7-2.7	14
CoC 90063 x CoH 70	31	25.8	24.2-25.6	2.3	2-8	2.3	1.9-2.8	9
Co 8371 x Co 11015	16	21.2	16.8-24.6	2.5	2-6	2.3	1.8-2.8	7
Co 98008 x Co 1148	42	20.9	17.4-24.6	3.8	3-8	2.0	1.8-2.6	10
CoA 13327 x Co 1148	51	23.7	20.4-26.5	3.7	3-10	2.3	1.8-2.6	12
CoM 6806 x CoPant 97222	53	21.6	22.0-24.2	3.9	2-9	2.3	2.1-2.4	8
Co 98010 x ISH 69	48	22.2	16.6-25.8	2.6	2-6	2.3	2.2-2.4	7
CoA 92081 x Co 775	54	21.8	20.8-24.2	4.5	3-10	2.3	1.8-2.5	8
CoOr 03152xCoPant 97222	79	20.6	20.8-26.2	2.8	1-7	2.5	2.2-2.6	8
ISH 41 x Co 97015	61	21.6	20.8-25.6	3.7	2-8	2.3	1.9-2.4	7
Co 97015 x Co 62198	49	26.3	22.2-26.8	4.2	2-10	2.4	1.9-2.6	7
Co1158GC	119	20.6	22.6-26.4	2.8	3-10	2.4	2.2-2.8	12
CoBln 03174GC	51	21.6	20.6-26.8	2.6	2-8	2.4	2.1-2.6	7
BO 91GC	128	20.6	20.8-23.8	3.2	1-10	2.2	1.8-2.5	8
BO 102GC	98	22.4	20.8-24.6	2.2	2-6	2.1	1.8-2.4	9
CoA13327GC	130	22.7	20.8-26.4	3.6	3-6	2.3	1.8-2.5	14

CoSe 01434GC	121	25.5	22.6-27.2	4.1	1-12	2.2	1.9-2.4	10
CoPb 10182GC	124	22.6	22.8-26.4	3.8	2-8	2.2	1.8-2.5	8
CoM 6806GC	98	25.5	22.4-26.5	2.6	3-9	2.4	1.9-2.6	9
CoH 119GC	62	25.4	20.2-27.4	2.3	1-8	2.2	1.9-2.4	8
CoLk 8102GC	128	24.0	22.3-26.4	4.4	2-12	2.0	1.8-2.6	12
Co 0235GC	57	23.6	20.2-26.8	3.8	3-8	2.3	2.2-2.4	9
Co 0230GC	51	24.4	22.7-26.8	3.5	3-6	2.2	1.9-2.7	7
ISH 1GC	73	23.5	22.3-25.8	2.5	2-6	2.1	1.9-2.4	9
LG 07650GC	102	25.7	22.4-26.4	3.5	3-8	2.0	1.7-2.3	13
ISH 157GC	94	24.6	22.6-27.2	3.6	2-7	1.9	1.7-2.4	12

Performance of crosses in the first clonal trial: Two hundred and five clones of 23 crosses were evaluated in first clonal trial. Seven crosses viz., Co 98010 x CoH 70 (1) CoOr 03152 GC (1) CoA 7602 GC (1) Co 1148 GC (1) Co 87044 GC (1) CoV 89101 PC (1) Co 94012 PC (1) give one selection each. Performance of crosses having more than one selection is presented below.

Cross combination	No. of clones planted	HR brix at 8 month		HR brix at 10 month		HR brix at 12 month		NMC/Clump		Cane Diameter (cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
CoOr 03152 x CoPant 97222	12	20.4	18.2-22.4	22.3	21.2-24.6	23.4	21.5-24.6	7.8	6-12	2.3	1.9-2.4	3
CoC671 x Co 1148	10	18.5	18.2-20.2	20.0	19.0-22.4	22.4	20.4-23.8	5.6	5-11	2.3	1.9-2.6	3
Co 98008 x Co 1148	13	19.3	18.5-20.6	21.3	20.0-22.2	22.0	20.8-23.2	4.8	6-12	2.2	2.1-2.4	3
Co86002 x BO 91	11	18.5	17.9-20.2	20.6	20.0-21.5	22.2	21.6-23.0	7.6	5-14	2.0	1.8-2.2	2
CoM6806 x Co1148	10	19.2	18-20.2	20.6	19.6-24.5	22.3	20.6-24.9	5.9	4-12	2.2	1.8-2.5	2
CoV89101 x Co 775	12	18.3	17.8-19.7	20.4	19.0-22.6	21.8	20.0-23.6	5.6	3-12	2.2	2.1-2.5	2
CoLk 8102 GC	14	18.4	17.8-19.4	19.6	18.4-20.0	20.6	19.8-22.6	6.2	6-10	2.3	2.0-2.6	3
LG 04607 GC	13	18.4	17.5-19.6	20.8	18.2-21.2	23.4	20.2-24.8	5.8	5-12	2.3	2.2-2.4	2
Co11001 GC	10	18.3	17.8-19.7	20.4	19.0-22.6	21.8	20.0-23.6	6.3	6-11	2.2	2.1-2.5	2
C81615 GC	8	19.2	18.8-19.6	23.2	20.2-24.5	24.0	21.3-25.6	5.6	5-12	2.2	2.1-2.4	2
Co 88013 GC	4	16.8	16.4-17.2	20.3	18.1-21.6	22.8	20.4-24.6	6.8	6-13	2.2	2.0-2.3	2
Co 87272 GC	12	18.4	17.5-19.6	20.8	18.2-21.2	23.4	20.2-24.8	6.3	7-14	2.3	2.2-2.4	2
CoM 6806 PC	8	18.8	18.2-19.4	19.6	18.6-20.2	22.3	20.4-24.3	5.7	4-12	2.4	2.0-2.6	2
CoC 90063PC	5	18.5	18.2-20.2	20.0	19.0-22.4	22.4	20.4-23.8	5.9	4-14	2.3	1.9-2.6	2
CoM 0265 PC	9	19.2	18.8-19.6	23.2	20.2-24.5	24.0	21.3-25.6	6.2	5-14	2.2	2.1-2.4	2
Co 85002 PC	6	18.3	17.8-19.7	20.4	19.0-22.6	21.8	20.0-23.6	6.1	5-13	2.2	2.1-2.5	2

6.2.2.4 Vuyyuru

Performance of crosses in ground nursery (2019-20): Seven thousand one hundred and thirty four seedlings of the 48 crosses were evaluated in ground nursery. No selections was effected in CoSnk 05103 X Co H 70 Co 98008 X Co 92013 Co H 110 X Co S 510 Co 94008 X Co S 8436 C 79218 X Co 775, Co 98006 X Co A 7602 Co C 671 X Co S 96275 Co C 85061 X Co 97015 Co 86032 X Co 11015, Co V 94101 GC, Co 99006 GC, Co V 92102 GC, Co V 92103 GC Co A 93082 GC, 70 A 5GC, 74 A 96 GC, Co A 88081 GC, Co 0116 GC, Co N 95132 GC, Co 95015 GC, 85 R 186 GC, Co 356 GC, Co 92002 GC, Co 94008 GC, ISH 229 GC, Co C 90063 PC, Co A 7602 PC, ISH 100 PC, Co 8371 PC, Co 94012 PC and Co 85002 PC. Performance of the crosses having selection for further evaluation is presented below.

Cross combination	Total number of seedlings evaluated	HR brix (%)		Number of millable canes		Cane diameter (cm)		No.of selections
		Mean	Range	Mean	Range	Mean	Range	
Co Tl 1153 X Co 1148	31	20.4	-	11.0	-	2.13	-	1
Co V 89101 X ISH 69	260	24.61	23.55-26.40	4.6	3-6	2.75	2.56-2.96	9
Co V 89101 X Co 97015	933	22.18	19.80-25.15	4.8	2-10	2.45	1.73-2.94	39
Co 8371 X Co 89003	311	21.71	20.35-23.20	4.4	3-5	2.66	2.35-3.01	5
ISH 100 X Co S 96275	45	20.85	-	4.0	-	2.62	-	1
Co M 6806 X ISH 41	169	21.48	20.63-23.10	4.0	3-5	2.53	2.50-2.57	3
Co 98010 X Co C 8001	272	22.00	-	3.0	-	2.70	-	1
Co 92006 X Co Pant 97222	347	20.80	-	6.0	-	2.55	-	1
Co Or 03152 X Co 11015	160	25.75	-	4.0	-	2.72	-	1
Co V 06356 X Co 11015	170	25.55	-	5.0	-	2.54	-	1
Co A 10321 X Co 86011	127	24.70	-	8.0	-	2.37	-	1
Co V 89101 GC	374	23.00	20.27-27.05	5.6	3-13	2.41	1.88-2.92	49
Co A 11323 GC	822	24.43	-	3.0	-	2.46	-	1
69 A 591GC	76	23.33	19.80-26.55	5.5	4-8	2.52	2.35-2.69	4
Co 7224GC	104	22.45	21.05-24.10	5.4	4-6	2.40	1.97-2.66	5
89 V 74GC	178	24.80	23.00-26.60	4.0	4.0	1.95	1.87-2.02	2
Co 2000-10 PC	279	22.78	22.60-23.05	8.3	4-14	2.40	2.29-2.55	3

Performance of crosses in first clonal trial (2019-20): Sixty clones were evaluated in the first clonal trial. From these 26 clones were selected for further evaluation. Performance of the crosses is presented in the following table.

Cross combination	No.of clones planted	HR –Brix at 8 th month		HR –Brix at 10 th month		Number of millable canes (NMC) (000s/ha)		No.of clones selected
		Mean	Range	Mean	Range	Mean	Range	
Co 98008 × Co 1148	30	18.99	16.75-21.25	20.42	19.10-21.55	82.9	57.5-117.5	11
ISH 100 GC	1	19.40	-	19.95	-	65.0	-	1
Co 98010 × Co H 104	5	20.03	19.75-20.40	20.66	19.91-22.40	80.6	70.0-90.0	4
Co C 671 × Co H 70	2	17.67	16.63-18.70	20.59	19.77-21.40	62.5	60.0-65.0	2
Co V 89101 × LG 05434	8	17.00	18.00-20.20	21.36	20.47-22.40	78.0	67.5-82.5	5
Co H 110 × Co 775	1	17.00	-	21.93	-	87.5	-	1
Co 98010 × Co Pant 97222	12	18.03	17.65-18.40	20.91	19.67-22.15	83.8	67.5-100.0	2

Data on cane diameter were not reported

Performance of crosses in second clonal trial: Thirty six clones were evaluated in second clonal trial and from them 18 were selected. Performance of the crosses tested in clonal trial is presented below.

Cross combination	No. of clones planted	No. of clones with > 70NMC /20*row (000s per ha)	No. of clones with > 2.5 cm cane thickness	No. of red rot resistant clones	Superiority of the cross (Sucrose (a)/NMC (b)/ cane dia (c) / Red rot resistance (d)	No.of clones selected
Co A 12-321 X Co H 119	15	2	3			3
Co A 92081 X Co1148	3	2	1			2
Co 98008 X Co H 70	3		1		a and c	1
Co 11015 GC	1		1		a and c	1
Co V 89101 PC	6	1	3			3
97 R 129 X 97 R 401	1	1	1		c	1
Co C 90063 X Co 97015	6	3	3		a and c	3
Co 06022 X Co 97015	2	2	1			2
Co V 89101 X Co Pant 97222	2	2	1			2

6.2.3 North West Zone

6.2.3.1 Faridkot

Performances of crosses in ground nursery: Among the 41 crosses evaluated no selection was effected from three crosses viz., CoH 56 GC, CoSe 92423 GC, BO 102 x Co 356 while 22 crosses viz., Co 1148 GC (2), Co 0327 GC (4), Co 89003 GC (4), Co 0237 GC (5), Co 0235 GC (3), Co 1158 GC (8), Co 99006 GC (8), CoJ 64 GC (4), CoPb 13183 GC (6), CoSnk 03044 GC (3), BO 91 GC (1), CoPb 09181 x Co 1148 (9), Co 98010 x CoN 98133 (4), Co 0238 x CoPant 84213 (2), CoM 6806 x CoPant 84213 (9), CoBln 03174 x Co 92008 (1), Co 98008 x CoSnk 03044 (2), NB 94-545 x Co 92008 (6), Co 92006 x BO 91 (1), CoS 96268 x CoPant 97222 (1), LG99190 x LG05493 (3), UP 05125 GC (6) and CoJ 88 PC (3) had less than 10 selections. Performance of the superior crosses with more than 10 selections is presented below.

Cross Combinations	Total number of seedlings evaluated	No. of tillers		Number of millable canes (NMC)		HR Brix at 8th Months		HR Brix at 10th Months		HR Brix at 12th Months		No. of seedlings selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
Co 62198 GC	156	6	4.0-9.0	4.0	3.0-7.0	13.0	12.6-15.1	14.2	13.3-18.1	18.8	14.0-20.0	10
BO 91GC	120	7	3.0-10.0	5.0	1.0-7.0	11.0	12.0-15.8	15.0	14.0-17.0	17.9	15.0-19.0	16
Co 775 GC	110	8.0	4.0-13.0	4.0	1.0-6.0	12.0	10.0-13.0	14.0	12.0-16.0	17.3	14.0-19.0	17
Co 97015 GC	12	6.0	4.0-8.0	3.0	1.0-4.0	13.0	11.0-14.0	15.0	13.0-16.0	17.9	15.0-20.0	11
CoJ 88 GC	31	8.0	5.0-9.0	4.0	3.0-8.0	14.0	12.0-16.0	16.0	14.0-18.0	18.50	16.0-21.0	20
CoPb 09181 GC	142	6.0	3.0-8.0	3.0	1.0-6.0	12.0	10.0-15.0	14.0	12.0-16.0	17.0	14.0-19.0	15
NCo 310 GC	34	5.0	4.0-8.0	3.0	2.06-0	12.0	11.0-14.0	14.8	13.0-16.0	17.8	18.0-20.0	11
Co 98008 x CoPant 97222	45	10.0	2.0-18.0	6.4	1.0-12.0	17.5	12.0-21.0	19.0	15.0-23.2	20.8	17.0-24.8	39
CoPb 09181 x Co 62198	45	9.3	4.0-18.0	5.4	2.0-12.0	19.2	14.2-22.8	19.9	15.2-24.2	20.8	17.2-25.1	38
Co 0238 x Co 97015	15	9.9	4.0-15.0	6.1	4.0-10.0	18.9	16.4-21.4	19.5	18.0-21.2	20.8	19.2-22.0	11

CoH 76 x Co 92008	32	10.0	2.0-14.0	6.6	1.0-12.0	20.9	17.4-23.2	21.4	19.0-23.6	22.0	19.8-24.0	32
Co 62198 x Co 1158	12	6.8	3.0-14.0	3.0	1.0-6.0	18.8	15.4-21.0	19.7	18.3-22.0	21.0	18.6-24.0	10
CoLk 03-044 x CoS 93278	32	5.1	2.0-10.0	2.9	2.0-6.0	17.6	12.0-20.6	18.7	16.6-21.0	19.8	17.0-22.4	21
Co 8208 x CoS 93278	23	4.8	3.0-13.0	2.8	1.0-8.0	17.6	13.0-21.4	18.7	15.0-22.0	20.0	16.0-22.4	16
CoPb 10182 x CoS 93278	18	6.5	2.0-19.0	3.4	1.0-12.0	17.8	10.2-20.0	19.0	17.0-21.0	20.4	18.0-22.0	14

Performances of crosses in first clonal trials (2017): In the first clonal trials four crosses CoJ 83 PC, CoJ 46 x BO 130, CoJ 64 x ISH176 and CoH 92 x LG 04605 did not give any selection. One selection each was made in the five crosses viz., CoN 98133 x Co 89036, CoJ 88 PC, CoPb13183 x ISH 280, CoP 13436 x Co 89029, CoLk 8102 x Co 89029.

Cross Combinations	No. of clones		HR Brix at 8th months		HR Brix at 10th Months		HR Brix at 12th Months		NMC		Tiller	
	Planned	Selected	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range
CoV 89101 PC	12	5	15.7	10.2-20.0	17.8	15.2-20.5	19.3	17.0-21.0	21.0	15-47	35.4	26.0-160.0
Co 0238 PC	7	4	17.4	16.0-19.8	17.5	16.4-19.9	18.4	17.4-21.2	21.0	9-37	36.3	22.0-55.0
Co87272 x CoH 15	10	2	16.9	15.0-18.0	17.9	16.4-18.4	18.4	17.6-20.0	22.7	7-42	38.1	20.0-50.0
CoPb13183x BO 154	8	3	18.2	16.0-19.0	18.5	17.0-19.5	19.5	18.0-21.6	21.5	8-28	32.5	31.0-52.0
CoLk 8102 x Co87268	15	6	17.2	12.8-20.8	18.8	16.9-20.8	19.4	17.6-21.0	19.8	7-39	33.3	17.0-52.0
Co 86002 x BO 91	12	8	18.6	16.2-21.0	19.7	18.5-20.5	20.6	19.6-21.6	22.9	11-22	31.4	19.0-38.0
BO 91 x Co 62198	7	6	18.2	14.9-20.3	19.6	18.7-20.7	21.4	20.0-22.8	11.9	6-16	28.7	16.0-42.0
CoPb13182x Co1158	6	6	20.3	19.0-21.4	20.6	19.9-21.5	20.9	19.8-22.0	14.8	6-27	24.7	13.0-55.0
Co8353 x CoS 510	23	15	17.9	14.0-21.8	19.2	17.0-22.6	21.2	17.6-22.6	12.5	5-20	24.3	7.0-33.0

Performance of crosses in second clonal trial (2016): Among the nine crosses evaluated no selection was effected from CoPb 10183 GC.

Cross Combinations	No. of clones planted	No. of clones with > 20 % Sucrose at 240 days	No. of clones with > 22 % Sucrose at 300 days	No. of clones with > 22 % Sucrose at 360 days	No. of clones with > 70 NMC/ 2 rows	No. of clones with > 70 Tillers/ 2 rows	Superiority of the crosses (Sucrose/ NMC/ Cane Dia/ Red rot resistant)	No. of clones selected
Co 7314 x Co 1148	2	0	0	1	2	2	Sucrose, NMC	1
CoPb 12181 GC	3	0	0	1	2	3	Sucrose, NMC	2
Co 89003 GC	9	0	2	7	9	6	Sucrose, NMC	9
CoS 8436 GC	3	0	0	0	3	2	Sucrose, NMC	1

Co 1148 GC	1	0	0	1	0	0	Sucrose, NMC	1
Co 98008 GC	2	0	0	0	2	2	Sucrose, NMC	1
CoPant 97222 GC	1	0	0	1	1	1	Sucrose, NMC	1
CoPb 10183 GC	4	0	0	0	4	4	Sucrose, NMC	0
CoJ 88 PC	3	0	0	3	2	3	Sucrose, NMC	3

Test result of red rot resistance was not reported

6.2.3.2 Kapurthala

Performance of crosses in ground nursery (2019-20): No selection could be effected in the 16 crosses viz., CoJ 87 GC CoPant 84212 x CoH 15, CoPb 10182 GC, Co 8353 x BO 130, CoJ 64 x Laukana, Co 0238 x IJ 76-545, CoN 05071 x BO 130, CoJ 88 x Co 87268, CoJ 83 x CoS 88216, CoSnk 03044 x CoS 07233, LG 95053 x CoH 12, CoLk 94184 GC, CoJ 88 GC, CoN 05071 GC, LG 07482 GC and CoH 160 GC. One selection each was effected in six crosses viz., CoPb 13183 x BO 130, Chapina x ISH 107, Co 0237 x BO 154, CoC 08336 x CoH 70, CoPb 09181 x Co 775, CoPb 14183 GC while five other crosses viz., CoH 110 x Co 8353, Co 09022 GC, CoH 110 x CoS 88216, Co 98008 x CoLk 09202 and CoH 110 x Co 775 had two selections each. Performance crosses with more than two selections each is presented below.

Cross combination	Total no. of seedling evaluated	HR (%)		Number of millable canes per clump		Cane diameter		No. of seedlings selected
		Mean	Range	Mean	Range	Mean	Range	
CoPb 10182 x CoS 88216	15	15.30	15-21	7.16	4-12	2.57	1.9-2.8	12
CoS 8436 x Co 62198	70	15.20	15-19	7.86	5-11	2.82	1.9-2.3	30
CoPb 09181 x Co 87268	22	16.20	15-18	10.22	4-12	2.85	2.1-3.1	15
Co 1148 GC	135	16.60	16-19	6.45	6-10	2.56	2.0-2.6	12
CoPb 12182 GC	69	18.40	15-18	6.84	5-15	2.60	2.1-2.5	19
CoPb 13183 x NCO 310	287	16.80	16-19	7.39	3-16	2.12	2.1-2.2	15
CoC 671 x Co 1148	52	16.80	16-18	5.81	5-15	2.30	2.1-3.3	12
CoPant 84212 GC	224	17.10	14-22	8.48	6-15	2.58	2.1-2.5	21
CoH 160 x Bo 154	67	16.50	15-21	8.55	3-12	3.12	2.1-3.1	9
CoPb 10182 x Co 8353	43	17.60	15-18	8.02	4-15	3.08	2.1-2.7	20
Co 09022 x Co 62198	72	17.10	16-22	12.32	5-15	3.15	1.7-3.0	25
Co 09021 x BO 130	17	16.10	15-20	9.59	4-12	3.37	1.8-3.0	7
CoLk 8102 x ISH 150	140	17.60	16-18	10.09	3-12	2.66	1.6-3.1	28
CoJ 83GC	8	16.70	15-22	9.63	6-11	2.88	2.1-2.8	3
CoV 89101 GC	22	17.80	16-20	8.20	3-15	2.37	2.0-2.9	8
LG 05434 GC	38	18.90	16-20	7.57	4-16	2.80	2.05-2.8	3
CoH 12 GC	53	16.40	16-18	8.61	3-16	2.80	2.2-3.45	3
)	19	18.80	15-16	6.05	4-15	2.89	2.5-3.3	1
CoLk 8102 GC	42	19.10	15-16	7.34	3-16	2.75	2.4-3.0	4
CoS 96268 x ISH 150	58	18.30	16-18	8.31	4-12	3.04	2.9-3.3	9
CoPb 13182 GC	58	16.40	15-16	7.16	3-11	2.57	2.5-3.0	4
	2217							275

Performance of crosses in first clonal trial: Among the 812 clones of 53 crosses evaluated in first clonal trials, no selection was effected in CoPb 13183 x BO 91, CoPb 13182 x Co 62198, CoPant 84212 x CoS 510, UP 05125 x CoH 70, LG 95053 x CoS 510, CoLk 8102 x ISH 176, CoT 8201(GC), CoPant 84212 x CoH 98, CoJ 88 PC, CoJ 83 PC, CoLk 8102 x ISH 176, CoPb 10182 x CoS 88216, CoJ 64 x BO 91, CoH 70 self, UP 05125 x CoH 70 and CoPb 10182 x Co 62198. Only one selection was made in CoPb 13183 x BO 91, LG 95053 x CoS 510, CoSe 01434 x CoH 70 CoPb 09181 x Co 89003, CoJ 88 x BO 130, CoPb 09181 x Co 775, CoS 8436 x Co 775, CoPb 12182 x Co 775,

Co 8353 x BO 146, CoN 98133 x Co 775, ISH 100 x Co 775 Co 11015 (GC) CoSe 92423(GC) and Co 0238 x Co 89003.

Cross combinations	No. of clones selected	HR (%) 8 th month		HR (%) 10 th month		HR (%) 12 th month		Number of millable canes (NMC) /4 meter		Cane diameter		No. of selected clones
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
Co 0238 x Co 89003	11	13.8	11-19	14.98	10-20	16.80	14-22	47.46	14-63	2.14	1.9-2.4	2
CoPb 10182 x Co 62198	23	13.4	10-16	14.99	12-16	16.80	15-19	58.08	21-40	2.19	1.4-2.7	3
CoPant 84212 x CoSe 01434	42	14.9	10-16	15.41	13-16	16.40	15-21	36.39	13-62	2.18	1.7-2.7	3
CoS 08272 x CoS 510	42	18.2	9-14	18.26	10-17	18.60	15-18	55.94	19-43	2.41	1.6-2.5	2
CoPb 13182 x Co 62198	67	16.5	9-16	16.99	13-16	17.90	15-17	37.34	14-63	2.36	2.1-2.7	7
CoPant 84212 x CoS 510	24	14.3	10-16	15.36	10-18	17.10	14-20	37.82	17-57	2.23	1.8-3.1	4
CoPb 10182 x BO 130	40	16.1	7-19	16.65	11-18	16.80	14-19	57.45	26-38	2.3	1.8-3.0	7
CoLK 8102 x BO 154	60	14.2	10-17	15.68	9-19	17.50	14-22	36.55	16-58	2.28	1.9-2.4	11
Co 775 self	29	15.0	7-18	16.41	10-15	16.90	16-18	40.70	21-40	2.24	1.8-3.3	3
CoJ 83 x CoPant 97222	21	13.5	10-16	15.09	9-15	15.80	16-18	37.29	13-62	2.25	1.9-2.5	2
Co 98008 x CoPant 97222	33	15.6	8-17	15.69	12-16	17.50	15-16	27.38	29-69	2.16	1.6-3.1	6
ISH 1 x CoPant 97222	35	14.2	10-15	15.46	9-14	16.70	15-17	51.72	19-43	2.23	1.5-2.3	4
CoS 92263 (GC)	13	16.0	8-17	16.97	12-17	17.60	15-16	42.92	26-38	2.16	1.4-2.7	3
CoPb 10183 x CoS 88216	6	16.3	10-16	17.49	9-14	17.60	16-18	34.45	21-40	2.23	2.4-3.0	2
Co 0238 PC	4	14.2	10-14	15.35	9-16	17.30	16-17	35.68	14-63	3.05	2.1-2.7	2
CoH 70(GC)	22	15.3	8-13	16.73	12-16	16.80	15-17	34.49	21-40	2.27	2.5-3.0	2
CoPb 12181 x Co 1158	15	11.9	9-14	13.85	13-16	15.80	15-16	37.55	14-63	2.14	2.1-3.3	3
CoH 70 self	28	15.3	8-15	16.51	16-17	16.60	15-16	51.85	19-68	2.58	3.1-3.4	2
CoPb 10182 x Co 62198	25	16.0	8-16	16.10	14-16	16.50	15-17	43.49	26-38	2.66	1.9-2.8	3
CoPant 84212 x CoSe 01434	18	15.6	7-13	17.39	11-16	18.40	16-18	36.96	21-40	2.41	2.1-3.1	2
CoS 08272 x CoS 510	34	17.3	7-15	17.67	11-15	19.40	16-18	27.32	17-57	2.42	2.4-3.0	4
CoSe 01434 x CoH 70	23	15.1	8-15	15.83	9-14	17.80	16-18	52.01	19-68	2.3	2.4-3.2	3
	812											94

Performance of crosses in second clonal trial: Among the 168 clones evaluated in second clonal trial, none was with > 20% sucrose at 240 days and > 22% sucrose at 300 and 360 days. Ten crosses CoSe 92423 PC, Co 0238 GC, Co 98008 x Co 94008, CoH 128 x Co 89029, CoH 14 x Co 62198, CoH 92 x Co 775, CoV 89101, Co 8209 GC, CoBlN 05-501GC and CoJ 61 GC and a self of Co 775 did not give clones combining with Sucrose 18-20 % (300& 360days), MR reaction to red rot. Performance other crosses showing superiority for combination economic traits are given below.

Cross combination	No. of clones planted	No. of clones with > 70NMC/20 m running rows	No. of clones with >2.5cm cane thickness	No. of red rot resistant clones	No. of clones selected with Sucrose 18-20% (300& 360days, MR reaction to red rot) for station trial
CoPb 10181 x Co 1148	35	29	17	28	5
CoV 89101 x Co 1148	38	13	10	30	3
CoPb 09181 x Co 1148	15	6	4	14	5
Co 98010 x Co 0775	19	10	10	15	4
CoJ 83 x CoPant 97222	14	8	8	10	3
Bo 91 x Co 0775	4	4	3	3	2
CoPant 97222 self	3	2	2	2	1
CoJ 88 x Bo 91	3	3	3	3	2
SP 80-185 GC	3	3	3	3	2
Co 90018 x CoH 70	5	3	4	4	1
BO 91 x Co 62198	5	3	3	4	3
ISH 100 x Co 89029	1	1	1	1	1
CoN 05071 GC	1	1	1	1	1
	168				33

6.2.3.3 Lucknow

Performance of crosses in ground nursery: Among the 10 550 seedlings of 56 crosses / general collections /selfs evaluated in ground nursery, 174 clones were selected. No selection was effected in the 17 crosses viz., CoPb 09181 x Co 8353, LG 95053 x LG 07650, CoPant 84212 x Co 62198, CoLk 94184 x LG 05434, CoS 8436 x CoPant 97222, LG 08865 GC, CoLk 13201 GC, LG 07650 GC, LG 05609 GC, CoPb 09181 GC, LG 08866 GC, CoLk 07201 GC, LG 72120 GC, LG 07590 GC, LG 05610 GC, LG 08805 GC and CoSe 01268 GC and a self of LG 99110. Among the crosses evaluated, one clone each was selected from seven crosses viz., LG 72120 x 28 NG 288, LG 06839 GC, LG 04602 GC, LG 05828 GC, CoPb 13183 GC), CoSe 01434 x CoPant 97222 and Co 06022 x BO 91 and two selection each were effected in eight crosses viz., CoPb 10183 GC, LG 05434 GC, LG 991 GC, LG 07482 GC, LG 72115 GC, LG 95123 GC, LG 08422 GC and CoSe 01434 x BO 154 and two selfs viz., LG 05493 self and LG 08478 self.

Cross combination	Total Number of seedling evaluated	HR brix (%)		Number of millable cane		Cane diameter (cm)		No. of seedling selected
		Mean	range	Mean	Range	Mean	range	
LG 95053 x BO 154	232	18.45	16.4-21.2	5.62	4.0-9.0	2.36	2.1-2.6	13
CoS 8436 x CoLk 09202	332	17.89	15.4-20.8	6.20	4.0-9.0	2.52	2.0-2.8	10
CoH 110 x Co 775	503	18.21	16.2-21.4	6.20	4.0-10.0	2.15	1.7-2.8	8
CoH 110 x LG 05434	276	17.89	17.4-21.4	5.55	3.0-12.0	2.57	2.1-3.2	13
CoLk 94184 x Co 1148	132	18.42	16.8-20.8	5.63	3.0-9.0	2.23	1.8-2.6	8
CoLk 94184 x LG 05823	176	18.47	16.6-21.4	5.12	4.0-8.0	2.26	1.9-2.7	17
CoH 14 GC	485	16.89	14.2-20.8	5.69	4.0-10.0	2.64	2.4-2.8	4
CoH 12 GC	88	17.24	13.6-19.8	4.58	3.0-8.0	2.32	1.9-2.6	3
LG 04605 GC	144	17.62	15.6-20.8	5.12	4.0-7.0	2.24	2.0-2.8	4
LG 02100 GC	460	17.25	14.2-20.8	5.63	4.0-10.0	2.63	1.7-2.9	10

LG 05810 GC	210	17.02	14.2-19.4	4.78	3.0-9.0	2.43	2.1-2.7	3
CoLk 7901 GC	297	18.25	17.8-21.4	6.23	5.0-10.0	2.41	2.2-2.6	15
CoLk 09202 GC	110	16.98	15.6-20.6	5.23	4.0-8.0	2.36	1.7-2.8	3
CoPant 84212 GC	132	18.23	15.8-20.2	4.58	3.0-9.0	2.48	2.1-2.8	5
BO 91 GC	351	17.23	15.8-21.2	6.23	5.0-10.0	2.36	1.8-2.7	7
Co 1148 GC	150	17.45	16.2-19.8	4.89	4.0-7.0	2.24	1.9-2.8	4
LG 95053 GC	69	18.25	14.8-20.6	3.69	2.0-6.0	2.47	1.9-3.2	2
CoLk 8002 GC	548	18.65	17.2-20.6	4.67	3.0-11.0	2.12	1.9-2.4	10
CoA 7602 GC	110	18.68	17.4-20.8	4.90	3.0-9.0	2.27	2.1-2.8	3
CoLk 8102 GC	197	17.85	16.4-20.4	5.21	4.0-8.0	2.48	1.8-3.2	5

Performance of crosses in first clonal trial : Among the 998 clones of 70 crosses evaluated in first clonal trial, 23 crosses viz., Co 10033 x CoH 98, CoJ 83 x CoH 70, CoP 06436 x BO 91, Co 98008 x Co 775, LG 95053 x CoPant 97222, CoLk 8102 x CoH 70, Co 0238 x Co 86249, CoPb 12181 x CoSe 01434, CoLk 8102 x Co 89003, Co 0238 x Co 775, CoJ 80 x Co 86011, CoSe 96436 GC, CoV 89101 PC, CoS 93278 GC, CoSe 92423 GC, CoPant 84212 GC, Co 775 GC, BO 130 GC, Co 0424 GC, CoPant 01215, CoH 56 GC, LG 05609 GC, LG 05828 GC and two selfs viz., LG 08422 self, and LG 99190 self-did not give any selection. Only one clone each was selected from 18 crosses viz., Co 86002 X Co 775, CoPb 12180 x CoSe 01434, CoLk 8002 x Co 62198, CoLk 94184 x Co 62198, CoP 06436 x Co 62198, CoA 7602 x ISH 136, CoS 8436 x Co 1148, UP 9530 x CoP 9301, BO 91 GC, CoLk 8002 GC, ISH 100 PC, CoLk 8102 GC, Co 95021 GC, LG 05823 GC, CoS 96275 GC, LG 07615 GC, Co 98006 GC and Co 1148 GC. Ten crosses viz., CoLk 94184 x Co 775, CoLk 94184 x ISH 176, CoS 8436 x Co 0233, CoSe 95422 x Co 62198, BO 91 x CoH 115, Co 0238 GC, Co 1158 GC, LG 04602 GC, CoS 88216 GC and LG 07650 GC and a self of LG 08478 gave two selections each. Performances of other superior crosses having more than two selections are presented in the following table.

Cross combination	No. of clones planted	HR brix at 8th month		HR brix at 10th month		Cane diameter (cm)		No of clones selected
		Mean	Range	Mean	Range	Mean	Range	
CoPant 84212 x CoH 15	10	17.5	16.7-19.7	18.6	17.3-20.4	2.36	2.1-2.9	3
CoH 110 x Co 1148	23	16.9	15.5-18.3	18.9	18.3-19.8	2.23	2.4-2.6	6
CoLk 94184 x CoPant 84212	14	18.5	17.3-19.9	19.4	18.9-21.3	2.45	2.2-2.9	3
LG 07501 x LG 05434	40	17.6	16.7-19.5	19.3	17.8-20.8	2.34	2.1-3.2	12
CoSe 95422 x CoSe 92423	16	18.3	17.5-19.8	19.5	18.4-20.8	2.48	1.9-2.8	3
LG 07482 GC	23	17.9	16.9-19.4	19.7	17.8-20.6	2.23	2.0-2.9	4
CoJ 88 GC	50	18.2	16.8-20.4	18.9	17.9-21.5	2.15	2.0-2.4	7
LG 72115 GC	50	17.6	16.4-19.7	19.3	17.8-21.3	2.45	2.1-2.6	13
LG 01030 GC	12	18.6	17.6-19.9	19.4	18.4-20.5	2.47	2.3-2.6	5
LG 02100 GC	38	17.2	15.8-20.4	18.9	17.2-21.8	2.13	1.9-2.7	11
CoSe 95422 PC	127	17.6	15.9-19.9	18.9	17.4-21.3	2.26	1.8-2.9	31
CoS 8436 PC	16	18.5	17.3-20.4	19.3	18.5-22.3	2.35	2.3-2.8	8
LG 06839 GC	32	18.6	17.4-19.8	19.5	18.6-20.9	2.45	2.1-2.8	10
CoJ 77 GC	40	19.1	18.2-20.1	19.8	19.2-22.0	2.56	2.3-2.9	4
Co 88013 GC	115	18.2	15.8-20.3	18.8	17.3-22.1	2.36	1.9-2.7	18
BO 108 GC	23	18.4	16.2-19.8	18.9	18.3-20.8	2.32	1.9-2.5	4
Co 1148 GC	31	17.6	16.3-19.4	19.2	18.3-20.5	2.60	1.9-2.8	1

Data on HR brix at 12th month and NMC were not reported.

Performance of crosses in second clonal trial : Fifty three clones of 19 crosses were evaluated in second clonal trial. No selection was from the six crosses viz., Co 98008 x Co 94003, CoLk 94184 x CoSe 92423, LG 08602 GC, CoH 107 GC, LG 72115 GC and CoSe 92423 GC. Crosses showing superiority for different economic traits and gave selections are presented in the table below.

Cross combination	Number of clones planted	No. of clones with >20% sucrose at 240 days*	No. of clones with >22% sucrose at 300 days*	No. of clones with >22% sucrose at 360 days*	No. of clones with >70 NMC/20' row	Number of clones with >2.5 cm cane thickness	Number of red rot resistant clones*	Superiority of the cross (Sucrose/NMC/cane dia/red rot resistance)	Number of clones selected
LG 08422 x LG 72120	2								2
Co 98010 x Co 775	1								1
LG 01118 x Co 1158	4								3
CoLk 8102 x Co 62198	3						1		3
CoS 8436 x Co 89003	1								1
BO 91 x Co 62198	1								1
LG 08422 x Co 89029	20						6		13
CoH 110 GC	1								1
CoH 106 GC	5						2		2
CoJ 82 GC	1								1
Co 8318 GC	1								1
CoV 89101 GC	2								1
LG 9901 GC	2								1

* none of the selected clones recorded >20 % Sucrose in juice.: **Selected clones given for red rot testing during this year (2020-21)

6.2.3.4. Shahjahanpur

Performance of the crosses in ground nursery (2018-19): One thousand seven hundred and eleven seedlings of 25 crosses were evaluated in ground nursery. CoSe 01434 x CoS 510, CoC 671 x CoS 96260, CoJ 83 x CoH 70, CoS 96260 x Co H 70, CoH 160 x Co 62198, LG 95053 x Co H 15, CoS 08279 x BO 130, CoS 96268 x ISH 150, Co 09021 x BO 130, Co S 8119 x Co 62198, Co 8353 x CoS 07233 and IK 76-315 x CoS 96260 did not give any selections. Performance of crosses which gave selections is presented in the table below.

Cross Combination	Total number of seedlings evaluated	H.R. Brix (%)		No. of millable canes		Cane diameter (cm)		Cane length		No. of seedlings selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	
Co 8353 x BO 130	313	14.2	8.4-20.0	4	2-6	2.2	1.4-3.0	225	160-200	31
CoS 8436 x CoS 96260	262	14.9	8.6-21.2	5	3-7	2.1	1.4-2.8	200	140-260	19
Co 09022 x Co 62198	61	14.0	10.0-8.0	5	3-7	2.1	1.6-2.6	205	150-260	07
Co 86002 x CoPant 97222	318	15.0	8.2-21.8	6	4-8	2.4	1.6-3.2	245	170-320	45
CoPant 84212 x Co 08353	162	13.8	8.6-19.0	7	4-10	2.4	1.6-3.2	185	150-220	08
Co 1158 x Co 62198	11	12.8	11.6-4.2	3	4-6	1.9	1.8-2.8	185	160-210	02
Co C 671 x CoPant 97222	134	15.8	9.6-22.0	6	4-8	2.2	1.3-3.0	160	130-190	26
CoPb10182 x Co 62198	63	12.6	10.8-4.4	6	3-9	2.0	1.6-2.4	165	110-220	03
CoS 08279 x Co 62198	13	13.0	9.6-16.4	5	3-7	1.8	1.6-2.0	210	160-260	04
BO 91 x Co 8353	48	11.5	9.8-13.2	6	4-8	1.8	1.6-2.1	185	150-220	01
Co 0238 x BO 91	07	17.0	16.4-17.6	6	4-8	2.0	1.4-2.6	195	170-220	02
Co 0238 x CoS 510	62	15.3	10.6-20.0	7	4-10	2.1	1.6-2.6	165	120-195	07
Co 0238 x Co Pant 97222	66	17.4	11.6-23.2	6	4-8	2.0	1.4-2.6	170	140-210	07
Total	1711									164

Performance of the crosses in the first clonal trial: First clonal trial was conducted with 424 clones of 36 crosses. No selection was done from 23 crosses viz., CoS 91269 x Co 775, CoLk 94184 x Co 62198, CoS 08279 x BO 32, Co S 96268 x Co 62198, CoC 8001x CoS 93278, Co 86002 x CoPant 97222, MS 68/47 x Co Pant 97222, CoS 8436 x Co 775, CoS 96275x Co 97015, CoV 89101x CoPant 97222, CoS 97261 (GC), CoS 8436 x Co S 96260, Co 98008 x Co 1148, Co 8371 x Co 1148, CoPb 13182 x Co1158, CoLk 8102 (GC), Co S 8408 (GC), CoLk 94184 x Co Pant 97222, Co S 10239 x LG 08478, Co S 08272 x Co 62198, Co 98010 x Co 97015, CoLk 8102 x Co 89029 and CoS 92263 GC and two selfs viz., CoS 08279 self and Co Se 92423self. Twenty clones were selected from 11 crosses whose performance is presented below.

Cross Combination	No. of clones planted	H.R. Brix at 12 th month		No. of clones selected
		Range	Mean	
CoJ 83 x Co775	23	11.1-19.3	15.2	02
CoS 91269 x Co 87268	34	12.8-19.2	16.0	04
Co Se 01434 x CoS510	99	11.2-19.6	15.4	02
Co Pb 09181 x Co775	04	11.2-15.8	13.5	01
CoH 119 self	02	15.7-16.0	15.8	01
Co Pant 84212 x Co 89003	01	14.6	14.6	03
Co S 510GC	07	12.5-16.6	14.6	02
Co S 96260 x Co H 70	10	11.3-15.8	13.6	01
Co 98008 x Co 1148	05	11.0-15.6	13.3	-
Co S 08279 x Co62198	10	14.6-19.0	16.8	01
Co7915 GC	13	14.2-18.9	16.6	01
Co 0238 x Co Se 92423	43	14.8-21.0	17.9	01
Grand Total	424			20

Data on H.R brix at 8th month and 10th month, NMC and cane diameter were not reported

6.2.3.5 Uchani

Performance of crosses in ground nursery: One thousand one hundred ninety six seedlings from 15 crosses viz. CoH 160 x Co 62198 (2), CoS 8436 x BO 130 (186), Co 0237 x CoH 15 (94), Co 0238 x BO 91 (1), CoH 110 x CoS 88216 (1), CoS 8436 x CoH 70 (192), CoA 13327 x LG 05434 (322), CoH 92 x Co 775 (8), Co 89036 x CoS 510 (7), Co 98008 x CoS 510 (16), CoH 76 x Co 775 (1), Co 0238 x Co 0209 (66), Co 0238 x CoPant 97222 (1), CoC 671 x CoPant 97222 (274) and CoH 104 x Co 89003 (Agali) (25), forty four seedling from general collection viz. CoS 10239 (12), Co 0238 (1), LG 05493 (1), CoH 12 (1), CoH 128 (1) CoLk 94184 (26) and CoS 8436 GC (Agali) (2) were evaluated in ground nursery. The observations on HR brix (%), number of millable canes and cane diameter (cm) were recorded during October, 2019 in seedlings ratoon crop. No selection was effected from the four crosses Co 0238 x BO 91, LG 05493 GC, CoH 12 GC, CoH 128 GC and CoS 8436 (GC from Agali). One selection each was effected in five crosses viz., CoH 76 x Co 775, Co 0238 x CoPant 97222, Co 0238 GC, CoH 110 x CoS 88216 and CoH 160 x Co 62198 while two selection were made in CoH 92 x Co 775 and CoLk 94184 GC. A total number of 172 seedlings were selected from cross combinations for further evaluation. Performances of other superior crosses are presented in table given below:

Cross combination	Quantity of fluff sown (g)	Number of seedling produced	Number of seedling evaluated	HR Brix %		Number of Millable canes (NMC)		Cane Diameter (cm)		Number of seedling selected
				Mean	Range	Mean	Range	Mean	Range	
CoS 8436 x Bo 130	25	218	186	19.7	18.0-21.4	9.6	6.0-14.0	2.2	1.8-2.6	14
Co 0237 x CoH 15	12	113	94	21.0	20.0-24.0	8.9	5.0-15.0	2.6	2.3-3.1	19
CoS 8436 x CoH 70	9	246	192	20.3	19.0-24.0	7.9	4.0-12.0	2.7	2.2-3.2	16

CoA 13227 x LG 05434	32.5	430	322	19.5	18.0-21.0	10.7	3.0-17.0	2.7	1.8-3.6	35
Co 89036 x CoS 510	13.5	7	7	21.4	20.0-22.2	11.8	4.0-18.0	2.6	2.4-3.1	5
Co 98008 x CoS 510	16.5	16	16	20.3	19.0-21.5	11.9	6.0-16.0	2.3	1.9-2.7	7
Co 0238 x Co 0209	13	68	66	21.1	20.0-23.0	8.6	6.0-12.0	2.5	1.8-2.7	7
CoC 671 x CoPant97222	21.5	305	274	20.4	19.2-24.2	7.1	2.0-14.0	2.7	1.8-4.1	48
CoH 104 x Co 89003 (Agali)	14.5	29	25	20.1	18.0-23.0	7.5	6.0-11.0	2.3	2.0-3.1	8
CoS 10239 GC	17	12	12	21.1	20.2-22.0	13.0	10.0-19	3.0	2.4-3.2	4
Total	436	1503	1240	-	-	-	-	-	-	172

Performance of crosses in first clonal selection trail: The Centre did not participate in hybridization programme during Oct/Nov 2016. The Fluff was not received from National hybridization programme during Feb/March 2019. Therefore, first clonal selection trial was not evaluated at centre.

Performance of crosses in second clonal trial (2019-20): One hundred and thirty selections from the 16 crosses were evaluated in second clonal trial. No selection was effected in the 8 crosses viz. Co 8213 x CoH 70, Co 98008 x Co 94008, CoH 110 x Co 88216, CoH 128GC, CoS 8436GC, CoS 96260 GC, CoJ 83 x Co 87268 and CoV 89101 PC. Out of the 130 clones, 17 clones were selected for further evaluation. Crosses with at least one selection each are presented in the Table below.

Cross combination	Number of seedling planted	No. of crosses with > 20 % sucrose (240 days)	Number of crosses with > 23 % HR Brix (300 days)	Number of crosses with >2.5 cm cane thickness	Seniority of cross (Sucrose (a), HR brix (b), Cane diameter (c))	No. of red rot resistant clones	Number of seedlings selected
Co 1158 x CoS 93278	14	0	3	3	b & c	-	3
Co 7704 GC	6	0	1	0	b	-	1
Co98010 x Co 775	4	0	1	1	b & c	-	1
CoH 104 x Co 775	23	0	6	4	b & c	-	4
CoH 128 x Co 06037	3	0	1	1	b	-	1
CoH 56GC	9	0	1	0	b	-	1
CoH 92GC	31	0	4	2	b & c	-	2
CoS 8436 x Co 89003	12	0	5	4	b & c	-	4
Total	130		22			-	17

6.2.4 North Central and North East Zone

6.2.4.1 Bethuadahari

Performance of crosses in ground nursery (2019-20): Three thousand three hundred and twenty one seedlings of the 52 crosses were evaluated in ground nursery. No selection was effected in CoJ 83 PC, Co97015 GC, CoBln04174 GC, CoP 9206 GC and CoS 109 GC. One clone each was selected in three crosses viz., Co 98006 x CoS96275, Co 05010 GC and LG 06839 GC while two selection each were effected from sic crosses viz., CoN 05071 x Co12014, CoBln 03174 x CoH70, CoOr 04152 x CoA 7602, Co0118 PC, CoBln 9104 GC and CoH13 GC. Other crosses giving less than ten selections were CoP 02182 GC (9), Co 0118 x CoSe92423 (8), CoLk 94184 x Co 97015

(6), CP 62-23 GC (6), Co1158 GC (6), CoS 8436 PC (4), GC-CoP11436 GC (4), 97R129 x ISH 69 (3), PC-Co0238 PC (3) and CoA10321 GC (3). Superior crosses having more than 10 selections are presented in the table below.

Cross combination	Total number of seedlings evaluated	HR brix (%)		Number of millable canes (NMC)		Cane diameter (cm)		No. of seedlings selected
		Mean	Range	Mean	Range	Mean	Range	
CoLk94184 x CoH70	98	18.6	16-23	4.3	2-8	1.92	1.67-2.42	31
Co 0238 x CoH 70	26	18.6	16-23	3.8	2-6	1.92	1.67-2.12	11
CoH 119 x Co 775	62	19.4	17-23	2.1	2-7	1.96	1.59-2.36	53
Co 98010 x CoA 7602	55	18.2	16-24	3.4	2-8	2.04	1.88-2.63	17
85R186 x Co 86011	62	18.7	17-22	2.4	2-9	1.82	1.62-2.23	31
Co 9200 6x Co1148	332	20.4	17-23	3.2	2-7	2.13	1.79-2.69	289
CoV 06356 x BO 155	178	19.9	17-25	3.8	2-6	1.95	1.77-2.46	113
Co 86249 x Co97015	170	18.3	16-24	3.1	2-7	1.84	1.68-2.61	75
Co 93009 x Co775	19	18.7	17-23	3.3	2-6	1.94	1.77-2.32	11
CoC 85061 x CoA12322	55	17.9	16-22	3.8	2-9	1.86	1.79-2.17	39
NB 94-545 x Co 92013	42	18.4	17-23	4.4	2-7	1.74	1.68-2.13	34
BO 91 x CoPant 84212	45	18.8	17-23	4.5	2-8	1.85	1.67-2.41	40
BO 91x Co1148	243	17.3	16-23	4.3	2-7	1.81	1.60-2.31	199
CoM0265 PC	22	19.3	17-22	4.2	2-8	1.85	1.52-2.34	19
Co 7201 PC	18	18.6	16-23	4.3	3-7	1.92	1.67-2.42	16
CoV 89101 PC	32	21.9	20-24	4.3	3-8	1.96	1.64-2.42	29
CoJ 88 PC	47	18.2	17-23	3.7	2-9	2.01	1.82-2.33	40
CoJ 83 Gc	24	19.7	18-23	4.6	2-9	1.77	1.64-2.35	12
CoH 119 GC	14	19.2	17-23	3.3	2-5	1.91	1.78-2.24	10
BO 91 GC	405	18.7	16-24	2.9	2-6	1.82	1.41-2.72	360
CoA 7602 GC	13	19.8	18-22	2.2	2-4	1.93	1.71-2.47	10
LG 07615 GC	500	18.1	15-23	2.7	1-9	1.67	1.37-2.39	84
CoBln 03173 GC	89	19.4	17-23	2.3	2-5	1.85	1.62-2.34	23
CoBln 05501 GC	168	18.6	16-24	3.3	2-7	1.72	1.57-2.42	30
BO 155 GC	185	19.7	18-22	3.3	2-6	2.14	1.89-3.09	57
CoSe 92423 GC	106	19.3	18-23	3.1	2-7	1.69	1.55-2.12	16
CoLk 96029 GC	32	18.4	16-23	2.9	2-6	1.87	1.71-2.35	28

Performance of crosses in first clonal trial (2019-20): Six hundred and eighteen clones of thirty crosses were evaluated in first clonal trial. No selection was effected in three crosses viz., Co 2000-10 x 85R 186. CoA 09321PC and CoBln 03174 GC. Performances of the other crosses with selections are presented in the table below.

Cross combination	No of clones planted	HR brix at 8 th month		HR brix at 10 th month		HR brix at 12 th month		Number of millable canes (NMC)		Cane diameter (cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
Co 94012 x ISH 41	7	17.2	16.3-19.0	17.8	16.8-19.6	18.7	17.6-20.4	16.7	15-22	2.09	1.89-2.34	1
LG 05828 GC	16	17.2	16.4-18.4	18.5	17.4-19.2	19.1	18.2-19.8	17.3	15-19	1.87	1.75-2.03	1
Co 0235 GC	217	15.7	14.8-19.4	17.3	15.4-20.8	18.2	16.6-21.4	16.8	13-24	1.72	1.59-2.33	9
Co 04602 GC	100	15.4	14.2-18.8	16.3	15.6-19.8	17.7	16.0-23.0	15.4	12-23	1.68	1.43-2.21	7
Co 7201 GC	34	16.2	14.0-19.8	18.1	16.8-21.2	19.4	17.8-23.6	17.5	13-25	1.87	1.69-2.43	9
LG 04605 GC	124	16.9	14.6-19.6	17.7	15.8-20.8	18.2	16.8-23.0	9.8	6-17	1.72	1.59-2.34	17
Co 2000-10 GC	9	16.8	14.8-17.8	18.6	17.2-20.0	19.5	18.6-21.2	17.3	14-22	1.87	1.78-2.13	1
CoLk 7901 GC	16	15.9	15.0-16.2	17.3	16.6-18.4	18.2	17.6-20.6	15.8	12-21	1.77	1.69-1.93	1
LG 07650 GC	28	15.4	14.8-17.4	16.7	15.8-19.8	18.2	17.0-21.2	14.3	11-17	1.74	1.56-2.17	1
BO 155 GC	57	14.3	13.8-15.8	16.6	15.2-18.8	17.7	16.0-20.6	16.5	14-21	1.79	1.63-1.98	1

Performance of crosses in second clonal trial (2019-20)

Cross combination	No. of clones planted	No. of clones with > 20% sucrose at 240 days	No. of clones with > 22 % sucrose at 300 days	No of clones with > 22% sucrose at 360 days	No. of clones with > 70NM C /20'row	No. of clones with > 2.5 cm cane thickness	No. of red rot resistant clones	Superiority of the cross (Sucrose /NMC/ cane dia / Red rot resistance	No. of clones selected
BO-91XCoH-70	12	1	1	1	1	1	5		2
BO91XCoSnk05103	2	0	0	1	1	1	1		1
Co 98008XCoH 70	11	1	2	2	3	1	4		4
BO91XCo1148	01	0	0	1	1	1	1		1
Co 0209 xCoSe 92423)	19	2	2	1	4	2	7		7
Co 89036	18	0	1	1	2	1	5		4
BO 91 GC	25	0	0	0	1	1	9		3

6.2.4.2 Buralikson

Performance of crosses in first clonal trial: One hundred and seven clones of eighteen crosses were evaluated in first clonal trial. Either one or two selections were made in the crosses viz., CoSnk 03044 x CoS 88216 (2), Co 1148 self (1), Co 97015 self (1), CoLk 7901 GC (2), Co 7201 GC (2), CoH 114 GC (2), BO 155 (1), CoBln-03174 (2), LG 08422 GC (2), CoLk 8102 GC (1), LG 08866 GC (1) and CoLk 13201 GC (2) . Performances of the other crosses with more than two selections are presented in the table below.

Cross combination	No of clones planted	HR brix at 8 th month		HR brix at 10 th month		HR brix at 12 th month		Number of millable canes (NMC)		Cane diameter (cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
LG 99183 GC	8	15.8	14.2-18.2	18.2	16.8-20.0	21.8	20.4-23.4	03	2-6	1.6	1.3-2.1	04
LG 07650 GC	03	14.4	13.2-15.2	19.0	18-20.2	21.4	18.6-23.2	3	1-4	2.1	1.1-2.5	03
CoL 29 GC	15	16.6	13.8-20.4	21.0	18.4-22.8	22.6	21.4-23.8	4	1-5	2.1	1.24	04
LG 0460 GC5	18	18	16-21	21.6	20-22	22	20-23	3	1-4	2.3	2-2.5	04
LG-04602	07	15.86	14-20.2	19.6	15.2-25	22.46	16.0-28.2	3	1-5	2.0	1.8-2.0	03
CoBln 04174	08	18.2	17.2-20.4	19.2	18.2-20.2	23.2	21.4-24.0	3	1-5	2.5	2.3-2.8	03

Performance of crosses in second clonal trial

Cross combination	No. of clones planted	No. of clones with > 20% sucrose at 240 days	No. of clones with > 22 % sucrose at 300 days	No of clones with > 22% sucrose at 360 days	No. of clones with > 70NMC /20'row	No. of clones with > 2.5 cm cane thickness	No. of red rot resistant clones	Superiority of the cross (Sucrose /NMC/ cane dia / Red rot resistance	No. of clones selected
CoBln 1982 x LG 5493	12	03	00	00	03	03	03	03	03
CoJ 46x NGO 310	06	01	00	00	02	02	01	01	01
CoJ 83 x CoH 70	08	02	00	00	02	02	02	02	02
UP 9530 x LG 5609	08	01	00	00	03	03	01	01	01
CoJ46 x NGO 310	06	02	00	00	01	01	01	00	01
Co 0235 GC	12	04	00	00	00	04	04	04	04
9101 AC	04	01	00	00	00	01	01	01	01
CoSe 01434 GC	06	02	00	00	00	02	02	02	02

6.2.4.3 Pusa

Performance of crosses in ground nursery: One thousand four hundred and fifty seedlings of 44 crosses were evaluated in ground nursery. One clones each was selected from nine crosses viz., BO 146 x Co 1148, CoPb 09181 x CoH 15, Co 0237 x BO 154, CoP 13438 x Co 1148, CoSe 95422 GC, CoP 13436 GC, Co 356GC, CoS 8436PC and Co 7201 GC. Two clones each was selected from four crosses (CoH 110 x Co 87268, CoP 13436 x Co 356, CoPb10181GC and BO 146 GC). Other nine crosses viz., BO 155 x BO 91 (3), BO 154 x Co 62198 (3), CoP 13436 x Co 8353 (3), CoLk 8102 x BO 130 (4), CoC 671 x BO 154 (4), CoP 12436GC (4), BO 137GC (4), CoP 03181GC (4) and BO 99GC (4) had less than five selections. Crosses with more than five selection are presented in the table.

Cross combination	No of seedlings produced	Total number of seedlings evaluated	HR brix (%)		Number of millable canes (NMC)		Cane diameter (cm)		No. of seedlings selected
			Mean	Range	Mean	Range	Mean	Range	
Co09022 x BO 154	375	200	21.1	18.2-24.0	6	4-8	2.1	1.5-2.7	61
BO91 x Co 87268	3102	200	20.8	17.8-23.8	7	3-11	2.2	1.4-3.0	25
CoA13327 x BO154	25	100	20.2	16.8-23.6	6	3-9	2.1	1.4-2.8	23
Co1158 x BO 130	503	50	20.6	17.5-23.7	6	4-8	2.3	1.3-3.3	11
CoPant84212 x Co62198	144	50	20.8	17.8-23.8	6	3-9	2.4	1.7-3.1	11
BO102 x Co 775	1924	150	20.8	18.2-23.4	7	3-11	2.5	1.9-3.1	75
CoH 160 x Co 62198	40	25	20.1	18.2-22.0	7	3-9	2.7	1.8-3.6	13
CoPant 84212 x Co775	55	25	19.8	17.8-21.8	5	3-9	2.5	1.8-3.2	05
Co8353 x BO130	45	25	20.0	18.0-22.0	7	3-7	2.8	1.8-3.8	07
CoP06436 x Co62198	05	30	19.8	18.2-21.4	5	4-9	2.4	1.6-3.2	09
Co09021 x CoJ 46	31	25	19.6	17.8-21.4	6	3-8	2.4	1.7-3.1	09
BO154 FC	5225	100	19.0	17.6-20.4	7	3-10	2.4	1.5-3.3	40
Co0238 GC	12	15	20.2	18.0-22.4	6	3-9	2.3	1.6-3.0	06
CoPb09181GC	256	20	19.8	18.4-21.2	5	3-7	2.6	1.9-3.3	05
BO91GC	632	25	19.6	18.2-21.4	7	4-10	2.5	1.7-3.3	06
CoP06436GC	750	50	19.2	17.6-20.8	7	3-10	2.5	1.8-3.2	27
CoJ88PC	63	20	20.2	18.2-22.2	5	3-7	2.4	1.6-3.2	07
Co1148GC	370	50	19.8	18.0-21.6	6	4-8	2.4		15
BO155GC	45	25	19.2	18.2-20.2	7	4-9	2.4	1.6-3.2	10
BO130GC	1625	25	20.1	18.0-22.2	8	5-11	2.5	1.6-3.4	08
CoH12GC	490	10	19.6	17.8-4.21	6	3-9	2.4	1.5-3.3	05
CoLk8102GC	75	15	19.4	16.2-22.6	6	4-8	2.4	1.5-3.3	06

Performance of crosses in first clonal trial: Among the 559 clones valued in first clonal trial, 111 were selected. One clone each was selected from seven crosses viz., BO 91xCo89003, Co 8371 x BO 137, Co89003 x BO137, CoP 03181 x CoPant 97222, Co62198 GC, Co98006GC and BO130GC

Cross combination	No of clones planted	HR brix at 8 th month		HR brix at 10 th month		HR brix at 12 th month		Number of millable canes		Cane diameter (cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
BO 91 x Co 88025	33	16.5	14.8-18.2	18.1	16.6-19.6	20.4	18.6-22.2	7	3-11	2.3	1.5-3.1	7
BO 155x Co 0233	35	15.7	14.6-16.8	17.8	15.8-19.8	19.8	17.8-21.8	7	4-10	2.4	1.7-3.10	9
BO 92 x Co 775	08	16.5	14.7-18.3	17.6	15.2-20.2	19.6	18.0-21.2	6	3-9	2.2	1.5-2.9	2
CoPant 84212 x Co 775	10	17.2	15.8-18.6	19.5	16.9-22.1	20.3	18.8-21.8	5	4-6	2.3	1.7-2.9	3
BO 147 x Co775	19	16.8	14.9-18.7	18.6	16.5-20.7	19.6	18.2-21.0	8	6-10	2.4	1.5-3.3	6
Co0233 x CoSe 92423	13	16.9	15.2-18.6	18.0	15.8-20.2	19.8	17.8-21.8	6	3-9	2.2	1.4-3.0	8
CoP 06436 x Co89003	09	16.8	14.8-18.8	19.0	17.2-20.8	20.3	19.0-21.6	7	5-9	2.3	1.6-3.0	2
CoJn 80141GC	13	16.8	15.4-18.2	17.6	15.0-20.2	20.2	18.2-22.2	6	3-9	2.2	1.5-2.9	6
C 79218GC	03	17.5	15.2-19.8	18.8	15.4-22.2	20.4	18.4-22.4	5	3-7	2.3	1.4-3.2	3
CoJ 88GC	48	17.6	15.6-19.6	19.2	16.8-21.6	20.8	18.8-22.8	5	4-6	2.1	1.6-2.6	6
BO 153GC	123	17.2	15.7-18.7	19.4	16.2-22.6	20.8	18.2-23.4	6	4-8	2.4	1.5-3.3	42
Co 70GC	30	16.8	14.6-19.0	18.8	16.6-21.0	20.2	17.8-22.6	7	5-9	2.2	1.5-2.9	2
Co 8353GC	18	17.2	15.2-19.2	19.4	16.2-22.6	20.8	18.4-23.2	6	3-9	2.8	1.8-3.8	4
CoS 88216GC	03	17.4	15.0-19.8	19.2	16.4-22.0	20.6	18.2-23.0	5	3-7	2.4	1.7-3.1	2
BO 154GC	26	16.5	14.2-18.8	18.2	15.6-20.8	20.1	18.0-22.2	7	5-9	2.3	1.6-3.0	2

Performance of crosses in second clonal trial: Among the 112 clones of 25 crosses, 43 were selected. Among the 25 crosses evaluated, 12 crosses viz., CoV89101PC, BO102 GC, CoS 8432 GC, CoP 52 GC, CoS 8436 x Co 0233, LG99190 x CoS93278, CoS767 x CoS 8436, Co 8213 x BO 96, CoSe 96436 x CoPant97222, BO 91 x Co 62198, BO 91 x Co775 and CoA 13327 x ISH 307Superiority of crosses for different economic traits is presented below.

Cross combination	No. of clones planted	No. of clones with > 20% sucrose at 240 days	No. of clones with > 22% sucrose at 300 days	No of clones with > 22% sucrose at 360 days	No. of clones with > 70NMC /20'row	No. of clones with > 2.5 cm cane thickness	No. of red rot resistant clones	Superiority of the cross (Sucrose /NMC/ cane dia / Red rot resistance)	No. of clones selected
CoLk 8102x Co 62198	30	12	11	11	15	16	10	09	09
LG 2100 x CoS 510	02	02	02	02	02	02	02	02	02
BO 154 x Co1148	04	03	02	02	02	02	02	02	02
CoS 8436 x Co 775	08	02	04	04	02	02	02	02	02
CoP 06436 x CoPant 97222	03	02	02	02	02	02	02	02	02
Co92006 x Co1148	02	02	02	02	02	02	02	02	02
BO154 FC	08	02	04	05	03	02	02	02	02
CoSe92423GC	10	04	05	05	03	03	03	03	03
CoP 9206 GC	02	01	01	01	01	01	01	02	02
Total	112								43

6.3 Progress made by the participating centers of fluff supply programme

6.3.1 Mandya

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trials	No. of clones in second clonal trials	No of clones evaluated in station trial	No. of clones selected for Zonal varietal trails	Name (s) of the clone(s) released by SVRC / CVRC
2019	1510	-	-	-	-	CoVC 16061 (VCF 10-43- 06)-E CoVC 16062 (VCF 09-61-07) - ML by Karnataka SVRC
2018	856	89	-		CoVC 18061	-
2017	1428	143	-	-	CoVC 17061	CoVC14061 (VCF 0517) variety by Karnataka SVRC
2016	1544	76	06	-	CoVC 16061 CoVC 16062	-
2015	5671	400	79	21	CoVC 15061 CoVC 15062 CoVC 15063 CoVC 15064	-

6.3.2 Navsari

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trials	No of clones evaluated in station trial	No. of clones selected for Zonal varietal trails	Name (s) of the clone(s) released by SVRC / CVRC
2019	12712					
2018	1339	250	1339			CoN 13072 (2019) SVRC
2017	4591	278	159	51+6		CoN 13073 CVRC
2016	8610	951	153	50+6		
2015	17210	1075	280	40+6		CoN 09072 CVRC

6.3.3 Padegaon

Year	No. of seedlings evaluated in Ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trial	No. of clones evaluated in station trial	No. of clones selected in Zonal varietal trial	Name of clone released by SVRC/CVRC
2015-16	7528	526	---	14	NIL	NIL
2016-17	18500	301	---	17	2	
2017-18	8495	357	---	17	2	MS 10001 (Phule 10001)
2018-19	7760	422	---	39	1	CoM 12085 (Phule 09057)
2019-20	6243	524	---	26	1	

6.3.4 Perumalpalale

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trial	No. of clones evaluated in station trials	No. of clones selected for zonal varietal trials	Name (s) of the clone(s) released by SVRC / CVRC
2015	5382	90	36	20	0	---
2016	13386	249	33	33	1 Co T 16366 (2011 T 88)	---
2017	5137	220	96	32	1 Co T 17366 (2012 T 58)	---
2018	9436	303	54	30	4 Co T 18366 (2013 T 106), Co T 18367 (2013 T 39), Co T 18368 (2013 T 124), Co T 18369 (2013 T 16)	--
2019	7056	587	116	38	2 Co T 19366 (2014 T 39), Co T 19367 (2016 T 7)	--

6.3.5 Rudrur

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trials	No of clones evaluated in station trial	No. of clones selected for Zonal varietal trails	Name (s) of the clone(s) released by SVRC / CVRC
2013-14	5728	220	45	9 Early + 9 Mid-late	NIL	NIL
2014-15	5640	270	250	8 Early + 9 Mid-late	NIL	NIL
2015-16	9168	2740	482	9 Early + 9 Mid-late	NIL	NIL
2016-17	2023	824	237	12	-	-
2017-18	5234	456	123	20	-	-

6.3.6 Thiruvalla

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trials	No. of clones evaluated in station trial	No. of clones selected for Zonal varietal trails	Name (s) of the clone(s) released by SVRC / CVRC
2015-16	334*	55				
2016-17	232*	27				
2017-18	Seedlings were lost in flood					
2018-19	Seedlings were lost in flood					
2019-20	Seedling were lost in flood					

6.3.7 Anakapalle

Year	No of seedlings evaluated in ground nursery	No of clones planted in first clonal trials	No of clones in second clonal trials	No of clones evaluated in station trials	No of clones selected for zonal varietal trials	Name (s)of the clones (s)released by SVRC/CVRC
2016-17	6965	760	76	Early-6 Midlate-6	(1 Early-CoA 14321) (2Midlate- CoA 14323, CoA 14324)	-
2017-18	6001	609	225	Early-8 Midlate-8	-	CoA 11321-(E)
2018-19	4533	208	122	Early-9 Midlate-8	2 (1 Early-CoA 16321) (1Midlate-CoA 16322)	-
2019-20	11,228	302	76	Early-14 Midlate-12	4 (3 Early-CoA 17321, CoA 17322, CoA 17323) (1 Midlate-CoA 17324)	CoA 14321-E and CoA 14323-ML by SVRC
2020-21	8940	345	100	Early-16 Midlate-13	2 (CoA19321(Early) CoA19322(Midlate)	

6.3.8 Cuddalore

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trials	No of clones evaluated in station trial	No. of clones selected for Zonal varietal trials	Name (s) of the clone(s) released by SVRC / CVRC
2019-20	2949	258	55	16	Early clones -1 Midlate clones -1	CoC 13339 by CVRC and SVRC
2018-19	3235	342	66	56	Early clones -2 Midlate clones -2	-
2017-18	4335	332	136	31	Early clones -3 Midlate clones -2	-
2016-17	4732	332	108	42	Early clones -1 Midlate clones -1	CoC 11336 as CoC 25 in SVRC
2015-16	4189	428	175	67	Early clones -3 Midlate clones -1	-

6.3.9 Nayagarh

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones planted in second clonal trial	No. of clones evaluated in station trial	No. of clones selected for zonal varietal trials	Names of the clone(s) released by SVRC / CVRC
2015	324	148	110	36	1 (CoOr 15346)	
2016	298	180	98	32	1 (CoOr 16346)	CoOr 10346 (Charchika)
2017		353	58	30	1 (CoOr 17346)	
2018	1077		72	28	1 (CoOr 18346)	
2019	2505	205		30		CoOr 12346 (Kalinga Akhu346)

6.3.10 Vuyyuru

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in			No. of clones selected for Zonal varietal trials	Name (s) of the clone(s) released by SVRC / CVRC
		First clonal trial	Second clonal trials	Preliminary Yield Trial		
2015-16	6291	180 (2015 V)	35 (2014 V)	20 (2013 V)	(1) Co V 15-356 (2009 V 127)	-
2016-17	2750	253 (2016 V)	180 (2015 V)	*35 (2014 V) - 12 Selections (E (7), ML (5)	(2) Co V 16-356 (2010 V 32) Co V 16-357 (2010 V 146)	-
2017-18	3288	83 (2017 V)	57 (2016 V)	24 (2015 V)	-	-
2018-19	1022	94 (2018 V)	36 (2017 V)	22(2016 V)	(3) Co V 18-356 (2012 V 123) Co V 18-357 (2012 V 67) Co V 18-358 (2008 V 257)	Co V 15-356 (SVRC)
2019-20	7134	60 (2019 V...)	36 (2018 V...)	16 (2017 V...)	(4) Co V 19-356 (2013 V 122) Co V 19-357 (2013 V 126) Co V 19-358 (2013 V 46) Co V 19-359 (2009 V 89)	

6.3.11 Fardikot

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones planted in second clonal trial	No. of clones evaluated in station trials (PYT+AYT)	No. of clones selected for zonal varietal trials	Name of the clone(s) released by SVRC/ CVRC
2019-20	2508	138	28	15+7	2	-
2018-19	328	132	48	14+9	2	-
2017-18	612	355	37	17+8	-	-
2016-17	667	501	50	19+16	1	CoPb 10181
2015-16	773	587			-	-

6.3.12 Kapurthala

Year	Number of seedlings evaluated in ground nursery	Number of clones planted in first clonal trials	Number of clones planted in second clonal trials	Number of clones evaluated in station trials	Number of clones selected for zonal varietal trials	Name of clones released by CVRC/SVRC
2016-17	8563	478	135	57	02 (1 & 1 ML)	CVRC: CoPb 08212 (CoPb 92), SVRC: CoPb 08217 (CoPb 93) & CoPb 10181 (CoPb 94)
2017-18	13175	433	120	50	05 (2 E & 3 ML)	-
2018-19	5550	812	194	64	04 (2 E & 2 ML)	-
2019-20	12550	931	168	95	04 (2 & 2 ML)	-
2020-21	*	275	94	33	-	-

*Sowing of fluff in May 2020 (Due to lockdown/ curfew, fluff was received on 5 May, 2020)

6.3.13 Lucknow

Year	No. of seedlings evaluated in the ground nursery	No. of clones planted in first clonal trial	No of clones in second clonal trial	No. of clones evaluated in station trial	No. of clones selected for zonal varietal trial	Name(s) of the clone(s) released by CVRC / SVRC
2015-16	17988	293	45	16	9	-
2016-17	13213	222	57	12	4	CoLk 09204
2017-18	24429	225	26	11	5	CoLk 11206 and CoLk 11203
2018-19	10676	998	53	9	4	CoLk 12207 and CoLk 12209
2019-20	30010	174	182	10	4	-

6.3.14 Shahjahanpur

Year	No. of seedlings evaluated in the ground nursery	No. of clones planted in first clonal trial	No of clones in second clonal trial	No. of clones evaluated in station trial	No. of clones selected for zonal varietal trial	Name(s) of the clone(s) released by CVRC / SVRC
2015-16	Coimb. 13662 Agali. 386	1083 53	29 07			
2016-17	Coimb. 6454 Agali. 3164	1719 56	- -			
2017-18	Coimb. 3258 Agali. 61	425 07	36 -			
2018-19	Coimb. 3608 Agali. 05	255	- -			
2019-20	Coimb. 21898	-	-			

6.3.15 Uchani

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trials	No of clones evaluated in station trial	No. of clones selected for Zonal varietal trails	Name (s) of the clone(s) released by SVRC / CVRC
2015-16	33947	368	202	24	-	-
2016-17	9708	373	114	15	-	-
2017-18	*	3212	107	25	2 Midlate)	-
2018-19	1240	503	285	15	-	CoH 160 (SVRC)
2019-20	7819	* -	226 (130+Repeat clones)	45	2 (1 Early & 1 Midlate)	-

*Fluff was not received by the centre during Feb / March, 2017

6.3.16 Bethuadahari

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trials	No of clones evaluated in station trial	No. of clones selected for Zonal varietal trails	Name (s) of the clone(s) released by SVRC / CVRC
2019-20	3321	1747				
2018-19	640	619	48			
2017-18	828	821	88	22		
2016-17	0					
2015-16	0					

#No participation in Crossing Programme during 2014 & 2015 from Bethuadahari Centre .

6.3.17 Burlikson

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trials	No of clones evaluated in station trial	No. of clones selected for Zonal varietal trails	Name (s) of the clone(s) released by SVRC / CVRC
2019	0	0	0	45	2	
2018	3502	104	62	35	0	
2017	1720	100	38	31	2	
2016	1897	150	62	24	2	
2015	4839	170	55	9	2	

6.3.18 Pusa

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in first clonal trial	No. of clones in second clonal trials	No of clones evaluated in station trial	No. of clones selected for Zonal varietal trails	Name (s) of the clone(s) released by SVRC / CVRC
2020-21	7587	467	112	43	05	-
2019-20	40794	559	111	82	06	01
2018-19	23812	448	161	59	03	-
2017-18	40427	342	94	64	11	-
2016-17	26824	231	173	49	06	-

