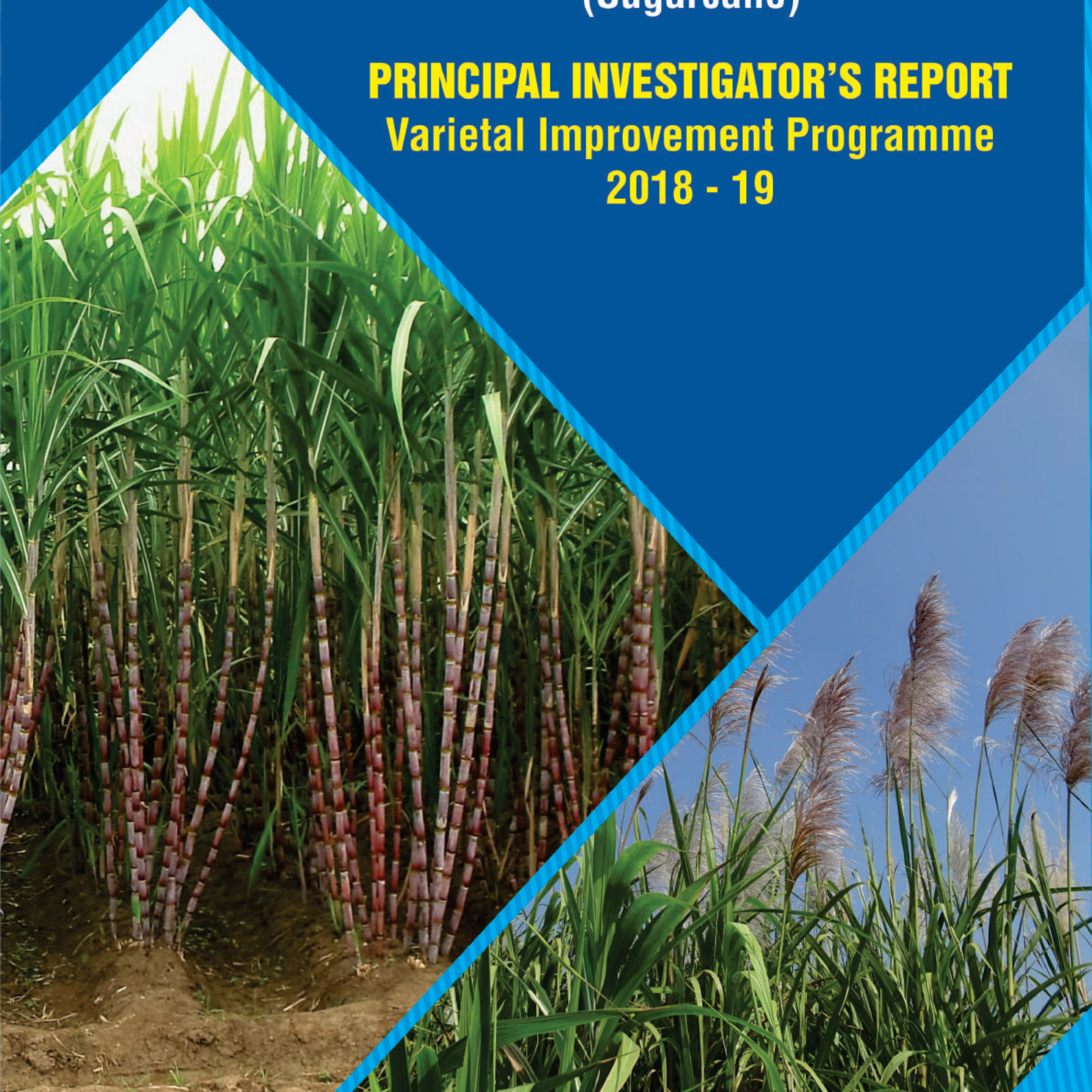


All India Coordinated Research Project
(Sugarcane)

PRINCIPAL INVESTIGATOR'S REPORT
Varietal Improvement Programme
2018 - 19



ICAR - SUGARCANE BREEDING INSTITUTE
(INDIAN COUNCIL OF AGRICULTURAL RESEARCH)
COIMBATORE - 641 007



ALL INDIA COORDINATED RESEARCH PROJECT ON SUGARCANE

VARIETAL IMPROVEMENT PROGRAMME

**PRINCIPAL INVESTIGATOR'S REPORT
2018-19**

COMPILED BY
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**ICAR - SUGARCANE BREEDING INSTITUTE
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Coimbatore
25.09.19



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All India Coordinated Research Project (Sugarcane) – Year 2018-19
Principal Investigator's (Crop Improvement) report

EXECUTIVE SUMMARY

Sugarcane varieties developed through All India Co-ordinated Research Project on Sugarcane (AICRP-S) made significant impact on sugarcane and sugar productivity of the nation. At present, 98 % of the sugarcane cropped areas are occupied with the varieties developed through AICRP(S). During the year 2018-19, the varieties developed/evaluated through AICRP(S) viz., Co 10026 (PZ), CoA 11321 (ECZ), Co 10029 (NWZ) and CoLk 12207 & CoLk 12209 (NC &NEZ) were released for cultivation. National Varietal Development Programme operated under AICRP(S) has two major activities viz., fluff supply programme and zonal varietal trials (ZVT). In the fluff supply and varietal development programme, sugarcane breeders from twenty four sugarcane research stations are participating and making desired crosses at National Hybridization Garden functioning at ICAR-Sugarcane Breeding Institute, Coimbatore, The crossed seeds (fluff) are collected, processed and sent to participating centres for raising seedlings and identifying location specific varieties. Elite clones developed by the breeding centres of each zones are pooled and these common entries are evaluated in ZVT conducted by 37 sugarcane research stations located in five different agro-climatic zones. Pooling of superior clones provides the opportunity to a centre to exchange and evaluate the elite clones developed by other participating centres of the zone. The clones 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. The data from each zone are compiled and based on the performance for cane yield, juice quality and reaction to pest and diseases across the centres in each zone qualifying entries are identified and are proposed for identification in AICRP(S) workshop. The identified clones 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 2018-19 are summarized below.

Weather, pests and diseases situation:

Normal rainfall was received in many centres during the year 2018-19. The lowest rainfall was reported by Padegaon (357.4 mm) followed by Pugalur (382 mm) and the highest rainfall was received at Thiruvalla (2821 mm). Kota in North West Zone recorded the maximum temperature of 44.6°C during May, 2018 and Muzzafarnagar in North West Zone recorded the lowest temperature (3.2°C) during December, 2018. No major disease was reported by the centres. Minor incidence of insect pests like top borer,

stalk borer, stem borer, shoot borer, root borer, plassey borer and other pest like mealy bug, pyrilla etc. were reported by centres. Sporadic incidence of Yellow Leaf Disease, leaf spot and rust (Mandya, Pune and Padegaon), smut and Pokkah boeng (Padegaon) and red rot and smut (Pusa) were noticed. General condition of the trials was good during the period under report.

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	17	Rudrur, Perumalapalle, Navasari, Mandya, Sankeshwar, Padegaon, Pune, Powarkheda, Thiruvalla	Sameerwadi, Akola, Pravaranagar, Kolhapur, Basmathnagar, Pugalur, Coimbatore, Raipur
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	37	24	13

Trials conducted and the number of entries evaluated:

A total of 25 Zonal Varietal Trials (12 in early, 9 in midlate and 4 trials combining early and midlate maturity groups) were conducted during the year 2018-19. There were 7 IVT and 18 AVT trials. A total of 42 entries in early group, 48 entries in midlate group and 51 entries combining both the maturity groups were evaluated. Of these entries, 12 in early, 13 in midlate and 9 entries with combined trial of early and midlate groups were found to be promising. Details of the trials conducted, number of entries evaluated and the promising clones identified are given below.

Zone / Trials	No. of clones + standards		Promising clones	
	Early	Midlate	Early	Midlate
Peninsular Zone				
AVT II Plant	8 + 3		VSI 12121, CoM 12085, Co 12009	
AVT Ratoon	8 + 3		VSI 12121, CoM 12085, Co 12009	
Pooled analysis	8 + 3		VSI 12121, CoM 12085, Co 12009	
AVT I Plant	17+3		Co 13008, Co 13013, MS 13081	
IVT	26+4		Co15009, Co 15010, PI 15131	
Total entries	51		9	
East Coast Zone				
AVT II Plant	3 + 3	6 + 3	CoA 14321, CoC 14336	PI 14377
AVT Ratoon	3 + 3	6 + 3	CoA 14321, CoC 14336	PI 14377, Co 13031
Pooled analysis	3 + 3	6 + 3	CoA 14321	-
AVT I Plant	3 + 3	-	CoV 15356	-
IVT	4 + 3	4 + 3	CoV 16356, CoA 16321	-
Total entries	10	10	5	2
North West Zone				
AVT II Plant	3 + 2	5 + 4	-	Co 13035, CoH 13263, CoPant 13224
AVT Ratoon	3 + 2	5 + 4	-	Co 13035, CoH 13263, CoPant 13224
Pooled Analysis	3 + 2	5 + 4	-	CoH 13263
AVT I Plant	4 + 3	7 + 3	Co 14034, CoPb 14181, CoPb 14211	CoPb 14185, CoS 14233, CoLk 14204
IVT	9 + 3	11 + 3	-	CoS 15233, CoLk 15206
Total entries	16	23	3	8
North Central & North East Zone				
AVT II Plant	3 + 3	-	-	-
AVT Ratoon	3 + 3	-	CoP 13437	-
Pooled Analysis	3 + 3	-	-	-
AVT I Plant	4 + 3	5 + 3	CoP 14437	CoLk 14208
IVT	9 + 3	10 + 3	CoLk 15466, CoLk 15467	CoSe 15454, CoLk 15469
Total Entries	16	15	4	3
Grand total (Entries)	51		9	
	42	48	12	13

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

Qualifying entries identified in different trials:

Zone	Trial	Entries
Peninsular Zone	Advanced Varietal Trial	VSI 12121, CoM 12085, Co 12009
East Coast Zone	Advanced Varietal Trial (Early)	CoA 14321
North West Zone	Advanced Varietal Trial (Midlate)	CoH 13263

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 VSI 12121, CoM 12085 and Co 12009, East Coast Zone CoA 14321 (Early) and North West Zone CoH 13263 (Midlate) were identified as the qualifying entries based on the mean performance in two plant and one ratoon crops.

Fluff Supply Programme:

During the year 2018-19, National Hybridisation Garden (NHG) was planted with 595 parental clones out of which 404 clones (69.70 %) flowered. Among 24 participating centers of Fluff supply / National Hybridization programme, 22 centres attended the crossing programme. A total of 125 female and 70 male parents were utilised by the participating centres. Co 86032 and Co 775 were the frequently used female and male parents respectively.

Twenty two fluff receiving centers were facilitated to make 539 bi-parental, 14 poly crosses, 154 general collections at NHG, ICAR-SBI, Coimbatore. Nine centers utilized National Distant Hybridization Facility (NDHF) established at ICAR-SBI RC, Agali for making 32 bi-parental crosses and 30 general collections. Fluff weighing 26.86 kg of crosses made at NHG and NDHF during 2018 flowering season were supplied to the 22 sugarcane breeding centers of National Hybridization and Fluff Supply Programme.

Crosses made by the participating centres and fluff (g) despatched from NHG during 2018-19

Zone / Centre	NHG, ICAR-SBI, Coimbatore						NDHF, ICAR-SBI RC, Agali				Total quantity of fluff sent (g)
	Station crosses		General collections		Poly crosses		Station crosses		General collections		
	No.	Fluff weight (g)	No.	Fluff weight (g)	No.	Fluff weight (g)	No.	Fluff weight (g)	No.	Fluff weight (g)	
PENINSULAR ZONE	175	3597.0	173	3716.5	6	285.0	15	239.5	25	301.0	8139.0
EAST COAST ZONE	90	1842	110	2313.5	6	165.5	9	198.5	-	-	4519.5
NORTH WEST ZONE	168	3689	233	5613	8	263.5	6	130	5	49.5	9745.0
NORTH CENTRAL ZONE	106	2442.5	104	1798.5	8	188	2	30	-	-	4459.0
Grand total	539	11570.5		13441.5	8	902.0	32	598.0	30	350.5	26862.5

*excluding duplicates

**Action Taken Report on the recommendation of the 32nd Biennial Workshop of
AICRP on Sugarcane held during October 17 & 18, 2018 at University of
Agricultural Sciences, Bengaluru (Karnataka)**

S.No.	Recommendation	Centres	Action taken
1	Entries which are entering into station trials must have the AICRP(S) allotted slot numbers. Hence AICRP(S) number may be assigned by the proposing centre for the new entries within the slot number allotted for the centre and proposed for inclusion in the ZVT in the AICRP(S) workshop/group meeting. This will ensure the maintenance of uniform number for the new entries in both station trials and ZVT	All Centres	Centres assured to propose the new entries with the allotted slot numbers and to maintain the same numbers in the station trials. Centres also requested for more slot numbers as more number of entries are entering into station trials
2	The data submitted by the centre must be carefully scrutinized by the scientist before sending to Principal Investigator (CI) to avoid sending wrong data / typographical error / logical error. Sending of wrong data results in serious problems in analysis, interpretation and identification of promising or qualifying entries. ADG (Commercial crop) has informed that the issue will be taken very seriously and budget will be allocated to the centres as per the performance of the centres in conducting and sending data	PC and All Centres	All the centres were informed by the Project Coordinator (Sugarcane) for proper reporting of the data Care was taken by the centres before submitting the data to avoid typographical error / logical error

3	Buralikson centre has sent the same data for AVT Plant I and Plant II trials for cane yield, sucrose % etc., The discrepancy may be reported to the Vice Chancellor, Assam Agricultural University to ensure reporting of correct data in future	Project Co-ordinator	The Project Coordinator (Sugarcane) has reported to Vice Chancellor / Director of Research, AAU, Jorhat vide letter no. 32-4/PCS/2019 dated January 09, 2019 for discrepancies in submitted data and the competent authority to ensure the submission of correct data in future
4	Action taken report should be carefully prepared with proper response for each of the action point/recommendation. Many centres give very routine or casual response for the action point which should be avoided	All centres	Many centres submitted action taken report in time except Powerkheda, Basmathnagar, Raipur, Akola, Rudrur and Sriganganagar
5	IVT in Peninsular zone will be conducted in RBD instead of Alpha design. Project Co-ordinating unit along with Dr. Rajesh, Principal Scientist (Statistics), IISR, Lucknow will conduct required experiments at IISR, Lucknow to understand the efficiency of RBD and Alpha design. Until the final results of these trials are available, IVT in Peninsular zone will be conducted in RBD instead of Alpha design	PC and IISR, Lucknow	Experiment is being conducted at ICAR-IISR, Lucknow under the leadership of Dr Rajesh Kumar, Principal Scientist (Statistics)
6	Very low number of seedlings was generated by many centres during the year 2018. Quantity of fluff supplied does not match with	All fluff receiving centres	More than 10,000 seedlings were reported by Pusa, Shajahanpur, Navasari, Anakapalle, Vuyyuru, Kapurthala, Pantnagar and

	the number of seedlings produced by the centres. Hence the centres must take care in raising atleast 5,000 seedlings		Uchani centres. Other centres informed that care would be taken to increase the seedling population atleast 5,000
7	An undertaking must be taken from the farmers / factories when pre release clones are given to the farmers for Adaptive Research Trial. The elite clones may be characterised with DUS morphological descriptors and if possible DNA finger printing before giving to them. This will give protection to the centres which developed the clones and to avoid wrong claim made by other parties	All centres	Compliance of the recommendation immediately was communicated by the centres
8	Top two promising entries in AVT II plant (Early) and Midlate must be maintained by the centres for inclusion as latest standard in IVT in the subsequent years	All centres	The centres are multiplying the top two promising entries
9	CoLk 11203 (Early) will be supplied to the centres by Lucknow for initial multiplication by the NWZ centres and subsequent inclusion as the latest standard in IVT (Early) during the year 2020-21	Lucknow	CoLk 11203 has been supplied to the Multiplication Centre (UPCSR, Shahjahanpur) for its initial multiplication during 2019-20. All the Centers will lift the seed of this variety as latest standard for IVT 2020-21 from the Shahjahanpur Centre.
10	Lucknow centre will supply the seed materials of CoLk 11206 (Midlate) to the centres which have shortage	Lucknow	CoLk 11206 has been supplied to the Multiplication Centre (UPCSR, Shahjahanpur) for its initial multiplication

	of planting materials. This variety will be included as latest standard in IVT (Midlate) during the year 2019-20		during 2019-20. All the Centers will lift the seed of this variety as latest standard for IVT 2020-21 from the Shahjahanpur Centre
11	Seed materials of four entries namely CoS 17231, CoS 17232, CoS 17233 and CoS 17234 were insufficient at Seed multiplication centre, Karnal. Decision on these entries will be discussed and decided in the Breeders meet during 2019	Shajahanpur and Karnal	Shajahanpur had supplied these entries to three centres viz., Kapurthalla, Faridkot, Muzaffarnagar and rest of the centres would be supplied in coming spring planting season.
12	Some centres send the ZVT report very late even after several reminders which severely affect the compilation of PI report. Centres are advised to send the report in time for compilation of report effectively	All centres	Timely sending of report was communicated by the centres
13	Soft copy of the all new proposals must be sent in the prescribed format to the PI (Crop Improvement) in advance. The entries will not be considered for inclusion in ZVT, if the soft copy is not received before 15 days in advance of the AICRP(S) workshop	All centres	The centres informed to send the soft copy of the new proposals to PI (Crop Improvement) 15 days in advance of the AICRP(S) workshop
14	Co 0238 will be included in IVT (Early) as zone standard instead of CoSe 95422 from 2019-20 onwards	All centres of NWZ	Co 0238 was included as standard during 2019-20
15	CoA 11321 (Early) will be supplied to other centres for inclusion as latest standard in	Anakapalle	The seed material of CoA 11321 was sent to the all centers of ECZ for

	East coast zone		multiplication during 2019-20 and inclusion as latest standard during 2020-21.
16	Unusual low germination in any entry should be reported along with the yield data for taking decision to include the data in analysis	All centres	Low germination of entries would be reported along with the cane yield as assured by the centres
17	Voluntary centre will be discontinued if the data sent by them is found to be incorrect	All voluntary centres	The voluntary centres indicated that the data would be scrutinized to ensure correctness of the data
18	Co 09004 will replace CoSnk 05103 in the IVT during the year 2019-20 onwards in Peninsular Zone	All centres of PZ	The centres in Peninsular Zone replaced the standard CoSnk 05103 with Co 09004 in the IVT during the year 2019-20
19	In Peninsular Zone, Co 17009 will be multiplied during the year 2019-20 in the seed multiplication centres and supplied to the centres during the year 2020-21 for multiplication along with 18 series	Coimbatore and Padegaon	Both seed multiplication centres multiplied Co 17009 during the year 2019-20 for supply during the year 2020-21
20	Insufficient seed materials in the second set of Climate resilient trials material being multiplied by the participating centres should be informed immediately	All centres conducting Climate resilient trials	The centres informed that the entries were multiplied in sufficient quality for planting trails during 2020-21 except Anakapalle (4 entries), Motipur (7 entries) and Pantnagar
21	In Peninsular Zone, based on the yield and quality parameters, fifteen entries viz., Co 14002, Co 14004, Co 14012, Co 14016, Co 14027, Co 14030, Co 14032, CoN 14073, CoSnk 14102, CoSnk 14103, CoT 14367, CoTI	All centres of PZ	As per the recommendation AVT was conducted with 15 entries and three standards during the year 2019-20

	14111, CoVC 14062, MS 14081, MS 14082 were selected. Hence AVT will be conducted with 15 entries and three standards during the year 2019-20		
22	Discrepancy in the data submitted in the Variety Release proposal and the PI report was observed. In future presentation of wrong data will be reported to the Vice chancellor of the concerned university for necessary action	Project Co-ordinator	PC unit communicated that the recommendation would be followed in future, if issue arises.

1. Weather conditions and pest and diseases incidence during 2018-2019 at different Zones

1.1 Peninsular Zone

Data received from the centers of Peninsular zone on weather parameters and pest diseases incidence are presented in Tables 1.1.1 to 1.1.11. The highest maximum (41.55°C at Rudrur) and the lowest (33.4°C at Mandya) monthly mean temperature were recorded during May 2018 and April 2019 respectively. The lowest monthly mean minimum temperature of 10.52°C was recorded at Pune during January 2019 and the highest mean minimum temperature of 30.00°C was at Rudrur during May 2018. The rainfall in the zone ranged from 382.00 mm at Pugalur to 2821.10 at Thiruvalla. Diseases like leaf spot, rust and yellow leaf disease (YLD) and insect pests like early shoot borer, top shoot borer, leaf hoppers, woolly aphid, root grub and internode borer were observed at Mandya centre. Diseases like grassy shoot, pokkah boeng, mosaic and YLD and insect pests like early shoot borere, internode borer, mealy bugs and sugarcane wooly aphid were observed in the trials at Pune centre. Diseases like rust, grassy shoot disease, smut, brown spot, pokkah boeng, ring spot, pine apple disease and YLD and insect pests like early shoot borer, internode borer, top shoot borer, mealy bugs, scale insect, sugarcane pyrilla, white fly, sugarcane wooly aphids and natural enemies like *Trichogramma chilonis*, *Epiricania melanoleuca*, *Ablerus chionaspidis*, *Encarsia sp.*, *Micromus igorotus*, *D. aphidivora*; Syrphid; Lady bird beetle, Chrysoperla ; *Ankylopteryx sp* were observed at Padegaon centre. Pests and diseases observed in Sankeshwar were root grub, early shoot borer, thrips, sugarcane wooly aphid, smut and rust.

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 (42.00°C) was recorded at Vuyyuru during May 2018. Similarly the lowest monthly maximum temperature of 28.13°C during December 2018 was recorded at Nayagarh. The lowest monthly mean minimum temperature of 11.6°C was recorded at Vuyyuru during December 2018 and the highest mean minimum temperature of 29.53°C was recorded at Nayagarh during July 2018. The rainfall in the zone ranged from 732.00 mm at Vuyyuru to 1668.00 mm at Nayagarh.

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 1.3.5. The highest maximum monthly mean temperature (44.62°C) was recorded at Kota centre during May 2018 while the lowest maximum temperature 18.3°C was recorded at Faridkot during January 2019. The lowest mean minimum temperature (3.2°C) during December 2018 and highest mean minimum temperature (28.38°C) during May 2018 were recorded at Kota. The rainfall in the zone ranged from 443.50 mm at Faridkot to 1321.7 mm at Lucknow.

1.4 North Central and North Eastern Zones

The highest maximum monthly mean temperature (36.0°C) and the lowest monthly mean maximum temperature (16.0°C) were recorded at Pusa center during June and April 2018 respectively. The lowest mean minimum temperature recorded at Pusa was 7.7°C during April 2018 and the highest monthly mean minimum temperature was 26.10° C during August 2018. The rainfall in the Pusa Centre was 900.6 mm. Pests and diseases noticed in the trials at Pusa reported were root borer , shoot borer, top borer, stalk borer, plassey borer, pyrilla, black bug, mealy bug, smut, pokkah boeng, wilt, red rot and ratoon stunting diseases.

1.1. Peninsular Zone

1.1.1. Coimbatore

Months	Temperature (°C)		Relative humidity (%)		Wind velocity (km per hour)	Open pan evaporation (mm/day)	Rainfall (mm)	No. of rainy days
	Max.	Min.	AM	PM				
April 2018	34.25	24.40	86.55	49.00	1.35	5.60	44.2	3
May, 2018	31.45	23.85	86.40	60.80	1.50	3.85	214.3	13
June, 2018	27.33	23.28	83.53	64.53	4.49	3.93	43.2	5
July, 2018	25.69	22.71	81.88	65.75	5.35	5.35	117.6	10
August, 2018	26.27	22.35	83.22	62.77	5.03	4.74	91.4	6
September, 2018	25.15	22.25	90.05	54.95	1.70	4.80	107.2	6
October, 2018	25.80	21.40	89.30	62.20	0.85	2.95	121.4	9
November, 2018	29.00	21.20	88.00	64.70	1.30	2.50	55.2	7
December, 2018	30.00	20.70	87.85	56.90	1.10	3.10	6.3	1
January, 2019	30.21	17.39	86.23	43.68	1.34	3.59	0	0
February, 2019	33.77	20.36	85.00	43.14	1.85	4.96	0	0
March, 2019	35.94	22.32	82.51	37.18	1.63	6.44	0	0
Total / Mean	29.57	21.85	85.88	55.47	2.29	4.32	800.8	60

1.1.2. Kolhapur

Month	Temperature (°C)		Relative humidity (%)		Bright Sunshine hours	Rainfall (mm)	Rainy days	Windspeed (km/h)	Evaporation (mm)
	Max.	Min.	AM	PM					
January, 2018	30.64	14.76	83.00	32.60	7.46	0.00	0	2.64	4.98
February, 2018	33.13	16.33	74.75	24.75	8.65	0.00	0	2.58	4.23
March, 2018	35.80	19.38	76.25	26.25	7.63	25.00	1	2.63	3.53
April, 2018	37.90	20.70	75.40	31.20	7.80	27.00	2	1.98	3.34
May, 2018	36.70	23.63	79.25	42.75	6.88	61.00	5	2.10	3.73
June, 2018	29.48	22.53	89.50	73.00	3.25	208.70	14	0.83	1.50
July, 2018	26.64	20.70	93.60	87.20	1.08	551.90	30	0.70	2.00
August, 2018	27.18	20.93	96.50	83.75	1.78	227.90	23	0.68	2.33
September, 2018	30.68	19.63	92.00	56.25	6.40	68.90	5	0.30	3.78
October, 2018	32.85	20.10	88.00	46.75	6.93	43.00	2	1.20	4.05
November, 2018	31.34	17.40	86.60	42.60	8.86	38.60	2	1.50	4.66
December, 2018	30.08	15.85	88.00	42.50	5.23	0.00	0	1.53	3.10
Total / Mean	31.87	19.33	85.24	49.13	6.00	1252	84	1.56	3.44

1.1.3. Mandya

Month	Temperature (°C)		Relative humidity (%)		Sunshine hours	Rainfall (mm)	Rainy days
	Max.	Min.	AM	PM			
April, 2018	33.4	21.3	91	86	6.6	41.8	4
May, 2018	32.2	20.9	92	79	5.9	259.3	12
June, 2018	31.5	20.0	89	82	4.6	20.9	3
July, 2018	31.2	20.1	91	75	2.6	26.4	5
August, 2018	31.3	19.3	94	79	3.6	11.6	2
September, 2018	30.6	19.2	93	79	7.1	177.8	9
October, 2018	31.5	19.2	94	79	6.5	100.0	8
November, 2018	31.4	19.1	91	77	6.8	0.0	0
December, 2018	30.5	18.6	90	77	3.8	3.8	1
January, 2019	30.5	17.0	91	79	6.8	0.0	0
February, 2019	31.9	19.1	86	74	8.7	0.0	0
March, 2019	33.3	20.8	88	82	8.0	0.0	0
Total / Mean	31.61	19.55	90.83	79	5.92	641.6	44

1.1.4. Navsari

Month	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	Rainy days
	Max.	Min.	AM	PM		

January, 2018	30.3	12.5	82.6	32.3	0.0	0
February, 2018	33.3	13.4	76.0	30.0	0.0	0
March, 2018	35.8	17.6	82.0	30.0	0.0	0
April, 2018	35.8	21.9	88.0	48.0	0.0	0
May, 2018	35.2	25.8	85.0	57.0	0.0	0
June, 2018	33.7	26.3	92.0	74.0	120.0	6
July, 2018	28.8	24.0	96.0	93.0	1282.0	22
August, 2018	29.8	23.9	93.0	82.0	209.0	16
September, 2018	31.6	21.9	91.0	65.0	64.0	4
October, 2018	36.6	19.9	82.0	52.0	0.0	0
November, 2018	35.1	15.2	87.0	56.0	0.0	0
December, 2018	22.8	30.2	84.0	53.0	0.0	0
Total / Mean	32.4	21.05	86.55	56.03	1675	48

1.1.5. Padegaon

Month /Year	Temperature (°c)		Relative humidity		Sunshine hours	Rainfal l(mm)	Rainy Days
	Max.	Min.	AM	PM			
January, 2018	31.4	12.3	91	75	8.1	-	-
February, 2018	33.9	13.6	91	70	8.1	-	-
March, 2018	37.2	17.9	92	77	7	-	-
April, 2018	39.5	20.4	93	85	8.6	1	-
May, 2018	40.3	23.2	90	90	8.4	15.9	2
June, 2018	31.3	21.9	94	90	4.4	132.1	8
July, 2018	29	19.3	93	90	2.2	29.5	7
August, 2018	30.1	17.0	95	90	2.8	18.4	5
September, 2018	33.5	16.4	94	88	6.4	107.9	3
October, 2018	33.7	15.6	94	84	7.6	31.4	2
November, 2018	33	14.2	94	82	7.8	21.2	3
December, 2018	29.7	12.9	96	80	7.8	0	0
Total/ Mean	33.55	17.06	93.08	83.42	6.60	357.40	30

1.1.6. Perumallapalle

Month	Temperature (°C)		Relative Humidity (%)		Decennial rainfall (mm)	Rainfall (mm)	Rainy days
	Max.	Min.	AM	PM			
January, 2018	24.2	15.8	99.5	65.5	1.18	0.0	0
February, 2018	26.2	16.8	93.0	58.5	8.42	0.0	0
March, 2018	30.2	22.8	78.5	60.0	10.7	11.0	1
April, 2018	39.8	26.6	69.5	47.0	8.4	0.0	0
May, 2018	37.9	26.1	68.9	55.4	88.2	87.2	3

June,2018	38.0	27.2	74.5	50.0	77.3	48.7	5
July, 2018	31.6	24.2	79.0	51.0	106.2	47.8	1
August, 2018	33.4	28.2	71.5	48.0	120.0	63.2	5
September, 2018	32.4	27.2	74.5	50.0	95.3	167.6	8
October, 2018	33.0	26.4	78.0	56.5	127.1	35.0	4
November, 2018	35.2	16.3	80.0	58.5	200.8	93.4	4
December, 2018	22.4	18.2	94.5	68.0	74.6	22.6	2
Total / Mean	32.0	22.9	80.1	55.7	918.2	576.5	33

1.1.7. Pugalur

Month	Temperature (°C)		Relative Humidity		Rainfall (mm)	No. of Rainy Days	Sunshine hours
	Max.	Min.	AM	PM			
April, 2018	39.53	25.40	63.93	40.50	Nil		8.23
May, 2018	37.68	24.45	76.48	46.26	102	6	7.42
June, 2018	35.70	25.07	81.63	50.87	Nil		6.03
July, 2018	34.61	24.87	85.48	54.23	50	2	5.62
August, 2018	34.97	24.90	82.45	53.29	2	0	6.25
September, 2018	35.43	24.27	82.40	47.27	93	5	7.16
October, 2018	34.00	23.00	87.13	50.71	67	4	6.49
November, 2018	32.57	22.70	89.07	55.10	62	9	5.96
December, 2018	33.00	20.94	90.58	51.71	Nil		6.17
January, 2019	34.87	19.45	91.71	48.10	6	1	7.51
February, 2019	36.50	22.07	80.57	42.46	Nil		8.12
March, 2019	38.16	23.48	72.55	35.90	Nil		8.60
Total / Mean	35.59	23.38	82.00	48.03	382	27	6.96

1.1.8. Pune

Month	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	Rainy Days	Wind Speed	Open Pan Evaporation
	Max	Min	AM	PM				
April, 2018	38.46	20.40	55.20	16.80	0.8	0	4.92	9.48
May, 2018	38.25	24.40	63.00	27.75	39.8	3	7.95	9.72
June, 2018	31.52	23.42	81.00	62.00	111.9	6	8.75	6.07
July, 2018	27.26	22.32	86.40	77.60	183.7	14	8.40	3.14
August, 2018	26.95	21.55	90.50	80.50	81.9	14	8.20	3.20
September, 2018	30.90	20.26	88.00	54.40	50.6	4	3.60	4.50
October, 2018	38.45	18.60	86.00	30.75	12.7	2	2.70	4.95
November, 2018	31.85	15.20	90.00	32.75	3.9	1	2.10	4.55
December, 2018	29.20	12.15	90.75	36.00	0.0	0	2.13	3.45
January, 2019	28.72	10.52	90.20	28.40	0.0	0	1.78	3.54
February, 2019	32.87	13.22	83.25	21.25	0.0	0	2.97	3.95
March, 2019	36.70	16.57	66.50	18.50	0.0	0	4.32	7.60
Total / Mean	32.59	18.22	80.9	40.56	485.3	44	4.82	5.35

1.1.9. Rudrur

Month	Temperature (°C)		Relative humidity		Normal rainfall (mm)	Actual rainfall (mm)	Percent Deviation (%)	No. of rainy days
	Max.	Min.	AM	PM				
January, 2018	29.60	16.50	95.26	73.16	1.96	0.00	-	0
February, 2018	31.00	20.64	91.57	69.71	4.40	0.00	-	0
March, 2018	35.11	23.74	94.39	66.91	6.64	0.00	-	0
April, 2018	39.41	28.35	93.75	54.00	21.59	0.00	-	0
May, 2018	41.55	30.90	90.35	65.55	14.80	8.60	-72.09	2
June, 2018	34.83	28.17	96.57	85.70	106.16	104.00	-2.03	5
July, 2018	30.37	27.45	96.16	87.65	112.91	93.00	-17.63	12
August, 2018	30.01	27.10	95.35	86.97	213.58	233.10	9.14	14
September, 2018	31.90	27.60	95.13	83.80	187.82	25.20	-86.58	5
October, 2018	32.65	24.00	94.61	76.39	33.75	9.60	-71.55	1
November, 2018	32.65	20.37	88.67	67.23	4.47	0.00	-	0
December, 2018	29.01	17.90	94.42	83.97	0.86	0.00	-	0
Total / Mean	33.17	24.39	93.85	75.09	708.94	473.5	-	39

1.1.10. Sankeshwar

Month	Rainfall (mm)	Number of rainy days	Average rainfall in 39 years (mm)
January, 2018	0	0	1.5
February, 2018	0	0	1.1
March, 2018	4.8	1	7.5
April, 2018	29.2	1	25.5
May, 2018	28.2	4	36.9
June, 2018	86.2	9	135.5
July, 2018	198.8	22	185.1
August, 2018	106.0	21	140.0
September, 2018	165.6	7	111.6
October, 2018	21.4	1	99.1
November, 2018	0	0	18.6
December	6.2	1	4.6
Total	646.4	67	767.1

1.1.11. Thiruvalla

Month	Temperature (°C)		Rainfall	
	Max.	Min.	Total rainfall (mm)	No. of rainy days
January, 2018	32.6	22.8	0.0	0
February, 2018	33.3	25.4	0.0	0
March, 2018	33.7	24.5	29.8	3
April, 2018	33.1	24.7	71.6	4

May, 2018	33.5	24.4	303.8	15
June, 2018	30.0	31.5	573.2	26
July, 2018	31.1	29.2	683.3	24
August, 2018	29.9	23.4	621.3	25
September, 2018	32.7	25.1	108.8	17
October, 2018	33.6	24.2	273.9	11
November, 2018	34.02	25.3	88.2	8
December, 2018	33.7	25.1	67.2	9
Total / Mean	32.60	25.47	2821.1	142

1.2. East Coast Zone

1.2.1. Anakapalle

Month	Temperature (°C)		Relative humidity		Rainfall (mm)	Rainy days	Wind speed (kmph)	Evaporation (mm)
	Max.	Min.	AM	PM				
January, 2018	30.6	15.6	91	41	0	0	3	3.3
February, 2018	33.2	15.0	87	33	0	0	3.2	4.8
March, 2018	35.9	21.8	91	41	0	0	4.2	5.2
April, 2018	35.2	24.3	84	54	93.0	3	5.3	5.6
May, 2018	35.4	25.9	84	61	118.4	5	4.7	5.2
June, 2018	35.3	25.8	83	61	140.5	9	3.7	4.9
July, 2018	32.8	25.3	87	65	121.9	7	4.4	3.9
August, 2018	32.4	25.1	87	64	106.9	7	3.5	3.9
September, 2018	34.1	23.9	90	60	110.8	9	2.8	4
October, 2018	33.9	22.1	86	51	47.9	3	3.6	4.3
November, 2018	32.5	20.0	86	47	39.0	1	3.5	3.7
December, 2018	29.4	17.2	90	50	64.9	2	0	2.9
Total /Mean	33.39	22.0	87.17	52.33	843.3	46	3.49	4.31

1.2.2. Nayagarh

Month	Temperature (°C)		Average relative humidity	Rainfall (mm)	No. of rainy days
	Max.	Min.			
April, 2018	37.00	26.30	57.9	95.8	10
May, 2018	37.93	28.06	52.6	103.8	3
June, 2018	37.33	29.53	69.2	137.2	11
July, 2018	34.13	28.16	73.7	553.4	22
August, 2018	32.20	26.70	78.3	182.8	19
September, 2018	32.20	25.80	77.2	246.0	15
October, 2018	32.23	24.26	64.2	225.6	4
November, 2018	31.37	23.00	54.1	0	0
December, 2018	28.13	18.74	55.9	50.8	2
January, 2019	30.90	18.55	62.1	0	0
February, 2019	34.11	21.11	83.8	31.2	4

March, 2019	34.35	24.35	54.3	41.4	4
Total / Mean	33.49	24.55	65.28	1668.0	94

1.2.3. Nellikuppam

Month	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	No. of rainy days
	Max.	Min.	AM			
April 2018	36.08	26.14	75.16		Nil	Nil
May 2018	37.39	26.45	78.36		0.25	Nil
June 2018	36.40	24.78	67.07		22.5	6
July 2018	35.8	25.10	72.80		63.8	10
August 2018	35.28	24.87	81.43		176.5	16
September 2018	35.65	24.64	86.21		31.5	11
October 2018	32.62	23.60	94.86		266.5	17
November 2018	29.83	22.22	84.75		185.75	19
December 2018	29.53	20.90	83.99		18	4
January 2019	29.30	19.02	88.70		0.25	Nil
February 2019	31.97	21.67	88.72		Nil	Nil
March 2019	35.45	22.66	88.36		Nil	Nil
Total / Mean	33.78	23.50	82.54		765.05	83

1.2.4. Vuyyuru

Month	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	No. of rainy days	Sunshine hours
	Max.	Min.	F.N.	A.N.			
January 2018	32.0	13.0	88.0	40.0	--	--	6.7
February 2018	37.0	13.0	87.0	39.0	--	--	7.7
March 2018	39.0	16.4	87.0	42.0	12.8	1	7.5
April 2018	40.4	19.4	82.0	48.0	--	--	8.3
May 2018	42.0	21.4	76.0	42.0	58.4	1	8.2
June 2018	42.0	20.6	76.0	50.0	141.6	8	5.0
July 2018	37.6	19.8	82.0	61.0	110.4	11	4.2
August 2018	37.0	19.0	88.0	66.0	263.8	12	4.1
September 2018	37.2	19.4	82.0	56.0	25.2	3	6.4
October 2018	36.6	17.0	84.0	60.0	28.2	2	5.9
November 2018	35.4	12.0	82.0	55.0	--	--	6.8
December 2018	32.6	11.6	88.0	60.0	91.6	4	6.4
Total / Mean	37.4	16.9	83.5	51.6	732.0	42	6.4

1.3.North West Zone

1.3.1. Faridkot

Months	Temperature (°C)		R.H. (%)		Rainfall (mm)	No. of rainy days
	Max.	Min.	Max.	Min.		
February, 2018	23.5	8.9	91	43	8.6	1
March, 2018	29.5	14.3	82	40	3.6	1
April, 2018	35.9	19.9	60	26	10.5	1
May 2018	39.6	23.9	49	20	7.8	1
June, 2018	38.0	26.8	68	41	106.2	7
July, 2018	34.7	27.2	83	61	120.1	8
August, 2018	34.5	27.2	82	65	77.5	3
September, 2018	32.9	24.2	87	60	102.4	3
October, 2018	31.9	16.5	86	38	0.0	0
November, 2018	27.3	10.6	87	33	0.0	0
December, 2018	20.9	4.7	93	42	0.6	0
January, 2019	18.3	5.3	93	53	6.2	?
Total / Mean	30.58	17.46	80.08	43.50	443.50	25

1.3.2. Kota

Months	Temperature (°C)		Rainfall (mm)	Rainy days	Relative humidity (%)
	Max.	Min.			
March, 2018	36.58	18.65	0.00	0	32.70
April, 2018	41.55	24.30	0.00	0	24.63
May, 2018	44.62	28.38	0.00	0	22.78
June, 2018	40.08	27.50	10.00	2	32.85
July, 2018	33.70	25.82	147.00	9	77.84
August, 2018	31.18	23.85	196.80	11	84.10
September, 2018	31.28	21.85	170.00	7	79.28
October, 2018	34.78	15.48	0.00	0	81.86
November, 2018	29.88	10.53	0.00	0	90.45
December, 2018	23.78	5.00	5.00	1	90.58
January, 2019	23.56	5.26	0.00	0	90.98
February, 2019	26.28	10.88	2.00	0	89.45
Total / Mean	33.11	18.13	530.80	30	66.46

1.3.3. Lucknow

Months	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	Rainy days (No.)	Bright Sun Shine Hours	Evaporation (mm/day)	Wind Speed (km/hr)
	Max	Min	AM	PM					
April, 2018	36.9	19.9	61.2	26.5	9.2	1	9	6.9	3.6
May, 2018	38.6	24.8	67.2	36.8	16.8	2	9.1	6.8	2.9
June, 2018	38.9	27.3	70.4	45.2	123.4	5	7.3	6.7	3.6
July, 2018	34.4	26.2	88.5	68.4	318.7	13	5.6	4.2	2.9
August, 2018	32.4	25.4	94.5	77.6	564.4	14	3.7	2.4	2
September, 2018	34.2	23.9	89.9	65.1	227.8	7	6.1	3.8	3.4
October, 2018	33.8	17.6	91.8	36.8	0	0	8.7	3.4	1.6
November, 2018	28.8	11.6	92.4	39.1	0	0	7.3	2.1	1.4
December, 2018	23.7	5	95	37	0	0	5.5	1.5	1.5
January, 2019	22.3	6.4	93.7	46.2	35.4	2	6.1	1.6	2.1
February, 2019	24.1	9.9	93.8	50.4	24.2	3	6.2	2	2.7
March, 2019	29.9	13.2	80.9	33.4	1.8	0	9.3	4.2	4.2
Total / Mean	31.5	17.6	84.94	46.89	1321.7	47	7.0	3.8	2.7

1.3.4. Muzaffarnagar

Month	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	No. of rainy days
	Max.	Min.	AM	PM		
April, 2018	34.7	17.8	68	24	22.2	03
May, 2018	37.8	21.2	58	32	28.8	04
June, 2018	36.0	24.2	71	50	64.6	05
July, 2018	32.8	23.8	86	73	439.4	15
August, 2018	32.7	23.0	89	75	233.2	16
September, 2018	31.9	20.8	90	68	251.2	11
October, 2018	31.0	14.0	83	51	32.2	01
November, 2018	26.2	9.2	83	47	12.0	02
December, 2018	21.4	3.2	91	47	3.4	01
January, 2019	20.2	6.2	87	46	28.4	01
February, 2019	21.2	10.2	85	52	57.6	10
March, 2019	27.0	13.7	71	38	4.4	03
Total / Mean	29.4	15.6	80.2	50.3	1177.4	72

1.3.5. Shahjahanpur

Month	Temperature (°C)		Relative humidity %		Rain fall (mm)	No. of rainy days
	Maximum	Minimum	AM	PM		
April 2018	36.2	20.9	59	31	11.4	3
May 2018	38.6	24.3	63	33	NIL	-
June 2018	38.3	27.3	66	46	67.4	3
July 2018	33.2	26.3	89	76	612.4	12

August 2018	31.8	25.9	91	83	324.4	17
September 2018	32.5	24.5	89	72	102.6	11
October 2018	32.5	17.8	85	45	NIL	-
November 2018	28.0	12.6	86	47	1.2	-
December 2018	22.5	6.3	85	49	-	-
January 2019	21.5	7.5	88	53	2.6	1
February 2019	22.5	10.7	88	57	26.0	7
March 2019	29.0	14.6	73	39	9.8	1
Total /Mean	30.55	18.23	80.2	52.6	1157.8	55

1.4.North Central Zone

1.4.1. Pusa

Months	Temperature (°C)		R.H. %		Rainfall (mm)	No. of rainy days
	Max.	Min.	AM	PM		
April, 2018	16.0	7.7	93	77	041.4	2
May, 2018	34.0	24.3	82	64	094.4	3
June, 2018	36.0	26.5	81	60	044.4	6
July, 2018	33.6	26.0	87.3	71.4	170.0	17
August, 2018	32.7	26.1	89	74	388.4	19
September, 2018	33.3	25.4	87	73	118.6	10
October, 2018	32.0	19.0	85	56	012.6	1
November, 2018	29.0	13.3	83	59	000.0	0
December, 2018	24.3	8.8	82	55	000.0	0
January, 2019	22.8	8.1	85	56	001.2	1
February, 2019	25.0	10.7	84	55	025.4	4
March, 2019	30.3	13.5	75	44	004.2	2
Total / Mean	29.08	17.45	84.44	62.03	900.6	65

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
Telangana	Rudrur

List of trials conducted during 2018-19

Sl.No.	Location	AVT II Plant	AVT Ratoon	AVT I Plant	IVT
1	Akola	C	C#	C	C
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	NC
10	Pravaranagar	C	C	C	C
11	Pune	C	C	C	C
12	Pugalur	NC	NC	NC	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	Thiruvalla	C	C	C	C**

C –Conducted NC-Not conducted C#: Vitiated due to drought C** Affected by flood

2.1. Advanced Varietal Trial II Plant (2018-19)

Centers where trial was conducted (15)	Coimbatore, Akola, Basmath Nagar, Kolhapur, Mandya, Navsari, Padegaon, Perumallapalle, Powerkheda, Pravaranaagar, Pune, Rudrur, Sameervadi, Sankeshwar, Thiruvalla
Entries (8)	Co 12007, Co 12008, Co 12009, Co 12012, Co 12019, Co 12024, CoM 12085 and VSI 12121
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

Results of the previous year: Eight clones were evaluated along with three standards at 13 centres during 2017-18 in AVT I Plant. Basmathnagar, Kawardha, Powerkheda, Pugalur and Sirugamani centres didn't conduct the trial. Three test entries *viz.*, VSI 12121 (16.55 t/ha), Co 12009 (15.81 t/ha) and CoM 12085 (15.69 t/ha) recorded higher sugar yield than the best standard CoC 671 (14.64 t/ha) and ranked as first three entries in the zone. VSI 12121 and Co 12009 recorded more than 10% improvement in sugar yield over the best standards at six centres. Four entries *viz.*, VSI 12121 (118.99 t/ha), Co 12012 (113.58 t/ha), Co 12009 (112.81 t/ha) and CoM 12085 (110.92 t/ha) had higher yield than the best standard Co 86032 (107.25 t/ha). The entry VSI 12121 ranked first in the zone and recorded more than 10% improvement in yield over the best standards at six locations. Co 12009 ranked third in the zone and recorded more than 10% yield improvement over the best check at five locations. None of the entries recorded higher CCS % and sucrose per cent than the best standard CoC 671 (14.51% and 20.56% respectively) in this trial. The test entries Co 12008 and Co 12007 ranked as second and third respectively in the zone for CCS% (14.11% and 13.97% respectively) and sucrose per cent (20.16% and 19.83% respectively). The best entry in the trial was VSI 12121 with 13.03% and 10.95% improvement over the best standard for CSS yield and yield respectively in the zone.

Results of the current year: Eight clones along with three standards were evaluated for yield and juice quality traits in 15 centres during 2018-19. The yield of the trial in Akola centre was very low (21.03 t/ha) which was lower than state average hence not included in calculating grand mean. Powerkheda centre had sent same data for second plant and ratoon crops and hence not included in calculating trial mean. In this trial, four test entries *viz.*, VSI 12121 (19.88 t/ha), CoM 12085 (19.37 t/ha), Co 12009 (17.84 t/ha) and Co 12012 (17.27 t/ha) recorded higher sugar yield than the best standard Co 86032 (17.15 t/ha). The entries, VSI 12121 and CoM 12085 recorded more than 10% improvement over the best standard at five locations in the zone. For yield, the entry VSI 12121 (129.67 t/ha) ranked first in the zone followed by CoM 12085 (127.17 t/ha), Co 12012 (121.59 t/ha) and Co 12009 (119.94 t/ha). The entry VSI 12121 recorded more than 10% improvement over the best standard at eight locations and 14.08% improvement over the best standard in the zone. None of the entries recorded higher CCS% and juice sucrose % than the best standard CoC 671 (14.76% and 20.73% respectively). The test entries CoM 12085 (14.39%) and VSI 12121 (14.37%) ranked as second and third respectively for CCS% in the zone. Two entries *viz.*, VSI 12121 and CoM 12085 showed more than 5% improvement over the best standard at Rudrur centre for both CCS and sucrose%. VSI 12121 was the best entry in the trial for both yield and sugar yield in the zone. The data are presented in the tables 2.1.1 to 2.1.34.

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Table 2.1.1 CCS t/ha at harvest

S. No.	Entries	Coimbatore	Akola#	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 12007	11.57	1.76	12.39	17.15	9.56	16.06	18.14	12.76	19.12	13.61	14.41	17.94	8.29	12.18	14.09	
2	Co 12008	9.97	4.02	12.33	15.84	8.20	15.35	16.07	13.42	20.60	15.73	12.92	18.32	10.60	11.05	13.88	
3	Co 12009	17.31*	2.08	14.88	18.53	12.12	17.74	20.66	18.16*	19.55	16.54	21.31	25.91	17.18	11.97	17.84	3
4	Co 12012	15.92	1.85	14.28	20.44*	15.96	16.55	23.28	13.94	17.33	16.93	18.02	29.14	10.92	11.78	17.27	4
5	Co 12019	11.85	1.15	11.57	16.83	10.18	16.69	18.64	14.07	14.39	11.85	17.67	20.42	8.08	10.51	14.06	
6	Co 12024	11.75	2.97	15.01	15.54	12.16	16.55	19.66	10.67	14.29	11.93	17.15	22.25	14.98	11.61	14.89	
7	CoM 12085	18.99*	1.69	18.05*	21.94*	17.72	18.36*	25.75	14.98	23.44*	18.35	22.36	23.75	16.32	11.79	19.37	2
8	VSI 12121	17.46*	2.83	16.73	20.22*	19.29	18.60*	22.55	15.76	22.28*	23.32*	21.37	29.53	17.12	14.25	19.88	1
	Stds																
1	Co 86032	14.12	3.00	15.20	16.72	14.76	14.69	21.95	12.91	19.37	17.55	16.62	29.45	17.01	12.53	17.15	5
2	CoC 671	13.36	1.84	13.87	15.90	14.73	13.79	21.31	10.65	17.17	16.77	13.61	21.61	16.73	12.54	15.54	
3	CoSnk 05103	14.64	5.80	15.86	14.83	15.85	13.68	20.26	11.25	17.77	16.50	11.07	26.93	15.88	12.41	15.92	
	Grand mean	14.27	2.64	14.56	17.63	13.68	16.19	20.75	13.51	18.66	16.28	16.96	24.11	13.92	12.06		
	SE	0.54	0.66	0.94	0.93	0.71	1.09	1.46	1.16	0.47	0.56	2.80	8.21	1.09	0.62		
	CD	1.61	1.95	2.81	2.75	2.08	3.21	4.31	3.44	1.40	1.64	9.68	2.76	3.30	1.77		
	CV	6.57	43.50	11.26	9.16	8.94	11.61	12.17	14.86	4.41	5.94	9.59	3.91	10.65	8.96		
Top three qualifying entries at each location																	
1		CoM 12085		CoM 12085	CoM 12085		VSI 12121		Co 12009	CoM 12085	VSI 12121						
2		VSI 12121			Co 12012		CoM 12085			VSI 12121							
3		Co 12009			VSI 12121												

*Significant at 5% level over best standard # Not included in calculating mean

Qualifying entries: CoM 12085 (5), VSI 12121 (5), Co 12009 (2), Co 12012 (1)

Performance across locations: Four test entries viz., VSI 12121 (19.88 t/ha), CoM 12085 (19.37 t/ha), Co 12009 (17.84 t/ha) and Co 12012 (17.27 t/ha) recorded higher sugar yield than the best standard Co 86032 (17.15 t/ha). The entries, VSI 12121 and CoM 12085 recorded more than 10% improvement over the best standard at five locations in the zone. Co 12009 ranked third in the zone and had more than 10% improvement over the best check in two centres.

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Table 2.1.2 Cane yield t/ha at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 12007	80.08	14.01	89.00	116.43	79.44	118.90*	118.61	89.47	134.16	96.84	103.89	73.44	63.21	90.83	96.49	
2	Co 12008	73.42	31.83	86.94	104.76	66.22	117.31*	106.02	107.34	141.05	104.68	104.04	69.00	77.12	82.57	95.42	
3	Co 12009	121.47*	16.71	111.65	120.67	90.41	127.47*	135.11	132.63*	134.19	112.37	153.93	93.87	128.49	96.94	119.94	4
4	Co 12012	120.28*	14.26	104.34	140.16*	109.85	121.15*	160.35	120.41*	130.27	124.05	142.31	117.86	91.96	97.64	121.59	3
5	Co 12019	83.75	9.11	83.86	114.44	71.69	125.64*	129.60	102.39	102.13	92.76	125.85	78.79	59.84	77.15	95.99	
6	Co 12024	86.13	23.73	104.49	106.31	84.59	124.03*	142.44	91.64	100.25	87.18	135.27	69.97	113.85	91.87	102.92	
7	CoM 12085	127.51*	13.15	118.23	146.80*	123.35	131.71*	168.73	106.95	155.30*	129.78	154.47	80.63	113.59	96.11	127.17	2
8	VSI 12121	122.54*	24.40	120.53*	134.88*	128.51*	134.98*	152.55	107.96	151.89*	153.41*	145.54	103.63	126.04	103.26	129.67	1
	Stds																
1	Co 86032	98.84	23.11	93.38	115.09	103.90	96.44	146.98	98.14	135.23	123.22	145.47	102.35	125.46	92.50	113.62	5
2	CoC 671	84.83	14.39	94.37	103.80	96.63	92.02	135.95	73.47	116.71	110.79	100.58	81.94	113.85	92.22	99.78	
3	CoSnk 05103	106.43	46.60	110.47	107.15	116.67	103.74	140.97	95.58	124.48	120.35	112.78	89.50	122.26	96.81	111.32	
	Grand mean	100.48	21.03	101.57	119.14	97.39	117.58	139.76	102.36	129.61	114.13	129.47	87.36	103.24	92.54		
	SE	2.24	5.32	7.12	5.90	3.78	4.47	8.87	6.61	3.28	3.80	7.12	7.48	8.47	3.35		
	CD	6.65	15.69	21.15	17.41	11.16	13.20	26.20	19.65	9.68	11.23	21.00	22.22	25.70	9.53		
	CV	3.86	43.80	12.14	8.58	6.73	6.59	10.99	11.19	4.38	5.77	9.52	14.83	10.78	6.27		
Top three qualifying entries at each location																	
	1	CoM 12085		VSI 12121	CoM 12085	VSI 12121	VSI 12121		Co 12009	CoM 12085	VSI 12121						
	2	VSI 12121			Co 12012		CoM 12085		Co 12012	VSI 12121							
	3	Co 12009			VSI 12121			Co 12009	VSI 12121								

*Significant at 5% level # Not included in calculating mean

Qualifying entries: VSI 12121 (8), CoM 12085 (4), Co 12009 (3), Co 12012 (2)

Performance across locations: Four entries viz., VSI 12121 (129.67 t/ha), CoM 12085 (127.17 t/ha), Co 12012 (121.59 t/ha) and Co 12009 (119.94 t/ha) recorded higher yield than the best check Co 86032 (113.62 t/ha). The first ranked entry in the zone was VSI 12121 with more than 10% improvement over the best standard at eight locations and 14.08% improvement over the best standard in the zone. CoM 12085 and Co 12012 had more than 10% improvement over the best standard at four and two centres respectively. The other qualifying entry was Co 12009 at three centres in the zone.

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Table 2.1.3 CCS % at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 12007	14.47	12.38	13.94	14.71	13.77	13.51	15.29	14.22	14.28	14.17	13.86*	13.19	13.13	13.39	13.99	
2	Co 12008	13.59	12.54	14.23	15.11	14.59	13.08	15.24	12.40	14.61	15.00	12.41	13.96	13.80	13.39	13.95	
3	Co 12009	14.25	12.51	13.39	15.34	14.45	13.92	15.31	13.70	14.57	14.77	13.84*	13.29	13.37	12.35	14.04	5
4	Co 12012	13.24	12.96	13.68	14.57	14.53	13.66	14.52	11.58	13.31	13.65	12.66	13.03	11.83	12.01	13.25	
5	Co 12019	14.16	12.58	13.79	14.69	14.20	13.29	14.39	13.70	14.06	12.81	14.05*	13.12	13.49	13.61	13.80	
6	Co 12024	13.64	12.62	14.36	14.62	13.77	13.35	13.82	11.64	14.10	13.76	12.68	13.43	13.16	12.63	13.46	
7	CoM 12085	14.89	12.43	15.36	14.95	14.36	13.94	15.27	14.02	15.10	14.17	14.48*	13.96	14.38	12.23	14.39	2
8	VSI 12121	14.26	11.65	13.91	15.00	15.09	13.79	14.72	14.59	14.66	14.98	14.68*	13.70	13.58	13.83	14.37	3
	Stds																
1	Co 86032	14.28	13.01	16.28	14.52	14.20	15.23	14.92	13.15	14.32	14.25	11.42	13.58	13.31	13.54	14.08	4
2	CoC 671	15.73	13.02	14.72	15.29	15.23	14.98	15.63	14.43	14.72	15.17	13.53	14.12	14.70	13.60	14.76	1
3	CoSnk 05103	13.72	12.51	14.30	13.85	13.59	13.17	14.32	11.76	14.28	13.77	9.82	13.33	12.97	12.82	13.21	
	Grand mean	14.20	12.56	14.36	14.79	14.34	13.81	14.86	13.20	14.36	14.23	13.04	13.52	13.43	13.04		
	SE	0.41	0.45	0.38	0.22	0.22	0.46	0.31	0.42	0.21	0.18	0.04	0.33	0.34	0.35		
	CD	1.23	N.S.	1.13	0.66	0.64	1.35	0.92	1.25	0.62	0.52	0.12	NS	1.02	0.98		
	CV	5.05	6.26	4.60	2.62	2.61	5.72	3.64	5.49	2.53	2.15	0.55	4.21	3.66	4.60		
Top three qualifying entries at each location																	
	1											VSI 12121					
	2											CoM 12085					
	3																

Not included in calculating mean

Qualifying entries: VSI 12121 (1), CoM 12085 (1)

Performance across locations: None of the entries recorded higher CCS% than the best standard CoC 671 (14.76%). The test entries CoM 12085 (14.39%) and VSI 12121 (14.37%) ranked as second and third respectively in the zone. Two entries viz., VSI 12121 and CoM 12085 had more than 5% improvement over the best standard at Rudrur centre.

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Table 2.1.4 Sucrose% at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padgaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 12007	20.44	18.50	19.47	20.85	19.45	19.01	21.16	20.22	20.10	19.62	19.65*	19.29	19.06	19.07	19.80	5
2	Co 12008	19.36	19.16	19.89	21.57	20.38	18.47	21.35	17.95	20.48	20.73	17.83	19.91	20.22	19.07	19.79	
3	Co 12009	20.23	18.66	19.36	21.51	20.17	19.82	21.09	19.29	20.61	20.42	19.65*	19.05	19.37	17.60	19.86	4
4	Co 12012	18.87	19.08	19.31	20.53	20.30	19.27	20.27	16.76	18.99	18.90	18.26	18.20	17.15	17.15	18.77	
5	Co 12019	20.10	18.75	19.42	20.65	19.87	18.66	20.19	19.42	19.88	18.21	19.86*	19.01	19.63	19.36	19.56	
6	Co 12024	19.31	18.64	19.56	20.43	19.27	18.87	19.29	16.90	18.88	19.10	18.21	18.88	18.88	17.96	18.89	
7	CoM 12085	20.96	18.73	21.02	21.00	20.03	19.64	21.00	19.99	21.14	19.38	20.29*	20.03	20.36	17.44	20.18	3
8	VSI 12121	20.18	17.74	19.89	21.19	21.05	19.71	20.55	20.60	20.72	20.78	20.57*	19.67	19.50	19.67	20.31	2
	Stds																
1	Co 86032	20.22	18.93	21.23	20.43	19.83	21.33	20.66	18.61	20.13	19.88	17.01	19.62	19.10	19.30	19.80	5
2	CoC 671	22.09	19.17	20.36	21.51	21.34	20.76	21.64	20.32	20.76	21.03	19.19	20.11	20.96	19.37	20.73	1
3	CoSnc 05103	19.47	18.88	19.92	19.68	19.05	18.62	20.34	16.99	18.70	19.29	14.60	18.69	18.84	18.26	18.65	
	Grand mean	20.11	18.75	19.95	20.85	20.07	19.47	20.69	18.82	20.04	19.76	18.65	19.31	19.37	18.57		
	SE	0.55	0.45	0.37	0.26	0.28	0.53	0.37	0.49	0.29	0.27	0.04	0.64	0.49	0.49		
	CD	1.63	N.S.	1.10	0.78	0.83	1.55	1.08	1.46	0.87	0.79	0.12	NS	1.50	1.39		
	CV	4.73	4.13	3.22	2.20	2.43	4.68	3.06	4.51	2.57	2.36	0.37	5.75	3.71	4.57		
Top three qualifying entries at each location																	
1												VSI 12121					
2												CoM 12085					
3																	

*Significant at 5% level, # Not included in calculating mean

Qualifying entries: VSI 12121 (1), CoM 12085 (1)

Performance across locations: None of the entries recorded higher mean juice sucrose per cent than the best standard CoC 671 (20.73%). The test entries VSI 12121 (20.16%) and CoM 12085 (20.18%) ranked as second and third respectively in the zone. Only two entries viz., VSI 12121 and CoM 12085 had more than 5% improvement over the best standard at Rudrur centre.

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Table 2.1.5 Brix % at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Man dya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	21.99	22.36	20.96	22.60	21.00	20.28	22.02	22.06	21.44	20.81	21.29	21.12	21.76	20.90	21.40
2	Co 12008	21.23	24.09	21.54	23.77	21.47	19.88	22.69	20.36	21.64	21.88	19.88	21.92	23.50	20.90	21.59
3	Co 12009	21.99	22.48	21.73	22.77	21.20	21.69	22.19	20.62	22.57	21.59	21.35	20.85	22.01	19.30	21.53
4	Co 12012	20.67	22.37	20.69	21.94	21.40	20.67	21.19	18.99	20.94	20.05	20.56	20.19	19.51	18.87	20.44
5	Co 12019	21.87	22.55	21.28	21.94	21.00	19.82	21.52	21.06	21.31	20.46	21.49	21.21	22.51	21.17	21.28
6	Co 12024	20.87	22.01	20.74	21.44	20.40	20.32	20.19	19.29	19.67	20.34	20.47	20.79	21.01	19.60	20.39
7	CoM 12085	22.37	22.98	21.67	22.27	21.00	21.01	22.02	21.92	22.34	21.11	21.56	21.79	22.01	19.17	21.56
8	VSI 12121	21.76	22.18	21.53	22.77	22.07	21.78	21.69	22.16	22.31	22.11	21.67	21.55	21.76	21.50	21.90
Stds																
1	Co 86032	21.84	21.72	21.06	21.77	20.87	22.52	21.69	20.09	21.41	21.47	20.46	21.39	21.26	21.17	21.31
2	CoC 671	23.45	22.52	21.46	22.94	22.60	21.34	22.69	21.72	22.21	22.33	20.87	21.98	23.02	21.20	22.14
3	CoSnk 05103	21.17	23.25	22.12	21.44	20.20	20.07	21.69	19.19	19.24	20.96	17.46	20.85	21.51	20.00	20.45
	Grand mean	21.75	22.59	21.34	22.33	21.20	20.85	21.78	20.68	21.37	21.19	20.64	21.24	21.81	20.34	
	SE	0.52	1.03	0.35	0.22	0.31	0.46	0.41	0.43	0.34	0.32	0.05	0.58	0.71	0.53	
	CD	N/A	N.S.	1.03	0.64	0.91	1.35	1.21	1.29	1.01	0.95	0.14	NS	2.15	1.51	
	CV	4.12	7.90	2.81	1.68	2.51	3.79	3.26	3.63	2.78	2.63	0.38	4.75	4.73	4.51	

Table 2.1.6 Purity % at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Man dya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	92.92	83.03	91.01	92.23	93.00	93.73	96.10	91.63	93.73	94.32	92.29	91.30	87.59	90.46	92.33
2	Co 12008	91.15	79.70	91.03	90.75	95.33	92.90	94.12	88.12	94.65	94.78	89.67	90.84	86.08	90.48	91.53
3	Co 12009	91.94	83.25	91.85	94.45	95.67	91.37	95.03	93.56	92.71	94.62	91.92	91.36	88.01	90.33	92.52
4	Co 12012	91.29	85.32	93.29	93.64	95.33	93.22	95.69	88.26	90.74	94.27	88.81	90.08	88.20	89.98	91.75
5	Co 12019	91.90	83.27	93.61	94.10	95.00	94.14	93.79	92.23	93.31	89.04	92.58	89.63	87.21	90.72	92.10
6	Co 12024	92.51	84.95	92.66	95.29	95.00	92.86	95.52	87.69	93.32	93.93	89.27	90.82	89.85	90.80	92.27
7	CoM 12085	93.72	81.62	92.97	94.28	96.00	93.47	95.39	91.24	94.80	93.38	94.32	91.86	92.46	90.14	93.39
8	VSI 12121	92.71	79.98	92.84	93.05	95.67	90.45	94.75	92.96	92.89	93.98	94.83	91.27	89.60	90.74	92.75
Stds																
1	Co 86032	92.57	88.78	92.68	93.87	95.33	94.71	95.25	92.63	94.07	92.58	83.18	91.75	89.82	90.42	92.22
2	CoC 671	94.21	85.63	92.45	93.78	95.00	97.28	95.37	93.51	93.48	94.18	91.91	91.51	91.06	90.59	93.41
3	CoSnk 05103	91.97	81.25	88.30	91.81	94.67	92.77	93.74	88.56	93.21	91.99	83.59	89.58	87.59	90.47	90.63
	Grand mean	92.44	83.34	92.06	93.39	95.09	93.35	94.98	90.94	93.36	93.37	90.21	90.91	88.86	90.47	
	SE	0.56	3.65	1.09	0.73	0.76	1.92	0.93	NS	0.61	0.55	0.04	0.75	1.45	0.24	
	CD	1.67	N.S.	N/A	2.15	NS	NS	N.S.		1.81	1.61	0.12	NS	4.40	NS	
	CV	1.05	7.59	2.05	1.35	1.39	3.56	1.70		1.14	1.01	0.08	1.43	2.31	0.46	

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Table 2.1.7 Pol% at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Man dya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	15.78		12.22	15.97	14.91	14.38	16.23			14.95		14.27			14.84
2	Co 12008	14.89		12.94	16.40	15.85	14.02	16.53			15.90		14.73			15.16
3	Co 12009	15.65		12.85	16.29	15.49	15.03	16.14			15.92		14.10			15.18
4	Co 12012	14.34		14.83	15.72	15.47	14.56	15.48			14.40		13.47			14.78
5	Co 12019	15.58		14.71	15.91	15.37	14.02	15.64			14.22		14.07			14.94
6	Co 12024	14.69		15.57	15.71	14.84	14.29	15.03			14.67		13.97			14.85
7	CoM 12085	16.20		14.62	16.13	15.42	14.87	16.34			14.62		14.82			15.38
8	VSI 12121	15.57		15.79	16.28	16.06	14.89	15.92			15.59		14.56			15.58
	Stds															
1	Co 86032	15.43		15.54	15.83	15.33	16.30	16.13			15.28		14.52			15.55
2	CoC 671	17.15		14.23	16.61	16.60	15.90	16.67			15.96		14.88			16.00
3	CoSnk 05103	15.15		16.08	14.84	14.56	14.16	15.59			14.46		13.83			14.83
	Grand mean	15.49		14.49	15.97	15.45	14.77	15.97			15.09		14.29			
	SE	0.45		0.23	0.22	0.23	0.41	0.29			0.21		0.48			
	CD	1.35		0.69	0.65	0.67	1.20	0.86			0.61		NS			
	CV	5.07		2.72	2.40	2.55	4.78	3.16			2.38		5.75			

Table 2.1.8 Extraction % at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Man dya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	42.23			50.66	53.28	54.96	57.67	59.58	50.97	45.89			54.74	58.07	52.81
2	Co 12008	41.16			48.96	52.58	57.80	60.45	54.02	53.81	45.52			56.20	60.90	53.14
3	Co 12009	44.69			49.46	50.22	56.50	55.80	60.68	54.57	48.16			53.34	57.83	53.13
4	Co 12012	43.58			45.04	50.22	56.59	58.39	50.16	53.54	45.42			53.85	56.94	51.37
5	Co 12019	41.61			46.63	51.83	53.54	57.74	57.30	53.79	44.16			55.02	56.89	51.85
6	Co 12024	62.64			52.05	48.89	54.39	52.71	54.26	54.28	42.10			56.72	58.39	53.64
7	CoM 12085	64.83			57.26	61.63	56.56	56.87	55.43	58.76	46.87			62.91	54.49	57.56
8	VSI 12121	47.09			50.84	55.83	54.34	56.89	59.03	57.90	48.59			58.59	60.34	54.94
	Stds															
1	Co 86032	42.60			52.70	56.94	56.09	56.48	57.41	55.72	50.13			58.59	58.10	54.48
2	CoC 671	46.09			55.63	59.41	56.36	56.99	53.28	51.35	50.25			55.60	60.32	54.53
3	CoSnk 05103	39.19			49.19	51.06	56.93	59.77	52.33	50.00	45.50			56.07	54.22	51.43
	Grand mean	46.88			50.77	53.81	55.82	57.25	55.77	54.06	46.60			56.51	57.86	53.53
	SE	7.56			1.98	1.98	0.96	2.39	2.11	0.87	0.77			1.72	1.31	
	CD	N/A			5.85	5.85	NS	N.S.	6.26	2.58	2.27			5.22	3.73	
	CV	27.93			6.76	6.39	2.98	7.24	6.55	2.80	2.86			4.34	3.93	

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Table 2.1.9 Fibre % at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Man dya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	12.74			13.39	13.33	14.37	13.28			13.78					13.48
2	Co 12008	13.12			13.98	12.23	14.11	12.58			13.28					13.22
3	Co 12009	12.65			14.28	13.22	14.18	13.47			12.06					13.31
4	Co 12012	14.00			13.43	13.81	14.46	13.59			13.78					13.85
5	Co 12019	12.47			12.96	12.66	14.88	12.51			11.93					12.90
6	Co 12024	13.92			13.10	13.00	14.26	12.07			13.19					13.26
7	CoM 12085	12.73			13.20	13.01	14.29	12.17			14.52					13.32
8	VSI 12121	12.83			13.18	13.68	14.46	12.56			14.97					13.61
Stds																
1	Co 86032	13.62			12.53	12.71	13.57	11.90			13.13					12.91
2	CoC 671	12.41			12.81	12.19	13.39	12.94			13.91					12.94
3	CoSnk 05103	12.21			14.61	13.57	13.97	13.33			15.04					13.79
	Grand mean	12.97			13.41	13.04	14.18	12.76			13.60					
	SE	0.76			0.41	0.34	0.25	0.43			0.08					
	CD	N/A			1.22	1.01	0.74	N.S.			0.24					
	CV	10.15			5.36	4.56	3.05	5.86			1.04					

Table 2.1.10 Number of millable s (000'/ha) at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Man dya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	75.81	10.11	82.93	91.55	75.00	115.69	76.60	92.88	102.69	84.32	112.91	55.74	52.17	98.54	85.91
2	Co 12008	60.03	25.77	80.72	76.68	79.30	113.51	92.85	87.08	111.80	86.50	115.17	50.37	60.48	87.85	84.79
3	Co 12009	72.06	9.65	82.09	81.48	74.07	117.18	70.28	81.20	89.50	71.10	111.21	46.30	78.00	103.82	82.95
4	Co 12012	97.95	9.03	89.47	129.46	95.77	116.50	117.29	97.75	106.33	95.33	129.31	80.28	85.18	103.40	103.39
5	Co 12019	87.68	7.02	83.17	96.59	91.87	111.62	117.85	92.10	94.60	91.90	124.04	62.41	65.70	87.12	92.82
6	Co 12024	66.93	14.81	83.91	73.90	79.23	112.86	88.61	87.46	91.58	71.46	109.64	46.85	79.75	99.65	83.99
7	CoM 12085	53.62	7.87	72.22	71.93	80.36	119.09	75.00	59.70	98.53	72.92	107.18	34.82	61.91	101.39	77.59
Stds																
8	VSI 12121	69.78	15.66	78.96	75.64	70.97	123.98	89.30	87.62	112.90	87.80	101.50	57.78	77.90	110.24	88.03
1	Co 86032	67.76	17.28	82.07	81.94	67.46	113.78	93.19	94.27	110.45	84.55	118.29	71.95	79.23	102.08	89.77
2	CoC 671	47.70	9.03	76.44	72.11	79.30	110.08	69.44	87.15	93.24	71.29	102.12	58.98	74.83	95.78	79.88
3	CoSnk 05103	92.96	29.55	88.68	110.71	109.13	111.49	125.80	107.80	114.38	104.03	147.07	69.07	84.56	103.54	105.33
	Grand mean	72.03	14.16	81.88	87.45	82.04	115.07	92.38	88.64	102.36	83.75	116.22	57.69	72.70	99.40	
	SE	1.01	3.30	5.23	2.74	3.03	3.57	3.20	5.56	1.54	3.26	2.69	3.88	3.39	4.05	
	CD	2.99	9.73	N/A	8.10	8.94	11.24	9.47	16.51	4.55	9.63	7.93	11.52	10.27	11.51	
	CV	20.97	40.36	11.06	5.44	6.40	5.37	6.01	10.87	2.61	6.75	4.00	11.64	6.53	7.06	

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Table 2.1.11 Cane length (cm) at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Man dya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	215.00	226.67	245.39	253.33	212.67	266.72	250.00	206.33	237.33	197.45	218.73	269.33	222.00	252.67	234.38
2	Co 12008	223.33	181.87	225.06	241.11	223.33	245.75	220.00	254.33	229.33	219.56	196.33	255.67	201.50	225.44	227.75
3	Co 12009	275.00	258.27	284.03	288.89	258.00	264.04	278.33	279.67	242.66	227.44	314.00	351.67	326.00	272.56	281.71
4	Co 12012	210.00	237.20	260.14	283.33	248.00	247.25	295.00	286.00	213.33	240.34	278.07	298.00	233.50	247.33	256.95
5	Co 12019	178.33	172.73	204.51	184.44	190.00	245.33	220.00	207.67	162.33	181.00	188.13	251.33	159.50	217.00	199.20
6	Co 12024	186.67	173.20	227.34	234.22	198.00	236.88	255.00	189.00	155.66	233.34	200.93	255.33	206.50	235.67	216.50
7	CoM 12085	275.00	218.13	276.26	282.22	268.67	227.75	275.00	206.67	244.66	238.55	245.60	307.33	242.00	269.78	258.42
8	VSI 12121	246.67	212.33	271.96	270.56	252.00	289.64	270.00	254.40	238.33	264.33	253.67	275.00	245.50	256.00	260.62
	Stds															
1	Co 86032	196.67	182.53	245.39	218.89	259.33	264.98	243.33	221.33	226.66	250.89	239.93	260.33	229.00	212.78	236.12
2	CoC 671	231.67	211.40	237.44	240.99	220.67	263.73	270.00	216.33	201.00	240.33	207.87	274.00	239.00	233.33	236.64
3	CoSnk 05103	251.67	244.27	218.78	240.00	232.67	268.67	273.33	299.67	223.66	249.56	264.53	288.33	243.50	268.00	255.57
	Grand mean	226.36	210.78	245.12	248.91	233.03	256.43	259.09	238.31	215.90	231.16	237.07	280.57	231.64	244.60	
	SE	17.93	8.30	243.88	4.98	5.31	7.58	6.22	12.20	3.52	8.28	3.49	17.18	7.20	11.46	
	CD	53.28	24.48	11.74	14.69	15.67	22.35	18.39	36.24	10.38	24.43	10.30	51.04	21.85	32.58	
	CV	13.72	6.82	34.88	3.46	3.95	5.12	4.16	8.87	2.82	6.21	2.55	10.61	4.27	8.12	

Table 2.1.12 Cane diameter (cm) at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Man dya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	2.91	2.69	2.66	2.65	2.59	2.50	2.68	2.69	2.68	2.87	2.72	3.07	2.68	2.58	2.71
2	Co 12008	2.64	2.81	2.60	3.05	2.73	2.52	2.71	2.70	2.65	2.90	2.52	3.53	3.06	2.47	2.78
3	Co 12009	3.05	2.99	2.78	2.91	2.65	2.57	3.61	2.43	2.69	2.95	3.24	2.90	2.89	2.28	2.84
4	Co 12012	2.76	2.54	2.62	2.49	2.49	2.26	2.97	2.15	2.51	2.74	2.43	2.73	2.48	2.89	2.58
5	Co 12019	2.75	2.79	2.63	2.27	2.41	2.51	2.73	2.56	2.61	2.88	2.74	2.97	2.79	2.45	2.64
6	Co 12024	2.85	2.63	2.85	2.88	2.72	2.53	3.29	2.52	2.64	2.74	3.17	2.97	3.02	2.68	2.84
7	CoM 12085	3.64	3.54	2.87	3.18	3.33	2.67	3.80	3.01	2.68	2.98	3.38	3.60	3.14	2.81	3.16
8	VSI 12121	3.22	3.01	2.89	2.95	2.84	2.61	3.32	3.11	2.66	3.24	3.36	3.30	3.07	2.74	3.02
	Stds															
1	Co 86032	3.23	2.95	2.66	3.04	2.81	2.71	3.32	2.44	2.56	3.19	3.08	3.07	2.99	2.53	2.89
2	CoC 671	2.85	3.15	2.81	3.02	2.99	2.62	3.05	2.51	2.47	3.44	2.84	2.93	2.91	2.58	2.85
3	CoSnk 05103	2.70	2.61	2.92	2.71	2.47	2.51	2.63	2.27	2.33	2.83	2.18	2.50	2.94	2.20	2.55
	Grand mean	2.96	2.88	2.75	2.83	2.73	2.55	3.10	2.58	2.59	2.98	2.88	3.05	2.91	2.56	
	SE	0.14	0.10	2.77	0.06	0.10	0.05	0.06	0.06	0.03	0.06	0.05	0.14	0.11	0.12	
	CD	0.43	0.29	0.07	0.17	0.31	0.16	0.16	0.18	0.10	0.16	0.14	0.42	0.34	0.35	
	CV	8.40	5.83	0.20	3.52	6.66	3.60	3.09	4.16	2.34	3.23	2.90	7.99	5.58	8.25	

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Table 2.1.13 Single cane weight (kg) at harvest

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	0.99	1.37	1.19	1.32	1.00	1.36	1.55	1.08	1.60	1.19	0.92	1.67	1.25	1.23	1.26
2	Co 12008	1.04	1.30	1.20	1.51	1.21	1.37	1.14	1.37	1.49	1.28	0.90	1.68	1.39	1.17	1.29
3	Co 12009	1.50	1.79	1.51	1.68	1.34	1.46	1.93	2.23	2.51	1.61	1.38	1.87	2.05	1.26	1.72
4	Co 12012	1.08	1.59	1.27	1.35	1.05	1.40	1.37	1.27	1.46	1.31	1.10	1.51	1.17	1.40	1.29
5	Co 12019	0.85	1.31	1.02	0.85	0.83	1.41	1.10	1.23	1.23	1.06	1.01	1.14	1.02	1.02	1.06
6	Co 12024	1.08	1.67	1.38	1.40	1.02	1.39	1.61	1.14	1.28	1.27	1.23	1.71	1.52	1.27	1.33
7	CoM 12085	2.07	1.56	1.83	2.17	2.34	1.46	2.25	1.64	2.62	1.81	1.44	2.63	1.95	1.49	1.98
8	VSI 12121	1.47	1.69	1.69	1.65	1.45	1.48	1.70	1.41	2.68	1.83	1.43	2.06	1.90	1.31	1.70
	Stds															
1	Co 86032	1.22	1.37	1.19	1.60	1.52	1.28	1.58	1.03	2.50	1.48	1.23	1.57	1.67	1.13	1.46
2	CoC 671	1.48	1.57	1.29	1.73	1.28	1.33	1.96	0.91	1.73	1.59	0.98	1.55	1.62	1.22	1.44
3	CoSnk 05103	1.09	1.54	1.39	1.15	0.87	1.27	1.11	0.93	1.52	1.26	0.77	1.03	1.53	0.95	1.14
	Grand mean	1.26	1.52	1.36	1.49	1.26	1.38	1.57	1.29	1.87	1.43	1.13	1.67	1.55	1.22	
	SE	0.15	0.16	1.38	0.08	0.08	0.04	0.10	0.07	0.02	0.02	0.05	0.18	0.14	0.05	
	CD	0.45	NS	0.08	0.24	0.24	0.13	0.28	0.22	0.08	0.07	0.14	0.53	0.42	0.15	
	CV	20.97	18.26	0.24	9.48	10.94	5.47	10.58	9.63	2.63	2.86	7.22	18.52	12.17	7.26	

Table 2.1.14 Brix % at 10 months

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	20.70	19.17		20.64	18.73	17.19	19.94	20.39	21.41	19.83	19.50	20.57	19.01	17.40	19.61
2	Co 12008	20.66	20.10		21.14	21.67	16.80	20.44	19.62	20.85	20.56	18.47	19.82	21.21	17.03	19.86
3	Co 12009	19.67	19.17		19.64	19.13	17.50	19.44	18.32	20.01	20.10	19.21	21.14	18.11	15.77	19.00
4	Co 12012	20.25	18.48		18.48	19.47	17.37	18.60	16.52	19.71	18.42	19.65	19.21	15.86	16.60	18.34
5	Co 12019	20.08	18.48		18.31	19.93	17.71	19.44	20.79	21.04	19.34	19.46	20.27	19.56	16.17	19.34
6	Co 12024	19.86	19.18		18.48	18.53	16.89	18.44	17.69	20.31	18.88	18.78	19.64	19.31	17.40	18.68
7	CoM 12085	19.77	19.47		20.14	18.20	17.66	19.77	20.95	21.87	20.07	19.08	19.56	18.86	15.93	19.32
8	VSI 12121	20.19	19.15		19.81	19.23	18.32	20.10	19.49	20.51	20.56	19.69	20.04	19.16	16.10	19.43
	Stds															
1	Co 86032	20.36	16.69		19.48	18.93	18.36	19.77	20.72	21.21	20.10	18.59	19.81	17.51	17.03	19.32
2	CoC 671	21.44	19.47		20.14	20.33	18.51	20.10	22.05	21.94	21.10	19.51	21.41	19.06	17.70	20.27
3	CoSnk 05103	19.36	19.37		18.64	19.27	17.49	19.94	17.52	18.54	18.31	18.66	20.19	18.06	15.70	18.47
	Grand mean	20.21	18.98		19.54	19.40	17.62	19.63	19.46	20.67	19.75	19.14	20.15	18.70	16.62	
	SE	0.37	0.57		0.26	0.39	0.37	0.37	0.58	0.44	0.14	0.04	0.47	0.72	0.46	
	CD	1.09	1.68		0.78	1.16	1.08	1.10	1.73	1.32	0.42	0.11	NS	2.19	1.32	
	CV	3.15	5.19		2.35	3.52	3.60	3.29	5.19	3.76	1.26	0.33	4.07	5.63	4.84	

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Table 2.1.15 Sucrose % at 10 months

S.	Entries	Coimb	Akola	Basmath	Kolha	Man	Navsari	Pade	Perumall	Pravara	Pune	Rudrur	Samee	Sankes	Thiru	Mean
1	Co 12007	18.97			19.33	17.63	14.71	19.06	18.91	19.79	17.94	18.58	18.34	16.76	15.08	17.92
2	Co 12008	18.83			19.41	20.06	14.15	18.57	17.05	19.70	19.23	16.73	17.47	18.97	14.79	17.91
3	Co 12009	17.58			17.78	18.08	14.93	18.17	16.97	19.75	18.88	18.43	18.95	16.31	13.72	17.46
4	Co 12012	18.69			15.40	18.23	14.96	16.42	13.92	17.47	16.65	19.06	16.64	13.09	14.41	16.25
5	Co 12019	18.22			16.37	18.74	14.53	18.20	18.88	19.51	17.16	18.34	17.92	17.09	14.03	17.42
6	Co 12024	18.20			17.66	17.64	14.36	17.41	16.13	18.77	17.58	17.66	17.35	17.50	15.01	17.11
7	CoM 12085	17.99			18.26	17.18	15.12	18.18	19.51	20.84	18.60	18.12	17.22	17.46	13.87	17.70
8	VSI 12121	18.36			17.95	18.29	15.73	18.89	17.29	19.63	19.21	19.28	17.84	17.28	13.95	17.81
	Stds															
1	Co 86032	18.62			17.91	17.87	16.30	18.55	18.97	19.96	18.53	17.45	17.52	15.53	14.70	17.66
2	CoC 671	19.70			18.54	19.34	16.18	19.32	20.14	20.63	19.71	18.81	19.36	17.23	15.39	18.70
3	CoSnk 05103	17.62			16.44	17.90	15.61	18.66	15.57	17.68	16.61	17.42	18.05	15.28	13.64	16.71
	Grand mean	18.43			17.73	18.27	15.14	18.31	17.58	19.43	18.19	18.17	17.88	16.59	14.42	
	SE	0.49			0.24	0.42	0.37	0.47	0.58	0.41	0.12	0.04	0.48	0.63	0.38	
	CD	N/A			0.72	1.24	1.09	1.38	1.71	1.21	0.35	0.11	1.42	1.93	1.07	
	CV	4.61			2.39	3.99	4.22	4.41	5.68	3.68	1.13	0.34	4.64	5.59	4.52	

Table 2.1.16 Purity % at 10 months

S. No.	Entries	Coimb atore	Akola	Basmath Nagar	Kolha pur	Man dya	Navsari	Pade gaon	Perumall apalle	Pravara nagar	Pune	Rudrur	Samee rwadi	Sankes hwar	Thiru valla	Mean
1	Co 12007	91.64	87.16		93.65	94.33	85.57	95.62	92.72	92.44	90.46	95.29	89.10	88.17	85.78	91.23
2	Co 12008	93.14	83.45		91.78	93.33	84.22	90.86	86.97	94.49	93.55	90.49	88.14	89.57	85.92	90.21
3	Co 12009	89.25	82.63		90.52	95.00	85.31	93.48	92.66	95.63	93.91	95.78	89.66	90.06	86.04	91.44
4	Co 12012	88.32	89.71		83.36	94.33	86.16	88.26	84.29	88.56	90.35	96.94	86.62	82.30	85.87	87.95
5	Co 12019	90.73	89.72		89.44	94.67	82.18	96.96	90.82	92.74	88.73	94.28	88.37	87.35	85.84	90.18
6	Co 12024	91.65	86.56		95.61	96.00	85.05	94.37	91.21	92.41	93.13	93.77	88.32	90.63	85.36	91.46
7	CoM 12085	91.01	83.47		90.63	94.67	85.67	91.92	93.18	95.25	92.68	95.05	88.06	92.54	86.08	91.40
8	VSI 12121	90.95	83.56		90.61	95.67	86.01	94.02	88.80	95.75	93.39	98.06	88.95	90.15	85.70	91.50
	Stds															
1	Co 86032	91.49	95.06		91.95	95.00	88.91	93.80	91.58	94.78	92.19	93.88	88.48	88.67	85.43	91.35
2	CoC 671	91.87	85.41		92.03	95.67	87.46	96.11	91.36	94.01	93.42	96.53	90.45	90.40	86.09	92.12
3	CoSnk 05103	90.99	84.71		88.20	93.33	89.26	93.61	88.79	92.81	90.70	93.47	89.35	84.60	85.90	90.08
	Grand mean	91.00	86.49		90.71	94.73	85.98	93.55	90.22	93.53	92.05	94.87	88.68	88.59	85.82	
	SE	1.09	4.94		0.62	0.59	2.21	1.30	1.60	1.49	0.43	0.12	0.51	1.49	0.30	
	CD	N/A	N.S.		1.83	NS	NS	3.83	4.76	4.41	1.26	0.34	1.50	4.52	NS	
	CV	2.07	9.89		1.18	1.07	4.46	2.40	3.08	2.77	0.80	0.21	0.99	2.38	0.60	

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Table 2.1.17 CCS % at 10 months

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Man dya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	13.34	11.43		13.72	12.58	10.02	13.66	13.37	13.97	12.71	13.31	12.73	11.58	10.33	12.61
2	Co 12008	13.21	11.21		13.66	14.20	9.56	13.01	11.69	14.04	13.84	11.69	12.06	13.19	10.14	12.52
3	Co 12009	12.22	10.53		12.44	12.92	10.15	12.89	12.00	14.34	13.61	13.18	13.20	11.38	9.42	12.31
4	Co 12012	13.19	11.52		10.35	12.98	10.22	11.35	9.41	12.10	11.73	13.72	11.40	8.74	9.88	11.26
5	Co 12019	12.76	11.51		11.39	13.36	9.69	12.92	13.23	13.80	12.17	13.07	12.39	11.75	9.62	12.18
6	Co 12024	12.80	11.35		12.66	12.65	9.75	12.40	11.32	13.25	12.62	12.57	11.99	12.25	10.26	12.04
7	CoM 12085	12.62	10.83		12.78	12.27	10.30	12.81	13.82	14.91	13.33	12.95	11.89	12.33	9.52	12.46
8	VSI 12121	12.87	10.72		12.56	13.11	10.74	13.44	11.97	14.08	13.81	13.97	12.38	12.06	9.55	12.55
	Stds															
1	Co 86032	13.09	11.33		12.61	12.77	11.30	13.18	13.34	14.42	13.25	12.41	12.13	10.75	10.05	12.44
2	CoC 671	13.87	11.24		13.07	13.86	11.14	13.87	14.14	14.69	14.17	13.56	13.54	12.04	10.56	13.21
3	CoSnk 05103	12.35	11.12		11.36	12.70	10.86	13.25	10.80	12.66	11.82	12.38	12.55	10.34	9.36	11.70
	Grand mean	12.94	11.16		12.42	13.04	10.34	12.98	12.28	13.84	13.01	12.98	12.39	11.49	9.88	
	SE	0.42	0.76		0.18	0.32	0.36	0.39	0.46	0.36	0.10	0.05	0.35	0.46	0.25	
	CD	5.62	NS		0.54	0.95	1.05	1.17	1.35	1.06	0.28	0.14	1.05	1.40	0.71	
	CV	N/A	11.75		2.55	4.27	5.95	5.27	6.42	4.52	1.28	0.66	4.95	5.87	4.39	

Table 2.1.18 Pol % (10 month)

S. No.	Entries	Man dya	Padegaon	Perumallapalle	Sankeshwar	Thiruvalla	Mean
1	Co 12007	14.96	11.35	14.72	12.68	17.49	14.24
2	Co 12008	14.87	10.88	14.25	14.68	19.46	14.83
3	Co 12009	13.53	11.50	13.78	12.43	16.93	13.63
4	Co 12012	11.92	11.56	12.69	10.03	13.53	11.95
5	Co 12019	12.77	11.17	14.19	13.10	17.65	13.78
6	Co 12024	13.73	11.16	13.48	13.37	18.13	13.97
7	CoM 12085	14.15	11.60	14.13	13.81	17.60	14.26
8	VSI 12121	13.93	12.24	14.75	12.89	18.20	14.40
	Stds						
1	Co 86032	13.91	12.59	14.49	12.16	15.79	13.79
2	CoC 671	14.31	12.45	15.02	13.00	18.02	14.56
3	CoSnk 05103	12.53	12.06	14.29	11.51	15.99	13.28
	Grand mean	13.69	11.69	14.16	12.34	17.16	
	SE	0.19	0.30	0.37	0.50	0.66	
	CD	0.56	0.88	1.10	1.52	2.02	
	CV	2.38	4.43	4.53	5.73	5.67	

Table 2.1.19 Fibre % (10 month)

S. No.	Entries	Kolhapur	Navsari	Padegaon	Sankeshwar	Mean
1	Co 12007	12.60	12.81	12.76	14.36	13.13
2	Co 12008	13.36	13.12	13.25	12.63	13.09
3	Co 12009	13.90	13.01	14.16	13.81	13.72
4	Co 12012	12.59	12.71	12.68	13.30	12.82
5	Co 12019	12.02	13.16	12.03	13.32	12.63
6	Co 12024	12.29	12.70	12.60	13.62	12.80
7	CoM 12085	12.50	13.25	12.30	10.84	12.22
8	VSI 12121	12.41	12.19	11.95	15.38	12.98
	Stds					
1	Co 86032	12.34	12.77	11.87	11.71	12.17
2	CoC 671	12.82	13.08	12.26	14.56	13.18
3	CoSnk 05103	13.80	12.75	13.40	14.66	13.65
	Grand mean	12.78	12.87	12.66	13.47	
	SE	0.21	0.31	0.36	0.66	
	CD	0.63	0.83	1.06	2.00	
	CV	2.88	4.25	4.93	7.10	

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Table 2.1.20 Extraction % (10 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	45.44			49.08		52.81	57.51	55.69	43.69				48.70	55.65	51.07
2	Co 12008	45.35			53.71		55.65	56.28	53.99	46.13				59.77	57.10	53.50
3	Co 12009	45.19			55.40		54.35	53.86	57.13	44.05				56.19	55.21	52.67
4	Co 12012	42.99			48.05		54.44	57.08	59.42	44.20				54.14	58.36	52.33
5	Co 12019	48.23			52.39		51.39	54.90	61.73	44.27				59.58	56.41	53.61
6	Co 12024	47.16			53.88		52.24	52.65	57.95	42.79				55.34	52.71	51.84
7	CoM 12085	49.04			58.73		54.41	55.87	54.60	48.15				55.01	58.64	54.31
8	VSI 12121	50.28			59.04		52.19	55.71	59.89	48.95				57.09	62.35	55.69
	Stds															
1	Co 86032	47.95			56.41		53.94	56.25	54.64	47.47				59.39	57.55	54.20
2	CoC 671	49.72			57.95		54.21	52.43	53.83	44.85				55.76	58.86	53.45
3	CoSnk 05103	45.46			55.08		54.78	58.53	51.82	43.22				58.25	54.35	52.69
	Grand mean	46.98			54.52		53.67	55.55	56.43	45.25				56.29	57.02	
	SE	1.63			1.55		0.96	1.42	NS	0.66				3.36	2.36	
	CD	N/A			4.58		NS	N.S.		1.95				10.18	NS	
	CV	5.99			4.93		3.10	4.42		2.53				8.45	7.18	

Table 2.1.21 NMC (10 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	77.52			243.89		121.61	79.23	92.65	105.78			55.74		104.26	110.08
2	Co 12008	62.10			206.34		122.36	95.48	90.17	117.24			50.37		93.63	104.71
3	Co 12009	73.12			266.67		123.50	72.57	90.63	94.02			46.30		109.90	109.59
4	Co 12012	92.52			250.57		121.73	119.93	120.56	111.06			80.28		109.60	125.78
5	Co 12019	85.42			173.01		120.40	120.69	98.21	102.98			62.41		93.13	107.03
6	Co 12024	60.58			210.10		120.98	85.83	91.25	94.88			46.85		105.01	101.94
7	CoM 12085	55.88			252.88		125.13	76.60	66.89	102.82			34.82		107.25	102.78
8	VSI 12121	68.52			239.91		127.27	92.36	89.63	118.72			57.78		117.35	113.94
	Stds															
1	Co 86032	66.47			200.01		122.43	92.08	98.06	114.79			71.95		110.17	109.49
2	CoC 671	44.91			231.11		118.10	75.55	89.47	98.19			58.98		100.17	102.06
3	CoSnk 05103	91.82			246.90		120.82	121.25	113.22	117.99			69.07		109.38	123.81
	Grand mean	70.81			229.22		122.21	93.78	94.61	107.13			57.69		105.44	
	SE	2.37			8.48		3.64	5.36	5.12	1.96			3.88		4.08	
	CD	7.05			25.03		12.47	15.83	15.22	5.79			11.52		11.58	
	CV	5.82			6.41		5.16	9.89	9.38	3.17			11.64		6.69	

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Table 2.1.22 Cane length (cm) (10 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	206.67			243.89	208.00	239.15	180.00	194.93	214.00			275.33	198.00	253.67	221.36
2	Co 12008	223.33			206.34	202.00	227.36	181.67	227.35	213.66			225.33	161.50	250.11	211.87
3	Co 12009	268.33			266.67	238.00	246.00	241.67	260.30	221.66			336.67	232.00	257.89	256.92
4	Co 12012	208.33			250.57	233.33	229.45	216.67	265.08	190.00			296.00	213.50	252.33	235.53
5	Co 12019	151.67			173.01	179.33	241.91	161.67	203.62	119.66			208.67	134.00	216.11	178.97
6	Co 12024	178.33			210.1	184.00	219.42	201.67	176.27	128.33			268.00	176.00	218.67	196.08
7	CoM 12085	248.33			252.88	224.00	215.95	211.67	201.38	212.33			271.00	200.50	255.89	229.39
8	VSI 12121	241.67			239.91	232.00	236.21	220.00	257.10	210.33			274.67	208.00	262.44	238.23
	Stds															
1	Co 86032	183.33			200.01	238.00	238.96	205.00	213.83	213.66			292.00	202.50	242.11	222.94
2	CoC 671	246.67			231.11	215.33	263.02	205.00	213.40	164.00			256.33	202.50	229.56	222.69
3	CoSnk 05103	201.67			246.9	226.00	235.57	210.00	266.77	209.00			285.67	227.00	258.33	221.36
	Grand mean	214.39			229.22	216.36	235.73	203.18	225.46	190.60			271.79	195.95	245.19	
	SE	16.01			8.48	6.08	8.23	3.86	12.50	3.51			11.92	6.88	10.92	
	CD	47.57			25.03	17.94	24.29	11.42	37.12	10.37			35.41	20.88	NS	
	CV	12.94			6.41	4.87	6.05	3.29	9.60	3.19			7.60	4.75	7.72	

Table 2.1.23 Cane Diameter (cm) (10 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	2.66			2.58	2.80	2.36	3.03	2.37	2.50			2.37	2.67	2.49	2.58
2	Co 12008	2.74			2.96	2.91	2.43	2.76	2.40	2.47			2.53	2.74	2.80	2.67
3	Co 12009	2.87			2.6	2.62	2.46	3.21	2.49	2.55			2.30	2.63	2.74	2.65
4	Co 12012	2.74			2.32	2.50	2.51	2.84	1.99	2.34			2.13	2.48	3.10	2.49
5	Co 12019	2.55			2.19	2.56	2.42	2.92	2.61	2.44			2.35	2.83	2.81	2.57
6	Co 12024	2.97			2.59	2.88	2.52	3.11	2.33	2.50			2.29	3.05	2.42	2.67
7	CoM 12085	3.15			3.08	3.46	2.59	3.13	2.88	2.56			2.53	3.60	2.98	3.00
8	VSI 12121	2.99			2.83	2.83	2.58	3.18	3.15	2.59			2.53	3.06	2.80	2.85
	Stds															
1	Co 86032	2.75			2.87	2.92	2.43	3.24	2.30	2.47			2.31	2.95	2.65	2.69
2	CoC 671	2.88			2.99	3.11	2.46	3.11	2.37	2.42			2.38	2.93	2.70	2.73
3	CoSnk 05103	2.49			2.72	2.52	2.16	2.49	2.10	2.14			2.11	2.98	2.59	2.43
	Grand mean	2.80			2.7	2.83	2.45	3.00	2.45	2.45			2.35	2.90	2.73	
	SE	0.14			0.1	0.14	0.05	0.12	0.07	0.04			0.09	0.07	0.12	
	CD	N/A			0.3	0.41	0.14	0.36	0.22	0.13			0.27	0.22	0.35	
	CV	8.91			6.56	16.09	3.41	6.99	5.25	3.20			6.63	3.62	7.87	

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Table 2.1.24 Single weight (10 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	0.98			1.17	0.95	1.22	1.32	1.35	1.32			1.28	1.12	1.09	1.18
2	Co 12008	0.87			1.31	1.01	1.27	1.03	1.26	1.23			1.12	0.98	1.44	1.15
3	Co 12009	1.46			1.54	1.08	1.36	1.97	2.60	2.02			1.44	1.43	1.43	1.63
4	Co 12012	1.06			1.20	0.97	1.33	1.17	1.34	1.24			1.11	1.06	1.46	1.19
5	Co 12019	0.73			0.77	0.93	1.37	0.97	1.39	1.06			1.06	0.84	1.15	1.03
6	Co 12024	1.12			1.27	1.05	1.29	1.39	1.47	0.97			1.38	1.26	1.14	1.23
7	CoM 12085	1.95			2.03	2.03	1.19	1.84	1.79	2.19			1.47	2.13	1.50	1.81
8	VSI 12121	1.42			1.83	1.32	1.36	1.77	1.63	2.21			1.95	1.59	1.51	1.66
	Stds															
1	Co 86032	1.14			1.36	1.53	1.21	1.41	1.18	1.94			1.39	1.43	1.29	1.39
2	CoC 671	1.55			1.63	1.44	1.36	1.66	1.21	0.91			1.26	1.49	1.22	1.37
3	CoSnk 05103	0.94			1.18	0.81	1.12	0.91	1.32	0.93			0.89	1.53	1.12	1.08
	Grand mean	1.20			1.39	1.19	1.28	1.40	1.50	1.46			1.30	1.35	1.30	
	SE	0.16			0.08	0.08	0.05	0.10	0.12	0.05			0.13	0.10	0.06	
	CD	0.47			0.24	0.22	0.14	0.30	0.34	0.16			0.38	0.29	0.17	
	CV	22.66			10.17	11.00	6.52	12.33	13.25	6.64			16.74	9.54	7.87	

Table 2.1.25 Cane length(cm) 8 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	175.00				144.00	210.90		184.69	193.00			234.00	100.00		177.37
2	Co 12008	173.33				144.67	207.10		209.14	187.00			221.33	103.00		177.94
3	Co 12009	213.33				164.67	219.93		236.36	199.66			286.00	139.50		208.49
4	Co 12012	208.33				161.33	208.83		250.07	167.33			244.33	107.50		192.53
5	Co 12019	128.33				100.00	221.84		185.31	110.00			167.33	98.50		144.47
6	Co 12024	148.33				117.33	207.96		170.26	111.33			213.00	92.00		151.46
7	CoM 12085	195.00				158.00	219.53		192.61	201.33			249.67	116.50		190.38
8	VSI 12121	201.67				174.00	222.69		234.00	193.33			221.33	129.50		196.65
	Stds															
1	Co 86032	140.00				160.00	212.76		209.33	202.33			214.67	104.50		177.66
2	CoC 671	173.33				140.00	213.51		189.33	148.00			219.00	106.00		169.88
3	CoSnk 05103	198.33				158.67	208.69		254.84	195.66			237.00	103.50		193.81
	Grand mean	177.73				147.52	213.98		210.54	173.54			227.97	109.14		
	SE	8.81				4.84	6.38		15.37	4.19			14.67	6.62		
	CD	26.17				14.29	NS		45.65	12.36			43.59	20.07		
	CV	8.59				5.69	5.16		12.64	4.18			11.15	8.29		

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Table 2.1.26 Cane diameter (cm) (8 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	3.14				2.92	2.11		2.20	2.35			1.73	2.94		2.48
2	Co 12008	3.17				3.15	2.13		2.27	2.41			1.87	2.99		2.57
3	Co 12009	3.49				3.04	2.25		2.07	2.35			1.87	2.82		2.56
4	Co 12012	2.72				2.78	2.30		2.04	2.25			1.50	2.58		2.31
5	Co 12019	2.94				2.79	2.23		2.19	2.34			1.57	2.96		2.43
6	Co 12024	2.93				3.11	2.35		2.18	2.37			1.73	3.26		2.56
7	CoM 12085	3.30				3.57	2.45		2.74	2.34			2.43	3.78		2.94
8	VSI 12121	3.25				3.21	2.41		2.90	2.40			2.00	3.24		2.77
	Stds															
1	Co 86032	3.07				3.25	2.23		2.03	2.28			1.70	3.22		2.54
2	CoC 671	3.12				3.32	2.34		2.10	2.29			1.67	2.87		2.53
3	CoSnk 05103	2.41				2.58	1.97		2.06	2.12			1.53	3.16		2.26
	Grand mean	3.05				3.07	2.25		2.25	2.32			1.78	3.07		
	SE	0.15				0.13	0.04		0.09	0.03			0.10	0.13		
	CD	0.44				0.39	0.11		0.26	0.10			0.31	0.38		
	CV	8.39				7.41	2.74		6.72	2.57			10.13	5.83		

Table 2.1.27 Single cane weight (8 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	1.12				0.81	0.93	1.07	1.18	1.14			1.21	0.61		1.01
2	Co 12008	1.06				0.85	0.98	0.85	1.15	1.16			1.12	0.66		0.98
3	Co 12009	1.51				0.80	1.07	1.40	1.89	1.64			1.72	0.87		1.36
4	Co 12012	0.98				0.72	1.04	0.92	1.29	1.19			1.05	0.57		0.97
5	Co 12019	0.78				0.49	1.08	0.80	1.14	0.83			0.73	0.49		0.79
6	Co 12024	0.89				0.69	1.00	1.07	1.24	0.95			1.18	0.68		0.96
7	CoM 12085	1.69				1.07	0.90	1.45	1.58	1.83			1.84	1.25		1.45
8	VSI 12121	1.46				1.10	1.07	1.09	1.76	1.73			1.44	1.06		1.34
	Stds															
1	Co 86032	0.95				0.89	0.92	1.13	1.12	1.72			1.13	0.84		1.09
2	CoC 671	1.26				0.95	1.07	1.15	1.24	0.93			1.02	0.66		1.03
3	CoSnk 05103	0.74				0.63	0.81	0.82	1.13	0.83			1.01	0.81		0.85
	Grand mean	1.13				0.82	0.99	1.07	1.34	1.27			1.22	0.77		
	SE	0.07				0.06	0.05	0.08	0.11	0.05			0.10	0.06		
	CD	0.20				0.18	0.14	0.25	0.33	0.14			0.31	0.18		
	CV	10.15				13.04	8.32	13.59	14.23	6.81			14.57	10.32		

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Table 2.1.28 CCS % 8 month

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	11.89				9.67	6.41	11.62	12.05	13.42	10.10	12.09	10.65	5.20		10.31
2	Co 12008	12.25				9.35	6.86	12.54	11.20	12.37	10.86	11.44	10.82	4.64		10.23
3	Co 12009	11.50				8.93	7.27	12.54	10.55	11.41	10.86	10.92	10.01	3.49		9.75
4	Co 12012	9.44				5.47	7.70	8.20	8.58	12.48	9.38	11.05	5.91	2.58		8.08
5	Co 12019	11.76				7.17	7.70	9.10	12.33	13.38	9.82	10.57	8.90	2.36		9.31
6	Co 12024	11.76				6.97	6.73	9.20	11.43	12.37	9.88	11.33	8.99	1.71		9.04
7	CoM 12085	10.97				8.86	7.89	10.32	12.55	12.96	10.70	12.31	10.27	2.72		9.95
8	VSI 12121	11.40				8.58	8.40	10.63	10.96	12.70	10.74	11.67	8.76	2.07		9.59
	Stds															
1	Co 86032	11.96				8.22	8.96	11.09	11.80	12.92	11.12	11.18	9.00	2.74		9.90
2	CoC 671	11.56				7.83	7.85	11.66	12.63	13.50	11.63	10.69	9.62	4.89		10.19
3	CoSnk 05103	11.16				7.02	7.38	10.83	8.30	11.67	9.73	9.27	8.54	2.66		8.66
	Grand mean	11.42				8.01	7.56	10.70	11.13	12.65	10.44	11.14	9.22	3.19		
	SE	0.40				0.72	0.19	0.42	0.39	0.27	0.11	0.02	0.52	0.67		
	CD	1.18				2.14	0.56	1.25	1.16	0.79	0.32	0.07	1.55	2.02		
	CV	6.01				15.65	4.38	6.87	6.10	3.69	1.80	0.37	9.82	29.76		

Table 2.1.29 Sucrose% (8 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	17.14				13.99	9.83	16.70	17.20	18.91	14.40	16.99	15.57	9.01		14.97
2	Co 12008	17.58				13.65	10.47	18.03	16.06	17.54	15.51	16.28	15.91	8.25		14.93
3	Co 12009	16.62				12.98	10.87	17.73	15.21	15.93	15.48	15.58	14.59	6.77		14.18
4	Co 12012	14.21				9.09	11.56	12.75	12.77	17.15	13.48	15.80	9.81	5.66		12.23
5	Co 12019	17.01				11.04	11.46	13.78	17.58	18.46	14.19	15.33	13.49	5.23		13.76
6	Co 12024	16.87				10.79	10.10	13.75	16.28	17.22	13.98	16.06	13.41	4.38		13.28
7	CoM 12085	15.84				12.14	11.96	15.10	17.96	18.31	15.28	17.23	15.01	5.79		14.46
8	VSI 12121	16.50				12.63	12.63	15.53	15.80	17.51	15.40	16.52	13.22	5.01		14.07
	Stds															
1	Co 86032	16.65				12.24	13.41	16.05	16.97	18.14	15.65	16.05	13.35	5.96		14.45
2	CoC 671	16.75				11.82	11.79	16.84	18.11	18.85	16.34	15.35	14.50	8.56		14.89
3	CoSnk 05103	16.23				10.87	11.00	15.81	12.11	16.23	13.86	13.69	13.03	5.81		12.86
	Grand mean	16.49				11.93	11.37	15.64	16.00	17.66	14.87	15.90	13.81	6.40		
	SE	0.44				0.90	0.18	0.48	0.48	0.29	0.14	0.03	0.68	0.76		
	CD	1.30				2.66	0.52	1.42	1.44	0.87	0.43	0.08	2.01	2.32		
	CV	17.14				13.99	9.83	16.70	17.20	18.91	14.40	16.99	15.57	9.01		

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Table 2.1.30 Brix % (8 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	19.25				15.90	12.47	18.67	18.91	20.22	16.27	18.11	18.01	13.71		17.15
2	Co 12008	19.60				15.90	13.18	20.13	17.88	18.99	17.59	17.80	18.64	12.96		17.27
3	Co 12009	18.79				14.90	13.18	19.09	17.11	16.66	17.51	17.18	16.78	11.71		16.29
4	Co 12012	17.42				13.20	14.11	16.53	15.31	17.52	15.48	17.50	14.11	10.96		15.21
5	Co 12019	19.26				14.20	13.77	17.06	19.28	18.79	16.50	17.45	16.71	10.21		16.32
6	Co 12024	18.78				14.00	12.30	16.62	17.84	17.89	15.54	17.40	16.18	9.46		15.60
7	CoM 12085	17.88				14.60	14.86	17.49	19.88	19.66	17.33	18.15	17.39	10.96		16.82
8	VSI 12121	18.68				14.90	15.46	17.97	17.74	17.93	17.60	17.85	16.28	10.46		16.49
	Stds															
1	Co 86032	17.33				14.80	16.25	18.21	19.01	19.26	17.19	17.81	15.91	11.46		16.72
2	CoC 671	19.04				14.70	14.38	19.02	20.11	19.76	17.93	17.16	17.81	13.21		17.31
3	CoSnk 05103	18.58				14.10	13.23	18.26	13.98	16.79	15.65	16.20	16.34	11.21		15.43
	Grand mean	18.60				14.65	13.93	18.10	17.91	18.50	16.78	17.51	16.74	11.48		
	SE	0.43				0.48	0.20	0.32	0.40	0.22	0.17	0.03	0.59	0.50		
	CD	1.29				1.41	0.59	0.96	1.20	0.66	0.50	0.08	1.75	1.50		
	CV	4.04				5.67	2.50	3.11	3.91	2.12	1.76	0.26	6.09	6.17		

Table 2.1.31 Purity % (8 month)

S. No.	Entries	Coimbatore	Akola	Basmath Nagar	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	89.02				88.67	78.82	89.41	90.85	93.39	88.51	93.87	86.40	65.67		86.46
2	Co 12008	89.70				86.33	79.43	89.52	89.90	92.93	88.20	91.47	85.21	63.62		85.63
3	Co 12009	88.46				87.33	82.47	92.92	88.87	95.62	88.42	90.77	86.82	57.67		85.94
4	Co 12012	81.52				69.00	81.92	77.12	83.44	97.89	87.08	90.36	69.36	51.49		78.92
5	Co 12019	88.32				78.00	83.22	80.73	91.15	98.24	86.04	87.83	80.64	51.09		82.53
6	Co 12024	89.84				77.67	82.11	82.59	91.24	96.25	89.96	92.32	82.88	46.50		83.14
7	CoM 12085	88.59				82.33	80.48	86.31	90.35	93.18	88.19	94.90	86.27	52.53		84.31
8	VSI 12121	88.29				84.33	81.69	86.44	89.09	93.95	87.49	92.53	81.11	47.90		83.28
	Stds															
1	Co 86032	88.36				83.33	82.52	88.10	89.32	93.30	91.01	89.99	83.86	51.59		84.14
2	CoC 671	87.94				81.00	81.98	88.52	89.96	95.44	91.13	89.48	81.40	64.54		85.14
3	CoSnk 05103	87.35				77.67	83.14	86.59	86.65	96.42	88.56	84.55	79.66	51.61		82.22
	Grand mean	87.94				81.42	81.62	86.20	89.17	95.15	88.60	90.73	82.15	54.93		
	SE	0.66				3.81	1.80	1.82	1.26	1.21	0.45	0.02	1.41	4.86		
	CD	1.95				NS	NS	5.39	3.75	3.58	1.33	0.07	4.18	14.75		
	CV	1.30				8.11	3.79	3.66	2.45	2.21	0.88	0.05	2.97	12.51		

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Table 2.1.32 NMC (8 month)

S. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007		10.11		87.76	144.63	81.46	96.13	111.12	89.12	141.13	82.07			104.18
2	Co 12008		25.77		100.46	143.93	97.98	93.88	122.33	88.73	143.96	95.85			110.89
3	Co 12009		9.65		91.53	160.07	75.21	90.17	98.90	72.63	139.02	76.89			100.55
4	Co 12012		9.03		127.05	141.72	122.08	144.23	118.57	98.63	161.63	114.74			128.58
5	Co 12019		7.02		128.44	149.58	122.91	104.25	110.15	96.30	155.05	117.56			123.03
6	Co 12024		14.81		95.77	157.44	88.12	102.78	99.86	74.16	137.05	77.41			104.07
7	CoM 12085		7.87		81.08	148.64	79.23	77.87	109.43	74.82	150.64	73.56			99.41
8	VSI 12121		15.66		115.94	160.79	94.79	91.64	124.75	90.99	136.88	137.26			119.13
	Stds														
1	Co 86032		17.28		80.82	125.08	94.03	103.16	119.25	86.29	147.86	142.22			112.34
2	CoC 671		9.03		96.30	137.57	77.71	93.57	104.58	73.49	127.65	91.11			100.25
3	CoSnk 05103		29.55		128.51	123.74	124.16	129.38	127.09	106.12	183.84	136.00			132.36
	Grand mean		14.16		103.06	144.84	96.15	102.46	113.28	86.48	147.70	104.06			
	SE		3.30		4.90	5.03	5.41	7.24	1.89	3.31	3.64	5.70			
	CD		9.73		14.45	14.84	15.98	21.50	5.58	9.77	10.73	16.92			
	CV		40.36		8.23	6.02	9.74	12.24	2.89	6.63	4.27	9.48			

Table 2.1.33 No. of shoots (120 days)

S. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	72.69	37.11	120.37	98.41	184.93	107.50	187.77	115.75	161.34	108.88	102.59	78.21	112.26	120.89
2	Co 12008	69.99	47.84	107.18	112.43	178.38	115.00	178.64	127.62	157.05	120.12	119.81	93.07	99.68	123.25
3	Co 12009	68.52	49.69	106.02	97.69	193.64	111.67	166.19	102.27	129.10	113.78	96.11	79.54	115.60	115.01
4	Co 12012	115.20	50.15	190.51	144.71	177.85	148.33	215.22	122.61	160.93	151.85	143.43	166.36	116.77	154.48
5	Co 12019	94.14	54.17	126.39	148.15	179.53	171.39	203.54	114.54	173.80	135.65	146.94	80.36	101.54	139.66
6	Co 12024	60.34	45.76	159.49	103.64	178.52	130.00	179.72	103.77	132.57	128.80	96.76	76.16	110.88	121.72
7	CoM 12085	65.05	51.70	127.55	86.44	181.92	140.00	178.02	114.16	140.51	136.23	91.94	103.83	113.33	123.25
8	VSI 12121	101.00	51.93	140.97	130.42	186.22	122.22	200.14	125.76	164.97	115.74	171.57	136.22	123.54	143.23
	Stds														
1	Co 86032	47.45	62.81	146.99	101.26	163.05	149.72	207.02	122.63	148.47	141.09	177.78	118.39		138.53
2	CoC 671	57.02	47.38	119.91	102.05	179.45	113.89	187.22	109.63	130.92	104.39	113.89	104.86	114.56	119.82
3	CoSnk 05103	109.18	56.25	171.06	140.41	165.28	164.17	217.85	133.78	205.51	159.84	170.00	121.36	107.28	155.48
	Grand mean	78.23	50.44	137.86	115.06	178.98	133.99	192.85	117.50	155.02	128.76	130.07	105.31	111.54	
	SE	6.51	2.05	8.59	4.00	5.56	7.12	8.99	2.13	4.86	5.72	7.12	8.40	111.87	
	CD	19.33	6.06	25.34	11.81	16.41	21.04	26.69	6.30	14.32	16.87	21.15	25.46	4.36	
	CV	14.41	7.05	10.79	6.03	5.38	9.20	8.07	3.14	5.42	7.69	9.48	11.12	12.39	

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Table 2.1.34 Germination % (30 days)

S. No.	Entries	Coimbatore	Akola	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 12007	48.03	28.61	37.96	37.08	57.77	42.67	69.03	43.35	37.08	35.50	64.10	43.20	61.94	48.14
2	Co 12008	48.39	35.83	37.38	40.83	51.65	38.67	41.95	42.97	33.97	32.17	59.17	44.01	52.99	43.68
3	Co 12009	51.07	38.24	42.36	42.08	56.68	49.33	61.74	42.26	40.74	41.44	57.92	43.66	48.23	48.13
4	Co 12012	46.30	40.37	51.39	40.63	57.52	46.00	85.47	39.52	37.79	35.78	55.48	48.16	52.88	49.74
5	Co 12019	56.42	38.89	37.62	41.25	55.25	53.33	64.00	41.30	37.40	37.22	61.53	44.01	54.69	48.67
6	Co 12024	42.97	38.06	58.80	42.83	59.04	53.67	64.41	40.69	33.06	29.61	53.75	47.47	60.83	48.93
7	CoM 12085	53.60	51.02	43.98	50.63	54.50	52.67	74.59	39.84	40.80	37.89	57.36	52.09	53.40	50.95
8	VSI 12121	54.47	41.48	54.17	41.25	54.22	37.67	68.80	39.17	42.49	28.33	68.68	49.78	65.14	50.35
	Stds														
1	Co 86032	38.56	60.09	47.22	53.75	51.81	46.67	56.83	45.23	35.03	35.33	65.49	47.36	45.52	47.57
2	CoC 671	43.04	43.06	44.21	44.08	58.64	35.33	62.50	39.36	36.46	31.28	61.11	46.08	54.55	45.63
3	CoSnk 05103	42.46	52.59	57.41	41.42	54.58	53.67	82.75	43.04	38.25	41.11	68.68	42.16	55.02	51.67
	Grand mean	47.76	42.57	46.59	43.26	55.61	46.33	66.55	41.52	37.55	35.06	61.21	46.18	56.45	
	SE	4.59	3.50	2.41	4.41	1.63	4.16	3.50	2.58	1.59	1.52	4.46	2.02	2.78	
	CD	N/A	10.34	7.12	NS	4.79	12.30	10.40	7.62	4.69	4.50	NS	6.13	7.89	
	CV	16.66	14.26	8.97	17.65	5.06	15.55	9.11	10.78	7.33	7.53	12.63	6.21	8.51	

Table 2.1.35. Assessment of performance of entries by monitoring team

S.No	Entries	Perumallapalle	Pugulur	Coimbatore	Thiruvalla	Mandya	Sankeshwar	Sameerwadi	Kolhapur
1	Co 12007	Poor	Not conducted	Poor	Poor	Poor	Poor	On par	Poor
2	Co 12008	Poor		Poor	On par	Poor	Poor	Poor	Poor
3	Co 12009	Poor		On par	On par	Better	Poor	Better	On par
4	Co 12012	On par		Better	On par	On par	Poor	Better	On par
5	Co 12019	Poor		Poor	Poor	Poor	Poor	Poor	Poor
6	Co 12024	Poor		Poor	Poor	Poor	Poor	On par	Poor
7	CoM 12085	Poor		On par	On par	Better	On par	Better	On par
8	VSI 12121	On par		On par	On par	Better	On par	On par	On par
Standards									
9	Co 86032						Best	Best	
10	CoC 671								
11	CoSnk 05103	Best		Best	Best	Best			Best

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S.No.	Variety	Navsari	PowerKheda	Rudrur	Pune	Padegaon	Pravarnagar	Akola
1	Co 12007	Average	Average	Poor	Good	Average	Very Good	Average
2	Co 12008	Poor	Good	Average	Good	Average	Good	Poor
3	Co 12009	Very Good	Good	Very Good	Very Good	Very Good	Very Good	Good
4	Co 12012	Good	Good	Good	Good	Very Good	Very Good	Good
5	Co 12019	Good	Good	Average	Poor	Average	Average	Poor
6	Co 12024	Good	Good	Poor	Poor	Good	Average	Average
7	CoM 12085	Average	Average	Good	Average	Very Good	Very Good	good
8	VSI 12121	Very Good	Good	Good	Very Good	Good	Very Good	Very Good
Standards :								
9	Co 86032	Good	Poor	Poor	Good	Very good	Very good	Good
10	CoC 671	Good	Good	Poor	Poor	Very good	Poor	Poor
11	CoSnk 05103	Very good	Good	Good	Good	Average	Good	Good

2.2. Advanced Varietal Trial –Ratoon (2018-19)

Centers where trial was conducted (12)	Coimbatore, Kolhapur, Mandya, Navsari, Padegoan, Perumallapalle, Pravaranagar, Pune, Sameerwadi, Sankeshwar, Rudrur and Thiruvalla
Entries (8)	Co 12007, Co 12008, Co 12009, Co 12012, Co 12019, Co 12024, CoM 12085, VSI 12121
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)
Year of start	2017-18
Crop duration	11 months

Results of the previous year: Eight clones were evaluated along with three standards at 13 centres in AVT I plant during 2017-18. Basmathnagar, Kawardha, Powerkheda, Pugalur and Sirugamani centres didn't conduct the trial. Three test entries *viz.*, VSI 12121 (16.55 t/ha), Co 12009 (15.81 t/ha) and CoM 12085 (15.69 t/ha) recorded higher sugar yield than the best standard CoC 671 (14.64 t/ha) and ranked as first three entries in the zone. VSI 12121 and Co 12009 recorded more than 10% improvement in sugar yield over the best standards at six centres. Four entries *viz.*, VSI 12121 (118.99 t/ha), Co 12012 (113.58 t/ha), Co 12009 (112.81 t/ha) and CoM 12085 (110.92 t/ha) had higher cane yield than the best standard Co 86032 (107.25 t/ha). The entry VSI 12121 ranked first in the zone and recorded more than 10% improvement in cane yield over the best standards at six locations. Co 12009 ranked third in the zone and recorded more than 10% yield improvement over the best check at five locations. None of the entries recorded higher CCS % and sucrose per cent than the best standard CoC 671 (14.51% and 20.56% respectively) in this trial. The test entries Co 12008 and Co 12007 ranked as second and third respectively in the zone for CCS% (14.11% and 13.97% respectively) and sucrose per cent (20.16% and 19.83% respectively). The best entry in the trial was VSI 12121 with 13.03% and 10.95% improvement over the best standard for CSS yield and cane yield respectively in the zone. The data are presented in the tables **2.7.1 to 2.7.24**.

Results of the current year: Eight test entries and three standards (Co 86032, CoC 671 and CoSnk 05103) were evaluated at 12 locations. The test entries VSI 12121 and Co12009 recorded 10 % improvement for sugar yield over the best standard CoSnk 05103 (14.31 t/ha) across the zone. None of the entries recorded 10 % improvement for cane yield over the best standard CoSnk 05103 (110.47 t/ha) across the zone, however, the entries VSI 12121 (115.59 t/ha) and Co 12009 (111.23 t/ha) recorded numerically higher cane yield in the zone as compared to the best standard. VSI 12121 had recorded more than 10 % improvement for cane yield over the best standard at four locations in the zone. In case of CCS %, none of the entries recorded 5% improvement over the best standard CoC 671 (14.71 %) across the zone. The test entries Co 12009 and CoM 12085 had recorded CCS% improvement of more than 5% at Padegaon and Rudrur respectively. For sucrose %, None of the test entries recorded 5 % improvement for sucrose % over the best standard CoC 671 (20.76) across the zone. Entry CoM 12085 recorded more than 5% improvement for sucrose content at Rudrur centre. The entries VSI 12121 and Co 12009 were identified as the qualifying entries as these entries recorded more than 10% improvement over the standard Co 86032 for sugar and cane yield and were numerically superior sucrose content and CCS %. Further details are presented in Tables 2.7.1 to 2.7.26.

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Peninsular zone AVT - Ratoon

Table 2.2.1 CCS t/ha at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameer wadi*	Sanke shwar	Rudrur	Thiruvalla*	Mean	Rank
1	Co 12007	10.62	11.58	7.30	12.23	12.09	9.02	16.96	12.58	11.18	6.02	15.32	8.27	11.37	
2	Co 12008	10.45	11.10	10.07	11.50	10.67	5.54	20.05	17.35	2.91	5.72	14.39	9.91	11.68	
3	Co 12009	18.49	14.40	11.39	14.22	17.25	15.25	20.54	19.54	7.60	14.11	12.50	8.96	15.77	2
4	Co 12012	15.52	13.65	13.43	11.96	13.92	12.10	16.18	14.37	10.69	9.85	12.66	8.23	13.36	
5	Co 12019	11.30	10.22	9.31	12.91	11.45	10.89	15.90	11.98	8.11	7.24	15.34	8.05	11.65	
6	Co 12024	12.58	12.94	5.82	13.49	11.38	8.52	14.40	6.98	4.14	6.31	15.00	9.36	10.74	
7	CoM 12085	12.46	15.88	15.29	13.67	17.93	8.57	22.11	15.03	2.55	7.62	21.56	8.50	15.01	3
8	VSI 12121	17.96	14.15	12.79	13.78	15.63	13.77	24.24	21.47	10.82	14.68	16.04	10.56	16.45	1
	Standards														
1	Co 86032	12.80	12.82	13.32	11.49	16.47	9.13	21.57	17.34	10.43	8.73	15.06	9.97	13.87	5
2	CoC 671	12.75	10.48	7.54	11.06	12.95	11.64	18.34	12.63	2.57	6.68	17.13	8.41	12.12	
3	CoSnk 05103	15.29	13.38	16.02	11.54	16.49	9.93	17.28	16.47	13.27	11.32	15.38	9.12	14.31	4
	GM	13.66	12.78	11.12	12.54	14.20	10.40	18.27	15.07	7.66	9.48	15.49	9.03	13.30	
	SE	0.48	0.92	0.56	0.64	0.97	0.94	0.43		1.29	0.85	0.90	0.49		
	CD	1.44	2.71	1.66	1.88	2.85	2.78	1.28		3.82	2.54	2.66	1.40		
	CV	6.14	12.46	8.79	8.82	11.78	15.59	3.98		29.08	12.64	10.08	9.42		
Qualifying Entries at each location															
	1	Co 12009	CoM 12085	-	Co 12009	CoM 12085	Co 12009	VSI 12121	VSI 12121	-	VSI 12121	CoM 12085	-	VSI 12121	
	2	VSI 12121	-	-	VSI 12121	-	VSI 12121	-	Co 12009	-	Co 12009	-	-	Co 12009	
	3	-	-	-	CoM 12085	-	-	-	-	-	-	-	-	-	

*Data not considered for calculating mean as the cane yield was less than the state average

Qualifying Entries: VSI 12121 (6), Co 12009 (5) and CoM 12085 (3)

Performance across locations: Two test entries VSI 12121 and Co 12009 recorded 10 % improvement for sugar yield over the best standard CoSnk 05103 (14.31 t/ha) across the zone. The entries CoM 12085, Co 12009 and VSI 12121 had recorded more than 10 % improvement for CCS t/ha over the best standards at three, five and six locations, respectively.

Varietal Improvement Programme- AICRP (Sugarcane)
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Peninsular zone AVT - Ratoon

Table 2.2.2 Cane yield t/ha at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameer wadi*	Sanke shwar	Rudrur	Thiruvalla*	Mean	Rank
1	Co 12007	77.02	78.49	52.71	94.35	80.09	68.25	115.22	86.74	90.99	62.13	113.22	60.37	82.82	
2	Co 12008	75.44	71.43	67.59	97.3	74.73	39.94	138.46	118.57	23.22	44.88	103.83	73.06	83.22	
3	Co 12009	124.42	91.63	79.03	105.65	113.62	113.99	146.49	131.46	64.14	101.32	104.70	74.57	111.23	2
4	Co 12012	116.47	93.73	97.22	98.3	98.28	108.61	115.18	126.68	88.9	81.48	119.78	61.25	105.57	5
5	Co 12019	83.50	69.97	65.01	99.27	85.58	84.49	114.23	89.72	57.84	53.51	113.33	59.17	85.86	
6	Co 12024	91.63	88.03	43.58	102.55	78.99	63.68	107.43	54.36	31.9	75.78	119.48	69.00	82.55	
7	CoM 12085	87.39	108.83	107.94	106.8	124.63	59.93	156.93	106.17	23.04	67.14	146.16	60.83	107.19	4
8	VSI 12121	121.8	99.26	86.31	108.05	108.46	101.58	165.74	147.53	88.42	102.32	114.86	81.60	115.59	1
	Standards														
1	Co 86032	88.23	86.00	96.89	81.95	115.89	67.55	154.19	122.68	79.2	70.36	123.50	76.80	100.72	
2	CoC 671	78.03	67.91	50.26	79.33	91.03	80.85	123.18	84.09	21.67	46.82	127.42	66.57	82.89	
3	CoSnk 05103	119.76	92.36	116.6	91.94	120.85	92.49	133.11	119.41	107.84	88.9	129.32	70.55	110.47	3
	GM	96.70	86.15	78.47	96.4	99.29	80.12	133.66	107.95	61.56	76.69	119.60	68.52	97.50	
	SE	2.09	6.35	3.96	3.86	6.24	5.93	3.23	6.10	10.48	5.82	6.57	3.77		
	CD	6.21	18.73	11.68	11.39	18.44	17.6	9.53	17.99	31.13	17.44	19.39	10.73		
	CV	3.74	12.77	8.74	6.90	10.89	12.8	4.18	9.78	29.49	10.73	9.52	9.54		
Qualifying Entries at each location															
	1	-	CoM 12085	-	VSI 12121	-	Co 12009	-	VSI 12121	-	VSI 12121	CoM 12085	-	-	
	2	-	-	-	CoM 12085	-	Co 12012	-	-	-	Co 12009	-	-	-	
	3	-	-	-	Co 12009	-	VSI 12121	-	-	-	-	-	-	-	

*Data not considered for calculating mean as the cane yield was less than the state average

Qualifying Entries: VSI 12121 (4), Co 12009 (3), CoM 12085 (3) and Co 12012 (1)

Performance across locations: None of the test entries recorded 10 % improvement for cane yield over the best standard CoSnk 05103 (110.47 t/ha) across the zone. The test entries VSI 12121 (115.59 t/ha) and Co 12009 (111.23 t/ha) had recorded numerically higher cane yield in the zone when compared with the best standard. VSI 12121 had recorded more than 10 % improvement over the best standard at four locations in the zone, which was followed by Co 12009 (3) and CoM 12085 (3) and Co 12012 (1).

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Table 2.2.3 CCS % at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla*	Mean	Rank
1	Co 12007	13.78	14.75	13.86	12.96	15.09	13.18	14.72	14.50	12.24	9.66	13.53	13.70	13.60	
2	Co 12008	13.86	15.52	14.90	11.82	14.31	13.90	14.43	14.63	12.52	13.01	13.86	13.55	14.02	4
3	Co 12009	14.85	15.70	14.41	13.46	15.19	13.38	14.02	14.84	11.96	13.95	11.94	12.02	14.17	2
4	Co 12012	13.33	14.56	13.81	12.16	14.17	11.04	14.06	11.35	12.20	12.09	10.57	13.41	12.71	
5	Co 12019	13.52	14.57	14.29	13.01	13.37	12.91	14.02	13.36	13.80	13.53	13.55	13.61	13.61	
6	Co 12024	13.73	14.68	13.34	13.16	14.32	13.47	13.43	12.83	12.62	8.58	12.55	13.60	13.01	
7	CoM 12085	14.27	14.58	14.19	12.80	14.38	14.27	14.10	14.15	11.13	11.37	14.74	14.01	13.89	5
8	VSI 12121	14.72	14.24	14.82	12.25	14.37	13.60	14.62	14.55	12.39	14.33	13.96	12.90	14.15	3
	Standards														
1	Co 86032	14.51	14.92	13.73	14.02	14.20	13.54	13.99	14.12	13.10	12.46	12.19	12.98	13.77	5
2	CoC 671	16.34	15.43	15.01	13.95	14.36	14.45	14.89	15.02	11.88	14.23	13.44	12.61	14.71	1
3	CoSnk 05103	12.77	14.48	13.74	12.55	13.67	10.74	12.99	13.78	12.56	12.80	11.89	12.99	12.94	
	GM	14.15	14.86	14.19	12.90	14.31	13.13	14.12	13.92	12.40	12.37	12.93	13.22	13.69	
	SE	0.27	0.17	0.16	0.33	0.44	0.37	0.11	0.15	0.75	0.77	0.07	0.31		
	CD	0.80	0.51	0.47	0.98	NS	1.11	0.33	0.44	NS	2.31	0.22	0.89		
	CV	3.28	2.02	1.93	4.46	5.27	4.93	1.38	1.85	10.52	8.81	0.99	4.08		
Qualifying Entries at each location															
	1	-	-	-	-	Co 12009	-	-	-	-	-	CoM 12085	-	-	
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	

Qualifying Entries: Co 12009 (1), CoM 12085 (1)

Performance across locations: None of the test entries recorded 5 % improvement for CCS % over the best standard CoC 671 (14.71) across the zone. The test entries Co 12009 and CoM 12085 had recorded CCS% improvement of more than 5% at Padegaon and Rudrur respectively

Varietal Improvement Programme- AICRP (Sugarcane)
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Table 2.2.4 Sucrose % at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla*	Mean	Rank
1	Co 12007	19.69	20.51	19.35	18.16	21.42	19.03	20.79	19.90	20.43	14.53	19.21	19.51	19.26	
2	Co 12008	19.82	21.84	20.82	16.84	20.41	19.78	20.46	20.08	20.79	19.10	19.64	19.30	19.88	4
3	Co 12009	20.99	21.68	20.17	18.92	21.18	18.97	19.86	20.35	20.37	20.08	17.36	17.14	19.96	3
4	Co 12012	18.94	20.42	19.33	17.50	20.12	16.33	19.95	16.31	20.40	17.69	15.76	19.07	18.24	
5	Co 12019	19.32	20.44	19.94	18.47	19.19	18.37	19.77	18.62	19.68	19.60	19.38	19.37	19.31	
6	Co 12024	19.57	20.54	18.62	18.63	19.99	19.13	19.07	17.77	19.82	13.47	17.84	19.37	18.46	
7	CoM 12085	20.51	20.16	19.78	18.06	20.16	20.12	20.03	19.53	20.82	16.92	20.38	19.95	19.57	5
8	VSI 12121	21.02	19.78	20.74	17.80	20.38	19.43	20.68	20.06	20.99	20.67	19.65	18.35	20.02	2
	Standards														
1	Co 86032	20.58	20.87	19.14	19.63	20.06	19.44	19.85	19.51	20.01	18.05	17.55	18.48	19.47	
2	CoC 671	23.12	21.47	20.91	19.75	20.73	20.38	21.05	20.60	21.71	20.65	18.97	17.96	20.76	1
3	CoSnk 05103	18.37	20.16	19.23	17.93	19.57	15.72	18.54	19.07	19.79	18.75	17.33	18.48	18.47	
	GM	20.18	20.72	19.82	18.23	20.29	18.79	20.00	19.25	20.44	18.09	18.46	18.82	19.38	
	SE	0.34	0.25	0.21	0.37	0.46	0.49	1.13	0.18	0.34	0.91	0.08	0.45		
	CD	1.02	0.74	0.61	1.10	N.S.	1.46	0.40	0.52	1.00	2.73	0.23	1.27		
	CV	2.96	2.1	1.81	3.53	3.96	4.54	1.18	1.58	2.86	7.11	0.72	4.13		
Qualifying Entries at each location															
	1	-	-	-	-	-	-	-	-	-	-	CoM 12085	-	-	
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	

Qualifying Entries: CoM 12085 (1)

Performance across locations: None of the test entries recorded 5 % improvement for sucrose % over the best standard CoC 671 (20.76) across the zone. Entry CoM 12085 recorded more than 5% improvement for sucrose content at Rudrur centre.

Table 2.2.5 Brix % at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	21.72	21.29	20.50	19.19	23.27	21.44	22.35	20.64	22.31	17.76	20.82	21.37	20.94
2	Co 12008	21.91	23.29	22.00	18.46	22.21	21.64	22.32	20.84	22.68	22.27	21.33	21.13	21.58
3	Co 12009	22.63	22.12	21.30	20.13	22.45	20.57	21.49	21.08	22.22	22.52	19.83	18.83	21.18
4	Co 12012	20.65	21.62	20.40	19.61	21.89	19.37	21.65	17.89	22.28	20.51	18.82	20.83	20.29
5	Co 12019	21.32	21.62	20.90	20.11	21.70	20.10	21.19	20.01	21.84	22.27	21.50	21.17	21.08
6	Co 12024	21.47	21.62	19.77	20.17	21.25	20.84	20.75	18.75	21.81	17.76	19.45	21.20	20.27
7	CoM 12085	22.92	20.62	20.70	19.37	21.31	21.54	21.82	20.56	22.52	20.26	20.87	21.87	21.08
8	VSI 12121	23.16	20.45	22.40	20.34	22.63	21.44	22.29	21.06	22.85	23.27	21.08	20.03	21.65
	Standards													
1	Co 86032	22.33	21.95	20.07	20.67	21.55	21.67	21.49	20.58	22.04	20.51	19.85	20.23	20.99
2	CoC 671	24.97	22.29	21.83	21.39	23.35	21.87	22.72	21.36	23.44	23.55	20.37	19.70	22.13
3	CoSnk 05103	20.55	20.95	20.73	19.79	21.67	18.24	20.39	20.20	21.77	21.76	19.94	20.20	20.40
	GM	22.15	21.62	20.96	19.93	22.12	20.79	21.68	20.27	22.34	20.97	20.35	20.60	21.04
	SE	0.31	0.40	0.16	0.48	0.37	0.53	0.15	0.14	0.27	0.67	0.08	0.50	
	CD	0.93	1.17	0.48	1.42	1.09	1.56	0.45	0.42	0.81	2.01	0.23	1.43	
	CV	2.45	3.17	1.35	4.19	2.90	4.38	1.23	1.22	2.11	4.52	0.67	4.23	

Table 2.2.6 Purity % at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	90.67	96.35	95.33	94.63	92.03	88.80	93.00	96.39	91.57	81.84	92.31	90.57	91.99
2	Co 12008	90.46	93.90	95.33	91.22	91.91	91.42	93.03	96.34	91.67	85.58	92.17	90.56	91.99
3	Co 12009	92.78	98.03	95.00	93.99	94.32	92.22	92.43	95.16	91.67	89.23	87.61	90.17	92.81
4	Co 12012	91.71	94.47	95.00	89.24	91.89	84.25	92.06	90.98	91.54	86.38	83.63	90.77	90.03
5	Co 12019	90.62	94.50	95.33	91.84	88.39	91.43	93.33	92.99	90.09	88.04	90.25	90.73	91.59
6	Co 12024	91.14	95.09	95.67	92.36	93.97	91.78	91.89	94.80	90.86	74.88	91.65	90.59	91.26
7	CoM 12085	89.47	97.80	95.67	93.24	94.58	93.44	91.80	94.78	92.38	83.48	97.65	90.51	92.95
8	VSI 12121	90.72	96.70	95.00	87.51	90.10	90.63	92.77	95.24	91.84	88.82	93.24	90.77	91.95
	Standards													
1	Co 86032	92.15	95.05	95.67	94.97	93.04	89.78	92.07	94.77	90.75	88.00	88.42	90.55	92.22
2	CoC 671	92.59	96.37	96.00	92.33	89.06	93.21	92.65	96.46	92.61	87.68	93.27	90.35	92.72
3	CoSnk 05103	89.36	96.24	95.00	90.60	90.35	86.16	90.93	94.41	90.91	86.12	86.88	90.68	90.61
	GM	91.06	95.86	95.36	91.47	91.79	90.28	92.36	94.76	91.44	86.04	90.64	90.56	91.84
	SE	0.55	1.05	0.35	2.63	2.08	1.27	0.39	0.42	0.60	2.84	0.07	0.18	
	CD	1.64	NS	NS	NS	NS	3.77	1.17	1.25	NS	8.52	0.22	NS	
	CV	1.05	1.89	0.63	4.97	3.92	2.44	0.74	0.78	1.14	4.67	0.14	0.35	

Table 2.2.7 Pol % Cane at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	15.09	15.64	14.72	13.54	16.40			15.32	15.12	11.14			14.62
2	Co 12008	15.09	16.69	16.05	12.85	15.90			15.32	15.38	14.75			15.25
3	Co 12009	16.00	16.42	15.46	14.41	16.10			15.60	15.07	15.00			15.51
4	Co 12012	14.34	15.50	14.73	13.33	15.18			13.50	15.09	13.63			14.41
5	Co 12019	14.83	15.59	15.29	13.91	14.73			14.52	14.56	14.85			14.79
6	Co 12024	15.22	15.77	14.36	14.16	15.46			13.59	14.67	10.39			14.20
7	CoM 12085	15.88	15.45	15.24	13.72	15.61			14.84	15.40	12.81			14.87
8	VSI 12121	16.00	15.03	16.06	13.52	15.41			15.06	15.54	15.91			15.32
	Standards													
1	Co 86032	15.97	16.06	14.63	15.00	15.48			13.94	14.81	14.27			15.02
2	CoC 671	17.60	16.44	16.23	15.07	15.87			15.70	16.06	16.08			16.13
3	CoSnk 05103	13.83	15.08	14.63	13.68	14.71			14.27	14.64	13.98			14.35
	GM	15.44	15.79	15.22	13.93	15.53			14.70	15.12	13.92			14.96
	SE	0.27	0.21	0.18	0.29	0.37			0.18	0.25	0.65			
	CD	0.80	0.62	0.52	0.85	NS			0.54	0.74	1.96			
	CV	3.02	2.30	2.01	3.60	4.08			2.16	2.85	6.65			

Varietal Improvement Programme- AICRP (Sugarcane)
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Table 2.2.8 Extraction % at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	51.50	43.09	58.50	54.20	55.50	55.06	54.06	43.31		52.61		54.30	52.21
2	Co 12008	49.17	45.52	56.65	52.40	54.88	55.93	56.20	48.54		50.78		52.81	52.29
3	Co 12009	53.09	46.76	58.48	54.46	61.00	58.17	55.31	51.11		54.32		56.13	54.88
4	Co 12012	48.77	42.71	67.53	58.81	57.48	58.22	53.57	45.13		51.63		58.56	54.24
5	Co 12019	51.39	43.41	53.46	51.06	55.80	57.64	50.04	43.64		54.05		55.54	51.60
6	Co 12024	51.95	45.13	53.64	54.65	54.66	53.52	50.25	39.86		53.03		55.72	51.24
7	CoM 12085	50.71	45.60	64.71	51.97	57.72	56.94	57.63	49.22		54.90		52.26	54.17
8	VSI 12121	54.81	47.94	52.13	51.26	53.12	52.53	58.19	51.76		58.70		57.10	53.75
	Standards													
1	Co 86032	52.45	51.05	59.64	50.91	55.39	57.76	54.55	50.28		56.56		57.78	54.64
2	CoC 671	54.04	46.82	57.07	53.55	54.93	59.32	52.41	47.15		54.53		52.40	53.22
3	CoSnk 05103	44.56	48.67	54.47	53.02	54.31	53.24	50.60	40.65		53.80		57.73	51.10
	GM	51.13	46.06	57.85	53.03	55.89	56.2	53.89	46.42		52.83		55.49	52.88
	SE	1.98	1.56	2.93	0.27	1.86	NS	1.02	1.19		1.68		1.74	
	CD	NS	4.61	8.65	NS	NS		3.01	3.51		5.03		NS	
	CV	6.70	5.88	8.78	3.41	5.77		3.28	4.44		4.49		5.42	

Varietal Improvement Programme- AICRP (Sugarcane)
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Table 2.2.9 Fibre % at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	13.31	13.74	13.94	14.24	13.43			12.98		13.32			13.57
2	Co 12008	13.83	13.58	12.91	13.67	12.10			13.70		12.65			13.21
3	Co 12009	13.75	14.27	13.36	13.85	13.97			11.67		15.30			13.74
4	Co 12012	14.28	14.09	13.80	13.80	14.57			13.88		12.95			13.91
5	Co 12019	13.26	13.73	13.34	14.63	13.25			11.98		14.22			13.49
6	Co 12024	12.23	13.26	12.89	13.97	12.67			13.48		12.74			13.03
7	CoM 12085	12.57	13.34	12.93	13.99	12.59			14.02		14.23			13.38
8	VSI 12121	13.87	14.03	12.58	14.02	14.42			14.91		13.04			13.84
	Standards													
1	Co 86032	12.43	13.05	13.57	13.56	12.79			12.67		10.97			12.72
2	CoC 671	13.88	13.43	12.37	13.66	13.44			13.80		12.13			13.24
3	CoSnk 05103	14.69	15.18	13.93	13.71	14.85			15.18		15.42			14.71
	GM	13.46	13.79	13.24	13.92	13.46			13.48		13.04			13.48
	SE	0.59	0.33	0.44	0.27	0.36			0.14		0.62			
	CD	NS	0.98	NS	NS	1.06			0.42		1.86			
	CV	7.64	4.16	5.82	3.41	4.63			1.85		6.71			

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

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	82.9	85.4	48.5	95.0	87.1	71.5	110.8	88.7	64.2	49.3	92.1	69.3	80.0
2	Co 12008	95.6	80.6	40.4	100.7	88.4	41.8	113.3	97.0	19.4	44.0	98.9	79.1	80.0
3	Co 12009	86.1	77.4	74.4	94.7	100.3	74.3	97.7	79.5	42.2	59.4	102.0	83.3	84.5
4	Co 12012	109.9	111.3	100.5	95.7	92.2	73.7	103.5	104.4	90.7	71.0	116.0	68.7	95.2
5	Co 12019	130.3	87.0	80.4	98.7	106.9	83.8	100.5	103.0	59.1	55.8	98.1	64.4	91.7
6	Co 12024	108.9	82.7	31.5	101.7	84.7	57.6	102.3	61.9	37.7	72.5	95.1	75.8	79.5
7	CoM 12085	77.0	70.9	78.5	109.6	75.8	38.7	117.3	61.6	20.5	32.4	102.9	67.7	75.7
8	VSI 12121	99.5	77.5	84.8	108.4	84.8	79.4	124.4	98.0	59.8	65.5	89.0	85.9	90.6
	Standards													
1	Co 86032	92.6	81.3	96.1	90.0	93.0	70.7	113.1	90.4	57.7	52.6	100.4	84.1	87.7
2	CoC 671	68.3	66.7	38.4	85.4	71.4	74.9	91.6	66.2	24.9	35.4	93.8	74.0	69.6
3	CoSnk 05103	141.7	107.5	122.2	97.8	124.0	97.4	114.8	112.4	84.7	67.0	106.9	77.4	106.3
	GM	99.3	84.4	72.3	98.0	91.7	69.4	108.1	87.5	51.0	53.6	99.6	75.4	85.4
	SE	5.44	4.26	4.84	3.13	1.72	3.40	3.38	3.73	6.07	3.92	4.51	4.25	
	CD	16.15	12.58	14.28	9.23	5.09	10.09	9.98	11.03	18.04	11.77	13.31	12.09	
	CV	9.48	8.75	11.59	5.53	3.25	8.47	5.42	7.38	20.62	10.36	7.85	9.77	

Table 2.2.11 Cane length (cm) at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	273.3	206.2	219.3	224.1	213.0	275.0	203.7	206.9	230.0	187.5	214.0	166.7	217.2
2	Co 12008	266.7	188.3	211.3	193.4	212.0	203.0	204.7	195.3	185.7	153.0	228.5	184.4	203.7
3	Co 12009	293.3	243.3	244.0	225.2	272.0	307.7	217.0	244.8	310.0	236.0	249.8	179.6	246.6
4	Co 12012	276.7	223.9	228.7	211.6	252.0	292.7	209.3	200.0	234.3	206.0	292.2	168.8	232.9
5	Co 12019	241.7	147.7	170.7	219.8	188.0	210.0	183.3	146.6	153.7	145.5	200.7	134.7	180.8
6	Co 12024	260.0	186.1	149.3	221.3	205.0	230.3	176.7	145.2	169.3	162.5	277.3	147.1	196.4
7	CoM 12085	266.7	218.9	248.0	223.8	223.0	235.3	216.7	187.7	186.3	174.0	314.8	155.1	224.0
8	VSI 12121	278.3	221.7	222.7	217.0	258.0	272.3	217.3	224.6	239.7	200.0	238.3	204.7	232.3
	Standards													
1	Co 86032	271.7	193.5	213.3	229.5	220.0	247.0	206.7	191.0	237.7	178.5	254.4	150.1	214.2
2	CoC 671	246.7	183.3	193.3	224.3	222.0	258.0	183.3	155.0	188.0	151.5	332.9	144.8	208.6
3	CoSnk 05103	261.7	246.7	245.3	236.5	263.0	276.2	235.3	241.6	260.0	211.5	314.3	185.0	247.0
	GM	267.0	205.4	213.3	220.6	230.0	255.2	204.9	194.4	217.7	190.4	265.2	165.5	219.3
	SE	9.82	6.66	4.50	7.00	4.48	17.30	5.64	6.85	10.87	9.00	1.50	8.55	
	CD	NS	19.66	13.26	20.66	13.23	51.41	16.66	20.2	32.3	26.98	4.43	24.30	
	CV	6.40	5.62	3.65	5.50	3.37	11.74	4.77	6.10	8.65	6.69	0.98	8.94	

Table 2.2.12 Cane diameter (cm) at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	2.77	2.15	2.52	1.95	2.92	2.46	2.42	2.79	3.13	2.41	2.21	1.97	2.42
2	Co 12008	2.76	2.43	2.95	2.04	2.68	2.51	2.53	3.29	3.10	1.99	2.70	2.47	2.58
3	Co 12009	3.07	2.78	2.56	1.55	3.24	2.54	2.57	2.98	3.43	2.30	2.85	2.48	2.63
4	Co 12012	2.68	2.30	2.42	1.44	2.52	2.41	2.43	2.62	2.77	2.02	2.35	2.76	2.36
5	Co 12019	2.73	2.30	2.45	1.72	2.76	2.48	2.63	2.58	2.87	2.20	2.71	2.31	2.44
6	Co 12024	2.85	2.57	2.75	2.17	3.18	2.66	2.53	2.84	2.97	2.34	3.05	2.25	2.65
7	CoM 12085	3.26	2.74	3.13	1.68	3.37	3.29	2.72	3.36	3.33	2.68	3.43	2.42	2.92
8	VSI 12121	2.84	2.70	2.79	1.73	3.08	2.71	2.74	3.17	2.90	2.45	2.80	2.57	2.69
	Standards													
1	Co 86032	2.97	2.75	2.95	1.68	3.26	2.39	2.56	2.96	3.17	2.45	2.92	2.31	2.65
2	CoC 671	2.97	2.59	2.51	1.90	3.03	2.17	2.41	3.01	3.13	2.56	3.23	2.24	2.60
3	CoSnk 05103	2.58	2.60	2.30	1.38	2.55	2.03	2.38	2.40	2.87	2.26	2.26	2.39	2.29
	GM	2.86	2.54	2.67	1.75	2.96	2.51	2.54	2.91	3.06	2.31	2.77	2.38	2.56
	SE	0.11	0.07	0.06	0.04	0.04	0.15	0.03	0.07	0.11	0.10	0.01	0.10	
	CD	0.33	0.22	0.17	0.12	0.12	0.44	0.09	0.21	0.31	0.31	0.03	0.27	
	CV	6.73	5.11	3.7	4.11	2.41	10.22	2.23	4.34		6.26	0.73	6.96	

Table 2.2.13 Single cane weight (kg) at harvest

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	1.06	0.99	1.06	0.94	0.92	0.94	1.24	1.02	1.30	1.08	1.22	1.04	1.05
2	Co 12008	0.85	0.88	1.35	0.99	0.84	0.98	1.50	1.24	1.03	0.81	1.05	1.14	1.06
3	Co 12009	1.54	1.46	1.22	1.01	1.13	1.57	1.61	1.69	2.51	1.50	1.03	1.32	1.37
4	Co 12012	1.11	1.02	0.85	1.06	1.07	1.51	1.15	1.23	1.15	0.99	1.06	1.13	1.11
5	Co 12019	0.76	0.64	0.78	0.95	0.80	1.05	1.17	0.92	0.77	0.76	1.15	1.05	0.91
6	Co 12024	0.99	1.10	0.92	1.02	0.93	1.15	1.20	0.94	0.96	0.92	1.26	1.03	1.04
7	CoM 12085	1.52	1.41	2.04	1.03	1.65	1.55	1.71	1.77	1.03	1.36	1.42	1.06	1.50
8	VSI 12121	1.29	1.40	1.28	0.99	1.28	1.33	1.89	1.75	1.38	1.42	1.29	1.30	1.38
	Standards													
1	Co 86032	1.20	1.18	1.14	0.95	1.25	0.96	1.59	1.38	1.41	1.17	1.23	1.12	1.20
2	CoC 671	1.20	1.12	1.13	1.01	1.27	1.08	1.56	1.31	1.12	1.07	1.36	1.08	1.20
3	CoSnk 05103	0.86	1.07	0.82	0.91	0.97	0.97	1.30	1.10	1.30	1.19	1.21	1.11	1.05
	GM	1.13	1.11	1.15	0.99	1.10	1.19	1.45	1.30	1.27	1.15	1.21	1.13	1.17
	SE	0.05	0.06	0.03	0.03	0.06	0.09	0.06	0.07	0.14	0.09	0.02	0.05	
	CD	0.14	0.17	0.10	0.08	0.19	0.26	0.18	0.22	0.42	0.26	0.05	1.13	
	CV	7.33	8.97	5.24	4.64	9.95	12.9	7.59	9.92	19.22	10.57	2.44	7.88	

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Table 2.2.14 CCS % at 9 months

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranaagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	13.04	13.81	13.35	8.01	13.35	11.53	14.24	13.53	12.74		13.09	10.80	12.48
2	Co 12008	13.63	14.83	13.88	9.89	14.37	11.56	13.58	13.79	12.63		13.70	10.15	12.94
3	Co 12009	13.70	14.50	13.26	8.86	13.78	9.39	13.03	13.54	12.51		12.68	9.05	12.18
4	Co 12012	12.67	13.21	12.73	7.81	11.45	7.61	12.83	10.71	10.90		10.36	10.16	10.95
5	Co 12019	13.35	13.80	13.28	7.52	12.08	8.79	12.74	11.94	11.53		13.38	10.83	11.77
6	Co 12024	12.92	13.01	13.13	9.05	12.01	9.41	12.70	12.19	12.21		12.52	10.27	11.72
7	CoM 12085	13.75	13.69	12.81	7.46	12.87	11.67	13.52	12.82	11.96		11.53	11.10	12.12
8	VSI 12121	13.97	13.29	14.88	8.28	13.14	9.48	14.02	13.77	11.43		10.35	9.96	12.11
	Standards													
1	Co 86032	14.06	14.24	13.18	9.90	12.83	11.04	12.90	13.47	12.36		12.89	10.00	12.45
2	CoC 671	15.14	14.16	14.41	8.12	13.40	10.56	14.05	14.46	12.28		12.80	10.24	12.73
3	CoSnk 05103	12.89	13.17	13.55	8.14	12.26	8.88	12.51	11.51	11.05		12.17	10.03	11.51
	GM	13.56	13.79	13.49	8.46	12.87	9.99	13.28	12.88	11.96		12.32	10.24	12.09
	SE	0.28	0.22	0.30	0.24	0.36	0.41	0.36	0.06	0.54		0.08	0.18	
	CD	0.82	0.64	0.88	0.72	1.06	1.22	1.09	0.18	NS		0.24	0.51	
	CV	3.54	2.71	3.84	4.97	4.82	7.14	4.82	0.82	7.79		1.16	3.04	

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Table 2.2.15 Sucrose % at 9months

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravaranaagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	18.53	19.31	18.67	12.05	18.99	16.66	20.08	18.73	19.82		17.94	15.81	17.68
2	Co 12008	19.39	20.88	19.47	14.62	20.19	16.46	19.19	18.92	19.66		18.86	14.85	18.28
3	Co 12009	19.36	20.46	18.62	13.21	19.27	13.58	18.49	18.79	19.56		17.69	13.18	17.26
4	Co 12012	18.12	18.81	17.98	11.77	16.57	11.00	18.37	15.33	17.32		14.69	14.86	15.75
5	Co 12019	18.97	19.39	18.71	11.38	17.47	13.28	17.99	16.98	18.31		18.43	15.84	16.84
6	Co 12024	18.27	18.62	18.28	13.47	17.07	13.89	17.85	17.24	19.00		17.28	15.01	16.70
7	CoM 12085	19.41	19.14	17.93	11.30	17.95	16.68	19.14	18.09	19.01		16.09	16.22	17.20
8	VSI 12121	19.72	18.80	20.79	12.42	18.60	14.00	19.90	19.19	18.28		14.84	14.55	17.28
	Standards													
1	Co 86032	19.83	19.92	18.39	14.38	18.10	16.01	18.49	18.69	19.30		17.73	14.63	17.62
2	CoC 671	21.30	20.08	20.16	12.12	18.90	15.43	19.93	20.05	19.56		17.67	14.94	18.06
3	CoSnk 05103	18.34	18.58	19.01	11.99	17.50	12.84	17.70	16.34	17.66		16.99	14.63	16.39
	GM	19.20	19.45	18.91	12.61	18.24	14.53	18.83	18.03	18.86		17.11	14.96	17.19
	SE	0.37	0.28	0.37	0.33	0.44	0.48	0.35	0.07	0.75		0.09	0.28	
	CD	1.10	0.83	1.09	0.97	1.30	1.43	1.03	0.19	NS		0.27	0.79	
	CV	3.35	2.52	3.39	4.54	4.19	5.75	3.23	0.63	6.87		0.92	3.20	

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Table 2.2.16 Brix % at 9 months

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	20.18	20.29	19.67	14.77	20.77	18.79	21.53	19.84	21.79		18.07	18.30	19.22
2	Co 12008	21.18	22.29	20.67	17.34	21.44	18.03	20.66	19.97	21.75		19.09	17.20	19.79
3	Co 12009	20.85	21.95	19.80	15.93	20.27	15.36	20.09	20.03	21.61		18.57	15.10	18.80
4	Co 12012	20.03	20.62	19.40	14.49	18.77	12.46	20.36	17.47	19.59		15.98	17.20	17.68
5	Co 12019	20.68	20.62	20.07	14.09	19.77	16.36	19.33	19.08	20.57		18.58	18.40	18.70
6	Co 12024	19.71	20.62	19.07	16.19	18.64	16.39	18.96	19.15	20.93		17.57	17.40	18.37
7	CoM 12085	20.84	20.12	18.93	14.01	18.77	18.43	20.69	20.01	21.21		16.85	18.80	18.75
8	VSI 12121	21.20	20.29	21.87	15.13	20.10	16.53	21.63	20.62	20.69		16.59	16.80	19.08
	Standards													
1	Co 86032	21.26	20.95	19.27	16.47	19.44	18.23	20.56	19.92	21.15		17.89	17.00	19.10
2	CoC 671	22.72	21.79	21.27	14.63	20.27	17.83	21.66	21.35	21.71		18.07	17.20	19.68
3	CoSnk 05103	20.05	19.95	20.17	14.11	19.27	14.53	18.76	18.31	20.11		17.85	16.90	17.99
	GM	20.79	20.86	20.02	15.20	19.77	16.63	20.38	19.61	21.01		17.74	17.30	18.83
	SE	0.36	0.32	0.34	0.37	0.35	0.37	0.23	0.07	0.61		0.08	0.36	
	CD	1.06	0.93	1.00	1.09	1.03	1.09	0.68	0.20	NS		0.22	1.02	
	CV	2.98	2.63	2.92	4.20	3.05	3.80	1.97	0.59	5.00		0.73	3.60	

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Table 2.2.17 Purity % at 9 months

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	91.81	95.19	94.00	81.58	91.46	88.63	93.26	94.37	90.86		99.37	85.40	91.51
2	Co 12008	91.51	93.69	93.67	84.31	94.13	91.34	92.89	94.74	90.17		99.18	85.30	92.08
3	Co 12009	92.82	93.15	94.33	82.93	95.10	88.31	92.03	93.80	90.46		95.16	86.14	91.38
4	Co 12012	90.49	91.26	93.00	81.23	88.22	88.25	90.20	87.77	88.38		91.93	85.48	88.78
5	Co 12019	91.76	94.10	93.33	80.77	88.40	81.09	91.10	88.96	89.04		99.12	85.41	89.40
6	Co 12024	92.70	90.31	94.67	83.20	91.59	84.62	90.24	89.99	90.76		98.25	85.53	90.11
7	CoM 12085	93.10	95.15	94.67	80.66	95.69	90.53	92.47	90.41	89.60		95.36	85.62	91.37
8	VSI 12121	93.03	92.68	93.00	82.09	92.40	84.73	91.99	93.06	88.31		89.81	85.54	89.83
	Standards													
1	Co 86032	93.28	95.07	95.33	87.31	93.11	87.81	89.90	93.83	91.23		99.24	85.35	92.02
2	CoC 671	93.76	92.17	95.00	82.84	93.27	86.46	92.03	93.94	89.98		98.04	85.94	91.34
3	CoSnk 05103	91.49	93.18	92.33	84.98	90.81	88.44	90.29	89.26	87.82		95.13	85.83	90.17
	GM	92.34	93.27	93.94	82.96	92.20	87.29	91.49	91.83	89.69		96.42	85.60	90.73
	SE	0.37	0.7	0.91	0.89	0.98	1.7	1.06	0.19	1.03		0.11	0.30	
	CD	1.09	2.07	NS	2.63	2.9	5.0	3.13	0.57	NS		0.32	NS	
	CV	0.69	1.3	1.68	1.87	1.84	3.3	2.01	0.37	1.98		0.19	0.62	

Table 2.2.18 Pol % Cane at 9 months

S No	Entries	Kolha pur	Nav sari	Pade gaon	Sameer wadi	Mean
1	Co 12007	14.96	9.23	14.76	14.66	12.98
2	Co 12008	16.18	11.40	15.71	14.55	14.43
3	Co 12009	15.55	10.14	14.72	14.47	13.47
4	Co 12012	14.50	9.07	12.78	12.81	12.12
5	Co 12019	14.93	8.86	13.49	13.55	12.43
6	Co 12024	14.44	10.36	13.26	14.06	12.69
7	CoM 12085	14.82	8.76	13.98	14.06	12.52
8	VSI 12121	14.52	9.68	14.25	13.52	12.82
	Standards					
1	Co 86032	15.40	11.14	14.01	14.28	13.52
2	CoC 671	15.46	9.44	14.58	14.47	13.16
3	CoSnk 05103	14.11	9.28	13.27	13.07	12.22
	GM	14.99	9.76	14.26	13.95	13.00
	SE	0.22	0.26	0.33	0.55	
	CD	0.66	0.76	0.98	NS	
	CV	2.57	4.59	4.03	6.86	

Table 2.2.19 Extraction % at 9 months

S No	Entries	Coim batore	Kolha pur	Nav sari	Pade gaon	Peruma llapalle	Pravara nagar	Thiru valla	Mean
1	Co 12007	47.38	41.95	52.59	54.95	55.83	45.54	55.95	50.60
2	Co 12008	48.80	49.44	55.31	53.98	63.23	48.86	56.55	53.74
3	Co 12009	47.17	56.31	52.24	53.57	57.95	44.88	54.97	52.44
4	Co 12012	45.76	44.53	54.00	54.21	51.75	43.64	53.21	49.59
5	Co 12019	50.87	43.32	50.03	55.90	53.92	41.57	53.63	49.89
6	Co 12024	48.23	47.63	51.72	55.50	52.46	42.57	49.05	49.59
7	CoM 12085	49.14	55.66	53.77	54.64	57.13	48.66	51.25	52.89
8	VSI 12121	50.69	56.57	54.04	54.41	59.48	49.05	53.85	54.01
	Standards								
1	Co 86032	53.31	54.30	52.51	55.91	57.23	45.12	57.51	53.70
2	CoC 671	47.85	52.41	52.41	57.39	54.60	42.48	54.72	51.69
3	CoSnk 05103	40.77	50.68	53.03	58.50	56.78	40.18	53.91	50.55
	GM	48.18	50.25	52.88	55.36	56.40	44.78	54.05	51.70
	SE	2.35	2.20	1.46	1.25	NS	1.00	2.13	
	CD	NS	6.48	NS	N.S.		2.95	NS	
	CV	8.45	7.57	4.77	3.91		3.87	6.83	

Table 2.2.20 Fibre % at 9 months

S No	Entries	Kolhapur	Navsari	Padegaon	Mean
1	Co 12007	12.55	13.43	12.31	12.76
2	Co 12008	12.51	12.07	12.17	12.25
3	Co 12009	13.98	13.29	13.61	13.63
4	Co 12012	12.92	12.88	12.91	12.90
5	Co 12019	13.02	12.18	12.79	12.66
6	Co 12024	12.47	13.13	12.34	12.65
7	CoM 12085	12.61	12.49	12.13	12.41
8	VSI 12121	12.79	12.03	13.35	12.72
	Standards				
1	Co 86032	12.68	12.55	12.58	12.60
2	CoC 671	13.03	12.11	12.87	12.67
3	CoSnk 05103	14.04	12.65	14.15	13.61
	GM	12.96	12.62	12.84	12.81
	SE	0.15	0.32	0.52	
	CD	0.44	0.95	N.S.	
	CV	1.99	4.41	6.97	

Table 2.2.21 Number of millable canes ('000/ha) at 9 months

S No	Entries	Coimbatore	Navsari	Padegaon	Perumallapalle	Pravara nagar	Sameerwadi	Thiruvalla	Mean
1	Co 12007	86.21	116.26	89.93	79.03	115.57	64.24	78.78	94.3
2	Co 12008	97.30	121.45	87.92	53.28	116.87	19.44	88.10	94.2
3	Co 12009	92.12	123.52	103.40	85.84	103.21	42.24	90.61	99.8
4	Co 12012	112.58	121.79	95.21	102.62	108.43	90.74	77.76	103.1
5	Co 12019	131.87	117.29	109.51	106.64	105.61	59.09	73.24	107.4
6	Co 12024	110.92	126.72	86.73	51.35	106.20	37.67	82.15	94.0
7	CoM 12085	82.23	128.29	78.19	38.05	121.56	20.49	71.65	86.7
8	VSI 12121	103.77	132.09	87.92	91.10	128.16	59.84	102.18	107.5
	Standards								
1	Co 86032	93.81	114.09	96.11	109.27	118.36	57.70	90.28	103.7
2	CoC 671	72.62	117.07	73.96	90.56	95.56	24.94	79.75	88.3
3	CoSnk 05103	139.68	117.90	139.16	127.21	119.94	84.72	83.28	121.2
	GM	102.10	121.50	95.28	85.00	112.68	51.01	83.43	100.0
	SE	6.02	3.65	0.93	4.33	3.75	6.07	5.06	
	CD	17.87	10.76	2.75	12.9	11.08	18.04	14.37	
	CV	10.21	5.20	1.69	8.82	5.77	20.62	10.50	

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Table 2.2.22 Stalk length (cm) at 9 months

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumalpal	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	241.7	195.2	188.0	211.1	168.3	273.0	177.0		197.7			150.7	200.6
2	Co 12008	226.7	158.3	166.0	201.1	211.7	169.3	202.7		145.0			170.2	188.3
3	Co 12009	263.3	237.9	228.7	210.9	231.7	259.3	198.7		239.7			179.1	226.2
4	Co 12012	245.0	209.1	214.7	200.4	220.0	210.7	158.7		214.3			167.8	203.3
5	Co 12019	218.3	143.1	152.7	218.6	168.3	179.8	146.3		126.3			122.1	168.7
6	Co 12024	226.7	172.2	142.0	203.9	181.7	204.7	136.0		160.3			137.8	175.6
7	CoM 12085	236.7	211.7	240.0	201.5	198.3	186.1	183.3		172.0			149.9	200.9
8	VSI 12121	251.7	193.9	222.7	213.9	221.7	235.7	201.3		187.0			198.1	217.4
	Standards													
1	Co 86032	246.7	191.1	191.3	207.5	215.0	234.7	185.0		185.7			147.8	202.4
2	CoC 671	220.0	175.0	153.3	207.6	173.3	212.7	151.7		140.7			157.0	181.3
3	CoSnk 05103	245.0	210.6	221.3	205.6	236.7	252.3	200.0		222.0			171.0	217.8
	GM	238.3	190.7	192.8	207.5	202.4	219.8	176.6		181.0			159.2	198.4
	SE	8.45	6.60	6.06	6.53	4.19	21.4	4.57		12.58			8.05	
	CD	25.11	19.46	17.89	NS	12.40	63.6	13.48		37.37			22.87	
	CV	6.14	5.99	5.45	5.45	3.59	16.9	4.48		12.04			8.75	

Table 2.2.23 Stalk diameter (cm) at 9 months

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	2.59	2.14	2.98	1.86	2.63	2.25	2.25		3.20			2.09	2.35
2	Co 12008	2.64	2.35	2.93	1.90	2.73	2.27	2.42		2.80			2.26	2.44
3	Co 12009	2.95	2.58	3.10	1.63	2.81	2.35	2.47		2.97			2.36	2.53
4	Co 12012	2.61	2.13	2.51	1.88	2.76	1.70	2.34		2.63			2.85	2.35
5	Co 12019	2.60	2.24	2.80	2.35	2.57	2.15	2.49		2.60			2.17	2.42
6	Co 12024	2.70	2.39	2.91	2.18	2.97	2.32	2.33		2.77			2.14	2.49
7	CoM 12085	3.21	2.72	3.17	1.85	2.79	2.68	2.6		3.23			2.41	2.68
8	VSI 12121	2.73	2.56	2.99	2.13	2.81	2.42	2.56		2.93			2.49	2.59
	Standards													
1	Co 86032	2.83	2.65	2.93	1.77	2.92	2.14	2.42		2.73			2.44	2.51
2	CoC 671	2.90	2.62	3.12	1.83	2.79	1.93	2.32		2.93			2.17	2.46
3	CoSnk 05103	2.50	2.31	2.82	1.89	2.63	1.87	2.24		2.83			2.25	2.31
	GM	2.75	2.43	2.93	1.93	2.76	2.19	2.41		2.87			2.33	2.47
	SE	0.09	0.06	0.11	0.05	0.03	0.14	0.04		0.13			0.13	
	CD	0.28	0.17	0.34	0.15	0.09	0.43	0.13		0.38			0.36	
	CV	5.86	4.14	6.71	4.56	1.98	11.3	3.38		7.79			9.38	

Table 2.2.24 Single cane weight (kg) at 9 months

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	0.96	0.84	0.84	0.88	0.85	1.22	0.97		1.16			0.94	0.94
2	Co 12008	0.82	0.81	0.78	0.91	0.85	0.91	1.23		0.74			1.10	0.93
3	Co 12009	1.38	1.28	1.14	0.87	1.51	1.71	1.25		1.47			1.11	1.28
4	Co 12012	1.03	0.84	0.77	0.92	0.88	1.09	0.89		1.09			1.18	0.95
5	Co 12019	0.70	0.63	0.64	0.79	0.82	0.99	0.83		0.44			0.90	0.79
6	Co 12024	0.94	0.91	0.74	0.87	0.99	1.23	0.91		0.90			1.07	0.96
7	CoM 12085	1.41	1.38	1.29	0.86	1.55	1.26	1.42		1.29			1.05	1.28
8	VSI 12121	1.24	1.16	1.04	0.93	1.18	1.17	1.49		1.16			1.33	1.19
	Standards													
1	Co 86032	1.14	1.09	0.71	0.81	1.56	1.13	1.14		1.03			1.06	1.08
2	CoC 671	1.16	1.15	0.91	0.89	1.09	0.96	1.14		1.46			1.05	1.04
3	CoSnk 05103	0.81	0.88	0.70	0.83	1.06	1.08	1.06		1.15			0.95	0.92
	GM	1.05	1.00	0.87	0.87	1.12	1.16	1.12		1.08			1.07	1.03
	SE	0.06	0.08	0.06	0.03	0.11	0.05	0.05		0.24			0.05	
	CD	0.16	0.24	0.18	0.09	0.34	0.16	0.16		NS			0.15	
	CV	9.04	14.17	12.12	5.80	17.61	7.87	8.68		38.49			8.43	

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

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	94.1		62.7	109.3		83.8	118.9	94.2	77.6		115.1	89.8	96.0
2	Co 12008	100.9		64.6	111.0		56.4	120.2	102.5	17.4		123.6	92.6	96.5
3	Co 12009	95.0		85.1	103.4		96.5	107.0	81.5	65.7		134.1	97.0	100.0
4	Co 12012	122.4		112.0	101.5		111.7	112.8	118.1	136.7		124.2	78.8	110.2
5	Co 12019	133.6		96.2	105.3		119.2	109.7	108.8	81.1		122.7	72.7	108.5
6	Co 12024	114.9		45.8	111.7		54.2	109.3	64.6	41.7		118.8	84.9	88.0
7	CoM 12085	80.2		92.7	113.5		42.0	125.5	65.0	26.3		138.6	72.7	91.3
8	VSI 12121	98.8		98.5	115.3		91.8	132.2	102.2	77.0		111.3	110.1	107.5
	Standards													
1	Co 86032	97.4		100.9	99.9		136.8	122.7	93.7	113.4		115.5	95.2	107.8
2	CoC 671	73.3		58.7	91.4		86.7	101.2	67.5	44.5		107.3	84.3	83.8
3	CoSnk 05103	144.1		130.6	105.9		147.5	124.9	114.2	88.4		120.3	90.4	122.2
	GM	105.0		86.2	106.2		93.3	116.8	92.0	70.0		121.1	88.0	101.1
	SE	5.85		3.35	4.23		5.12	3.62	3.34	10.93		5.34	5.72	
	CD	17.39		9.87	12.49		15.2	10.69	9.86	32.47		15.76	16.26	
	CV	9.66		6.72	6.90		9.50	5.37	6.29	27.05		7.64	11.25	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2018-19)
Peninsular zone AVT - Ratoon

Table 2.2.26 Number of tillers ('000/ha) at 90 days

S No	Entries	Coimbatore	Kolhapur	Mandya	Navsari	Padegaon	Perumallapalle	Pravara nagar	Pune	Sameerwadi	Sanke shwar	Rudrur	Thiruvalla	Mean
1	Co 12007	112.9	93.1	137.6	116.7	175.6	98.2	101.8	147.6	74.2		101.1	96.6	118.1
2	Co 12008	117.9	163.6	165.7	119.3	261.4	47.4	112.1	154.2	26.2		110.1	100.8	135.2
3	Co 12009	102.6	110.9	138.6	120.4	183.1	153.0	89.6	138.9	69.4		102.1	101.8	124.1
4	Co 12012	135.9	181.5	187.6	119.7	256.4	135.7	102.1	176.3	126.4		132.6	87.3	151.5
5	Co 12019	130.3	143.1	187.6	123.9	269.2	132.3	99.1	163.5	89.4		119.9	80.7	145.0
6	Co 12024	108.9	149.9	106.9	124.5	216.4	48.2	97.7	133.1	29.9		109.0	93.2	118.8
7	CoM 12085	96.0	105.4	140.2	122.8	177.8	42.9	115.0	125.2	23.2		125.5	85.7	113.7
8	VSI 12121	99.5	148.9	188.8	126.7	248.1	149.1	115.7	185.2	96.0		105.5	120.2	148.8
	Standards													
1	Co 86032	109.3	138.9	129.3	134.6	222.5	148.0	112.2	156.8	126.3		111.2	101.5	136.4
2	CoC 671	97.3	126.4	125.7	115.1	202.8	110.6	94.0	127.1	37.5		114.2	92.5	120.6
3	CoSnk 05103	146.1	180.5	190.9	122.2	307.8	187.5	106.5	223.9	123.6		116.4	96.6	167.8
	GM	114.2	140.2	154.5	121.6	229.2	113.9	104.2	157.4	74.7		113.4	96.1	134.5
	SE	5.45	8.38	5.95	3.61	10.26	6.73	4.69	5.31	11.91		5.65	4.96	
	CD	16.19	24.72	17.55	10.6	30.32	20.0	13.85	15.67	35.38		16.67	14.11	
	CV	8.26	10.35	6.67	5.15	7.75	10.2	7.81	5.85	27.6		8.63	8.95	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's Report (2018-19)
Peninsular zone AVT - Ratoon

Table 2.2.27 Assessment of performance of entries by monitoring team

S.No	Entries	Perumallpalle	Pugulur	Coimbatore	Thiruvalla	Mandya	Sankeshwar	Sameerwadi	Kolhapur
1	Co 12007	Poor	Not conducted	Poor	Poor	On par	Poor	Poor	Poor
2	Co 12008	Poor		Poor	Poor	Poor	Poor	Poor	Poor
3	Co 12009	Poor		Better	On par	Better	On par	Poor	Better
4	Co 12012	Poor		Better	Poor	Better	Poor	Poor	On par
5	Co 12019	Poor		Poor	Poor	Poor	Poor	Poor	Poor
6	Co 12024	Poor		Poor	Poor	Poor	Poor	Poor	Poor
7	CoM 12085	Poor		On par	Poor	Better	Poor	Poor	On par
8	VSI 12121	Poor		On par	Poor	On par	On par	Poor	Better
Standards									
9	Co 86032								
10	CoC 671								
11	CoSnk 05103	Best		Best	Best	Best	Best	Best	

No.	Variety	Navsari	PowerKheda	Rudrur	VSI, Pune	Padegaon	Pravarnagar	Akola
1	Co 12007	Average	Average	Poor	Average	Poor	Poor	Poor
2	Co 12008	Poor	Average	Poor	Average	Average	Good	Poor
3	Co 12009	Good	Poor	Poor	Very Good	Very Good	Good	Good
4	Co 12012	Good	Good	Average	Good	Very Good	Average	Poor
5	Co 12019	Poor	Poor	Poor	Average	Average	Poor	Average
6	Co 12024	Average	Average	Poor	Poor	Poor	Poor	Average
7	CoM 12085	Poor	Poor	Poor	Poor	Very Good	Poor	Poor
8	VSI 12121	Very Good	average	Good	Very Good	Very Good	Very Good	Good
Standards :								
9	Co 86032	Average	Average	Poor	Good	Good	Good	Poor
10	CoC 671	Good	Poor	Average	Poor	Poor	Poor	Poor
11	CoSnk 05103	Good	Good	Good	Good	Good	Good	poor

2.3 Advanced Varietal Trial –Pooled data

2.3 Mean performance of two plant and one ratoon crops (2017—2019)

Twelve centers conducted Advanced Varietal Trial (I plant) during 2017-18 and Basmathnagar, Kawardha, Powerkheda, Pugalur and Sirugamani centres didn't conduct the trial. Fourteen centers conducted AVT II plant crop during 2018-19 and only 11 centres conducted AVT ratoon trial. Powerkheda had reported same data for both AVT II plant and ratoon trial. Akola centre reported that the AVT ratoon trial vitiated due to poor plant stand and low water availability. Rudrur centre had reported severe lodging in AVT I plant. Basmathnagar didn't conduct ratoon trial. 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 Rudrur, Sameerwadi, Thiruvalla, AVT II Plant at Akola and AVT Ratoon at Sameerwadi and Thiruvalla were not considered. Mean performance of eleven entries compared to zonal standards across 14 centers in terms of weighted average is presented in tables 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):

Three test entries viz., VSI 12121 (18.32 t/ha), CoM 12085 (17.35 t/ha) and Co 12009 (17.31 t/ha) recorded higher sugar yield (t/ha) compared to the best standard Co 86032 (15.68 t/ha). The entry VSI 12121 ranked first in the zone followed by CoM 12085 and Co 12009 had shown an improvement of 16.85 %, 10.67% and 10.37% respectively over Co 86032. The entry VSI 12121 performed well in all the locations except Padegaon.

2.3.2 Cane yield (t/ha):

The clone VSI 12121 recorded the highest cane yield of 125.37 t/ha followed by Co 12009 (119.64 t/ha) and CoM 12085 (119.13 t/ha) compared to the standards CoSnk 05103 (110.86 t/ha) and Co 86032 (109.73 t/ha). The entries VSI 12121, Co 12009 and CoM 12085, had shown an improvement of 14.29%, 9.07% and 8.59% respectively over the standard Co 86032. VSI 12121 performed well in all the locations except Rudrur and Co 12009 performed better in nine centres viz., Coimbatore, Akola, Basmathnagar, Kolhapur, Navsari, Perumalapalle, Pune, Sankeshwar and Thiruvalla.

2.3.3 CCS %:

None of the entries was better than the best standard CoC 671 (14.79%). But five entries viz., VSI 12121 (14.71%), CoM 12085 (14.11%), Co 12009 (14.10%), Co 12008 (14.06%) and Co 12007 (13.92%) recorded higher CCS than the standard Co 86032 (13.79%). The entries viz., VSI 12121, CoM 12085 and Co 12009 had shown 2.76%, 2.29 % and 2.26% higher improvement over the standard Co 86032.

2.3.4 Sucrose %:

None of the entries was superior to the best standard CoC 671 (20.81%) for juice sucrose. However, five entries recorded higher mean sucrose% than Co 86032 (19.55%) and had shown more than 2.0% improvement.

Overall performance: Based on the weighted average of two plant and one ratoon crops at 14 centres, the entries VSI 12121, CoM 12085 and Co 12009 had shown more than 10% improvement over the best standard Co 86032 for sugar yield. For cane yield also, the entries VSI 12121, Co 12009 and CoM 12085 had shown an improvement of 14.29%, 9.07% and 8.59% respectively over the standard Co 86032. For juice quality traits, VSI 12121, CoM 12085 and Co 12009 had shown more than 2.0% improvement over the standard Co 86032. These three test clones may be considered for identification in the 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 12007	14.98	11.57	10.62	12.39	8.18	1.76	-	8.18	-	12.39	-	12.39	17.59	17.15	11.58	15.44
2	Co 12008	13.66	9.97	10.45	11.36	8.05	4.02	-	8.05	-	12.33	-	12.33	18.12	15.84	11.10	15.02
3	Co 12009	15.34	17.31	18.49	17.05	14.33	2.08	-	14.33	-	14.88	-	14.88	22.57	18.53	14.40	18.50
4	Co 12012	14.13	15.92	15.52	15.19	10.68	1.85	-	10.68	-	14.28	-	14.28	16.35	20.44	13.65	16.81
5	Co 12019	12.27	11.85	11.30	11.81	9.90	1.15	-	9.90	-	11.57	-	11.57	16.4	16.83	10.22	14.48
6	Co 12024	14.74	11.75	12.58	13.02	8.33	2.97	-	8.33	-	15.01	-	15.01	15.28	15.54	12.94	14.59
7	CoM 12085	15.11	18.99	12.46	15.52	10.16	1.69	-	10.16	-	18.05	-	18.05	22.88	21.94	15.88	20.23
8	VSI 12121	15.08	17.46	17.96	16.83	11.77	2.83	-	11.77	-	16.73	-	16.73	22.17	20.22	14.15	18.85
	Stds																
1	Co 86032	14.43	14.12	12.8	13.78	8.88	3.00	-	8.88	-	15.2	-	15.20	17.31	16.72	12.82	15.62
2	CoC 671	15.28	13.36	12.75	13.80	10.86	1.84	-	10.86	-	13.87	-	13.87	17.05	15.9	10.48	14.48
3	CoSnk 05103	14.29	14.64	15.29	14.74	12.27	5.80	-	12.27	-	15.86	-	15.86	17.15	14.83	13.38	15.12
	Mean	14.48	14.27	13.66	14.14	10.31	2.64		10.31		14.56		14.56	18.44	17.63	12.78	16.29

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 12007	12.28	9.56	7.30	9.71	15.37	16.06	12.23	14.55	19.24	18.14	12.09	16.49	19.82	12.76	9.02	13.87
Co 12008	10.91	8.20	10.07	9.73	14.86	15.35	11.50	13.90	21.68	16.07	10.67	16.14	9.7	13.42	5.54	9.55
Co 12009	16.03	12.12	11.39	13.18	17.30	17.74	14.22	16.42	22.71	20.66	17.25	20.21	13.47	18.16	15.25	15.63
Co 12012	10.31	15.96	13.43	13.23	13.53	16.55	11.96	14.01	20.94	23.28	13.92	19.38	14.13	13.94	12.10	13.39
Co 12019	8.87	10.18	9.31	9.45	15.29	16.69	12.91	14.96	15.99	18.64	11.45	15.36	17.01	14.07	10.89	13.99
Co 12024	9.51	12.16	5.82	9.16	14.68	16.55	13.49	14.91	22.22	19.66	11.38	17.75	11.21	10.67	8.52	10.13
CoM 12085	14.43	17.72	15.29	15.81	14.35	18.36	13.67	15.46	23.47	25.75	17.93	22.38	11.22	14.98	8.57	11.59
VSI 12121	14.70	19.29	12.79	15.59	15.89	18.6	13.78	16.09	22.80	22.55	15.63	20.33	15.07	15.76	13.77	14.87
Stds																
Co 86032	12.32	14.76	13.32	13.47	12.99	14.69	11.49	13.06	20.58	21.95	16.47	19.67	14.69	12.91	9.13	12.24
CoC 671	11.50	14.73	7.54	11.26	15.14	13.79	11.06	13.33	20.04	21.31	12.95	18.10	17.41	10.65	11.64	13.23
CoSnk 05103	9.32	15.85	16.02	13.73	11.84	13.68	11.54	12.35	18.55	20.26	16.49	18.43	15.03	11.25	9.93	12.07
Mean	11.83	13.68	11.12	12.21	14.66	16.19	12.53	14.46	20.75	20.75	14.20	18.57	14.43	13.51	10.40	12.78

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 12007	20.05	19.12	16.96	18.71	16.94	13.61	12.58	14.38	7.12	14.41	15.32	14.87	6.80	17.94	11.18	17.94
Co 12008	20.47	20.60	20.05	20.37	19.94	15.73	17.35	17.67	10.74	12.92	14.39	13.66	4.31	18.32	2.91	18.32
Co 12009	20.51	19.55	20.54	20.20	21.12	16.54	19.54	19.07	8.67	21.31	12.50	16.91	6.44	25.91	7.60	25.91
Co 12012	18.76	17.33	16.18	17.42	21.11	16.93	14.37	17.47	14.6	18.02	12.66	15.34	9.92	29.14	10.69	29.14
Co 12019	17.82	14.39	15.90	16.04	17.25	11.85	11.98	13.69	11.64	17.67	15.34	16.51	4.36	20.42	8.11	20.42
Co 12024	17.14	14.29	14.40	15.28	14.73	11.93	6.98	11.21	13.71	17.15	15.00	16.08	3.82	22.25	4.14	22.25
CoM 12085	22.47	23.44	22.11	22.67	21.64	18.35	15.03	18.34	18.02	22.36	21.56	21.96	3.95	23.75	2.55	23.75
VSI 12121	22.95	22.28	24.24	23.16	25.39	23.32	21.47	23.39	14.94	21.37	16.04	18.71	5.81	29.53	10.82	29.53
Stds																
Co 86032	22.10	19.37	21.57	21.01	19.68	17.55	17.34	18.19	13.08	16.62	15.06	15.84	8.43	29.45	10.43	29.45
CoC 671	20.24	17.17	18.34	18.58	19.12	16.77	12.63	16.17	16.43	13.61	17.13	15.37	4.72	21.61	2.57	21.61
CoSnk 05103	16.37	17.77	17.28	17.14	18.94	16.50	16.47	17.30	9.75	11.07	15.38	13.23	6.33	26.93	13.27	26.93
Mean	19.90	18.66	18.87	19.14	19.62	16.28	15.07	16.99	12.61	16.96	15.49	16.22	5.90	24.11	7.66	24.11

Entries	Sankeshwar				Thiruvalla				Overall Mean				Rank
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP*	AVT IIP	AVT Ratoon*	Mean	AVT IP	AVT IIP	AVT Ratoon	Weighted Average	
Co 12007	14.57	8.29	6.02	9.63	11.71	12.18	8.27	12.18	15.90	14.09	11.37	13.82	
Co 12008	10.82	10.60	5.72	9.05	12.19	11.05	9.91	11.05	14.82	13.88	11.68	13.50	
Co 12009	18.15	17.18	14.11	16.48	8.95	11.97	8.96	11.97	18.15	17.84	15.77	17.31	3
Co 12012	13.09	10.92	9.85	11.29	10.80	11.78	8.23	11.78	15.30	17.27	13.36	15.49	
Co 12019	7.70	8.08	7.24	7.67	7.37	10.51	8.05	10.51	13.85	14.06	11.65	13.27	
Co 12024	11.13	14.98	6.31	10.81	7.59	11.61	9.36	11.61	13.90	14.89	10.74	13.33	
CoM 12085	14.98	16.32	7.62	12.97	11.27	11.79	8.50	11.79	17.07	19.37	15.01	17.35	2
VSI 12121	15.83	17.12	14.68	15.88	12.72	14.25	10.56	14.25	18.17	19.88	16.45	18.32	1
Stds													
Co 86032	12.72	17.01	8.73	12.82	10.72	12.53	9.97	12.53	15.57	17.15	13.87	15.68	4
CoC 671	13.80	16.73	6.68	12.40	8.73	12.54	8.41	12.54	16.04	15.54	12.12	14.66	
CoSnk 05103	12.44	15.88	11.32	13.21	6.76	12.41	9.12	12.41	14.62	15.92	14.31	15.04	
Mean	13.20	13.92	8.93	12.02	9.89	12.06	9.03	12.06	15.78	16.35	13.30	15.25	

*Trials were not included for calculating overall mean since the trial average for cane yield 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 12007	109.16	80.08	77.02	88.75	64.48	14.01	-	64.48	-	89.00	-	89.00	112.79	116.43	78.49	102.57
2	Co 12008	98.30	73.42	75.44	82.39	66.93	31.83	-	66.93	-	86.94	-	86.94	110.76	104.76	71.43	95.65
3	Co 12009	112.91	121.47	124.42	119.60	112.95	16.71	-	112.95	-	111.65	-	111.65	141.56	120.67	91.63	117.95
4	Co 12012	124.54	120.28	116.47	120.43	85.84	14.26	-	85.84	-	104.34	-	104.34	114.31	140.16	93.73	116.07
5	Co 12019	97.67	83.75	83.50	88.31	77.55	9.11	-	77.55	-	83.86	-	83.86	106.4	114.44	69.97	96.94
6	Co 12024	110.45	86.13	91.63	96.07	64.38	23.73	-	64.38	-	104.49	-	104.49	108.37	106.31	88.03	100.90
7	CoM 12085	111.90	127.51	87.39	108.93	83.61	13.15	-	83.61	-	118.23	-	118.23	152.98	146.8	108.83	136.20
8	VSI 12121	109.24	122.54	121.8	117.86	88.63	24.40	-	88.63	-	120.53	-	120.53	150.59	134.88	99.26	128.24
	Stds																
1	Co 86032	108	98.84	88.23	98.36	79.57	23.11	-	79.57	-	93.38	-	93.38	122.14	115.09	86.00	107.74
2	CoC 671	102.61	84.83	78.03	88.49	84.22	14.39	-	84.22	-	94.37	-	94.37	104.89	103.8	67.91	92.20
3	CoSnk 05103	114.68	106.43	119.76	113.62	90.1	46.60	-	90.10	-	110.47	-	110.47	124.38	107.15	92.36	107.96
	Mean	109.04	100.48	96.70	102.07	81.66	21.03	-	81.66	-	101.57	-	101.57	122.65	119.14	86.15	109.31

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 12007	89.29	79.44	52.71	73.81	125.74	118.9	94.35	113.00	126.55	118.61	80.09	108.42	144.48	89.47	68.25	100.73
Co 12008	74.84	66.22	67.59	69.55	119.44	117.31	97.30	111.35	139.70	106.02	74.73	106.82	79.70	107.34	39.94	75.66
Co 12009	119.55	90.41	79.03	96.33	128.70	127.47	105.65	120.61	149.85	135.11	113.62	132.86	106.84	132.63	113.99	117.82
Co 12012	74.59	109.85	97.22	93.89	112.03	121.15	98.30	110.49	153.04	160.35	98.28	137.22	131.10	120.41	108.61	120.04
Co 12019	63.60	71.69	65.01	66.77	111.11	125.64	99.27	112.01	115.10	129.60	85.58	110.09	124.12	102.39	84.49	103.67
Co 12024	73.28	84.59	43.58	67.15	114.35	124.03	102.55	113.64	160.51	142.44	78.99	127.31	101.70	91.64	63.68	85.67
CoM 12085	106.96	123.35	107.94	112.75	106.02	131.71	106.8	114.84	155.2	168.73	124.63	149.52	84.64	106.95	59.93	83.84
VSI 12121	105.33	128.51	86.31	106.72	127.77	134.98	108.05	123.60	151.63	152.55	108.46	137.55	128.88	107.96	101.58	112.81
Stds																
Co 86032	94.37	103.90	96.89	98.39	106.2	96.44	81.95	94.86	139.57	146.98	115.89	134.15	109.44	98.14	67.55	91.71
CoC 671	81.93	96.63	50.26	76.27	108.15	92.02	79.33	93.17	123.55	135.95	91.03	116.84	122.55	73.47	80.85	92.29
CoSnk 05103	69.71	116.67	116.6	100.99	109.26	103.74	91.94	101.65	129.73	140.97	120.85	130.52	131.48	95.58	92.49	106.52
Mean	86.68	97.39	78.47	87.51	115.34	117.58	96.86	109.93	140.40	139.76	99.29	126.48	114.99	102.36	80.12	99.16

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 12007	133.46	134.16	115.22	127.61	114.76	96.84	86.74	99.45	53.21	103.89	113.22	108.56	51.85	73.44	90.99	73.44
Co 12008	138.47	141.05	138.46	139.33	129.48	104.68	118.57	117.58	74.72	104.04	103.83	103.94	33.87	69.00	23.22	69.00
Co 12009	137.31	134.19	146.49	139.33	144.32	112.37	131.46	129.38	66.58	153.93	104.70	129.32	54.63	93.87	64.14	93.87
Co 12012	130.17	130.27	115.18	125.21	149.54	124.05	126.68	133.42	125.34	142.31	119.78	131.05	87.42	117.86	88.90	117.86
Co 12019	125.27	102.13	114.23	113.88	121.89	92.76	89.72	101.46	81.04	125.85	113.33	119.59	39.35	78.79	57.84	78.79
Co 12024	118.51	100.25	107.43	108.73	107.48	87.18	54.36	83.01	104.29	135.27	119.48	127.38	30.94	69.97	31.90	69.97
CoM 12085	146.81	155.3	156.93	153.01	148.35	129.78	106.17	128.10	122.94	154.47	146.16	150.32	31.25	80.63	23.04	80.63
VSI 12121	149.05	151.89	165.74	155.56	174.05	153.41	147.53	158.33	102.34	145.54	114.86	130.20	47.45	103.63	88.42	103.63
Stds																
Co 86032	138.42	135.23	154.19	142.61	139.02	123.22	122.68	128.31	99.03	145.47	123.5	134.49	71.14	102.35	79.2	102.35
CoC 671	131.30	116.71	123.18	123.73	124.18	110.79	84.09	106.35	128.52	100.58	127.42	114.00	34.18	81.94	21.67	81.94
CoSnk 05103	115.10	124.48	133.11	124.23	134.61	120.35	119.41	124.79	78.37	112.78	129.32	121.05	56.02	89.5	107.84	89.50
Mean	133.08	129.61	133.65	132.11	135.24	114.13	107.95	119.11	94.22	129.47	119.60	124.53	48.92	87.36	61.56	87.36

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 12007	98.42	63.21	62.13	74.59	85.83	90.83	60.37	90.83	111.91	96.49	82.82	97.02	
Co 12008	71.44	77.12	44.88	64.48	86.77	82.57	73.06	82.57	102.91	95.42	83.22	93.99	
Co 12009	122.78	128.49	101.32	117.5	68.54	96.94	74.57	96.94	127.68	119.94	111.23	119.64	2
Co 12012	106.73	91.96	81.48	93.39	81.87	97.64	61.25	97.64	118.19	121.59	105.57	115.70	4
Co 12019	55.35	59.84	53.51	56.23	56.20	77.15	59.17	77.15	99.81	95.99	85.86	94.08	
Co 12024	87.63	113.85	75.78	92.42	60.10	91.87	69.00	91.87	104.67	102.92	82.55	97.28	
CoM 12085	109.66	113.59	67.14	96.80	81.67	96.11	60.83	96.11	120.61	127.17	107.19	119.13	3
VSI 12121	110.55	126.04	102.32	112.9	101.35	103.26	81.60	103.26	129.57	129.67	115.59	125.37	1
Stds													
Co 86032	100.07	125.46	70.36	98.63	87.29	92.50	76.80	92.50	113.68	113.62	100.72	109.73	6
CoC 671	89.45	113.80	46.82	83.37	65.00	92.22	66.57	92.22	107.28	99.78	82.89	96.94	
CoSnk 05103	87.29	122.20	88.90	99.48	57.41	96.81	70.55	96.81	110.63	111.32	110.47	110.86	5
Mean	94.49	103.24	72.24	89.99	75.64	92.54	68.52	92.54	113.36	110.35	97.10	107.25	

*Trials were not included for calculating overall mean since the trial average for cane yield was lower than respective state average

Table 2.3.3 Pooled Mean CCS % 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 12007	13.72	14.47	13.78	13.99	12.69	12.38	-	12.69	-	13.94	-	13.94	15.60	14.71	14.75	15.02
2	Co 12008	13.88	13.59	13.86	13.78	12.02	12.54	-	12.02	-	14.23	-	14.23	16.37	15.11	15.52	15.67
3	Co 12009	13.57	14.25	14.85	14.22	12.64	12.51	-	12.64	-	13.39	-	13.39	15.90	15.34	15.70	15.65
4	Co 12012	11.35	13.24	13.33	12.64	12.46	12.96	-	12.46	-	13.68	-	13.68	14.43	14.57	14.56	14.52
5	Co 12019	12.57	14.16	13.52	13.42	12.79	12.58	-	12.79	-	13.79	-	13.79	15.44	14.69	14.57	14.90
6	Co 12024	13.35	13.64	13.73	13.57	12.86	12.62	-	12.86	-	14.36	-	14.36	14.10	14.62	14.68	14.47
7	CoM 12085	13.51	14.89	14.27	14.22	12.16	12.43	-	12.16	-	15.36	-	15.36	14.96	14.95	14.58	14.83
8	VSI 12121	13.80	14.26	14.72	14.26	13.28	11.65	-	13.28	-	13.91	-	13.91	14.73	15.00	14.24	14.66
	Stds																
1	Co 86032	13.36	14.28	14.51	14.05	11.2	13.01	-	11.20	-	16.28	-	16.28	14.20	14.52	14.92	14.55
2	CoC 671	14.84	15.73	16.34	15.64	12.87	13.02	-	12.87	-	14.72	-	14.72	16.26	15.29	15.43	15.66
3	CoSnk 05103	12.45	13.72	12.77	12.98	13.62	12.51	-	13.62	-	14.30	-	14.30	13.79	13.85	14.48	14.04
	Mean	13.31	14.20	14.15	13.89	12.60	12.56	-	12.60	-	14.36	-	14.36	15.07	14.79	14.86	14.91

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 12007	13.78	13.77	13.86	13.80	12.18	13.51	12.96	12.88	15.20	15.29	15.09	15.19	13.74	14.22	13.18	13.71
Co 12008	14.57	14.59	14.90	14.69	12.44	13.08	11.82	12.45	15.52	15.24	14.31	15.02	12.24	12.40	13.90	12.85
Co 12009	13.41	14.45	14.40	14.09	13.44	13.92	13.46	13.61	15.16	15.31	15.19	15.22	12.56	13.70	13.40	13.22
Co 12012	13.81	14.53	13.81	14.05	12.09	13.66	12.16	12.64	13.67	14.52	14.17	14.12	10.72	11.58	11.04	11.11
Co 12019	13.94	14.2	14.29	14.14	13.76	13.29	13.01	13.35	13.9	14.39	13.37	13.89	13.69	13.70	12.91	13.43
Co 12024	12.99	13.77	13.34	13.37	12.83	13.35	13.16	13.11	13.86	13.82	14.32	14.00	11.00	11.64	13.47	12.04
CoM 12085	13.5	14.36	14.19	14.02	13.52	13.94	12.8	13.42	15.12	15.27	14.38	14.92	13.24	14.02	14.27	13.84
VSI 12121	14.02	15.09	14.82	14.64	12.45	13.79	12.25	12.83	15.03	14.72	14.37	14.71	11.71	14.59	13.60	13.30
Stds																
Co 86032	12.95	14.20	13.70	13.62	12.25	15.23	14.02	13.83	14.75	14.92	14.20	14.62	13.40	13.15	13.5	13.35
CoC 671	14.03	15.23	15.01	14.76	14.00	14.98	13.95	14.31	16.22	15.63	14.36	15.40	14.12	14.43	14.45	14.33
CoSnk 05103	13.36	13.59	13.74	13.56	10.84	13.17	12.55	12.19	14.31	14.32	13.67	14.10	11.40	11.76	10.74	11.30
Mean	13.67	14.34	14.19	14.07	12.71	13.81	12.92	13.15	14.79	14.86	14.31	14.65	12.53	13.20	13.13	12.95

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 12007	15.02	14.28	14.72	14.67	14.76	14.17	14.5	14.48	13.38	13.86	13.53	13.70	13.10	13.19	12.24	13.19
Co 12008	14.78	14.61	14.43	14.61	15.40	15.00	14.63	15.01	14.33	12.41	13.86	13.10	12.71	13.96	12.52	13.96
Co 12009	14.94	14.57	14.02	14.51	14.63	14.77	14.84	14.75	12.93	13.84	11.94	12.90	11.71	13.29	11.96	13.29
Co 12012	14.42	13.31	14.06	13.93	14.11	13.65	11.35	13.04	11.61	12.66	10.57	11.60	11.33	13.03	12.20	13.03
Co 12019	14.22	14.06	14.02	14.10	14.14	12.81	13.36	13.44	14.25	14.05	13.55	13.80	11.07	13.12	13.80	13.12
Co 12024	14.46	14.10	13.43	14.00	13.71	13.76	12.83	13.43	13.12	12.68	12.55	12.60	12.37	13.43	12.62	13.43
CoM 12085	15.31	15.10	14.10	14.84	14.58	14.17	14.15	14.30	14.67	14.48	14.74	14.60	12.69	13.96	11.13	13.96
VSI 12121	15.40	14.66	14.62	14.89	14.59	14.98	14.55	14.71	14.64	14.68	13.96	14.30	12.03	13.70	12.39	13.70
Stds																
Co 86032	15.25	14.32	13.99	14.52	14.16	14.25	14.12	14.18	13.39	11.42	12.19	11.80	12.10	13.58	13.10	13.58
CoC 671	15.41	14.72	14.89	15.01	15.40	15.17	15.02	15.20	12.80	13.53	13.44	13.50	13.80	14.12	11.88	14.12
CoSnk 05103	14.21	14.28	12.99	13.83	14.07	13.77	13.78	13.87	12.44	9.82	11.89	10.90	11.25	13.33	12.56	13.33
Mean	14.86	14.36	14.12	14.45	14.50	14.23	13.92	14.22	13.41	13.04	12.93	13.00	12.20	13.52	12.40	13.52

Entries	Sankeshwar				Thiruvalla				Overall Mean				Rank
	AVT IP	AVT IIP	AVT Ratoon	Mean	AVT IP*	AVT IIP	AVT Ratoon*	Mean	AVT IP	AVT IIP	AVT Ratoon	Weighted Average	
Co 12007	14.78	13.13	9.66	12.52	13.63	13.39	13.70	13.39	14.15	13.99	13.60	13.92	6
Co 12008	15.09	13.8	13.01	13.97	14.05	13.39	13.55	13.39	14.23	13.95	14.02	14.06	5
Co 12009	14.76	13.37	13.95	14.03	13.04	12.35	12.00	12.35	14.11	14.04	14.17	14.10	4
Co 12012	12.40	11.83	12.09	12.11	13.19	12.01	13.41	12.01	12.95	13.25	12.71	13.00	
Co 12019	14.05	13.49	13.53	13.69	13.09	13.61	13.61	13.61	13.85	13.80	13.61	13.76	
Co 12024	12.70	13.16	8.58	11.48	12.62	12.63	13.60	12.63	13.19	13.46	13.01	13.24	
CoM 12085	13.63	14.38	11.37	13.13	13.79	12.23	14.01	12.23	13.95	14.39	13.89	14.11	3
VSI 12121	14.35	13.58	14.33	14.09	12.56	13.83	12.9	13.83	13.94	14.37	14.15	14.17	2
Stds													
Co 86032	12.72	13.31	12.46	12.83	12.28	13.54	13.00	13.54	13.42	14.08	13.77	13.79	7
CoC 671	15.46	14.70	14.23	14.80	13.41	13.6	12.61	13.60	14.86	14.76	14.71	14.78	1
CoSnk 05103	14.28	12.97	12.80	13.35	11.77	12.82	12.99	12.82	13.23	13.21	12.94	13.13	
Mean	14.02	13.43	12.36	13.27	13.04	13.04	13.22	13.04	13.75	13.94	13.69	13.80	

*Trials were not included for calculating overall mean since the trial average for cane yield 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 12007	19.45	20.44	19.69	19.86	18.70	18.50	-	18.70	-	19.47	-	19.47	21.92	20.85	20.51	21.09
2	Co 12008	19.75	19.36	19.82	19.64	18.44	19.16	-	18.44	-	19.89	-	19.89	22.83	21.57	21.84	22.08
3	Co 12009	19.25	20.23	20.99	20.16	18.57	18.66	-	18.57	-	19.36	-	19.36	22.22	21.51	21.68	21.80
4	Co 12012	16.54	18.87	18.94	18.12	18.34	19.08	-	18.34	-	19.31	-	19.31	20.41	20.53	20.42	20.45
5	Co 12019	18.00	20.10	19.32	19.14	18.53	18.75	-	18.53	-	19.42	-	19.42	21.57	20.65	20.44	20.89
6	Co 12024	18.91	19.31	19.57	19.26	18.79	18.64	-	18.79	-	19.56	-	19.56	19.71	20.43	20.54	20.23
7	CoM 12085	19.13	20.96	20.51	20.20	18.28	18.73	-	18.28	-	21.02	-	21.02	21.01	21.00	20.16	20.72
8	VSI 12121	19.58	20.18	21.02	20.26	19.10	17.74	-	19.10	-	19.89	-	19.89	20.55	21.19	19.78	20.51
	Stds																
1	Co 86032	19.08	20.22	20.58	19.96	17.40	18.93	-	17.40	-	21.23	-	21.23	19.86	20.43	20.87	20.39
2	CoC 671	21.01	22.09	23.12	22.07	19.18	19.17	-	19.18	-	20.36	-	20.36	22.69	21.51	21.47	21.89
3	CoSnk 05103	17.84	19.47	18.37	18.56	19.21	18.88	-	19.21	-	19.92	-	19.92	19.37	19.68	20.16	19.74
	Mean	18.96	20.11	20.18	19.75	18.59	18.75	-	18.59	-	19.95	-	19.95	21.10	20.85	20.72	20.89

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 12007	19.28	19.45	19.35	19.36	17.66	19.01	18.16	18.28	21.41	21.16	21.42	21.33	19.47	20.22	19.03	19.57
Co 12008	20.63	20.38	20.82	20.61	18.13	18.47	16.84	17.81	22	21.35	20.41	21.25	17.62	17.95	19.78	18.45
Co 12009	19.01	20.17	20.17	19.78	19.46	19.82	18.92	19.40	21.39	21.09	21.18	21.22	17.92	19.29	18.97	18.73
Co 12012	19.41	20.30	19.33	19.68	17.81	19.27	17.50	18.19	19.66	20.27	20.12	20.02	15.7	16.76	16.33	16.26
Co 12019	19.63	19.87	19.94	19.81	19.68	18.66	18.47	18.94	19.94	20.19	19.19	19.77	19.42	19.42	18.37	19.07
Co 12024	18.23	19.27	18.62	18.71	18.43	18.87	18.63	18.64	19.64	19.29	19.99	19.64	15.82	16.9	19.13	17.28
CoM 12085	19.15	20.03	19.78	19.65	19.37	19.64	18.06	19.02	21.44	21.00	20.16	20.87	18.89	19.99	20.12	19.67
VSI 12121	19.71	21.05	20.74	20.50	18.15	19.71	17.8	18.55	21.23	20.55	20.38	20.72	16.92	20.6	19.43	18.98
Stds																
Co 86032	18.28	19.83	19.14	19.08	17.89	21.33	19.63	19.62	20.84	20.66	20.06	20.52	18.79	18.61	19.44	18.95
CoC 671	19.77	21.34	20.91	20.67	19.95	20.76	19.75	20.15	22.77	21.64	20.73	21.71	19.6	20.32	20.38	20.10
CoSnk 05103	18.68	19.05	19.23	18.99	15.93	18.62	17.93	17.49	20.4	20.34	19.57	20.10	16.54	16.99	15.72	16.42
Mean	19.25	20.07	19.82	19.71	18.41	19.47	18.34	18.74	20.97	20.69	20.29	20.65	17.88	18.82	18.79	18.50

Entries	Pravaranganagar				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 12007	21.09	20.10	20.79	20.66	20.41	19.62	19.9	19.98	19.10	19.65	19.21	19.43	18.80	19.29	20.43	19.29
Co 12008	21.14	20.48	20.46	20.69	21.27	20.73	20.08	20.69	20.24	17.83	19.64	18.74	18.37	19.91	20.79	19.91
Co 12009	21.02	20.61	19.86	20.50	20.22	20.42	20.35	20.33	18.44	19.65	17.36	18.51	17.01	19.05	20.37	19.05
Co 12012	20.19	18.99	19.95	19.71	19.57	18.9	16.31	18.26	16.90	18.26	15.76	17.01	16.62	18.2	20.40	18.20
Co 12019	19.99	19.88	19.77	19.88	19.44	18.21	18.62	18.76	20.16	19.86	19.38	19.62	16.29	19.01	19.68	19.01
Co 12024	20.27	18.88	19.07	19.41	18.96	19.10	17.77	18.61	18.55	18.21	17.84	18.03	17.76	18.88	19.82	18.88
CoM 12085	21.49	21.14	20.03	20.89	20.14	19.38	19.53	19.68	20.38	20.29	20.38	20.34	18.12	20.03	20.82	20.03
VSI 12121	21.65	20.72	20.68	21.02	20.28	20.78	20.06	20.37	20.43	20.57	19.65	20.11	17.27	19.67	20.99	19.67
Stds																
Co 86032	21.34	20.13	19.85	20.44	19.62	19.88	19.51	19.67	18.91	17.01	17.55	17.28	17.65	19.62	20.01	19.62
CoC 671	21.71	20.76	21.05	21.17	21.25	21.03	20.6	20.96	18.35	19.19	18.97	19.08	19.82	20.11	21.71	20.11
CoSnk	19.96	18.70	18.54	19.07	19.42	19.29	19.07	19.26	17.96	14.6	17.33	15.97	16.47	18.69	19.79	18.69
Mean	20.90	20.04	20.00	20.31	20.05	19.76	19.25	19.69	19.04	18.65	18.46	18.55	17.65	19.31	20.44	19.31

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 12007	20.43	19.06	14.53	18.01	14.53	19.07	19.51	17.70	19.98	19.80	19.26	19.69	6	
Co 12008	20.79	20.22	19.10	20.04	19.10	19.07	19.30	19.16	20.26	19.79	19.88	19.96	3	
Co 12009	20.37	19.37	20.08	19.94	20.08	17.60	17.14	18.27	19.94	19.86	19.96	19.91	5	
Co 12012	20.4	17.15	17.69	18.41	17.69	17.15	19.07	17.97	18.80	18.77	18.24	18.62		
Co 12019	19.68	19.63	19.60	19.64	19.60	19.36	19.37	19.44	19.59	19.56	19.31	19.49		
Co 12024	19.82	18.88	13.47	17.39	13.47	17.96	19.37	16.93	18.86	18.89	18.46	18.75		
CoM 12085	20.82	20.36	16.92	19.37	16.92	17.44	19.95	18.10	19.97	20.18	19.57	19.93	4	
VSI 12121	20.99	19.5	20.67	20.39	20.67	19.67	18.35	19.56	19.82	20.31	20.02	20.07	2	
Stds														
Co 86032	20.01	19.1	18.05	19.05	18.05	19.30	18.48	18.61	19.31	19.80	19.47	19.55	7	
CoC 671	21.71	20.96	20.65	21.11	20.65	19.37	17.96	19.33	20.96	20.73	20.76	20.81	1	
CoSnk 05103	19.79	18.84	18.75	19.13	18.75	18.26	18.48	18.50	18.71	18.65	18.47	18.61		
Mean	20.44	19.37	18.09	19.30	18.14	18.57	18.82	18.51	19.66	19.67	19.38	19.58		

*Trials were not included for calculating overall mean since the trial average for cane yield was lower than respective state average

Fig 2.3.1 Pooled mean for sugar yield t/ha

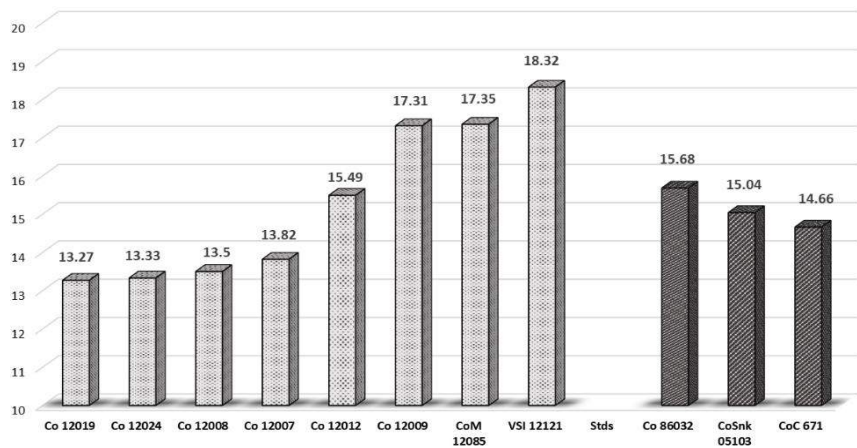


Fig 2.3.2 Pooled mean for cane yield t/ha

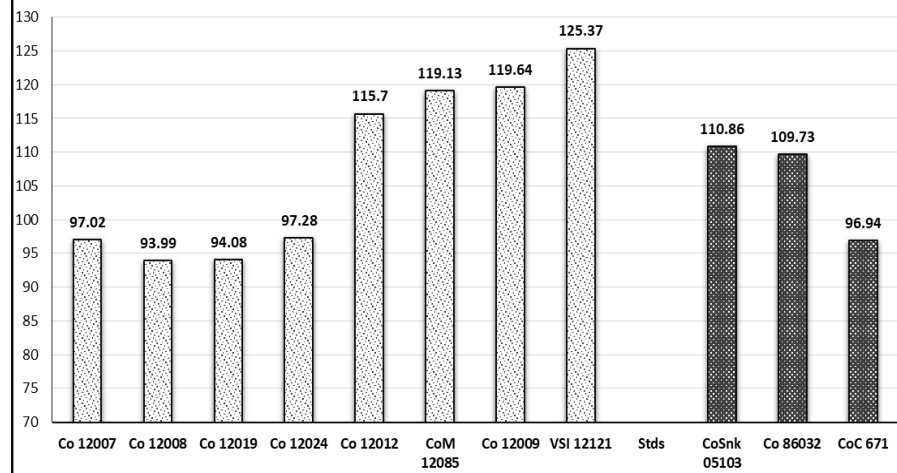


Fig 2.3.3 Pooled mean for CCS%

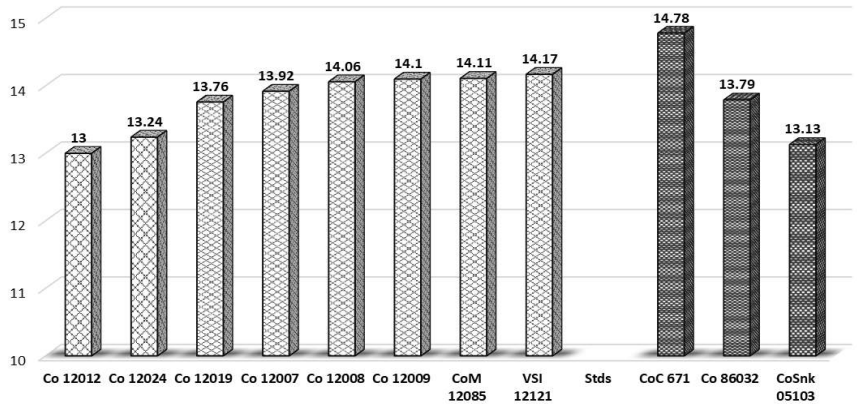
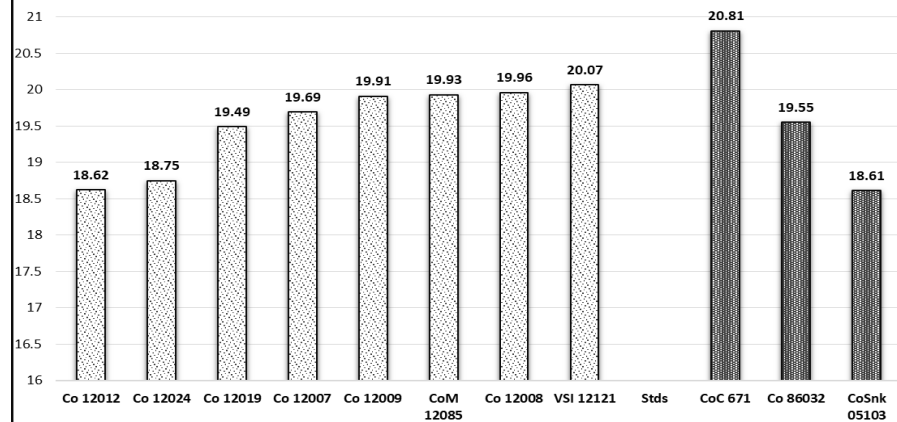


Fig 2.3.4 Pooled mean for Sucrose %



2.4. Advanced Varietal Trial I Plant (2018-19)

Centers where trial was conducted (13)	Coimbatore, Akola ^ψ , Basmathnagar Kolhapur, 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 center was not considered for the calculation of the zone mean, as the mean yield of the center was less than the state average.

Results of the previous year: Eight entries with three standards were evaluated at 14 locations in IVT early trial and twenty entries along with two standards were evaluated in 15 locations in IVT midlate during 2016-17. In early trial the entry MS 13081 (13.95 t/ha) ranked first for CCS yield in the zone and it recorded more than 10 % improvement over the best standard at 10 locations. The entries Co 13002 (11.82 t/ha) and CoN 13072 (11.95 t/ha) ranked second and third respectively for CCS yield in the zone and were the qualifying entries at four locations each. The test entries MS 13081 (111.93 t/ha), CoN 13071 (92.45 t/ha) and Co 13002 (90.11 t/ha) ranked as first, second and third respectively for cane yield in the zone and are better than the best check (CoC 671). For CCS% at harvest, the test entries Co 13002 (13.18%) and CoSnk 13101 (12.94%) were ranked first and second respectively in the zone and performed better than the best check (CoC 671). For sucrose per cent at harvest only the entry Co 13012 (18.15%) performed better than the best standard CoC 671 (17.84%). In IVT midlate category, the entry Co 13008 (15.04 t/ha) had recorded 11.32 % improvement for CCS yield over the best standard Co 86032 (13.51 t/ha) across the zone. Other four test entries viz., Co 13018 (14.41 t/ha) Co 13009 (14.13 t/ha) Co 13013 (13.85 t/ha) and Co 13020 (13.57 t/ha) recorded numerically superior values over the best standard Co 86032. For cane yield none of the test entries recorded > 10 % improvement over the best standard Co 86032 (103.58 t/ha) across the zone, however eight entries viz., Co 13008 (113.63 t/ha), Co 13009 (109.41 t/ha), CoM 13082 (109.35 t/ha), Co 13013 (108.51 t/ha), Co 13018 (107.39 t/ha), CoN 13074 (105.37 t/ha), Co 13014 (105.25 t/ha) and CoN 13073 (105.08 t/ha) recorded numerical higher cane yield compared to the best standard. In case of CCS % none of the test entries recorded > 5 % improvement for CCS % over the best standard Co 09004 (13.33 %), however three entries viz., Co 13020 (13.43%), Co 13016 (13.40 %) and Co 13008 (13.39 %) recorded numerically higher CCS % over the best standard in the zone. For sucrose %, none of the test entry recorded > 5 % improvement over the best standard Co 09004 (18.77), however two test entries namely Co13020 (18.89 %) and Co 13016 (18.78 %) recorded numerically higher sucrose % than the best standard in the zone.

Results of the current year:

Seventeen entries along with three standards (Co 86032, CoC 671 & CoSnk 05103) were evaluated at 15 centers during 2018-19. The trials were not conducted at Kawardha, Powerkheda, Pugalur and Sirugamani.

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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 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 % 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 Sankeswar. 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. The data are presented in the tables 2.7.1 to 2.7.34

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Table 2.4.1: CCS t/ha at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegon	Perumalpal	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 13002	14.65	2.59	10.48	11.84	11.82	16.81	13.28	11.94	17.98	8.61	17.21	9.21	8.56	10.04	12.49	
2	Co 13003	17.1	3.59	10.62	12.04	11.54	17.45	17.71	12.45	17.99	10.78	15.31	10.11	14.39	8.47	13.54	
3	Co 13004	18.19	2.77	11.95	16.57	10.81	16.37	16.68	9.48	14.78	14.21	15.25	10.46	14.69	11.10	13.89	
4	Co 13006	17.34	3.61	13.92	16.51	11.26	14.66	21.85	12.90	16.61	15.36	14.83	10.89	13.36	9.00	14.50	
5	Co 13008	14.39	2.19	16.80	12.47	12.25	16.99	19.40	14.22	19.41	20.25*	18.41	8.54	9.68	8.93	14.75	4
6	Co 13009	13.09	3.76	16.05	10.72	12.92	16.32	20.87	5.56	17.08	18.60	22.55*	8.93	12.57	7.44	14.05	
7	Co 13013	18.38	4.41	16.92	18.24	15.94	19.38*	24.22*	15.87*	20.41	17.09	14.17	11.19	14.53	8.69	16.54	2
8	Co 13014	17.76	1.21	14.74	11.04	11.03	15.73	20.52	9.24	19.41	15.55	15.42	11.95	13.43	8.61	14.19	
9	Co 13018	16.72	3.88	14.83	12.74	14.69	16.31	16.26	12.49	18.74	14.78	13.78	8.98	11.84	8.69	13.91	
10	Co 13020	16.91	2.20	15.66	15.93	13.60	17.01	21.68	13.61	17.71	12.01	18.97	9.38	10.08	8.24	14.68	5
11	CoN 13072	12.69	4.91	15.47	16.82	9.93	18.24*	18.47	15.49*	14.76	14.78	20.47*	9.50	10.74	8.53	14.30	
12	CoN 13073	12.83	4.97	11.43	16.57	13.02	18.24*	14.21	14.37	14.73	16.78	19.37	7.55	10.28	12.03*	13.95	
13	CoSnk 13101	15.47	2.90	10.17	13.03	11.92	17.23	13.22	12.25	16.02	12.44	17.88	9.95	11.96	10.32	13.22	
14	CoSnk 13103	14.29	1.67	14.83	16.03	9.89	16.63	17.11	9.45	15.90	12.52	18.41	8.29	12.75	9.46	13.50	
15	CoSnk 13106	16.12	3.78	15.38	14.53	13.21	17.21	18.58	9.35	17.68	16.62	15.47	9.94	15.07	10.58	14.60	6
16	MS 13081	18.89	1.69	14.51	23.51*	17.48	18.42*	23.90	9.96	19.11	16.98	20.50*	11.03	17.85	11.05	17.17	1
17	PI 13132	19.95*	1.31	11.89	13.39	14.35	17.21	11.35	16.76*	15.87	12.01	14.17	11.40	12.54	11.33	14.02	
Standards																	
1	Co 86032	15.87	4.95	14.64	15.86	18.49	14.56	19.57	12.35	20.71	17.40	14.64	11.24	14.45	10.20	15.38	3
2	CoC 671	15.15	3.35	10.47	14.34	19.56	15.02	14.13	11.46	18.56	16.18	15.82	8.38	13.10	7.68	13.83	
3	CoSnk 05103	13.89	8.96	13.77	14.14	16.33	15.17	16.15	11.89	16.54	12.58	14.34	6.65	12.06	10.08	13.35	
Grand Mean		15.98	3.44	13.73	14.82	13.50	16.75	17.96	12.06	17.50	14.78	16.85	9.68	12.70	9.52	14.29	
SE(m)		1.22	1.05	1.05	0.98	0.82	0.85	1.61	0.94	0.72	0.75	1.41	1.09	1.42	0.52		
CD		3.49	3.09	3.00	2.90	2.41	2.43	4.61	2.69	2.06	2.18	4.04	NS	4.21	1.48		
CV		13.15	52.80	13.19	11.48	8.53	8.76	15.54	13.46	7.14	8.43	14.51	19.53	15.85	9.45		
Top three qualifying entries at each centre																	
1	PI 13132			Co 13013	MS 13081		Co 13013	Co 13013	PI 13132		Co 13008	Co 13009		MS 13081	CoN 13073		
2	MS 13081			Co 13008	Co 13013		MS 13081	MS 13081	Co 13013			MS 13081			PI 13132		
3	Co 13013						CoN 13072	Co 13006	CoN 13072			CoN 13072					

* Significant over the best standard at 5 %

Qualifying entries: MS 13081 (6), Co 13013 (6), Co 13008 (5), Co 13020 (4) CoN 13073 (4), PI 13132 (4) CoN 13072 (3), CoSnk 13101 (2), Co 13002 (1), Co 13003 (1), Co 13004(1), Co 13006 (1), Co 13009 (1), Co 13014 (1), CoSnk 3103 (1) and CoSnk 13106 (1)

Performance across the locations: MS 13081 (17.71 t/ha) was the best test entry in this zone followed by Co 13013 (16.54 t/ha) and the best standard was Co 86032 (15.38 t/ha). None of the entries recorded > 10% improvement over the best standard across the locations in the zone for CCS yield. However, MS 13081 and Co 13013 recorded > 10% improvement over the best standards at six locations followed by 13008 at four locations, Co 13020, CoN 13073 and PI 13132 at four location, CoN 13072 in three locations, CoSnk 13101 in two locations. Other entries 13002, Co 13003, Co 13004, Co 13006, Co 13009 Co 13014, CoSnk 13103 and CoSnk 13106 recorded >10% improvement over the best standard in one of the locations of the zone.

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Table 2.4.2: Cane yield t/ha at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmat hnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravaranaagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank	
1	Co 13002	106.70	22.63	77.29	74.35	79.27	120.47	81.40	88.93	135.64	62.09	119.27	67.69	57.34	79.31	88.44		
2	Co 13003	119.70	29.47	83.35	84.74	84.62	128.87*	118.05	91.41	131.40	84.27	120.57	75.18	109.91	65.35	99.80		
3	Co 13004	123.60	21.93	92.48	101.50	74.11	127.82*	106.84	70.14	121.18	104.55	124.02	77.51	104.97	86.25	101.15		
4	Co 13006	117.10	26.78	95.09	108.49	81.73	118.49	144.86	102.08	120.75	106.44	112.45	73.76	91.31	76.53	103.78		
5	Co 13008	106.50	16.74	119.84	84.15	88.35	129.37*	125.62	112.83	137.92	146.62*	130.68	68.51	83.37	69.72	107.96	5	
6	Co 13009	98.30	29.13	110.99	71.42	90.61	117.61	128.50	55.06	130.72	141.23*	162.13*	64.83	112.34	61.67	103.49		
7	Co 13013	142.80*	33.24	122.29	116.58	108.33	137.46*	155.84*	124.70*	145.00	127.68	131.44	88.02	107.60	73.68	121.65	1	
8	Co 13014	137.60	10.12	107.08	73.79	80.75	115.05	129.77	89.90	141.64	117.86	118.55	81.23	94.81	66.87	104.22		
9	Co 13018	118.60	29.66	107.65	81.99	99.90	120.83	106.13	94.15	134.59	115.91	99.93	64.72	92.23	67.85	100.34		
10	Co 13020	113.50	15.87	112.86	100.20	93.12	125.54*	136.46	100.77	121.38	96.57	137.03	63.19	79.11	75.21	104.23		
11	CoN 13072	104.20	41.36	118.69	106.81	72.92	130.07*	125.07	122.34*	121.33	114.93	151.13	79.17	89.07	66.74	107.88	6	
12	CoN 13073	97.50	38.60	88.20	109.72	93.55	130.72*	102.39	139.35*	115.39	139.72	159.06*	58.78	92.07	100.00*	109.73	4	
13	CoSnk 13101	109.70	23.28	75.95	84.43	87.34	127.32*	86.65	99.76	110.84	92.02	130.37	76.96	93.67	75.42	96.19		
14	CoSnk 13103	99.20	13.04	106.40	102.99	73.47	122.47*	114.43	78.49	118.31	91.19	126.45	62.95	98.20	79.17	97.98		
15	CoSnk 13106	116.20	30.22	112.68	92.41	93.75	127.13*	119.12	86.77	114.98	119.61	133.74	71.72	109.42	83.12	106.20		
16	MS 13081	132.30	12.87	109.28	148.42*	122.52	131.73*	154.61*	79.19	139.70	124.69	141.48	79.29	123.96	90.14	121.33	2	
17	PI 13132	156.10*	9.87	87.25	87.22	101.88	126.65*	74.49	134.41*	105.35	92.84	114.65	89.17	92.48	96.94*	104.57		
	Standards																	
1	Co 86032	114.20	37.96	109.55	107.64	131.85	96.20	128.08	95.20	154.59	127.37	108.76	81.59	106.53	78.47	110.77	3	
2	CoC 671	98.70	26.12	81.18	91.09	127.88	93.79	90.81	84.10	124.84	108.45	103.92	58.78	96.40	56.11	93.54		
3	CoSnk 05103	110.60	64.92	101.32	96.44	106.65	108.89	109.03	99.37	124.97	96.78	123.82	51.54	94.12	78.82	100.18		
	Grand Mean	116.16	26.69	100.97	96.22	94.63	121.82	116.91	97.45	127.54	110.54	127.47	71.73	96.44	76.37	104.17		
	SE(m)	8.49	8.09	6.62	6.32	5.71	4.47	8.75	6.11	3.04	4.80	10.40	8.05	8.41	4.41			
	CD	24.38	23.86	19.01	18.63	16.90	12.79	25.06	17.56	8.72	13.86	29.77	NS	24.88	12.53			
	CV	12.70	52.49	11.35	11.37	8.53	6.35	12.97	10.86	4.14	7.52	14.13	19.43	12.32	10.00			
	Top three qualifying entries at each centre																	
		PI 13132		Co 13013	MS 13081		Co 13013	Co 13013	CoN 13073		Co 13008	Co 13009		MS 13081	CoN 13073			
		Co 13013					MS 13081	MS 13081	PI 13132		Co 13009	CoN 13073			PI 13132			
		Co 13014					CoN 13073	Co 13006	Co 13013			CoN 13072			MS 13081			

* Significant over the best standard at 5 %

Qualifying entries: MS 13081 (7), Co 13013 (5), CoN 13073 (4), PI 13132 (4), Co 13008 (3), CoN 13072 (3), Co 13009 (2), Co 13020 (2), Co 13002 (1), Co 13003 (1), Co 13004 (1), Co 13006 (1), Co 13014 (1), Co 13018 (1), CoSnk 13101 (1), CoSnk 13103 (1) and CoSnk 13106 (1)

Performance across the locations: Co 13013 (121.65 t/ha) and MS 13081 (121.33) were the best test entries in this zone and the best standard was Co 86032 (110.77 t/ha). None of the entries had recorded > 10 % improvement for cane yield over the best standard, across all the locations. However Co 13013 and MS 13081 recorded > 10 % improvement over the best standard at five and seven locations respectively. Similarly the entries CoN 13073 and PI 13132 in four locations, Co 13008 and CoN 13072 in three locations, Co 13009 and Co 13020 in two locations and Co 13002, Co 13003, Co 13004, Co 13006, Co 13014, Co 13018, CoSnk 13101, CoSnk 13103 and CoSnk 13106 in one of the location of the zone recorded > 10 % improvement over the best standard for cane yield.

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Table 2.4.3: CCS % at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmath nagar	Kolhapur	Mandya	Nava sari	Padegaon	Perumalalalle	Pravara nagar	Pune	Rudrur	Sameer wadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 13002	13.77		13.56	15.92	14.89	13.95	16.28	13.42	13.27	13.89	14.43	13.66	14.92	12.75	14.21	2
2	Co 13003	14.29		12.67	14.20	13.64	13.54	15.02	13.63	13.70	12.78	12.70	13.44	13.13	12.95	13.51	
3	Co 13004	14.72		12.99	16.33	14.57	12.81	15.64	13.50	12.21	13.59	12.29	13.50	14.06	12.88	13.78	
4	Co 13006	14.82		14.62*	15.21	13.79	12.37	15.00	12.59	13.76	14.41	13.19	14.77	14.72	11.76	13.92	5
5	Co 13008	13.52		14.03	14.83	13.87	13.13	15.41	12.61	14.25	13.80	14.08	12.46	11.79	12.78	13.58	
6	Co 13009	13.33		14.50*	15.00	14.27	13.88	16.22	10.06	13.05	13.17	13.91	13.67	11.40	12.05	13.42	
7	Co 13013	12.81		13.83	15.64	14.71	14.10	15.54	12.70	14.07	13.39	10.78	12.64	13.38	11.83	13.49	
8	Co 13014	12.99		13.79	14.96	13.66	13.67	15.79	10.22	13.70	13.19	13.01	14.70	14.39	12.86	13.61	
9	Co 13018	14.09		13.96	15.53	14.69	13.50	15.29	13.29	13.92	12.74	13.79	13.90	12.86	12.81	13.87	6
10	Co 13020	14.86		13.86	15.93	14.60	13.55	15.89	13.56	14.58	12.40	13.84	14.79	12.72	10.97	13.97	4
11	CoN 13072	12.38		13.08	15.75	13.62	14.02	14.75	12.66	12.24	12.84	13.55	12.02	12.04	12.80	13.21	
12	CoN 13073	13.12		12.81	15.13	13.93	13.95	13.70	10.37	12.79	12.00	12.18	12.86	11.17	12.03	12.77	
13	CoSnk 13101	14.08		13.38	15.40	13.64	13.53	15.27	12.27	14.47	13.49	13.72	12.98	12.77	13.68	13.74	
14	CoSnk 13103	14.37		13.99	15.57	13.48	13.58	14.93	12.00	13.52	13.71	14.56	13.20	12.99	11.98	13.68	
15	CoSnk 13106	13.85		13.65	15.72	14.10	13.54	15.55	10.72	14.37	13.85	11.56	13.85	13.81	12.73	13.64	
16	MS 13081	14.25		13.27	15.83	14.27	13.98	15.41	12.57	13.70	13.63	14.49	13.93	14.42	12.27	14.00	3
17	PI 13132	12.99		13.66	15.39	14.08	13.59	15.21	12.44	15.05	12.90	12.36	12.82	13.60	11.70	13.52	
	Standards																
1	Co 86032	13.89		13.39	14.73	14.02	15.13	15.29	12.98	13.40	13.66	13.46	13.75	11.67	13.02	13.72	
2	CoC 671	15.35		12.90	15.77	15.27	16.01	15.55	13.62	14.86	14.93	15.22	14.29	13.54	13.68	14.69	1
3	CoSnk 05103	12.55		13.50	14.64	15.38	13.93	14.81	11.87	13.26	13.03	11.59	12.97	12.80	12.77	13.32	
	Grand Mean	13.80		13.57	15.37	14.22	13.79	15.33	12.35	13.71	13.37	13.24	13.51	13.11	12.52	13.68	
	SE(m)	0.39		0.34	0.22	0.24	0.47	0.37	0.43	0.71	0.25	0.04	0.34	0.81	0.25		
	CD	1.11		0.99	0.64	0.71	1.35	1.06	1.22	2.04	0.71	0.11	0.97	2.41	0.71		
	CV	4.86		4.38	2.44	2.39	4.36	4.18	5.97	9.00	3.18	0.52	4.33	8.77	3.45		
	Top three qualifying entries at each centre																
	1			Co 13006										Co 13002			
	2			Co 13009										Co 13006			
	3													MS 13081			

* Significant over the best standard at 5%

Qualifying entries: Co 13006 (2), Co 13002 (1), Co 13009 (1), Co 13014 (1), MS 13081 (1)

Performance across the locations: None of the entries recorded higher CCS % in the zone over the best standard CoC 671 (14.69 %). The entry Co 13002 (14.21 %) ranked second followed by MS 1081 (14 %) and Co 13020 (13.97 %). However the entries Co 13006 (14.62) and Co 13009 (14.50) recorded significantly higher and > 5 % improvement over the best standard CoSnk 05103 (13.50 %) 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 (13.54) at Sankeshwar.

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Table 2.4.4: Sucrose% at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmathnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalalle	Pravarannagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean	Rank
1	Co 13002	19.55		19.03	22.16	20.92	19.49	23.02	18.79	18.96	19.51	20.35	19.41	21.39	18.18	20.06	2
2	Co 13003	20.29		17.96	20.14	19.08	18.92	21.36	19.28	19.10	18.08	18.27	19.22	18.99	18.47	19.17	
3	Co 13004	20.77		18.22	22.46	20.39	18.34	22.62	18.88	17.00	19.04	17.61	19.26	20.33	18.32	19.48	
4	Co 13006	20.79		20.09	21.28	19.39	17.55	21.40	17.83	19.32	20.37	18.75	20.91	21.19	16.77	19.66	4
5	Co 13008	19.25		19.60	20.57	19.40	18.62	21.76	17.74	19.84	19.37	19.88	17.92	17.26	18.19	19.18	
6	Co 13009	19.07		19.84	20.83	19.93	19.43	22.81	14.45	18.63	18.55	19.65	19.53	16.51	17.15	18.95	
7	Co 13013	18.33		19.38	21.70	20.60	20.00	21.94	17.94	19.85	18.91	15.96	18.11	19.45	16.85	19.16	
8	Co 13014	18.49		19.28	20.69	19.06	19.35	22.38	15.02	19.47	18.61	18.74	20.78	20.45	18.32	19.28	
9	Co 13018	19.99		19.40	21.39	20.58	19.16	21.69	18.66	19.78	18.15	19.63	19.78	18.73	18.26	19.63	5
10	Co 13020	21.10		19.49	21.98	20.48	19.22	22.47	19.00	20.62	17.78	19.63	21.06	18.38	15.69	19.76	3
11	CoN 13072	17.95		18.05	21.90	19.14	19.95	21.28	17.92	17.36	18.02	19.20	17.44	17.93	18.26	18.80	
12	CoN 13073	18.66		18.32	21.10	19.58	19.64	19.63	15.01	18.56	17.22	17.59	18.42	16.79	17.13	18.28	
13	CoSnk 13101	19.89		18.66	21.17	19.06	19.16	21.69	17.54	20.34	18.99	19.42	18.57	19.07	19.50	19.47	
14	CoSnk 13103	20.30		19.64	21.48	18.94	19.26	21.24	16.89	18.96	19.16	20.35	18.86	19.00	17.07	19.32	
15	CoSnk 13106	19.60		19.14	21.68	19.69	19.01	21.96	15.23	19.10	19.48	16.89	19.72	19.73	18.11	19.18	
16	MS 13081	20.09		18.50	21.79	19.95	19.69	21.82	17.80	19.58	19.38	20.34	19.77	20.69	17.50	19.76	3
17	PI 13132	18.59		19.03	21.26	19.90	19.14	21.63	17.50	21.14	18.23	17.82	18.42	19.52	16.70	19.14	
	Standards																
1	Co 86032	19.68		19.04	20.47	19.59	21.02	21.67	18.21	19.18	19.18	19.18	19.58	17.28	18.55	19.43	
2	CoC 671	22.61		18.24	21.82	21.38	22.35	22.17	19.22	20.76	20.85	21.44	20.29	19.32	19.51	20.77	1
3	CoSnk 05103	17.98		18.84	20.48	21.57	19.54	21.28	17.09	18.78	18.38	16.88	18.55	18.82	18.19	18.95	
	Grand Mean	19.65		18.99	21.32	19.93	19.43	21.79	17.50	19.32	18.86	18.88	19.28	19.04	17.84	19.37	
	SE(m)	0.47		0.42	0.28	0.33	0.52	0.44	0.54	0.90	0.34	0.02	0.45	1.06	0.35		
	CD	1.35		1.20	0.83	0.96	1.49	1.25	1.55	2.58	0.99	0.06	1.29	3.13	1.00		
	CV	4.16		3.81	2.29	2.31	4.65	3.48	5.34	8.09	3.14	0.21	4.03	7.85	3.43		
	Top three qualifying entries at each centre																
	1			Co 13006										Co 13002			
	2													Co 13006			
	3													MS 13081			

* Significant over the best standard at 5%

Qualifying entries: Co 13006 (2), Co 13002 (1), Co 13004 (1), Co 13014 (1) and MS 13081 (1)

Performance across the locations: None of the entries recorded higher sucrose % in the zone over the best standard CoC 671 (20.77 %). The entry Co 13002 (20.06 %) ranked second followed by Co 13020 (19.76 %) and MS 1081 (19.76 %). 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.

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Table 2.4.5: Brix % at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	21.27		20.79	23.04	22.25	20.46	24.86	19.84	20.91	21.34	21.56	21.17	23.77	19.97	21.63
2	Co 13003	22.08		20.05	21.87	20.10	19.86	23.34	20.80	19.91	20.10	20.44	21.21	21.51	20.30	20.89
3	Co 13004	22.27		19.87	22.71	21.50	20.33	24.28	19.84	17.68	20.72	19.56	21.18	23.02	20.03	21.00
4	Co 13006	22.01		20.94	22.37	20.65	19.06	23.51	19.27	20.48	22.09	20.46	22.61	23.77	18.43	21.20
5	Co 13008	21.09		21.20	21.21	20.45	20.20	23.38	18.90	21.14	21.19	21.34	20.05	20.01	19.90	20.77
6	Co 13009	21.09		20.46	21.54	20.90	20.46	24.26	16.14	20.51	20.43	21.17	21.54	18.75	18.77	20.46
7	Co 13013	20.26		21.12	22.37	21.75	21.72	23.56	19.27	21.28	21.15	18.96	20.10	22.26	18.47	20.94
8	Co 13014	20.24		20.91	21.21	20.00	20.91	24.23	17.57	22.21	20.46	20.55	22.38	22.26	20.10	21.00
9	Co 13018	21.69		20.75	21.71	21.80	20.85	23.57	19.80	21.54	20.48	21.46	21.64	21.51	20.03	21.30
10	Co 13020	22.96		21.40	22.37	21.75	20.89	24.22	20.07	22.24	20.33	21.35	23.04	20.76	17.33	21.44
11	CoN 13072	20.41		19.92	22.71	20.40	20.98	23.97	19.37	18.88	19.71	20.61	19.87	21.51	20.07	20.65
12	CoN 13073	20.39		19.92	22.04	20.90	20.95	21.79	17.00	21.18	19.73	19.88	20.44	20.51	18.77	20.27
13	CoSnk 13101	21.40		20.11	21.37	20.05	20.73	23.69	19.37	21.64	20.88	21.04	20.53	23.01	21.40	21.17
14	CoSnk 13103	21.84		21.47	21.87	20.20	20.94	23.18	18.04	20.08	20.75	21.38	20.83	22.01	18.73	20.87
15	CoSnk 13106	21.18		20.87	22.04	20.70	20.15	23.61	16.60	17.64	21.38	19.54	21.59	21.76	19.80	20.53
16	MS 13081	21.52		19.90	22.04	21.00	21.04	23.61	19.24	21.61	20.86	21.54	21.48	23.02	19.23	21.24
17	PI 13132	20.58		20.45	21.71	21.50	20.44	23.64	18.67	22.44	20.20	20.05	20.57	21.76	18.37	20.80
	Standards															
1	Co 86032	21.34		21.38	21.21	20.60	21.75	23.46	19.27	21.21	20.98	21.04	21.45	20.51	20.33	21.12
2	CoC 671	24.08		20.25	22.37	22.60	23.41	24.35	20.64	21.78	22.65	22.76	22.10	21.26	21.43	22.28
3	CoSnk 05103	19.92		20.34	21.54	22.90	20.69	23.78	19.17	20.38	20.33	19.46	20.53	22.01	19.93	20.84
	Grand Mean	21.38		20.60	21.97	21.10	20.80	23.71	18.94	20.68	20.79	20.71	21.22	21.75	19.57	21.02
	SE(m)	0.49		0.51	0.30	0.43	0.54	0.39	0.47	1.12	0.36	0.06	0.44	1.00	0.39	
	CD	1.38		N/A	0.87	1.26	1.54	1.12	1.36	3.22	1.04	0.18	1.27	2.96	1.10	
	CV	3.67		4.31	2.34	2.86	4.47	2.85	4.32	9.44	3.00	0.52	3.61	6.50	3.42	

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Table 2.4.6: Purity % at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudrur	Sameer wadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	91.84		91.66	96.23	94.19	95.26	92.82	94.76	90.72	91.45	94.32	91.70	89.99	90.26	92.71
2	Co 13003	91.86		88.44	92.09	95.12	95.27	91.51	92.66	92.74	89.93	89.37	90.57	88.31	90.20	91.39
3	Co 13004	93.25		91.73	98.92	94.97	90.21	92.76	95.15	93.38	91.87	90.02	90.95	88.34	90.65	92.48
4	Co 13006	93.01		93.14	95.12	94.06	92.08	90.99	92.52	91.83	91.73	91.62	92.03	89.16	90.11	92.11
5	Co 13008	92.23		90.88	97.01	95.05	92.18	93.03	93.84	93.78	91.43	93.16	89.41	85.89	90.57	92.19
6	Co 13009	90.42		94.11	96.70	95.51	94.97	93.99	89.48	90.85	90.81	92.87	90.56	87.43	90.54	92.17
7	Co 13013	90.48		88.89	96.98	94.90	92.08	93.03	93.08	93.26	89.70	84.17	90.11	87.37	90.36	91.11
8	Co 13014	91.28		89.23	97.63	95.66	92.54	92.37	85.38	91.83	90.95	91.25	92.84	91.75	90.36	91.78
9	Co 13018	92.17		92.05	98.56	94.73	91.89	92.04	94.24	91.81	87.98	91.46	91.38	87.08	90.33	91.98
10	Co 13020	91.89		88.92	98.21	94.50	92.01	92.77	94.68	92.74	87.44	92.02	91.38	88.56	89.57	91.90
11	CoN 13072	87.83		90.71	96.45	94.04	95.09	88.76	92.52	90.74	91.44	92.13	87.75	83.35	90.17	90.84
12	CoN 13073	91.46		90.56	95.71	94.08	93.75	89.97	88.20	89.32	87.24	88.45	90.12	81.88	90.40	90.09
13	CoSnk 13101	92.94		92.56	99.08	95.25	92.43	91.56	90.57	94.10	90.96	92.32	90.44	82.89	90.37	91.96
14	CoSnk 13103	92.97		88.74	98.22	94.13	91.98	91.58	93.77	94.05	92.33	95.16	90.53	86.34	90.28	92.31
15	CoSnk 13106	92.55		90.35	98.38	95.45	94.34	93.05	91.68	93.18	91.08	86.44	91.36	90.71	90.64	92.25
16	MS 13081	93.36		92.89	98.86	95.18	93.58	92.40	92.47	90.58	91.22	94.43	91.96	89.88	90.15	92.84
17	PI 13132	90.17		92.49	97.92	93.04	93.64	91.49	93.68	94.16	90.39	88.91	89.58	89.76	90.03	91.94
	Standards															
1	Co 86032	92.23		88.32	96.53	95.43	96.64	92.34	94.52	90.45	91.41	91.18	91.30	84.27	90.44	91.93
2	CoC 671	93.88		90.11	97.51	94.88	95.47	91.05	93.16	95.33	92.17	94.13	91.81	91.19	90.28	93.15
3	CoSnk 05103	90.28		85.13	95.05	94.48	94.44	89.54	89.08	89.42	90.38	86.80	90.34	85.50	90.41	90.07
	Grand Mean	91.80		90.54	97.06	94.73	93.44	91.85	92.27	92.21	90.60	91.01	90.81	88.29	90.31	91.92
	SE(m)	0.78		1.58	0.66	1.07	2.43	0.92	1.31	1.16	0.44	0.02	0.62	1.48	0.21	
	CD	2.25		N/A	1.96	NS	NS	2.63	3.77	3.33	1.26	0.07	1.77	5.82	NS	
	CV	1.47		3.02	1.18	1.60	4.50	1.73	2.46	2.18	0.84	0.05	1.17	2.37	0.40	

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Table 2.4.7: Pol% Cane at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmat hnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudrur	Sameer wadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002			18.03	17.06	16.11	15.01	17.80			14.94		14.36			16.19
2	Co 13003			17.72	15.06	14.35	14.41	15.90			13.19		14.22			14.98
3	Co 13004			17.25	16.91	15.49	13.94	17.26			14.31		14.25			15.63
4	Co 13006			18.19	16.17	14.90	13.36	16.49			15.37		15.47			15.71
5	Co 13008			17.58	15.60	14.98	14.03	16.57			14.87		13.26			15.27
6	Co 13009			17.29	15.80	15.36	14.87	17.56			14.12		14.45			15.64
7	Co 13013			17.37	16.42	15.88	15.45	16.65			14.36		13.40			15.65
8	Co 13014			17.38	15.85	14.67	14.72	17.41			14.07		15.38			15.64
9	Co 13018			18.50	16.44	15.81	14.67	16.94			13.84		14.64			15.83
10	Co 13020			17.50	16.83	15.88	14.62	17.53			13.66		15.58			15.94
11	CoN 13072			17.15	16.53	14.73	15.11	16.23			13.16		12.91			15.12
12	CoN 13073			18.15	16.13	14.84	14.91	14.96			12.98		13.63			15.09
13	CoSnk 13101			17.58	16.03	14.51	14.57	16.52			14.32		13.74			15.32
14	CoSnk 13103			17.48	16.31	14.40	14.63	16.47			14.45		13.96			15.39
15	CoSnk 13106			17.51	16.79	15.11	14.56	17.07			14.75		14.59			15.77
16	MS 13081			17.46	16.79	15.37	14.85	16.98			15.14		14.63			15.89
17	PI 13132			17.58	16.44	14.98	14.50	16.79			14.02		13.63			15.42
	Standards															
1	Co 86032			18.45	15.73	14.98	16.09	16.71			14.48		14.49			15.85
2	CoC 671			17.56	16.69	16.25	16.71	16.84			15.45		15.02			16.36
3	CoSnk 05103			18.26	15.41	16.36	14.80	16.09			13.27		13.73			15.42
	Grand Mean			17.69	16.25	15.25	14.79	16.74			14.24		14.27			15.60
	SE(m)			0.72	0.23	0.28	0.39	0.36			0.26		0.33			
	CD			0.78	0.69	0.81	1.12	1.03			0.75		0.96			
	CV			2.66	2.50	2.55	4.60	3.72			3.16		4.04			

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Table 2.4.8: Fibre % at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudrur	Sameer wadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002				13.02	13.00	12.97	12.69			13.42					13.02
2	Co 13003				15.22	14.77	13.81	14.90			17.06					15.15
3	Co 13004				14.68	14.02	13.97	13.69			14.83					14.24
4	Co 13006				14.04	13.12	13.86	13.00			14.51					13.71
5	Co 13008				14.16	12.78	14.63	13.86			13.26					13.74
6	Co 13009				14.13	12.90	13.43	12.99			13.90					13.47
7	Co 13013				14.32	12.92	12.73	14.08			14.09					13.63
8	Co 13014				13.42	13.03	13.94	12.15			14.39					13.39
9	Co 13018				13.14	13.18	13.44	11.92			13.75					13.09
10	Co 13020				13.44	12.49	13.90	12.00			13.18					13.00
11	CoN 13072				14.50	13.03	14.03	13.70			17.01					14.45
12	CoN 13073				13.55	14.22	14.06	13.80			14.59					14.04
13	CoSnk 13101				14.29	13.90	13.93	13.86			14.58					14.11
14	CoSnk 13103				14.06	13.97	14.03	12.42			14.61					13.82
15	CoSnk 13106				12.55	13.23	13.42	12.27			14.24					13.14
16	MS 13081				12.93	12.98	14.58	12.19			11.88					12.91
17	PI 13132				12.67	14.73	14.26	12.38			13.10					13.43
	Standards															
1	Co 86032				13.17	13.54	13.43	12.89			14.50					13.51
2	CoC 671				13.49	13.95	14.27	14.00			15.94					14.33
3	CoSnk 05103				14.73	14.17	14.27	14.39			17.80					15.07
	Grand Mean				13.78	13.49	13.85	13.16			14.53					13.76
	SE(m)				0.40	0.56	0.26	0.55			0.19					
	CD				1.19	NS	0.75	1.58			0.55					
	CV				5.05	5.91	3.29	7.27			2.27					

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Table 2.4.9: Extraction % at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmat hnar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	45.24			50.63	60.61	57.86	56.71	60.90	56.37	46.87			56.45	61.33	55.30
2	Co 13003	45.31			47.25	54.13	55.60	53.92	58.40	56.38	50.28			58.47	56.41	53.62
3	Co 13004	46.04			51.40	54.93	58.10	57.57	55.66	55.15	46.80			56.62	55.69	53.80
4	Co 13006	43.30			41.30	49.18	59.25	51.51	55.56	55.33	52.38			53.64	58.19	51.96
5	Co 13008	44.53			54.74	59.79	58.74	53.64	58.16	58.54	49.92			59.26	53.40	55.07
6	Co 13009	44.44			47.10	53.86	56.80	51.47	68.09	56.73	46.16			54.04	54.50	53.32
7	Co 13013	45.67			50.55	54.71	55.68	54.21	60.79	55.68	52.78			56.42	54.08	54.06
8	Co 13014	42.26			52.17	57.11	53.20	49.37	54.17	53.24	52.90			60.74	58.20	53.34
9	Co 13018	44.92			49.99	55.86	58.28	48.80	61.27	55.36	51.06			60.75	55.56	54.19
10	Co 13020	47.67			49.08	52.42	57.90	48.99	57.72	50.45	52.28			56.35	55.89	52.87
11	CoN 13072	44.34			48.27	49.74	58.94	53.26	56.10	53.90	53.00			50.06	52.88	52.05
12	CoN 13073	44.07			50.06	59.95	57.95	53.50	57.54	48.79	52.44			59.19	56.82	54.03
13	CoSnk 13101	39.27			42.20	53.03	58.00	53.65	57.90	51.99	46.96			56.91	56.87	51.68
14	CoSnk 13103	39.20			45.78	48.93	58.01	50.05	53.49	54.35	52.61			54.71	56.61	51.37
15	CoSnk 13106	44.60			46.16	49.17	55.96	49.67	47.61	51.80	58.78			56.84	58.52	51.91
16	MS 13081	49.88			53.46	56.40	56.85	49.48	54.60	56.39	52.19			58.15	59.42	54.68
17	PI 13132	45.47			48.48	50.69	56.52	49.95	55.97	52.21	48.06			59.34	55.28	52.20
	Standards															
1	Co 86032	44.99			49.48	52.90	58.81	51.23	58.46	55.29	53.96			59.34	59.38	54.38
2	CoC 671	46.49			53.08	53.71	55.64	54.00	58.52	50.83	52.25			57.87	54.07	53.65
3	CoSnk 05103	39.36			42.49	50.28	53.48	54.98	55.55	50.48	53.15			65.72	56.84	52.23
	Grand Mean	44.35			48.68	53.87	57.08	52.30	57.32	53.96	51.24			57.54	56.50	53.28
	SE(m)	1.43			1.60	1.64	0.90	1.28	2.50	0.86	1.02			2.51	1.65	
	CD	4.09			4.72	4.84	2.57	3.67	7.18	2.48	2.93			7.43	NS	
	CV	5.56			5.69	4.29	2.72	4.25	7.55	2.79	3.43			6.17	5.05	

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

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	103.70		73.94	67.30	76.88	119.31	81.32	80.04	108.55	69.30	104.62	65.05	60.29	89.23	84.58
2	Co 13003	95.70		70.36	80.15	62.83	121.89	71.73	84.68	116.13	61.36	101.42	50.69	70.38	73.73	81.62
3	Co 13004	89.30		72.03	61.28	55.95	116.00	66.67	50.89	106.70	69.04	94.42	57.56	59.75	94.55	76.47
4	Co 13006	98.90		84.03	79.91	61.61	110.42	83.12	102.31	115.00	81.73	108.31	53.39	55.21	92.22	86.63
5	Co 13008	86.90		95.09	52.37	70.63	122.36	70.07	66.74	117.66	91.21	105.25	46.76	50.74	83.54	81.49
6	Co 13009	72.60		89.26	38.25	59.42	111.87	69.17	51.35	123.03	78.51	104.27	43.21	55.44	74.17	74.66
7	Co 13013	90.80		93.21	63.31	77.62	136.79	84.44	75.40	106.63	74.28	95.11	53.24	61.68	84.30	84.37
8	Co 13014	94.50		83.28	51.27	61.81	115.16	66.39	77.02	111.26	76.64	89.85	49.00	58.29	76.81	77.79
9	Co 13018	102.30		90.19	68.51	103.47	110.25	82.98	69.14	121.60	80.75	98.03	54.71	65.14	84.79	87.07
10	Co 13020	76.80		90.35	62.84	88.89	116.40	76.46	75.25	125.93	71.95	104.80	43.98	48.59	86.60	82.22
11	CoN 13072	97.90		87.90	83.50	51.79	128.79	79.51	72.85	104.33	80.29	111.10	52.55	63.91	73.75	83.71
12	CoN 13073	69.40		69.97	68.51	72.52	113.93	68.19	107.03	103.99	82.89	102.11	42.05	61.45	103.68	81.98
13	CoSnk 13101	105.20		72.75	81.30	55.48	114.94	70.21	79.89	105.35	64.18	107.81	58.02	56.83	87.11	81.47
14	CoSnk 13103	81.30		89.95	87.61	64.98	115.15	77.15	73.93	98.59	71.12	90.34	49.62	59.06	92.29	80.85
15	CoSnk 13106	83.30		90.06	80.38	63.49	113.53	69.79	64.88	124.31	76.47	102.55	46.76	60.83	95.21	82.43
16	MS 13081	82.80		71.70	77.14	84.14	120.25	75.00	90.79	113.04	66.60	94.20	48.69	59.91	102.99	83.63
17	PI 13132	109.50		83.29	74.01	77.98	112.96	68.54	98.06	102.45	68.78	98.31	66.43	60.98	111.25	87.12
	Standards															
1	Co 86032	90.70		93.03	78.58	85.42	108.09	86.11	95.74	123.96	88.64	95.29	58.41	66.14	90.97	89.31
2	CoC 671	63.20		72.13	67.36	83.44	110.36	66.18	67.90	102.31	74.49	91.01	55.25	56.75	70.83	75.48
3	CoSnk 05103	135.30		87.11	106.42	129.07	108.00	99.30	102.08	103.05	102.75	117.37	41.05	72.92	89.51	99.53
	Grand Mean	91.51		82.98	71.50	74.37	116.32	75.62	79.30	111.71	76.55	100.81	51.82	60.21	87.88	83.12
	SE(m)	6.33		5.79	4.13	4.43	3.64	2.92	6.30	1.76	3.68	5.23	3.19	3.25	4.63	
	CD	18.10		16.63	12.18	13.11	10.43	8.36	18.12	5.05	10.63	14.19	9.16	9.62	13.16	
	CV	13.92		12.07	10.00	8.42	5.42	6.69	13.77	2.73	8.33	8.52	10.65	7.64	9.12	

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Table 2.4.11: Stalk length (cm) at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Nava sari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	228.33		190.03	217.21	161.00	267.30	173.33	269.00	217.66	170.78	224.67	225.00	192.50	221.67	212.19
2	Co 13003	240.00		184.53	243.21	226.00	268.41	276.67	254.33	225.00	213.11	239.67	288.67	241.00	258.33	242.99
3	Co 13004	271.67		217.78	255.57	185.00	250.48	240.00	262.67	215.33	214.11	217.20	226.00	237.00	261.33	234.93
4	Co 13006	253.33		224.67	257.21	215.00	254.24	268.33	315.33	205.66	230.56	237.73	287.00	231.50	281.00	250.89
5	Co 13008	246.67		236.17	257.78	220.00	272.86	245.00	244.33	223.00	236.22	250.20	282.67	228.00	241.00	244.92
6	Co 13009	253.33		211.83	236.10	195.00	256.51	265.00	218.00	217.66	231.56	233.07	274.00	223.50	221.87	233.65
7	Co 13013	273.33		245.83	272.21	207.00	273.68	280.00	269.00	227.66	231.11	225.80	285.33	261.00	246.67	253.74
8	Co 13014	258.33		224.17	230.00	191.00	246.07	250.00	293.67	219.00	214.22	240.40	268.33	216.00	250.67	238.60
9	Co 13018	230.00		228.67	212.79	211.00	254.08	258.33	245.00	222.33	210.78	199.40	247.33	220.50	224.33	228.04
10	Co 13020	241.67		217.33	229.99	205.00	249.20	238.33	304.00	186.00	194.00	213.93	224.67	214.50	257.33	228.92
11	CoN 13072	218.33		217.74	236.11	191.00	267.46	245.00	238.67	215.00	243.11	193.13	299.33	222.00	231.67	232.20
12	CoN 13073	240.00		242.17	260.43	201.00	266.15	225.00	275.00	194.33	232.33	250.13	300.00	218.00	245.67	242.32
13	CoSnk 13101	210.00		196.03	210.44	172.00	257.24	235.00	253.67	209.66	222.78	193.40	271.67	195.00	252.67	221.50
14	CoSnk 13103	255.00		237.50	241.10	208.00	253.99	225.00	268.33	213.00	213.45	226.40	270.67	215.50	270.33	238.33
15	CoSnk 13106	223.33		229.00	217.23	242.00	260.09	228.33	242.33	218.00	222.55	241.07	269.00	227.00	211.33	233.17
16	MS 13081	261.67		215.61	239.43	225.00	268.93	250.00	302.93	213.66	239.33	236.40	280.33	242.00	246.67	247.84
17	PI 13132	273.33		198.67	235.47	209.00	267.10	198.33	281.67	194.33	194.33	199.27	279.67	220.00	225.67	228.99
	Standards															
1	Co 86032	211.67		214.17	218.80	233.00	242.12	223.33	303.00	210.66	242.11	200.80	258.00	221.50	201.00	229.24
2	CoC 671	246.67		198.97	216.43	246.00	249.41	226.67	271.67	203.66	233.89	225.20	256.67	223.00	200.67	230.69
3	CoSnk 05103	243.33		266.17	242.78	232.00	246.33	273.33	342.00	219.33	234.11	252.13	208.67	231.00	251.67	249.45
	Grand Mean	244.00		219.85	236.52	208.75	258.58	241.25	272.73	212.55	221.22	225.00	265.15	224.03	240.10	236.13
	SE(m)	11.69		8.81	9.07	5.38	9.85	9.12	15.06	3.31	5.15	2.45	11.56	9.55	11.50	
	CD	33.56		25.30	26.74	15.93	NS	26.11	43.27	9.48	14.87	7.01	33.22	28.26	32.70	
	CV	8.29		6.94	6.64	3.65	6.59	6.55	9.56	2.69	4.03	1.89	7.55	6.03	8.30	

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Table 2.4.12: Stalk diameter (cm) at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Nava sari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruvalla	Mean
1	Co 13002	2.81		2.57	2.56	3.05	2.63	2.89	2.54	2.69	2.83	3.40	2.87	2.76	2.53	2.78
2	Co 13003	3.12		2.74	2.72	3.22	2.77	3.21	2.71	2.70	2.80	3.00	3.03	2.83	2.66	2.89
3	Co 13004	2.92		2.79	2.81	3.07	2.17	3.50	2.76	2.69	2.91	2.94	3.47	3.01	2.53	2.89
4	Co 13006	2.95		2.90	2.67	2.82	2.58	3.03	2.63	2.73	2.69	3.05	2.83	3.10	2.54	2.81
5	Co 13008	2.88		3.07	2.83	2.79	2.73	3.29	2.89	2.64	3.04	3.03	3.30	2.92	2.20	2.89
6	Co 13009	3.22		3.18	3.02	2.90	2.55	3.32	3.10	2.73	3.31	3.83	3.60	3.55	2.55	3.14
7	Co 13013	3.09		3.10	2.99	2.86	2.77	3.53	2.95	2.72	3.23	3.65	3.17	3.33	2.66	3.08
8	Co 13014	3.43		3.12	3.02	2.85	2.58	3.45	2.95	2.65	3.26	3.22	3.83	3.25	2.31	3.07
9	Co 13018	2.90		2.99	2.63	2.73	2.34	3.11	2.53	2.67	3.11	3.19	3.17	2.88	2.46	2.82
10	Co 13020	3.10		3.20	2.72	2.89	2.64	3.40	2.86	2.51	3.16	3.28	3.33	2.84	2.64	2.97
11	CoN 13072	2.65		2.65	2.54	3.19	2.52	3.29	3.02	2.68	2.86	3.38	3.07	2.90	2.52	2.87
12	CoN 13073	3.05		3.02	2.79	2.99	2.77	3.53	2.86	2.68	3.24	3.30	3.57	2.72	2.82	3.03
13	CoSnk 13101	2.88		2.71	2.49	3.51	2.45	3.48	2.71	2.47	2.99	3.14	3.13	3.23	2.62	2.91
14	CoSnk 13103	2.71		2.97	2.44	2.88	2.45	3.45	2.63	2.74	3.14	2.73	3.17	2.86	3.16	2.87
15	CoSnk 13106	3.00		3.12	2.64	2.99	2.78	3.16	2.53	2.70	3.24	2.92	3.27	3.19	2.38	2.92
16	MS 13081	3.25		2.93	2.98	3.29	2.80	3.26	3.08	2.58	3.33	3.19	3.43	3.33	2.91	3.10
17	PI 13132	3.07		2.85	2.47	2.89	2.11	3.18	2.60	2.60	3.21	2.90	3.07	3.13	2.59	2.82
	Standards															
1	Co 86032	2.84		2.97	2.80	2.90	2.11	3.24	2.50	2.52	3.00	3.10	3.20	3.07	2.31	2.81
2	CoC 671	3.00		2.77	2.72	2.93	2.59	3.05	2.59	2.58	3.17	3.26	3.03	2.92	2.69	2.87
3	CoSnk 05103	2.44		2.56	2.23	2.51	2.10	2.87	2.59	2.57	2.70	2.75	2.97	2.59	2.31	2.55
	Grand Mean	2.97		2.91	2.70	2.96	2.52	3.26	2.75	2.64	3.06	3.16	3.23	3.02	2.57	2.90
	SE(m)	0.12		0.12	0.08	0.13	0.05	0.08	0.09	0.06	0.06	0.05	0.14	0.15	0.13	
	CD	0.34		0.35	0.23	0.38	0.14	0.24	0.25	0.09	0.17	0.15	0.41	0.45	0.36	
	CV	6.91		7.22	5.05	6.14	3.33	4.38	5.58	2.27	3.37	2.85	7.70	7.18	8.60	

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Table 2.4.13: Single cane weight (kg) at harvest

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara Nagar	Pune	Rudru	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	1.03		1.12	1.15	0.81	1.25	1.00	1.28	1.94	0.94	1.14	1.52	1.05	1.14	1.18
2	Co 13003	1.49		1.27	1.33	1.56	1.40	1.65	1.17	1.84	1.49	1.19	2.08	1.65	1.20	1.49
3	Co 13004	1.54		1.38	1.68	1.16	1.37	1.61	1.40	1.68	1.59	1.31	1.80	1.75	1.23	1.50
4	Co 13006	1.46		1.23	1.48	1.23	1.27	1.75	1.47	1.48	1.42	1.04	1.81	1.74	1.28	1.44
5	Co 13008	1.27		1.37	1.70	1.56	1.12	1.79	1.82	1.79	1.67	1.24	2.18	1.56	1.30	1.57
6	Co 13009	1.68		1.35	1.90	1.23	1.30	1.87	1.49	2.06	1.92	1.55	2.41	2.14	1.37	1.71
7	Co 13013	1.79		1.43	1.87	1.40	1.38	1.85	1.78	2.18	1.79	1.38	2.01	2.28	1.51	1.74
8	Co 13014	1.70		1.38	1.51	1.25	1.33	1.95	1.30	2.10	1.59	1.32	2.25	1.72	1.13	1.58
9	Co 13018	1.14		1.26	1.20	1.11	1.22	1.28	1.25	1.61	1.50	1.02	1.45	1.51	1.09	1.28
10	Co 13020	1.62		1.36	1.64	1.37	1.28	1.79	1.47	1.48	1.43	1.31	1.93	1.77	1.18	1.51
11	CoN 13072	1.16		1.45	1.29	1.07	1.52	1.57	1.95	1.52	1.50	1.36	1.65	1.49	1.26	1.45
12	CoN 13073	1.41		1.39	1.63	1.34	1.43	1.51	1.65	1.56	1.77	1.56	2.50	1.61	1.34	1.59
13	CoSnk 13101	1.06		1.12	1.05	1.21	1.32	1.25	1.24	1.24	1.47	1.21	1.66	1.56	1.27	1.28
14	CoSnk 13103	1.21		1.29	1.22	1.17	1.37	1.49	1.07	1.61	1.39	1.40	1.92	1.43	1.53	1.39
15	CoSnk 13106	1.40		1.35	1.17	1.56	1.21	1.71	1.43	1.40	1.62	1.30	2.13	1.81	1.15	1.48
16	MS 13081	1.98		1.65	1.94	1.90	1.42	2.06	1.32	1.67	1.89	1.50	2.62	2.26	1.46	1.82
17	PI 13132	1.65		1.13	1.19	1.28	1.32	1.09	1.40	1.33	1.44	1.17	1.82	1.62	1.27	1.36
	Standards															
1	Co 86032	1.30		1.26	1.38	1.63	1.05	1.49	1.34	1.42	1.48	1.14	2.03	1.78	1.18	1.42
2	CoC 671	1.42		1.22	1.36	1.75	1.03	1.37	1.36	1.83	1.60	1.14	1.68	1.82	1.11	1.44
3	CoSnk 05103	0.83		1.24	0.90	0.87	1.21	1.10	1.37	1.24	1.03	1.05	1.85	1.18	1.09	1.15
	Grand Mean	1.41		1.31	1.43	1.32	1.31	1.56	1.43	1.65	1.53	1.27	1.97	1.69	1.25	1.47
	SE(m)	0.11		0.08	0.10	0.11	0.09	0.11	0.08	0.06	0.04	0.08	0.21	0.11	0.06	
	CD	0.33		0.22	0.30	0.32	0.22	0.32	0.23	0.18	0.10	0.22	0.61	0.34	0.18	
	CV	14.21		10.17	12.18	11.74	10.34	12.50	9.79	6.69	4.00	10.37	18.61	9.56	8.87	

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Table 2.4.14: CCS % at 10 months

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara Nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	13.61	11.24		12.60	12.83	10.51	14.33	12.48	12.78	12.62	13.76	13.80	11.57	9.58	12.54
2	Co 13003	12.56	12.21		12.97	12.80	11.28	12.07	11.20	12.96	11.30	13.13	12.29	10.00	11.15	11.98
3	Co 13004	13.16	12.60		11.60	13.41	11.39	11.76	10.67	13.31	11.77	12.37	10.30	11.72	9.41	11.74
4	Co 13006	12.44	13.52		12.35	13.39	11.68	12.19	9.65	14.18	11.72	11.28	12.94	11.83	10.06	11.98
5	Co 13008	12.79	13.09		11.21	12.27	11.35	13.41	10.74	13.01	11.58	13.76	11.54	10.23	10.10	11.83
6	Co 13009	11.47	13.31		9.59	11.52	10.55	12.93	8.80	11.79	11.46	13.63	12.10	8.69	10.26	11.07
7	Co 13013	12.91	13.25		11.61	13.61	11.69	12.16	9.91	13.23	10.76	10.11	12.46	9.87	10.40	11.56
8	Co 13014	11.32	11.96		10.90	12.65	10.94	13.34	10.11	12.15	10.74	12.08	11.85	10.62	10.65	11.45
9	Co 13018	13.18	13.12		11.61	12.67	11.26	11.80	10.34	12.82	10.94	11.74	12.04	10.23	9.97	11.55
10	Co 13020	12.79	13.84		12.22	13.31	10.14	12.67	11.34	13.64	11.01	12.68	12.46	9.72	9.83	11.82
11	CoN 13072	10.65	11.96		10.54	11.18	11.19	11.46	9.42	12.09	11.94	12.36	12.12	10.43	10.25	11.14
12	CoN 13073	11.30	12.80		9.87	12.71	11.41	10.59	6.01	11.90	9.81	8.65	11.66	7.41	10.47	10.15
13	CoSnk 13101	11.70	12.46		12.68	11.92	10.37	12.77	12.61	13.11	12.14	13.17	12.79	11.90	10.01	12.10
14	CoSnk 13103	12.36	12.82		12.85	13.46	10.37	12.58	9.42	13.50	12.00	12.96	12.65	11.10	9.86	11.93
15	CoSnk 13106	11.62	12.78		12.32	12.40	10.14	12.33	8.13	13.73	11.80	10.99	13.53	11.43	10.49	11.58
16	MS 13081	12.58	13.15		12.53	12.81	11.91	12.96	11.64	13.76	11.34	12.36	12.24	11.60	10.12	12.15
17	PI 13132	11.52	13.14		13.23	12.26	10.38	12.77	9.52	13.53	12.08	12.15	11.77	11.33	10.21	11.73
	Standards															
1	Co 86032	12.61	12.87		12.27	12.43	11.70	13.51	12.18	13.12	11.96	13.20	11.71	10.63	10.58	12.16
2	CoC 671	13.57	12.83		12.49	13.96	12.15	13.83	13.82	14.26	13.46	13.47	13.54	9.62	10.47	12.89
3	CoSnk 05103	12.30	13.74		12.63	13.08	11.99	13.20	11.78	12.28	11.25	10.71	12.25	10.18	9.57	11.77
	Grand Mean	12.32	12.83		11.91	12.73	10.51	12.63	10.49	13.06	11.58	12.23	12.30	10.51	10.17	11.70
	SE(m)	0.40	0.23		0.34	0.49	0.38	0.44	0.52	0.54	0.23	0.02	0.63	0.60	0.26	
	CD	1.15	0.67		1.02	NS	1.09	1.26	1.49	1.56	0.66	0.06	NS	1.76	0.73	
	CV	5.64	3.05		5.01	1.60	5.95	6.05	8.54	7.23	3.43	0.31	8.83	8.01	4.36	

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Table 2.4.15: Sucrose % at 10 months

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	19.26	17.45		17.88	17.93	15.03	20.05	17.84	18.26	17.82	19.07	19.71	16.98	14.02	17.82
2	Co 13003	18.06	18.11		18.39	17.93	16.19	17.27	16.43	18.42	16.12	18.36	17.76	14.87	16.29	17.17
3	Co 13004	18.75	18.92		16.61	18.75	16.24	16.87	15.42	18.84	16.54	17.43	15.36	17.01	13.72	16.80
4	Co 13006	17.84	19.44		17.55	18.70	16.50	17.48	14.23	19.85	16.75	16.05	18.54	17.43	14.70	17.14
5	Co 13008	18.28	18.98		16.19	17.24	16.27	18.91	15.49	18.47	16.75	19.06	16.62	15.04	14.78	16.93
6	Co 13009	16.66	19.48		14.23	16.42	15.25	18.15	12.94	16.98	16.70	18.85	17.51	13.01	15.01	15.98
7	Co 13013	18.43	19.13		16.58	19.06	16.72	17.30	14.68	18.81	15.85	14.65	18.00	14.64	15.23	16.66
8	Co 13014	16.33	18.18		15.60	17.69	15.77	18.76	14.51	17.24	15.34	16.99	17.20	15.47	15.55	16.37
9	Co 13018	18.76	19.30		16.63	17.71	16.14	16.76	14.76	18.29	15.68	16.74	17.40	15.19	14.55	16.55
10	Co 13020	18.32	19.76		17.61	18.58	14.79	17.91	16.33	19.37	15.95	17.88	17.97	14.40	14.40	16.96
11	CoN 13072	15.62	18.51		15.54	15.97	16.04	16.52	14.33	17.34	16.85	17.43	17.46	15.27	15.01	16.12
12	CoN 13073	16.41	18.66		14.44	17.81	16.33	15.44	9.94	16.92	14.26	13.19	16.90	11.30	15.31	14.85
13	CoSnk 13101	16.87	18.53		17.96	16.80	15.01	17.99	18.06	18.71	17.17	18.36	18.36	17.25	14.63	17.26
14	CoSnk 13103	17.69	18.73		18.37	18.72	14.96	17.86	13.86	19.09	17.06	18.13	18.15	16.09	14.40	17.03
15	CoSnk 13106	16.69	18.65		17.42	17.44	14.69	17.47	12.21	19.46	16.66	15.60	19.34	16.51	15.32	16.57
16	MS 13081	17.94	19.55		17.63	17.93	16.82	18.28	16.64	19.64	16.14	17.44	17.60	16.72	14.78	17.30
17	PI 13132	16.57	19.30		18.79	17.14	14.85	18.09	14.08	19.36	17.26	17.05	17.05	16.40	14.94	16.80
	Standards															
1	Co 86032	17.99	18.86		17.37	17.47	16.68	19.00	17.33	18.85	16.97	18.37	16.96	15.43	15.46	17.32
2	CoC 671	19.37	19.05		17.68	19.86	17.14	19.50	19.64	20.28	19.05	18.81	19.34	14.59	15.31	18.38
3	CoSnk 05103	17.66	19.60		17.58	18.54	17.01	18.66	16.86	17.41	16.06	15.35	17.70	14.97	13.95	16.81
	Grand Mean	17.68	18.91		17.00	17.88	15.92	17.91	15.28	18.58	16.55	17.24	17.75	15.43	14.87	16.84
	SE(m)	0.53	0.21		0.42	0.62	0.41	0.56	0.60	0.65	0.29	0.02	0.79	0.76	0.38	
	CD	1.46	0.63		1.24	1.84	1.17	1.61	1.74	1.87	0.83	0.06	NS	2.25	1.07	
	CV	4.98	1.94		4.29	4.91	4.45	5.45	6.84	6.10	3.00	0.22	7.73	6.97	4.37	

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Table 2.4.16: Brix % at 10 months

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	20.81	22.58		19.44	18.90	16.60	21.09	19.70	20.14	19.76	19.84	21.76	19.81	16.27	19.51
2	Co 13003	20.22	21.55		19.94	19.00	18.05	19.09	19.17	20.08	18.24	19.28	20.07	17.81	18.83	19.15
3	Co 13004	20.58	23.07		18.44	19.80	17.83	18.75	17.40	20.34	18.15	18.66	18.51	19.41	15.80	18.64
4	Co 13006	19.82	21.75		19.10	19.70	17.76	19.42	16.77	20.91	19.04	17.55	20.58	20.46	17.00	19.01
5	Co 13008	20.20	21.62		18.27	18.40	18.09	20.25	17.44	20.08	18.64	19.58	18.65	17.61	17.13	18.69
6	Co 13009	19.03	22.57		16.94	18.10	17.27	19.25	15.17	19.05	18.25	19.30	19.83	15.76	17.40	17.95
7	Co 13013	20.27	21.56		18.27	20.20	18.49	18.92	17.44	20.51	18.52	16.65	20.33	17.41	17.70	18.73
8	Co 13014	18.42	22.66		17.27	18.70	17.73	20.09	16.17	18.61	17.42	18.08	19.63	17.76	17.93	18.15
9	Co 13018	20.53	22.62		18.44	18.70	17.94	18.25	16.24	20.11	17.90	18.38	19.66	18.11	16.80	18.42
10	Co 13020	20.33	21.76		19.77	19.55	17.06	19.42	18.30	21.07	18.65	19.15	20.21	17.11	16.73	18.95
11	CoN 13072	18.21	23.83		18.27	17.70	17.83	18.59	17.87	14.28	18.65	18.65	19.59	17.71	17.43	17.90
12	CoN 13073	18.72	21.50		16.77	18.90	18.08	17.75	14.20	18.94	16.75	16.35	19.21	14.16	17.73	17.30
13	CoSnk 13101	18.99	22.20		19.44	18.10	17.02	19.25	20.04	20.55	19.09	19.18	20.48	19.61	16.93	19.06
14	CoSnk 13103	19.57	21.64		20.27	19.50	16.85	19.42	16.24	20.58	19.15	19.07	20.21	18.31	16.63	18.82
15	CoSnk 13106	18.63	21.54		18.77	18.70	16.70	18.92	14.90	21.08	18.44	16.97	21.35	18.61	17.70	18.40
16	MS 13081	19.72	23.40		18.77	19.00	18.08	19.59	18.40	21.62	18.18	18.67	19.68	18.76	17.10	18.96
17	PI 13132	18.54	22.55		20.44	18.10	16.46	19.59	16.64	21.43	19.60	17.91	19.37	18.61	17.30	18.67
	Standards															
1	Co 86032	19.80	21.94		18.77	18.70	18.32	20.25	18.97	20.97	19.02	19.10	19.28	17.61	17.87	19.05
2	CoC 671	21.33	22.74		19.10	21.80	18.39	20.92	21.40	22.15	20.87	19.69	21.31	18.11	17.73	20.23
3	CoSnk 05103	19.68	21.57		18.27	20.20	18.50	20.09	18.70	18.85	18.18	17.08	20.00	17.51	16.03	18.59
	Grand Mean	19.67	22.23		18.74	19.09	17.65	19.45	17.56	20.32	18.63	18.46	19.99	18.01	17.20	18.73
	SE(m)	0.42	0.35		0.36	0.55	0.43	0.48	0.46	0.61	0.30	1.42	0.66	0.69	0.44	
	CD	1.19	1.03		1.06	1.62	1.23	1.39	1.31	1.76	0.85	4.07	NS	2.06	1.26	
	CV	3.62	2.73		3.32	4.05	4.20	4.31	4.48	5.26	2.76	13.59	5.75	5.45	4.46	

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Table 2.4.17: Purity % at 10 months

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudrur	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	92.57	77.35		92.01	95.40	90.54	95.07	90.62	90.66	90.14	97.36	90.60	85.49	85.25	91.31
2	Co 13003	89.32	84.09		92.22	94.88	89.70	90.42	85.81	91.79	88.37	95.23	88.49	83.50	85.65	89.61
3	Co 13004	91.14	82.10		90.06	95.13	91.08	89.91	88.58	92.60	91.35	93.47	82.26	87.67	85.93	89.93
4	Co 13006	89.99	89.42		91.80	95.46	92.91	89.94	84.80	90.69	87.99	91.47	90.06	85.26	85.60	89.66
5	Co 13008	90.48	87.91		88.63	94.23	89.94	93.34	88.77	92.05	89.07	97.36	89.15	85.39	85.35	90.31
6	Co 13009	87.34	86.31		84.00	91.12	88.30	94.27	85.24	89.22	87.25	97.61	88.08	82.51	85.38	88.36
7	Co 13013	90.90	88.86		90.75	94.88	90.43	91.29	84.13	91.74	85.61	87.97	88.56	84.03	85.20	88.79
8	Co 13014	88.70	80.25		90.37	95.16	88.95	93.55	89.74	92.54	88.07	93.99	87.57	87.05	85.83	90.13
9	Co 13018	91.35	85.39		90.16	95.24	89.97	91.79	90.93	90.93	87.60	91.02	88.35	83.85	85.72	89.74
10	Co 13020	90.10	90.88		89.06	95.58	86.69	92.38	89.14	91.77	85.53	93.36	88.86	84.14	85.12	89.31
11	CoN 13072	85.59	77.68		85.06	90.78	89.96	88.70	79.99	89.92	90.39	93.46	89.13	86.11	85.22	87.86
12	CoN 13073	87.60	86.81		86.08	94.75	90.32	86.96	70.05	86.99	85.77	79.67	87.81	79.65	85.48	85.09
13	CoSnk 13101	88.82	83.68		92.26	93.33	88.19	93.40	90.10	90.99	90.09	95.76	89.67	87.99	85.51	90.51
14	CoSnk 13103	90.36	86.59		90.63	96.50	88.78	91.92	85.33	92.65	89.06	95.04	89.77	87.88	85.64	90.30
15	CoSnk 13106	89.58	86.71		92.80	93.82	87.96	92.33	81.83	92.30	90.32	91.91	90.52	88.70	85.67	89.81
16	MS 13081	90.95	83.56		93.91	94.91	93.03	93.31	90.41	90.85	88.96	93.35	89.35	89.10	85.54	91.14
17	PI 13132	89.35	85.72		91.98	95.24	90.22	92.30	84.46	90.41	88.07	95.12	87.96	88.17	85.44	89.89
	Standards															
1	Co 86032	90.85	86.10		92.51	93.97	91.05	93.82	91.36	89.90	89.25	96.30	87.88	87.47	85.67	90.84
2	CoC 671	90.81	83.93		92.51	91.56	93.20	93.20	91.79	91.52	90.58	95.47	90.64	80.59	85.48	90.61
3	CoSnk 05103	89.75	90.88		96.25	92.35	91.95	92.87	90.15	88.02	88.28	89.91	88.50	85.47	86.04	89.96
	Grand Mean	89.78	85.21		90.65	94.21	90.20	92.04	86.66	90.88	88.59	93.24	88.66	85.50	85.54	89.66
	SE(m)	0.92	1.51		1.17	1.14	2.42	0.96	2.07	1.37	0.32	0.02	1.67	1.89	0.25	
	CD	2.64	4.44		3.46	NS	NS	2.76	5.95	3.94	0.92	0.07	NS	5.59	NS	
	CV	1.77	3.06		2.24	1.71	4.65	1.81	4.14	2.62	0.62	0.05	3.26	3.12	0.51	

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Table 2.4.18: Pol % Cane at 10 month

Sl. No.	Entries	Coimbatore	Akola	Basmat hnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002				14.04		11.67	14.70					14.59	12.72		13.54
2	Co 13003				13.90		12.68	11.73					13.14	10.97		12.48
3	Co 13004				12.91		12.61	12.16					11.37	13.03		12.42
4	Co 13006				13.53		12.84	12.61					13.72	13.18		13.18
5	Co 13008				12.51		12.54	13.51					12.30	11.16		12.40
6	Co 13009				11.11		11.85	12.85					12.96	9.90		11.73
7	Co 13013				12.92		13.07	12.60					13.32	11.23		12.63
8	Co 13014				12.24		12.28	13.46					12.73	11.87		12.52
9	Co 13018				13.04		12.52	12.15					12.87	11.64		12.44
10	Co 13020				13.60		11.51	12.94					13.30	11.21		12.51
11	CoN 13072				12.13		12.41	11.93					12.92	11.28		12.13
12	CoN 13073				11.32		12.62	11.15					12.51	8.84		11.29
13	CoSnk 13101				13.92		11.64	12.75					13.59	12.74		12.93
14	CoSnk 13103				14.40		11.59	12.72					13.43	12.33		12.89
15	CoSnk 13106				13.61		11.39	12.68					14.31	12.47		12.89
16	MS 13081				13.77		13.00	13.08					13.02	13.49		13.27
17	PI 13132				14.66		11.50	13.02					12.62	12.71		12.90
	Standards															
1	Co 86032				13.62		12.89	13.75					12.55	11.86		12.93
2	CoC 671				13.79		13.31	14.08					14.31	11.27		13.35
3	CoSnk 05103				13.25		13.17	12.59					13.10	11.72		12.77
	Grand Mean				13.21		12.35	12.82					13.13	11.78		13.50
	SE(m)				0.33		0.32	0.44					0.59	0.60		
	CD				0.97		0.91	1.25					NS	1.79		
	CV				4.29		4.44	5.89					7.73	7.24		

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Table 2.4.19: Fibre % at 10 month

Sl. No.	Entries	Coimbatore	Akola	Basmat hnagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudrur	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002				11.48		12.33	11.21						15.14		12.54
2	Co 13003				14.40		11.72	14.28						16.25		14.16
3	Co 13004				12.30		12.37	12.33						13.37		12.59
4	Co 13006				12.88		12.18	12.64						14.36		13.02
5	Co 13008				12.74		12.89	13.03						15.78		13.61
6	Co 13009				11.90		12.29	12.74						13.81		12.69
7	Co 13013				12.08		11.83	11.57						13.30		12.20
8	Co 13014				11.53		12.12	11.93						13.31		12.22
9	Co 13018				11.62		12.41	11.40						13.34		12.19
10	Co 13020				12.73		12.21	12.12						12.17		12.31
11	CoN 13072				11.93		12.63	12.35						16.14		13.26
12	CoN 13073				11.66		12.72	11.71						11.78		11.97
13	CoSnk 13101				12.51		12.42	12.78						16.17		13.47
14	CoSnk 13103				11.62		12.54	12.31						13.38		12.46
15	CoSnk 13106				11.89		12.47	11.00						14.44		12.45
16	MS 13081				11.91		12.72	12.16						9.33		11.53
17	PI 13132				11.97		12.61	11.97						12.48		12.26
	Standards															
1	Co 86032				11.59		12.69	11.72						13.14		12.29
2	CoC 671				11.98		12.37	11.91						12.75		12.25
3	CoSnk 05103				14.61		12.57	14.74						11.71		13.41
	Grand Mean				12.27		12.40	12.30						13.61		12.65
	SE(m)				0.29		0.29	0.44						0.59		
	CD				0.86		NS	1.26						1.74		
	CV				4.11		4.09	6.20						6.10		

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Table 2.4.20: Extraction % at 10 month

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	47.50			49.86		53.40	53.02	56.19	44.18				57.42	59.51	52.64
2	Co 13003	49.31			54.82		51.97	52.71	50.02	43.69				59.57	59.19	52.66
3	Co 13004	47.16			56.88		55.79	55.81	53.43	43.50				61.75	57.30	53.95
4	Co 13006	48.56			39.86		54.60	56.60	55.17	42.45				58.75	54.89	51.36
5	Co 13008	47.01			53.00		55.45	52.58	56.28	45.63				61.98	54.85	53.35
6	Co 13009	47.64			50.87		52.15	52.86	52.23	49.52				53.43	53.27	51.50
7	Co 13013	48.79			57.01		51.03	53.91	59.69	48.66				62.80	56.69	54.82
8	Co 13014	51.37			53.09		48.55	54.82	57.04	48.94				61.83	54.07	53.71
9	Co 13018	50.14			48.88		53.63	53.51	58.97	44.54				58.77	59.89	53.54
10	Co 13020	49.64			50.09		53.25	55.29	56.42	42.07				60.99	58.18	53.24
11	CoN 13072	48.43			48.18		52.17	55.88	57.66	41.58				58.22	56.12	52.28
12	CoN 13073	49.24			51.59		53.30	54.28	55.95	45.49				62.09	58.53	53.81
13	CoSnk 13101	45.52			46.95		53.35	56.95	53.49	41.20				54.78	54.39	50.83
14	CoSnk 13103	46.56			42.60		53.36	55.78	54.83	44.57				58.66	61.75	52.26
15	CoSnk 13106	47.75			45.36		51.31	52.51	48.96	40.64				59.66	56.00	50.27
16	MS 13081	51.63			57.74		52.20	55.40	55.39	44.32				61.84	58.37	54.61
17	PI 13132	46.33			50.99		51.87	54.93	53.06	41.72				64.29	60.23	52.93
	Standards															
1	Co 86032	48.76			46.99		54.16	54.30	55.34	45.71				62.42	61.06	53.59
2	CoC 671	49.94			57.79		50.99	51.78	55.12	42.48				59.67	54.62	52.80
3	CoSnk 05103	45.51			46.34		48.83	51.85	50.53	41.19				57.23	57.92	49.92
	Grand Mean	48.34			50.44		52.57	54.24	54.79	44.11				59.81	57.34	52.70
	SE(m)	1.51			2.64		0.81	1.10	1.93	0.87				1.23	1.87	
	CD	NA			7.80		2.33	3.15	5.56	2.49				3.65	NS	
	CV	5.21			9.07		2.68	3.52	6.12	3.42				2.92	5.66	

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Table 2.4.21: NMC (‘000/ha) at 10 month

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002		19.91				130.78	72.98	92.95	112.14			65.05		93.89	94.63
2	Co 13003		23.33				133.25	70.97	89.86	120.40			50.69		80.81	91.00
3	Co 13004		18.15				129.95	64.58	53.67	112.36			57.56		104.97	87.18
4	Co 13006		20.09				128.97	82.43	112.06	118.55			53.39		95.97	98.56
5	Co 13008		12.22				132.51	69.72	71.77	121.27			46.76		93.75	89.30
6	Co 13009		21.20				132.55	66.53	60.32	128.71			43.21		80.85	85.36
7	Co 13013		32.13				138.95	84.30	88.08	111.66			53.24		90.60	94.47
8	Co 13014		7.78				130.64	64.24	82.67	116.72			49.00		83.40	87.78
9	Co 13018		27.04				127.98	76.67	75.09	126.58			54.71		90.35	91.90
10	Co 13020		12.59				140.77	75.28	88.70	129.01			43.98		92.85	95.10
11	CoN 13072		34.63				133.10	79.44	80.12	109.73			52.55		78.54	88.91
12	CoN 13073		29.44				130.96	65.49	120.10	109.56			42.05		111.04	96.53
13	CoSnk 13101		19.35				127.37	69.24	93.42	108.74			58.02		93.74	91.75
14	CoSnk 13103		9.91				126.64	76.67	81.05	102.99			49.62		96.73	88.95
15	CoSnk 13106		23.33				135.23	69.10	79.65	129.13			46.76		105.28	94.19
16	MS 13081		9.81				139.74	74.03	102.62	116.96			48.69		109.03	98.51
17	PI 13132		8.33				134.73	65.62	110.05	108.67			66.43		120.77	101.04
	Standards															
1	Co 86032		27.68				135.18	88.19	99.53	128.83			58.41		96.57	101.12
2	CoC 671		20.09				121.28	60.90	76.25	110.74			55.25		73.33	82.96
3	CoSnk 05103		50.46				122.96	102.85	123.58	111.58			41.05		94.33	99.39
	Grand Mean		21.37				131.36	73.96	89.08	116.72			51.82		94.34	92.88
	SE(m)		6.01				4.45	3.10	7.14	1.74			3.19		3.71	
	CD		17.74				12.35	8.87	20.51	4.99			9.16		10.54	
	CV		48.74				5.85	7.25	13.87	2.58			10.65		6.81	

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Table 2.4.22: Stalk length (cm) at 10 month

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	225.00	118.33		194.20	155.00	250.72	165.00	227.77	195.33			242.33	153.00	231.67	204.00
2	Co 13003	235.00	117.73		203.00	202.00	251.82	238.33	213.00	204.33			286.33	218.00	221.22	227.30
3	Co 13004	248.33	162.00		217.00	181.00	233.96	208.33	223.40	193.33			259.67	210.00	235.22	221.02
4	Co 13006	253.33	191.67		243.78	187.00	237.66	235.00	233.10	184.33			288.33	201.50	237.11	230.11
5	Co 13008	243.33	137.33		241.89	170.00	256.27	205.00	234.30	212.00			278.00	212.50	221.33	227.46
6	Co 13009	223.33	144.00		203.00	177.00	239.92	205.00	210.50	208.00			258.67	190.50	195.44	211.14
7	Co 13013	261.67	173.53		241.44	198.00	257.09	213.33	248.23	210.33			282.33	206.50	235.45	235.44
8	Co 13014	233.33	128.07		213.11	187.00	229.48	218.33	211.47	206.33			303.67	194.50	221.78	221.90
9	Co 13018	223.33	161.20		183.00	186.00	237.50	195.00	244.57	202.33			288.00	175.50	211.22	214.64
10	Co 13020	216.67	159.27		190.00	194.00	232.61	190.00	220.77	167.00			267.67	187.00	222.89	208.86
11	CoN 13072	216.67	172.40		205.22	168.00	250.87	201.67	261.87	201.66			292.33	194.00	219.22	221.15
12	CoN 13073	235.00	164.60		218.89	197.00	249.56	203.33	226.13	173.00			316.67	175.50	221.33	221.64
13	CoSnk 13101	213.33	118.80		181.64	136.00	240.65	198.33	213.23	195.66			264.00	178.00	207.67	202.85
14	CoSnk 13103	255.00	148.40		211.78	173.00	239.08	211.67	211.47	199.66			282.33	194.50	230.33	220.88
15	CoSnk 13106	230.00	184.40		193.11	199.00	243.50	196.67	248.17	204.33			263.00	186.00	213.78	217.76
16	MS 13081	233.33	129.47		217.56	204.00	252.34	261.67	186.20	196.00			287.67	215.00	222.67	227.64
17	PI 13132	255.00	150.20		201.56	203.00	250.51	171.67	241.17	145.00			299.33	172.50	205.44	214.52
	Standards															
1	Co 86032	203.33	195.47		174.33	200.00	225.54	210.00	269.27	174.33			242.33	183.50	201.11	208.37
2	CoC 671	251.67	145.20		196.00	235.00	232.82	198.33	235.50	172.00			255.67	196.50	192.33	216.58
3	CoSnk 05103	235.00	178.07		210.78	222.00	229.74	211.67	298.97	208.66			232.00	202.00	260.00	231.08
	Grand Mean	234.58	154.01		207.06	188.70	242.08	206.92	232.95	194.18			274.52	192.33	220.36	219.37
	SE(m)	10.63	16.71		8.51	6.62	9.78	3.88	11.52	3.12			20.28	9.17	11.88	
	CD	30.50	5.81		25.10	19.60	NS	11.10	33.10	8.94			NS	27.14	NS	
	CV	7.80	6.54		7.12	4.96	6.99	3.25	8.56	2.78			12.80	6.74	9.34	

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Table 2.4.23: Stalk diameter (cm) at 10 month

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpalale	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	2.80	2.70		2.45	2.82	2.51	2.76	2.25	2.61			3.13	2.71	2.71	2.67
2	Co 13003	2.91	2.37		2.39	3.31	2.69	3.18	2.27	2.57			3.00	2.96	2.64	2.79
3	Co 13004	2.88	2.57		2.73	3.02	2.06	3.11	2.38	2.62			3.63	3.10	2.68	2.82
4	Co 13006	2.49	2.67		2.60	2.79	2.45	3.11	2.20	2.59			3.13	2.83	2.74	2.69
5	Co 13008	2.67	2.55		2.73	3.08	2.61	2.87	2.55	2.54			3.20	3.12	2.56	2.79
6	Co 13009	2.98	2.99		3.01	3.17	2.43	3.74	2.60	2.54			3.50	3.27	2.68	2.99
7	Co 13013	2.94	2.60		2.91	3.09	2.64	3.40	2.62	2.58			3.33	3.04	2.83	2.94
8	Co 13014	3.02	2.60		2.95	3.16	2.47	3.56	2.59	2.52			3.90	3.36	2.46	3.00
9	Co 13018	2.68	2.91		2.63	3.05	2.26	3.08	2.23	2.56			3.23	3.15	2.89	2.78
10	Co 13020	3.12	2.61		2.67	2.96	2.53	3.08	2.61	2.48			3.37	3.47	2.25	2.85
11	CoN 13072	2.74	2.77		2.37	3.15	2.43	2.87	2.65	2.54			3.07	2.83	2.61	2.73
12	CoN 13073	3.04	2.86		2.64	3.16	2.67	3.40	2.57	2.51			3.70	2.93	3.16	2.98
13	CoSnk 13101	2.69	2.31		2.42	3.17	2.35	2.97	2.41	2.34			3.20	2.84	2.71	2.71
14	CoSnk 13103	2.85	2.35		2.36	2.92	2.35	3.00	2.40	2.50			3.17	3.15	3.11	2.78
15	CoSnk 13106	2.88	3.25		2.62	2.91	2.70	3.24	2.27	2.52			3.60	3.15	2.50	2.84
16	MS 13081	2.61	2.27		2.90	3.29	2.73	3.34	2.73	2.52			3.63	3.46	2.87	3.01
17	PI 13132	2.90	2.96		2.53	3.12	2.04	2.68	2.31	2.53			3.20	3.12	2.99	2.74
	Standards															
1	Co 86032	2.86	2.96		2.66	3.00	2.03	3.26	2.25	2.46			3.10	2.98	2.52	2.71
2	CoC 671	2.98	2.99		2.75	3.13	2.46	3.05	2.36	2.52			3.07	3.18	2.83	2.83
3	CoSnk 05103	2.44	2.46		2.24	2.66	2.01	2.52	2.31	2.42			3.43	2.70	2.55	2.53
	Grand Mean	2.82	2.69		2.63	3.05	2.42	3.11	2.43	2.52			3.33	3.07	2.71	2.81
	SE(m)	0.04	0.05		0.07	0.14	0.04	0.05	0.08	0.03			0.15	0.08	0.10	
	CD	0.12	0.14		0.20	NS	0.12	0.13	0.22	0.09			0.43	0.24	0.28	
	CV	7.90	3.06		4.46	6.66	2.99	2.61	5.43	2.17			7.69	3.79	6.30	

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Table 247.24: Single Cane Weight (kg) at 10 month

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	1.03	1.29		1.02	0.75	1.14	0.88	1.17	1.73			1.30	0.89	1.26	1.12
2	Co 13003	1.25	1.52		1.33	1.34	1.32	1.25	1.32	1.74			1.67	1.37	1.21	1.38
3	Co 13004	1.38	1.44		1.44	1.03	1.26	1.55	1.19	1.55			1.73	1.78	1.15	1.41
4	Co 13006	1.18	1.55		1.48	1.01	1.17	1.39	1.28	1.32			1.89	1.31	1.38	1.34
5	Co 13008	1.23	1.56		1.70	1.03	1.01	1.63	1.35	1.66			1.84	1.66	1.10	1.42
6	Co 13009	1.35	1.43		1.52	1.15	1.21	1.57	1.42	1.86			2.03	1.63	1.21	1.49
7	Co 13013	1.57	1.33		1.59	1.17	1.45	1.42	1.62	1.97			1.83	1.80	1.45	1.59
8	Co 13014	1.46	1.58		1.51	1.23	1.21	1.73	1.34	1.88			2.18	1.76	1.23	1.55
9	Co 13018	1.16	1.32		1.07	0.95	1.07	1.21	1.20	1.47			1.46	1.42	1.21	1.22
10	Co 13020	1.48	1.57		1.22	1.30	1.17	1.35	1.50	1.34			1.59	1.77	1.00	1.37
11	CoN 13072	1.06	1.42		1.05	1.02	1.34	1.24	1.47	1.36			1.52	1.30	1.26	1.26
12	CoN 13073	1.41	1.54		1.33	1.33	1.28	1.53	1.54	1.49			2.30	1.40	1.46	1.51
13	CoSnk 13101	1.04	1.42		1.05	1.04	1.26	0.87	1.20	1.05			1.70	1.23	1.14	1.16
14	CoSnk 13103	1.22	1.60		1.16	0.93	1.28	1.19	1.13	1.41			1.63	1.48	1.42	1.29
15	CoSnk 13106	1.39	1.57		1.12	1.23	1.08	1.47	1.17	1.21			1.86	1.45	1.04	1.30
16	MS 13081	1.60	1.58		1.66	1.78	1.21	1.91	1.46	1.43			2.37	2.05	1.46	1.69
17	PI 13132	1.43	1.34		1.09	1.20	1.22	0.93	1.26	1.15			1.79	1.39	1.29	1.27
	Standards															
1	Co 86032	1.26	1.59		1.08	1.24	0.96	1.51	1.27	1.20			1.46	1.43	1.10	1.25
2	CoC 671	1.56	1.58		1.29	1.51	0.95	1.18	1.18	1.66			1.44	1.53	1.06	1.34
3	CoSnk 05103	0.82	1.59		0.72	0.84	1.08	0.85	0.88	1.07			1.63	1.21	1.06	1.02
	Grand Mean	1.29	1.49		1.27	1.15	1.20	1.33	1.30	1.47			1.76	1.49	1.22	1.35
	SE(m)	0.10	0.51		0.08	0.08	0.10	0.16	0.10	0.05			0.20	0.11	0.06	
	CD	0.28	1.49		0.23	0.23	0.29	0.44	0.30	0.15			0.56	0.33	0.16	
	CV	12.80	14.69		10.75	9.32	14.56	20.16	13.80	6.35			19.24	10.51	8.08	

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Table 2.4.25: Stalk Length (cm) at 8 month

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpalale	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	196.67				105.00	232.24	146.67	201.87	173.66			231.00	144.50		178.95
2	Co 13003	180.00				115.00	236.38	188.33	182.97	180.66			241.67	118.00		180.38
3	Co 13004	201.67				110.00	216.24	186.67	197.47	169.66			199.67	143.00		178.05
4	Co 13006	230.00				125.00	221.32	233.33	205.23	164.33			256.33	148.00		197.94
5	Co 13008	206.67				138.00	241.19	195.00	220.00	188.66			245.00	139.50		196.75
6	Co 13009	190.00				109.00	225.19	193.33	189.33	101.66			235.00	122.50		170.75
7	Co 13013	201.67				137.00	241.71	190.00	229.93	192.33			233.67	134.50		195.10
8	Co 13014	188.33				132.00	213.21	186.67	190.93	186.66			239.00	135.00		183.98
9	Co 13018	185.00				111.00	220.32	171.67	220.00	188.33			232.33	141.00		183.71
10	Co 13020	176.67				107.00	215.92	168.33	202.93	153.33			213.00	121.00		169.77
11	CoN 13072	178.33				92.00	233.65	175.00	232.43	179.66			260.67	127.50		184.91
12	CoN 13073	171.67				123.00	231.70	181.67	198.03	155.00			251.67	99.00		176.47
13	CoSnk 13101	176.67				93.00	225.43	171.67	189.13	174.33			240.00	125.00		174.40
14	CoSnk 13103	198.33				118.00	221.65	173.33	193.87	179.66			229.00	140.50		181.79
15	CoSnk 13106	190.00				135.00	226.34	185.00	239.01	190.00			223.67	131.50		190.07
16	MS 13081	206.67				119.00	230.85	208.33	174.40	172.99			243.00	153.50		188.59
17	PI 13132	213.33				133.00	234.04	160.00	225.33	156.66			263.67	122.00		188.50
	Standards															
1	Co 86032	163.33				124.00	211.63	175.00	242.40	157.33			234.33	118.00		178.25
2	CoC 671	200.00				153.00	217.05	178.33	214.00	144.00			252.00	128.50		185.86
3	CoSnk 05103	218.33				151.00	214.51	195.00	273.60	190.66			201.33	142.00		198.30
	Grand Mean	193.67				121.50	225.53	183.17	211.14	174.43			236.30	131.73		177.47
	SE(m)	8.33				6.63	9.36	4.35	11.07	4.19			14.63	10.47		
	CD	23.93				19.63	NS	12.44	31.81	12.01			NS	30.99		
	CV	7.45				14.71	7.19	4.11	9.08	4.16			10.73	11.24		

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Table 2.4.26: Stalk diameter (cm) at 8 month

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpalle	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	2.94				2.79	2.41	2.60	1.63	2.53			2.23	3.10		2.53
2	Co 13003	2.93				3.13	2.57	3.03	1.77	2.43			2.60	3.08		2.69
3	Co 13004	3.11				2.96	1.93	2.81	1.82	2.46			2.40	3.33		2.60
4	Co 13006	2.94				2.82	2.30	2.95	1.71	2.47			2.20	3.14		2.57
5	Co 13008	2.84				3.22	2.51	2.95	1.93	2.39			2.87	3.19		2.74
6	Co 13009	3.36				3.28	2.33	3.24	2.10	2.51			2.70	3.54		2.88
7	Co 13013	2.96				3.18	2.58	3.21	1.98	2.50			2.93	3.40		2.84
8	Co 13014	3.52				3.28	2.32	3.34	1.98	2.37			2.93	3.55		2.91
9	Co 13018	2.91				2.90	2.10	3.03	1.62	2.41			2.73	2.96		2.58
10	Co 13020	3.18				3.11	2.44	2.95	1.90	2.36			2.53	3.70		2.77
11	CoN 13072	3.17				2.82	2.33	2.47	2.04	2.42			2.67	2.86		2.60
12	CoN 13073	3.33				3.41	2.51	3.24	1.90	2.15			2.93	3.47		2.87
13	CoSnk 13101	2.99				3.12	2.22	2.65	1.78	2.26			2.43	2.83		2.53
14	CoSnk 13103	2.91				2.84	2.26	2.87	1.71	2.41			2.87	3.11		2.62
15	CoSnk 13106	3.39				2.92	2.57	2.95	1.62	2.47			3.03	3.38		2.79
16	MS 13081	3.39				2.75	2.57	3.26	2.09	2.46			3.07	3.49		2.88
17	PI 13132	3.28				3.06	1.89	2.55	1.68	2.33			2.57	3.19		2.57
	Standards															
1	Co 86032	3.09				3.12	1.88	3.03	1.60	2.34			2.83	3.28		2.65
2	CoC 671	3.19				3.44	2.30	2.95	1.68	2.37			2.23	3.19		2.67
3	CoSnk 05103	2.67				2.58	1.87	2.55	1.67	2.14			2.97	2.98		2.43
	Grand Mean	3.10				3.04	2.29	2.93	1.81	2.40			2.69	3.23		2.51
	SE(m)	0.13				0.16	0.05	0.03	0.07	0.03			0.22	0.10		
	CD	0.38				0.49	0.15	0.09	0.20	0.10			NS	0.30		
	CV	7.29				13.98	3.91	1.83	6.68	2.65			14.31	4.37		

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Table 2.4.27: Single Cane Weight (kg) at 8 month

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudrur	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	1.08				0.62	1.04		1.34	1.50			1.22	0.79		1.08
2	Co 13003	1.09				0.70	1.23		1.48	1.55			1.46	0.85		1.19
3	Co 13004	1.37				0.67	1.12		1.84	1.34			1.35	1.21		1.27
4	Co 13006	1.35				0.73	1.04		1.54	1.15			1.27	1.07		1.16
5	Co 13008	1.27				0.85	0.92		1.76	1.35			1.56	1.09		1.26
6	Co 13009	1.39				0.79	1.11		1.91	1.58			1.66	1.23		1.38
7	Co 13013	1.35				0.84	1.33		1.69	1.61			1.73	1.30		1.41
8	Co 13014	1.45				0.97	1.14		1.79	1.66			1.89	1.27		1.45
9	Co 13018	1.08				0.58	0.96		1.25	1.18			1.23	0.84		1.02
10	Co 13020	1.22				0.73	1.07		1.76	1.15			1.66	1.24		1.26
11	CoN 13072	1.17				0.62	1.31		1.59	1.03			1.48	0.87		1.15
12	CoN 13073	1.29				1.14	1.17		1.71	1.20			1.65	0.88		1.29
13	CoSnk 13101	1.02				0.74	1.18		1.50	0.92			1.33	0.80		1.07
14	CoSnk 13103	1.05				0.76	1.15		1.29	1.17			1.44	0.99		1.12
15	CoSnk 13106	1.46				0.80	1.01		1.46	1.04			1.48	1.08		1.19
16	MS 13081	1.55				0.88	1.31		1.71	1.29			1.85	1.57		1.45
17	PI 13132	1.55				0.89	1.11		1.46	0.99			1.62	1.01		1.23
	Standards															
1	Co 86032	1.13				0.83	0.91		1.44	1.03			1.52	0.98		1.12
2	CoC 671	1.38				1.21	0.88		1.75	1.36			1.56	0.99		1.30
3	CoSnk 05103	0.93				0.66	0.98		1.25	0.86			1.46	0.90		1.01
	Grand Mean	1.26				0.80	1.10		1.58	1.25			1.52	1.05		1.22
	SE(m)	0.08				0.09	0.08		0.10	0.06			0.14	0.08		
	CD	0.24				0.25	0.24		0.29	0.17			NS	0.24		
	CV	11.58				15.18	13.05		10.96	8.61			15.86	11.08		

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Table 2.4.28: CCS % at 8 months

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	13.06				10.01	8.81	11.84	10.34	11.70	10.04	10.68	11.48	8.25		10.62
2	Co 13003	11.48				9.27	8.90	10.90	11.23	11.87	9.12	10.22	9.81	6.57		9.94
3	Co 13004	11.49				10.59	9.34	10.57	10.94	12.11	8.75	9.43	8.60	5.83		9.76
4	Co 13006	12.22				9.50	9.10	11.43	9.99	12.56	9.69	10.38	10.07	7.77		10.27
5	Co 13008	11.30				11.02	9.75	11.18	10.87	12.04	9.02	9.17	10.25	5.28		9.99
6	Co 13009	10.01				9.07	9.41	10.32	8.71	11.36	8.31	10.97	9.35	3.67		9.12
7	Co 13013	11.51				10.33	10.43	10.55	8.13	11.79	8.31	12.32	10.29	5.19		9.88
8	Co 13014	11.51				9.01	9.22	11.00	9.63	11.17	7.68	11.67	10.14	5.75		9.68
9	Co 13018	10.94				8.35	8.89	10.87	8.13	11.90	7.84	11.08	10.28	4.20		9.25
10	Co 13020	11.92				10.92	8.87	10.00	10.54	12.57	8.91	10.48	9.14	3.96		9.73
11	CoN 13072	9.68				8.29	10.11	10.18	8.58	11.78	9.12	9.43	9.40	3.61		9.02
12	CoN 13073	9.07				8.36	10.06	9.32	6.67	11.22	7.21	7.43	10.30	2.36		8.20
13	CoSnk 13101	12.09				10.90	9.98	11.26	12.23	12.16	9.49	11.76	10.03	6.64		10.65
14	CoSnk 13103	11.68				9.94	9.06	9.91	8.31	12.16	9.39	12.00	9.91	7.27		9.96
15	CoSnk 13106	9.91				10.58	10.22	10.55	9.20	12.29	8.71	11.08	9.79	4.66		9.70
16	MS 13081	10.55				11.82	10.67	11.16	9.25	12.22	8.99	10.23	10.51	6.64		10.20
17	PI 13132	9.43				8.64	10.69	11.62	8.48	14.90	9.08	9.68	9.33	4.67		9.65
	Standards															
1	Co 86032	11.21				8.96	10.98	11.59	11.19	12.30	9.29	11.03	9.81	4.44		10.08
2	CoC 671	11.58				9.74	10.82	12.05	13.70	12.66	10.09	11.27	11.29	7.25		11.05
3	CoSnk 05103	11.42				7.42	10.19	10.20	8.31	11.13	8.31	9.83	11.68	5.18		9.37
	Grand Mean	11.10				9.64	9.77	10.82	9.72	12.09	8.87	10.51	10.07	5.46		9.80
	SE(m)	0.51				0.39	0.27	0.66	0.61	0.62	0.17	0.02	0.60	0.47		
	CD	1.45				1.16	0.77	N.S.	1.76	1.80	0.48	0.06	NS	1.40		
	CV	7.93				5.77	4.75	10.51	10.90	9.01	3.26	0.36	10.33	12.22		

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Table 2.4.29: Sucrose % at 8 months

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudrur	Sameer wadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	18.75				14.54	11.72	17.04	14.82	16.76	14.42	15.35	16.65	13.03		15.31
2	Co 13003	16.81				13.61	11.18	15.74	16.13	16.76	13.19	14.67	14.39	10.68		14.32
3	Co 13004	16.64				15.16	10.46	15.37	15.49	17.21	12.70	13.72	13.08	9.60		13.94
4	Co 13006	17.66				13.85	11.96	16.35	14.37	17.83	14.06	14.90	15.13	12.14		14.83
5	Co 13008	16.50				15.42	12.54	16.01	15.31	17.09	13.18	14.08	15.20	8.98		14.43
6	Co 13009	14.89				13.16	11.16	14.84	12.57	16.13	12.37	15.40	13.95	6.91		13.14
7	Co 13013	16.65				14.59	12.93	15.21	11.85	16.94	12.43	17.04	14.96	8.83		14.14
8	Co 13014	16.69				12.93	10.71	15.74	13.83	15.86	11.57	16.52	14.95	9.44		13.82
9	Co 13018	15.97				12.42	11.56	15.66	12.03	16.32	11.79	15.82	15.11	7.64		13.43
10	Co 13020	17.27				15.51	11.12	14.47	15.09	16.94	13.14	14.91	13.72	7.26		13.94
11	CoN 13072	14.45				12.22	13.29	14.33	12.74	16.61	12.93	13.72	13.83	6.93		13.10
12	CoN 13073	13.77				12.44	12.57	13.71	10.04	15.94	10.78	11.34	15.13	5.13		12.08
13	CoSnk 13101	17.36				15.41	12.10	16.14	17.24	17.30	13.52	16.54	14.87	10.67		15.12
14	CoSnk 13103	16.97				14.44	10.42	14.44	12.18	17.36	13.73	16.58	14.69	11.57		14.24
15	CoSnk 13106	14.61				15.24	12.08	15.26	13.31	17.57	12.92	15.82	14.61	8.16		13.96
16	MS 13081	15.48				16.48	12.69	16.13	13.38	17.56	13.02	14.67	15.38	10.17		14.50
17	PI 13132	14.03				12.57	13.64	16.59	12.31	17.41	13.46	13.97	13.82	8.18		13.60
	Standards															
1	Co 86032	16.29				13.05	14.27	16.46	15.87	17.56	13.75	15.61	14.28	7.88		14.50
2	CoC 671	16.75				14.10	13.83	17.24	19.18	18.16	14.80	15.85	16.53	11.41		15.78
3	CoSnk 05103	16.61				11.25	13.02	15.05	12.18	15.77	12.46	14.20	16.96	8.81		13.63
	Grand Mean	16.21				13.92	12.16	15.59	14.00	16.96	13.01	15.04	14.86	9.17		14.09
	SE(m)	0.65				0.47	0.25	0.81	0.78		0.20	0.04	0.78	0.55		
	CD	1.87				1.39	0.72	N.S.	2.24		0.56	0.13	NS	1.62		
	CV	6.97				4.76	3.57	9.00	9.64		2.60	0.51	9.08	8.43		

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Table 2.4.30: Brix % at 8 months

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	20.90	19.64			16.70	14.92	19.09	16.46	18.59	16.56	17.16	18.94	17.36		17.67
2	Co 13003	19.53	18.77			16.00	14.11	17.75	17.99	18.15	15.36	16.35	16.77	14.86		16.69
3	Co 13004	18.91	18.42			16.90	13.32	17.59	16.76	18.75	14.88	15.75	16.32	13.61		16.28
4	Co 13006	19.94	18.64			16.05	14.22	18.09	16.09	19.32	16.48	16.60	18.48	15.86		17.11
5	Co 13008	19.05	18.13			16.35	15.68	17.75	16.39	18.49	15.66	17.91	18.11	13.36		16.88
6	Co 13009	17.81	18.09			15.10	13.67	16.59	14.19	17.52	15.23	16.35	16.81	11.61		15.49
7	Co 13013	18.85	19.27			15.80	15.86	17.09	13.66	18.89	15.41	17.43	17.11	13.11		16.32
8	Co 13014	18.98	18.65			14.50	13.44	17.42	15.43	17.19	14.53	17.85	17.58	13.36		16.03
9	Co 13018	18.44	18.61			15.00	14.35	17.59	14.26	17.79	14.77	17.42	17.67	12.36		15.97
10	Co 13020	19.63	18.21			17.00	13.91	16.42	16.73	18.49	15.88	16.30	16.75	11.86		16.30
11	CoN 13072	17.42	19.27			14.50	15.19	16.42	15.19	17.75	15.12	15.75	16.21	11.86		15.54
12	CoN 13073	17.12	18.01			15.00	15.02	16.09	12.29	17.35	13.38	14.26	17.68	9.86		14.81
13	CoSnk 13101	19.36	19.29			16.70	14.49	17.92	18.46	18.89	15.67	17.60	17.71	14.61		17.14
14	CoSnk 13103	19.40	17.51			16.60	13.75	16.59	14.16	19.05	16.32	16.92	17.47	15.61		16.59
15	CoSnk 13106	17.22	18.11			17.20	15.71	17.25	15.06	19.42	15.77	17.42	17.61	12.61		16.53
16	MS 13081	18.06	19.40			17.30	15.70	18.25	15.16	19.62	15.22	16.30	17.81	12.86		16.63
17	PI 13132	16.81	17.75			14.50	15.77	18.25	14.03	19.28	16.43	15.72	16.41	12.61		15.98
	Standards															
1	Co 86032	18.62	17.93			15.10	16.50	17.92	17.23	19.35	16.74	16.82	16.41	12.36		16.70
2	CoC 671	18.98	18.33			16.10	16.34	19.09	20.19	20.19	17.70	16.92	19.21	15.11		17.98
3	CoSnk 05103	19.01	17.76			14.05	15.89	17.75	14.16	17.12	15.54	16.02	19.37	13.11		16.20
	Grand Mean	18.70	18.49			15.82	14.89	17.55	15.70	18.56	15.63	16.64	17.52	13.40		16.44
	SE(m)	0.55	0.71			0.37	0.36	0.58	0.69	0.59	0.21	0.02	0.75	0.41		
	CD	1.58	2.10			1.11	1.02	1.67	1.99	1.69	0.60	0.07	NS	1.21		
	CV	5.11	6.68			3.34	4.15	5.77	7.62	5.53	2.29	0.24	7.38	4.30		

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Table 2.4.31: Purity % at 8 months

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	89.68	80.64			87.60	78.55	89.28	90.04	90.15	87.08	89.52	87.84	75.05		86.48
2	Co 13003	86.01	83.95			85.65	79.23	88.60	89.57	92.33	85.92	89.73	85.69	71.94		85.47
3	Co 13004	88.01	83.54			90.06	78.53	87.42	92.43	91.78	85.34	87.15	79.14	70.44		85.03
4	Co 13006	88.49	90.56			86.77	84.11	90.39	89.31	92.29	85.34	89.73	85.55	76.44		86.84
5	Co 13008	86.43	91.97			94.99	79.97	90.09	93.46	92.41	84.14	78.71	83.81	67.23		85.12
6	Co 13009	83.13	90.89			87.62	81.64	89.20	88.72	92.07	81.22	94.21	82.97	59.29		84.01
7	Co 13013	88.30	84.25			92.96	81.53	88.96	86.57	89.68	80.65	97.78	87.27	67.22		86.09
8	Co 13014	87.84	87.20			89.88	79.69	90.33	89.51	92.24	79.61	92.58	84.99	70.62		85.73
9	Co 13018	86.60	92.62			83.36	80.56	89.02	84.16	91.75	79.80	90.80	85.52	61.82		83.34
10	Co 13020	87.96	96.32			91.83	79.94	88.10	90.18	91.62	82.74	91.50	81.92	61.05		84.68
11	CoN 13072	82.85	82.91			84.59	87.49	86.93	83.79	93.55	85.50	87.16	85.41	58.39		83.57
12	CoN 13073	80.41	96.98			83.49	83.69	85.00	81.02	91.89	80.68	79.56	85.60	52.01		80.33
13	CoSnk 13101	89.67	82.99			92.84	83.51	90.02	93.41	91.59	86.26	93.96	83.49	73.03		87.78
14	CoSnk 13103	87.46	95.88			87.47	75.78	90.92	85.73	91.15	84.09	97.99	84.12	74.09		85.88
15	CoSnk 13106	84.63	88.75			89.09	76.89	84.32	88.23	90.47	81.88	90.80	82.95	64.71		83.40
16	MS 13081	85.55	87.33			95.86	80.83	88.34	88.28	89.52	85.58	90.00	86.05	79.22		86.92
17	PI 13132	83.49	92.46			87.39	86.49	89.31	87.58	90.30	81.87	88.84	84.10	64.66		84.40
	Standards															
1	Co 86032	87.46	96.17			87.05	86.48	91.77	92.12	90.77	82.14	92.81	86.55	63.72		86.09
2	CoC 671	88.24	88.93			88.17	84.64	90.34	95.01	89.94	83.61	93.67	85.88	75.51		87.50
3	CoSnk 05103	87.37	96.18			80.62	81.94	84.44	85.73	92.09	80.20	88.60	87.41	67.09		83.55
	Grand Mean	86.48	89.53			88.36	81.67	88.64	88.74	91.38	83.18	90.26	84.81	67.68		85.12
	SE(m)	1.14	1.51			1.75	2.22	2.10	2.14	1.01	0.72	0.02	1.52	2.89		
	CD	3.26	4.44			5.19	6.35	N.S.	6.14	2.91	2.09	0.07	4.36	8.55		
	CV	2.27	3.06			2.81	4.71	4.10	4.17	1.93	1.51	0.04	3.10	6.03		

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Table 2.4.32: Number of shoots (000'/ha) at 240 days

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	95.60	19.91			91.96	166.68	75.42	106.95	115.86	70.87	130.77	100.74			106.09
2	Co 13003	72.74	23.33			63.99	158.96	73.54	98.45	123.71	62.28	126.77	79.69			95.57
3	Co 13004	70.14	18.15			59.52	149.32	70.00	59.55	116.26	74.77	118.03	90.62			89.80
4	Co 13006	79.86	20.09			76.19	164.63	88.33	121.41	122.61	84.03	135.39	90.00			106.94
5	Co 13008	69.73	12.22			77.18	173.80	75.07	76.64	125.68	93.48	131.56	74.75			99.77
6	Co 13009	68.11	21.20			73.71	145.95	71.73	61.09	132.72	80.64	136.59	84.01			94.95
7	Co 13013	80.32	32.13			83.13	180.02	89.72	94.58	114.21	76.47	118.88	88.52			102.87
8	Co 13014	73.26	7.78			73.61	163.44	66.32	87.39	120.84	88.29	112.31	72.53			95.33
9	Co 13018	113.95	27.04			116.96	149.75	87.64	88.24	130.45	82.68	122.54	82.84			108.34
10	Co 13020	69.16	12.59			119.05	142.43	81.87	98.52	132.86	53.94	131.00	78.39			100.80
11	CoN 13072	71.64	34.63			78.97	172.30	79.65	90.87	113.44	80.85	147.21	99.75			103.85
12	CoN 13073	60.01	29.44			79.07	161.17	67.43	132.32	112.05	84.90	127.64	78.09			100.30
13	CoSnk 13101	79.40	19.35			69.25	161.44	78.05	109.50	112.71	66.51	134.76	83.15			99.42
14	CoSnk 13103	79.40	9.91			85.22	159.82	80.00	92.26	107.32	73.23	112.92	88.03			97.58
15	CoSnk 13106	60.59	23.33			73.12	156.37	73.12	87.93	132.60	80.25	128.19	86.67			97.65
16	MS 13081	58.85	9.81			86.26	164.95	80.21	126.75	124.40	67.10	117.75	79.44			100.63
17	PI 13132	99.54	8.33			98.71	155.76	67.15	123.97	113.72	71.81	122.88	87.10			104.52
	Standards															
1	Co 86032	72.11	27.68			88.02	152.82	90.07	108.81	133.91	89.81	119.11	87.47			104.68
2	CoC 671	58.85	20.09			95.24	141.71	56.80	84.22	114.40	75.92	113.76	96.48			93.04
3	CoSnk 05103	111.46	50.46			144.35	140.38	105.55	134.17	115.88	104.22	146.72	89.38			121.35
	Grand Mean	77.24	21.37			86.68	158.05	77.88	99.18	120.63	78.10	126.74	85.88			101.15
	SE(m)	6.24	11.65			5.42	6.97	3.79	8.29	1.61	3.80	6.54	4.86			
	CD	17.90	N.S			16.04	19.96	10.85	23.83	4.62	10.96	18.71	13.95			
	CV	13.97	48.74			8.84	7.64	8.43	14.47	2.32	8.42	8.93	9.79			

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

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumalpal	Pravara Nagar	Pune	Rudru	Sameerwadi	Sankeshwar	Thiruvalla	Mean
1	Co 13002	101.97	53.78		122.16	107.04	171.91	153.89	165.96	123.29	179.61	112.01	125.93	123.82	99.79	132.28
2	Co 13003	71.99	36.88		110.19	79.27	201.84	123.06	147.32	131.74	157.41	102.37	99.61	104.64	96.16	118.80
3	Co 13004	62.56	44.29		72.45	70.14	162.42	128.89	88.31	123.70	129.52	91.31	113.27	92.71	116.08	104.28
4	Co 13006	84.43	47.68		105.32	95.54	174.65	142.50	222.10	127.24	175.28	117.81	112.50	83.62	106.39	128.95
5	Co 13008	76.10	52.70		124.76	98.12	167.73	136.39	161.47	121.15	176.00	110.44	93.44	96.48	102.21	122.02
6	Co 13009	75.81	50.62		107.63	78.97	174.90	133.61	117.55	139.54	185.66	120.21	105.01	89.94	91.82	118.39
7	Co 13013	84.32	54.47		110.26	89.38	189.41	133.33	141.75	121.60	145.58	96.08	110.65	101.56	101.85	118.81
8	Co 13014	68.69	11.81		88.42	80.65	178.55	112.78	165.80	128.00	154.89	88.98	90.66	96.71	92.99	112.26
9	Co 13018	110.13	56.48		104.97	120.44	188.33	145.00	155.44	137.55	165.51	104.89	103.55	122.43	100.97	129.93
10	Co 13020	81.77	57.72		141.66	136.81	173.57	173.61	127.45	141.34	164.55	114.61	98.00	92.94	101.70	129.00
11	CoN 13072	80.32	71.14		132.40	85.22	208.36	177.50	135.41	120.55	215.05	131.49	124.69	120.58	87.70	134.94
12	CoN 13073	72.05	50.85		83.65	81.45	196.30	116.39	189.31	120.88	154.40	111.16	97.61	93.17	121.32	119.81
13	CoSnk 13101	85.07	68.36		94.79	71.92	169.63	150.28	204.93	120.99	181.71	113.71	103.94	84.70	104.23	123.83
14	CoSnk 13103	89.24	39.74		98.60	89.88	176.37	156.11	168.51	116.17	173.29	81.51	110.03	116.89	110.14	123.90
15	CoSnk 13106	72.57	70.60		117.06	77.88	199.98	157.78	162.79	142.86	196.46	98.85	108.33	88.55	114.70	128.15
16	MS 13081	64.58	30.02		136.55	91.17	176.79	171.67	191.71	125.97	151.06	89.34	99.31	110.03	122.29	127.54
17	PI 13132	100.46	40.74		114.58	122.02	192.87	131.94	206.33	123.07	151.88	102.33	108.87	108.88	129.81	132.75
	Standards															
1	Co 86032	78.88	58.41		97.56	93.25	190.32	166.11	186.37	142.77	167.26	87.73	109.34	111.57	108.48	128.30
2	CoC 671	63.60	44.14		86.57	97.32	169.09	109.44	131.23	123.61	156.87	92.97	120.60	97.79	86.08	111.26
3	CoSnk 05103	113.31	70.29		171.98	156.94	152.27	196.94	186.91	127.81	177.95	130.03	111.73	127.51	104.06	146.45
	Grand Mean	81.89	50.54		111.08	96.17	180.76	145.86	162.83	128.49	168.00	104.89	107.35	103.23	104.94	124.62
	SE(m)	5.89	19.60		7.85	8.98	5.73	14.30	11.46	1.47	5.21	8.96	6.07	6.14	4.43	
	CD	16.89	57.81		23.15	26.59	16.39	40.93	32.93	4.22	15.04	25.66	17.44	18.17	12.60	
	CV	12.43	15.55		12.24	13.21	5.49	16.98	12.19	1.98	5.37	14.80	9.79	8.41	7.32	

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Table 2.4.34: Germination % at 30 days

Sl. No.	Entries	Coimbatore	Akola	Basmat h Nagar	Kolhapur	Mandya	Navasari	Padegaon	Perumal apalle	Pravara nagar	Pune	Rudru r	Sameer wadi	Sankes hwar	Thiruv alla	Mean
1	Co 13002	44.79	42.31	45.89	53.76	45.00	51.32	42.00	67.82	35.44	46.35	35.55	46.41	51.47	50.63	47.42
2	Co 13003	40.16	26.20	43.63	48.78	35.00	47.57	45.67	62.50	36.00	32.75	34.32	44.21	50.00	53.54	44.16
3	Co 13004	35.30	29.07	42.92	36.11	37.50	46.23	37.33	40.85	32.23	31.15	32.08	49.31	49.56	46.08	39.74
4	Co 13006	45.60	32.78	39.62	42.36	52.50	49.71	56.00	92.30	27.35	39.55	36.42	34.32	53.28	40.24	46.87
5	Co 13008	50.17	47.41	46.43	61.63	52.45	54.13	50.33	78.70	42.60	50.45	36.13	46.76	59.51	55.76	52.70
6	Co 13009	46.24	49.44	44.99	44.50	52.68	50.14	49.00	41.49	48.72	42.07	38.53	46.64	48.27	58.30	47.04
7	Co 13013	38.31	37.50	44.21	44.62	35.50	52.64	43.33	51.56	31.82	42.68	33.26	50.81	53.54	52.95	44.25
8	Co 13014	46.30	8.24	45.54	47.28	52.90	51.21	40.67	85.06	25.39	42.45	35.75	44.50	53.54	57.09	48.28
9	Co 13018	45.14	39.54	39.74	41.32	52.78	46.89	44.67	63.88	39.50	30.77	35.52	46.70	55.88	56.11	46.07
10	Co 13020	57.75	44.54	51.92	54.11	53.38	45.97	50.00	61.05	45.60	52.55	39.30	45.72	48.70	54.93	50.84
11	CoN 13072	43.23	50.93	45.75	54.63	40.00	49.68	54.00	75.86	33.07	46.04	38.59	53.70	62.45	56.32	50.26
12	CoN 13073	38.66	30.28	39.84	44.56	35.50	47.76	44.00	77.89	37.02	35.90	39.25	38.13	49.39	61.70	45.35
13	CoSnk 13101	52.60	47.31	46.06	56.08	46.00	54.14	50.67	85.76	35.45	46.79	33.99	49.54	35.12	60.73	50.23
14	CoSnk 13103	46.01	24.26	42.17	53.94	35.40	52.35	46.67	74.88	31.85	42.37	26.27	45.31	55.53	46.01	46.06
15	CoSnk 13106	37.56	47.87	44.54	58.62	35.95	51.32	49.00	76.09	40.82	44.27	29.73	47.34	52.07	60.49	48.29
16	MS 13081	40.63	15.93	46.12	46.06	42.50	53.17	52.33	66.72	32.19	37.59	33.89	42.76	55.79	50.59	46.18
17	PI 13132	52.89	38.06	44.41	57.75	48.50	48.44	38.67	80.72	35.59	36.99	39.05	46.58	59.86	47.57	49.00
	Standards															
1	Co 86032	46.01	57.04	43.70	55.67	40.00	52.08	51.33	62.79	43.82	41.65	32.71	40.33	61.33	58.79	48.48
2	CoC 671	34.78	37.78	44.08	46.53	52.00	49.28	36.00	56.42	29.47	38.91	34.46	49.19	52.25	46.29	43.82
3	CoSnk 05103	42.82	63.43	48.00	64.41	48.00	50.43	50.00	83.73	40.65	51.74	42.73	41.55	55.10	57.92	52.08
	Grand Mean	44.25	38.50	44.48	50.64	44.68	50.22	46.58	68.54	36.23	41.65	35.38	45.49	53.13	53.60	47.30
	SE(m)	2.72	11.79	2.34	2.84	1.41	1.99	3.85	5.19	1.87	2.00	2.60	2.21	3.92	2.93	
	CD	7.81	34.78	NS	8.37	4.17	NS	11.02	14.92	5.37	5.77	7.45	6.34	11.61	8.32	
	CV	10.64	14.73	9.09	9.70	4.46	6.87	14.31	12.97	8.97	8.32	12.75	8.40	10.44	9.46	

2.4.35. Assessment of performance of entries by monitoring team

S.No.	Entries	Perumallpalle	Pugulur	Coimbatore	Thiruvalla	Mandya	Sankeshwar	Sameerwadi	Kolhapur
1	1.Co 13002	Poor	Not conducted	Poor	Poor	Poor	Poor	Poor	Poor
2	2. Co 13003	Poor		Poor	On par	Poor	On par	Poor	On par
3	3.Co 13004	Poor		On par	On par	Poor	On par	Poor	Better
4	4. CoN 13072	On par		Poor	On par	Poor	Poor	Better	On par
5	5. CoSnk 13101	Poor		Poor	On par	Poor	On par	Better	On par
6	6.MS 13081	Poor		On par	Poor	Poor	On par	Better	Better
7	7.Co 13006	Poor		On par	Poor	Poor	Poor	Better	On par
8	8. Co 13008	On par		On par	Poor	Poor	On par	On par	Poor
9	9. Co 13009	Poor		Poor	On par	Poor	Poor	Poor	Poor
10	10. Co 13013	Poor		Poor	On par	Poor	On par	Better	On par
11	11.Co 13014	On par		On par	On par	Poor	On par	On par	Poor
12	12. Co 13018	Poor		Poor	On par	Poor	Poor	Better	Poor
13	13. Co 13020	Poor		On par	On par	Poor	Poor	Poor	Poor
14	14. CoN 13073	Better		On par	On par	Better	On par	Better	Better
15	15.CoSnk 13103	Better (drying)		Better	Better	Poor (YLD)	On par	Better	Better
16	16.CoSnk 13106	Better		Better	Better	On par	On par	Better	On par
17	17.PI 13132	Poor		Better	Better	On par	On par	On par	Poor
Standards									
18	18.Co 86032	Best				Best			
19	19. CoC 671								
20	20.CoSnk 05103			Best	Best	Best		Best	

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S.No	Variety	Navsari	PowerKheda	Rudrur	VSI, Pune	Padegaon	Pravarnagar	Akola
1	Co 13002	Good	Average	Good	Poor	Average	Average	Poor
2	Co 13003	Very Good	Poor	Poor	Good	Good	Good	Poor
3	Co 13004	Very Good	Average	Average	Good	Average	Good	Good
4	CoN 13072	Very Good	Good	Very Good	Very Good	Very Good	Good	Very Good
5	CoSnk 13101	Average	Average	Poor	Average	Good	Average	Good
6	MS 13081	Very Good	Average	Poor	Poor	Very Good	Very Good	Good
7	Co 13006	Very Good	Poor	Poor	Average	Very Good	Good	Good
8	Co 13008	Very Good	Average	Good	Very Good	Good	Very Good	Poor
9	Co 13009	Very Good	Average	Good	Good	Very Good	Good	Poor
10	Co 13013	Very Good	Average	Very Good	Good	Very Good	Very Good	Very Good
11	Co 13014	Very Good	Average	Average	Very Good	Good	Good	Good
12	Co 13018	Good	Average	Good	Average	Good	Good	Average
13	Co 13020	Average	Average	Average	Average	Good	Average	Poor
14	CoN 13073	Very Good	Nil	Very Good	Very Good	Good	Good	Very Good
15	CoSnk 13103	Very Good	Average	Average	Average	Good	Average	Poor
16	CoSnk 13106	Average	Average	Good	Average	Average	Very Good	Good
17	PI 13132	Average	Average	Good	Poor	Poor	Poor	Poor
Standards :								
18	Co 86032	Average	Average	Average	Good	Good	Good	Good
19	CoC 671	Very Good	Average	Good	Good	Average	Good	Poor
20	CoSnk 05103	Very Good	Average	Good	Good	Good	Very Good	Very Good

2.5 Initial Varietal Trial

Centres where trial was conducted (15)	Coimbatore, Akola, Basmathnagar, Kolhapur, Kawardha, Mandya, Navsari, Padegoan, Perumallapalle, Pravaranagar, Pugulur, Pune, Rudrur, Sameervadi, Sankheshwar
Entries (26)	<ol style="list-style-type: none"> 1. Co 14005 (Co 86032 x Co 86011) 2. Co 15002 (1148-S4-242-4 PC) 3. Co 15005 [(Co 8371 x ISH 69) x (Co 86032 x Co 99006)] 4. Co 15006 (CoM 0265 x Co 89003) 5. Co 15007 (ISH 100 x Co 0209) 6. Co 15009 (CoSi 6 x BO 92) 7. Co 15010 (Co 99006 x CoH 70) 8. Co 15015 (CYM 08-903 x Co 94008) 9. Co 15017 (Co 94012 x Co 86011) 10. Co 15018 [(CoC 671 x IG 91-1100) x Co 94008] 11. Co 15020 (Co 86032 x Co 86011) 12. Co 15021 (Co 86032 x Co 86011) 13. CoN 15071 (CoM 0265 x CoN 85134) 14. CoN 15072 (CoM 0265 x CoN 85134) 15. CoSnk 15101 (Co 86032 x Co 86250) 16. CoSnk 15102 (Co 86032 x Co 86250) 17. CoSnk 15103 (CoM 0265 GC) 18. CoSnk 15104 (Co 86032 x Co 86250) 19. CoVC 15061 (Co 8371 x CoH 110) 20. CoVC 15062 (Co 8213 x CoT 8201) 21. CoVC 15063 (Co 8371 x CoH 110) 22. CoVC 15064 (Co 95021 x Co 86002) 23. PI 15131 (PI 98-4959 PC) 24. PI 15132 (PI 99-1034 PC) 25. VSI 15122 (Co 87044 x MS 6847) 26. CoVSI 15121 (Co 8371 PC)
Standards (4)	Co 86032, CoC 671, Co 85004 and CoSnk 05103
Design	RBD
Replications	Two
Plot size	6 m x 6 rows x 1.2 m (Gross) 5m x 4 rows x 1.2 m (Net)
Seed rate	12 buds per meter
Crop duration	12 months

Results of the previous year: The entries were under multiplication

Results of the current year: Twenty six entries along with four standards (Co 86032, CoC 671, Co 85004 and CoSnk 05103) were evaluated in randomised block design at 15 locations in 2018-19. The data of Akola centre were not considered as the average cane yield of the trial was lower than the state average. Eight entries viz., PI 15132, Co 15010, CoVSI 15121, Co 15009, CoN 15071, VSI 15122, CoSnk 15102 and Co 15007 recorded higher sugar yield than the best check Co 86032 (15.75 t/ha). None of the entries were found to be qualifying across the zone. PI 15132 recorded >10% sugar yield compared to the best standard at six locations of the zone. Other qualifying entries were CoVSI 15121 at five locations and Co 15006 and Co 15010 at four locations each. For cane yield, 12 entries showed numerically higher yield than the best check Co 86032 (114.18 t/ha) across all locations of the zone, CoVSI 15121 (128.51 t/ha) was the best entry followed by VSI 15122 (124.36 t/ha) and CoN 15071 (123.51 t/ha). CoVSI 15121 recorded >10% cane yield than the best standard across the zone. CoVSI 15121 recorded >10% cane yield at seven locations of the zone followed by CoVC 15061 at six and Co 15006 and CoN 15071 each at five locations.

For CCS %, no entry performed better than the best standard CoC 671 (14.61 %) across all the locations in the zone. However, Co 15005, Co 15007 and Co 15017 recorded >5% CCS % at harvest over the best standard in one location each. For sucrose content at harvest, no entry performed better than the best standard CoC 671 (19.85 %) across locations of the zone. Entries Co 15017 and Co 15005 showed >5% improvement over the best standard at Basmathnagar and Rudrur respectively. Considering both cane yield and juice quality, none of the entries was identified as qualifying entry.

The data are presented in tables 2.5.1 to 2.5.34.

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Table 2.5.1: CCS (t/ha) at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Mean	Rank
Co 14005	3.50	14.06	20.93	12.27	15.89	13.19	16.49	17.33	13.93	19.03	16.17	13.59	13.54	14.6	15.81	15.49	
Co 15002	3.03	14.36	17.63	11.15	12.42	10.74	16.20	15.64	16.25*	15.28	14.18	13.21	9.95	15.21	11.45	13.83	
Co 15005	1.59	16.34	18.84	15.07	9.22	11.51	14.98	20.19	11.90	15.83	11.44	19.25	16.96	23.36	14.65	15.68	
Co 15006	2.01	13.68	17.88	14.05	13.27	10.42	17.65	20.49	12.85	14.98	11.77	20.55	19.98	12.66	11.74	15.14	
Co 15007	1.85	15.22	17.79	12.52	14.88	14.15	16.39	15.11	13.06	14.66	14.64	16.87	24.25*	14.87	18.31	15.91	
CoSnk15101	1.71	15.10	15.82	11.27	14.70	12.33	14.58	15.63	10.87	16.72	9.89	13.34	13.58	11.29	16.20	13.67	
CoSnk15102	2.19	14.64	18.30	13.73	13.81	14.58	16.15	15.32	13.52	17.26	10.58	18.09	18.78	17.21	19.41	15.81	
CoVSI 15121	1.60	14.96	17.20	14.20	17.51	10.89	19.29*	19.92	14.76*	13.18	11.73	17.64	19.75	22.71	16.07	16.41	3
Co 15009	3.99	14.88	19.55	14.50	12.75	13.70	17.06	20.85	10.91	16.31	9.39	20.07	23.35*	18.35	15.38	16.22	4
Co 15010	3.67	15.62	21.39	19.04	11.84	18.74	17.38	20.30	7.52	19.04	7.84	16.14	20.58	18.09	17.38	16.49	2
Co 15015	3.54	13.83	12.44	11.36	13.12	14.60	17.26	17.32	12.07	16.37	11.53	15.88	13.30	14.3	18.02	14.39	
Co 15017	2.41	13.10	13.64	12.42	13.63	17.05	13.69	18.86	12.94	16.53	14.05	20.71	19.82	13.81	13.02	15.23	
Co 15018	1.75	15.66	11.91	15.38	12.29	11.61	17.19	15.47	16.34*	16.04	11.65	11.26	17.40	12.61	14.43	14.23	
Co 15020	3.01	14.09	20.72	13.04	14.89	8.17	14.78	15.39	7.92	17.97	18.37*	15.51	20.06	13.48	16.03	15.03	
Co 15021	2.09	15.51	21.57	15.69	12.63	15.18	15.09	14.53	12.54	13.86	10.54	18.68	20.54	19.08	9.88	15.38	
CoN 15071	4.98	15.49	21.51	11.89	12.40	11.39	15.97	18.02	16.56*	18.25	8.31	18.17	19.21	17.05	19.58	15.99	5
CoN 15072	4.27	13.21	10.51	9.78	9.15	10.54	17.44	17.79	13.40	15.86	13.77	12.75	20.06	14.16	8.90	13.38	
CoSnk 15103	3.50	10.07	17.65	14.17	14.87	14.03	17.97	18.65	9.90	18.03	11.58	14.15	19.63	16.75	18.60	15.43	
CoSnk 15104	1.96	13.92	14.52	15.71	16.23	15.13	15.68	17.88	10.08	14.19	13.31	17.47	17.50	13.88	18.50	15.29	
CoVC 15061	6.53	14.46	16.44	14.83	7.18	14.78	16.46	19.44	13.13	18.02	10.52	14.93	17.38	20.2	16.01	15.27	
CoVC 15062	5.32	11.38	13.16	9.90	12.69	14.50	19.2*	12.06	10.76	13.30	10.76	14.92	19.57	16.34	13.43	13.71	
CoVC 15063	4.56	13.74	16.00	14.90	9.57	14.16	17.09	13.50	11.75	17.15	10.93	14.17	12.82	10.51	7.64	13.14	
CoVC 15064	4.08	13.92	-	10.76	9.41	17.60	14.10	8.98	4.50	17.23	7.55	14.41	22.27*	13.17	12.20	12.78	

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PI 15131	5.76	13.88	20.55	15.77	11.39	13.23	15.84	17.46	16.33*	15.24	11.85	14.69	19.71	16.22	12.90	15.36	
PI 15132	4.71	15.73	13.01	25.66	12.62	11.23	18.73*	13.49	17.7*	16.25	15.96	18.31	22.53*	14.87	15.00	16.51	1
VSI 15122	4.33	14.21	18.25	14.31	14.85	13.78	19.43*	17.45	15.01*	13.88	13.18	16.67	17.45	18.68	16.28	15.96	
Standards																	
Co 86032	5.23	10.96	19.57	15.62	16.51	18.74	14.51	16.77	11.81	21.14	14.05	17.28	11.74	13.34	18.49	15.75	
CoC 671	5.68	9.88	16.57	13.00	13.83	15.77	14.22	16.18	9.43	18.66	14.37	17.54	17.47	17.05	14.33	14.88	
CoSnk 05103	3.73	13.66	15.68	14.48	13.82	14.02	15.36	16.43	8.42	15.99	9.49	13.58	10.36	15.90	15.31	13.75	
Co 85004	2.24	11.60	23.72	20.24	10.11	18.90	15.72	11.60	11.57	17.97	13.65	12.41	14.07	20.01	-	15.51	
Grand Mean	3.49	13.91	17.34	14.22	12.92	13.82	16.40	16.60	12.26	16.47	12.10	16.07	17.79	15.99	15.00	15.06	
SE (m)±	2.30		1.37		1.09	0.76	0.82	1.48	0.86	0.57	1.01	0.95	1.52	2.32	1.58		
CD %	33.62		3.19		3.20	2.20	2.36	4.28	2.49	1.64	2.94	2.76	4.39	NS	4.56		
CV (%)	32.34		10.98		11.89	7.79	7.04	12.61	9.90	4.89	11.81	8.40	12.06	20.51	14.86		
Top three qualifying entries at each location																	
		Co 15005		PI 15132			VSI 15122	Co 15009	PI 15132		Co 15020	Co 1501	Co 15007	Co 15005			
		PI 15132					CoVc 15062	Co 15006	CoN 15071		Co 14005	Co 1500	Co 15009	CoVSI 15121			
		Co 15018					CoVSI 15121	Co 15010	Co 15018			Co 1500	PI 15132				

* Significant with the best standard at 5% level. Data of Akola centre were not considered for calculating grand mean because the trial mean of cane yield (t/ha) was lower than state average.

Qualifying entries: PI 15132 (6), CoVSI 15121 (5), Co 15006 (4), Co 15010 (4), Co 15005 (3), Co 15007 (3), Co 15009 (3), Co 15017 (3), CoN 15072 (3), CoSnk 15103 (3), CoVC 15061 (3), Co 14005 (2), Co 15018 (2), Co 15020 (2), Co 15021 (2), CoN 15071 (2), CoVC 15062 (2), PI 15131(2), VSI 15122 (2), Co 15002 (1), CoSnk 15101 (1), CoSnk 15102 (1), CoVC 15064 (1).

Performance across locations: Eight entries viz., PI 15132, Co 15010, CoVSI 15121, Co 15009, CoN 15071, VSI 15122, CoSnk 15102 and Co 15007 recorded higher sugar yield than the best check Co 86032 (15.75 t/ha). None of the entries was found to be qualifying across the zone. PI 15132 recorded >10% higher sugar yield compared to the best standard at six locations of the zone. Other qualifying entries were CoVSI 15121 at five locations and Co 15006 and Co 15010 at four locations each recorded >10% higher sugar yield than the best standard.

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Table 2.5.2: Cane yield (t/ha) at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawar dha	Kolhapur	Mandya	Nava sari	Padegaon	Perumal lapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankeshwar	Mean	Rank
Co 14005	28.45	106.67	151.47	86.40	105.43	94.97	118.15	111.89	102.82	139.89	118.99	98.47	91.08	109.57	105.19	110.07	
Co 15002	25.32	115.36	115.48	84.90	86.57	75.40	119.80	103.92	130.17	102.85	106.13	104.05	77.28	110.17	86.64	101.34	
Co 15005	12.40	117.04	127.39	104.28	59.10	80.82	107.95	125.76	88.14	111.62	82.10	147.09	111.47	158.43	96.76	108.42	
Co 15006	15.05	99.56	127.59	94.12	85.42	73.02	121.95	136.00	110.93	107.22	91.35	145.84	145.06	91.19	82.52	107.98	
Co 15007	14.31	114.07	115.02	85.83	93.47	96.16	117.74	96.54	127.54	111.21	105.95	117.52	160.76	97.34	118.99	111.30	
CoSnk15101	13.11	109.37	121.39	87.35	97.94	91.67	112.01	106.92	95.02	115.85	84.49	105.18	101.41	84.10	120.32	102.36	
CoSnk15102	17.58	106.05	133.73	102.43	88.70	105.42	115.45	104.53	101.35	116.74	79.64	126.93	126.98	124.45	135.79	112.01	
CoVSI 15121	12.41	116.69	132.48	113.61	133.89	85.71	133.30	140.81	135.19	101.21	108.13	149.76	160.55	162.89	124.89	128.51	1
Co 15009	32.71	110.24	131.15	111.69	88.90	97.35	119.67	137.35	93.86	105.44	77.27	154.31	163.25	136.75	127.06	118.16	
Co 15010	27.11	118.40	137.87	137.69	78.03	126.72	123.54	132.17	86.44	122.43	61.44	137.27	157.32	128.72	133.06	120.08	5
Co 15015	25.98	105.61	106.00	92.31	89.12	98.94	124.65	132.19	105.06	125.33	105.18	132.63	108.74	120.00	139.42	113.23	
Co 15017	19.28	89.57	98.96	86.64	87.85	116.40	111.37	117.69	101.35	122.08	99.86	148.89	138.14	106.89	82.08	107.70	
Co 15018	13.07	119.00	109.88	138.28	93.88	94.31	124.91	116.46	148.63	117.05	108.89	98.47	156.02	106.44	116.29	117.75	
Co 15020	22.56	102.56	149.14	112.02	102.40	62.30	110.85	110.76	61.41	118.51	133.83	127.09	154.77	102.28	126.05	112.43	
Co 15021	16.40	110.21	144.45	123.62	89.84	106.48	113.57	99.35	109.62	105.73	94.26	139.78	155.38	138.40	78.10	114.91	
CoN 15071	38.68	115.23	159.33	96.92	89.41	83.99	124.39	120.05	128.24	134.35	73.41	153.14	153.15	143.47	154.01	123.51	3
CoN 15072	32.36	101.76	78.88	75.70	61.75	76.32	128.13	112.72	100.50	118.22	113.31	104.56	162.67	102.23	69.63	100.46	
CoSnk 15103	25.80	82.82	139.86	116.32	103.12	114.68	129.65	133.82	78.95	129.22	98.34	104.77	161.19	151.50	147.44	120.83	4
CoSnk 15104	14.92	100.19	113.26	132.70	112.80	114.95	112.57	132.06	81.11	93.62	99.03	147.65	158.17	98.97	142.90	117.14	
CoVC 15061	51.79	101.54	115.99	110.61	52.91	102.65	128.32	140.57	130.71	121.55	96.26	123.96	151.19	152.50	124.58	118.10	
CoVC 15062	38.70	86.97	103.44	76.98	92.83	102.91	129.47	83.54	99.96	109.06	90.25	112.69	157.78	113.17	106.34	104.67	
CoVC 15063	36.91	97.78	117.80	99.30	65.52	98.28	116.88	102.79	95.33	117.98	92.16	105.17	89.72	76.86	54.95	95.04	

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CoVC 15064	32.95	113.43	-	89.17	71.52	122.09	109.30	69.36	49.05	120.27	59.67	109.06	162.31	105.47	100.52	98.56	
PI 15131	45.07	107.77	140.73	112.53	75.23	90.87	118.37	128.25	148.63	111.96	97.06	104.37	157.16	115.39	90.56	114.21	
PI 15132	37.54	111.73	104.04	165.46	83.37	75.40	128.47	110.45	132.56	123.67	119.19	135.92	169.16	104.50	102.29	119.01	
VSI 15122	32.98	108.54	132.37	118.79	102.79	103.31	131.49	121.36	122.13	117.68	110.61	144.58	150.23	135.71	141.43	124.36	2
Standards																	
Co 86032	42.39	84.01	140.95	112.40	110.60	134.79	95.25	112.56	86.83	148.08	108.79	131.83	93.27	101.87	137.33	114.18	
CoC 671	45.46	72.01	98.86	92.98	91.17	105.69	92.33	99.13	74.16	118.68	108.10	115.64	122.37	114.35	92.46	99.85	
CoSnk 05103	29.61	108.58	129.66	107.02	96.70	102.12	101.60	110.43	73.85	123.85	81.87	101.78	94.22	121.03	106.91	104.26	
Co 85004	18.18	87.72	159.04	135.46	72.76	125.93	109.35	75.27	95.87	126.87	99.89	86.38	110.06	135.27	111.88	109.41	
Grand Mean	27.30	104.02	125.39	106.78	88.77	98.66	117.68	114.16	103.18	117.94	96.85	123.83	136.69	118.33	111.88	111.72	
SE (m)±	6.30		8.89	14.76	6.98	5.12	5.12	10.87	7.15	2.3	8.43	6.81	11.37	17.46	11.10		
CD %	17.47		25.40	42.19	20.60	14.81	14.80	31.43	20.79	6.66	24.50	19.70	32.89	NS	32.17		
CV (%)	32.34		9.92	19.55	11.13	7.34	6.15	13.46	9.80	2.76	12.31	7.78	11.76	20.87	14.04		
Top three qualifying entries at each location																	
						CoVSI 15121		CoVSI 15121	CoVSI 15121	Co 15018		Co 15020	Co 15009	PI 15132	CoVSI 15121	CoN 15071	CoVSI 15212
								VSI 15122	CoVc 15061	PI 15131			CoN 15071	Co 15009	Co 15005		
								CoVc 15062	Co 15009	CoVSI 15121			CoVSI 15121	CoN 15072	CoVc 15061		

* Significant with the best standard at 5% level. Akola, were not considered for calculating grand mean because the trial mean of cane yield (t/ha) was lower than state average.

Qualifying entries: CoVSI 15121 (7), CoVC 15061 (6), Co 15006 (5), CoN 15071 (5), CoSnk 15103 (4), PI 15132 (4), Co 15005 (3), Co 15009 (3), Co 15010 (3), Co 15018 (3), CoSnk 15104 (3), PI 15131(3), VSI 15122 (3), Co 15020 (2), Co 15021 (2), CoN 15072 (2), Co 15015 (2), Co 15017 (2), Co 15007 (2), CoVC 15062 (2), CoVC 15064 (1), Co 15002 (1).

Performance across locations: Twelve entries showed numerically higher yield than the best check Co 86032 (114.18 t/ha) across all locations of the zone, with CoVSI 15121 being the highest followed by VSI 15122 and CoN 15071. CoVSI 15121 recorded >10% cane yield than the best standard across the zone. CoVSI 15121 recorded >10% cane yield than the best standard at seven locations of the zone followed by CoVC 15061 at six and Co 15006 and CoN 15071 each at five locations.

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Table 2.5.3: CCS% at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawar dha	Kolhapur	Mandya	Nava sari	Padegaon	Perumalpal	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankeshwar	Mean	Rank
Co 14005		11.98	13.81	14.20	15.13	13.90	13.96	15.48	13.56	13.60	13.60	13.82	14.85*	13.15	15.00	14.00	
Co 15002		11.41	15.27	13.14	14.30	14.25	13.52	15.06	12.56	14.85	13.37	12.68	12.87	13.80	13.27	13.60	
Co 15005		12.98	14.78	14.45	15.56	14.26	13.88	16.08	13.49	14.16	13.92	13.10	15.22*	14.68	15.15	14.41	2
Co 15006		12.76	13.97	14.93	15.55	14.30	14.47	15.10	11.58	13.99	12.88	14.08	13.78	13.54	14.23	13.94	
Co 15007		11.65	15.47	14.59	15.92	14.71	13.92	15.66	10.24	13.19	13.79	14.35	15.09*	14.98	15.37	14.21	3
CoSnk15101		12.78	13.04	12.90	15.00	13.43	13.02	14.60	11.44	14.44	11.71	12.69	13.40	13.45	13.47	13.24	
CoSnk15102		12.78	13.65	13.41	15.57	13.81	13.99	14.65	13.35	14.72	13.26	14.25	14.79*	13.96	14.31	14.03	5
CoVSI 15121		11.57	12.99	12.50	13.08	12.68	14.47	14.11	10.94	12.99	10.87	11.78	12.30	14.11	12.94	12.67	
Co 15009		12.52	14.91	12.98	14.34	14.07	14.26	15.22	11.65	15.48	12.12	13.01	14.30	13.40	12.22	13.61	
Co 15010		12.21	15.51	13.83	15.19	14.79	14.07	15.45	8.72	15.56	12.76	11.75	13.08	14.09	13.06	13.58	
Co 15015		12.01	11.75	12.30	14.72	14.76	13.85	13.11	11.49	13.06	10.96	11.96	12.24	11.94	12.85	12.64	
Co 15017		13.62	13.75	14.34	15.52	14.63	12.29	16.02	12.77	13.54	14.07	13.91	14.35	13.14	15.91	14.13	4
Co 15018		12.21	10.93	11.13	13.10	12.28	13.76	13.32	11.03	13.68	10.71	11.42	11.16	12.02	12.42	12.08	
Co 15020		12.72	13.88	11.64	14.59	13.12	13.33	13.87	12.89	15.16	13.73	12.19	12.97	13.33	12.72	13.30	
Co 15021		11.97	15.01	12.69	14.03	14.24	13.29	14.62	11.42	13.14	11.18	13.35	13.23	13.79	12.69	13.19	
CoN 15071		12.46	13.50	12.27	13.86	13.56	12.84	15.06	13.00	13.59	11.37	11.89	12.54	11.89	12.73	12.90	
CoN 15072		11.27	13.28	12.89	14.83	13.84	13.61	15.79	13.34	13.42	12.15	12.17	12.33	13.85	12.82	13.26	
CoSnk 15103		11.24	12.57	12.18	14.41	12.24	13.86	13.99	12.50	13.89	11.77	13.49	12.18	11.14	12.63	12.72	
CoSnk 15104		12.87	12.79	11.84	14.37	13.18	13.93	13.49	12.57	15.15	13.44	11.84	11.07	14.10	12.95	13.11	
CoVC 15061		13.23	14.11	13.40	13.70	14.42	12.83	13.84	10.09	14.38	10.93	12.04	11.50	13.46	12.83	12.91	
CoVC 15062		11.64	12.72	12.86	13.67	14.10	14.83	14.53	10.76	12.21	11.92	13.25	12.41	14.44	12.63	13.00	
CoVC 15063		13.07	13.58	15.01	14.58	14.41	14.62	13.14	12.33	14.54	11.88	13.49	14.28	13.55	13.68	13.72	
CoVC 15064		11.41	11.16	12.07	13.11	14.44	12.90	12.98	9.17	14.36	12.66	13.24	13.72	12.48	12.22	12.57	
PI 15131		11.94	14.60	14.01	15.09	14.56	13.38	13.66	10.99	13.64	12.21	14.07	12.54	14.02	14.24	13.50	
PI 15132		13.06	12.48	15.51	15.19	14.88	14.58	12.30	13.35	13.19	13.41	13.49	13.32	14.26	14.72	13.84	

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VSI 15122		12.49	13.80	12.05	14.46	13.34	14.78	14.42	12.30	11.81	11.92	11.53	11.62	13.79	11.40	12.84	
Standards																	
Co 86032		11.34	13.88	13.90	14.93	13.91	15.23	14.87	13.59	14.27	12.91	13.11	12.59	13.06	13.42	13.64	
CoC 671		12.75	16.76	13.98	15.18	14.92	15.40	16.32	12.76	15.13	13.31	15.18	14.28	14.95	15.51	14.74	1
CoSnk 05103		11.69	12.10	13.53	14.29	13.73	15.12	14.88	11.41	12.94	11.58	13.32	11.00	13.28	14.32	13.08	
Co 85004		10.09	14.99	14.94	13.90	15.02	14.38	15.42	12.06	14.15	13.70	14.39	12.78	14.80		13.89	
Grand Mean		12.19	13.70	13.32	14.57	13.99	13.95	14.57	11.91	13.94	12.47	13.03	13.06	13.55	13.51	13.41	
SE (m)±			0.46		0.44	0.32	0.38	0.45	1.62	0.42	0.20	0.25	0.06	0.75	0.60		
CD %			1.34		1.30	0.92	1.09	1.31	0.56	1.21	0.59	0.72	0.16	NS	1.74		
CV (%)			4.76		4.29	3.20	3.82	4.40	6.62	4.25	2.30	2.69	0.60	7.79	6.29		
Top three qualifying entries at each location																	
		Co 15017												Co 15005			
														Co 15007			

* Significant with the best standard at 5% level. Data of Akola centre were not considered for calculating grand mean because the trial mean of cane yield (t/ha) was lower than state average.

Qualifying entries: Co15017 (1), Co 15005 (1), Co 15007 (1)

Performance across locations: No entry performed better than the best standard CoC 671 (14.74 %) across all the locations in the zone. However, Co 15005, Co 15007 and Co 15017 recorded >5% higher CCS % over the best standard in one location each

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Table 2.5.4: Juice sucrose % at harvest

Clone	Akola	Basmath nagar	Coim batore	Kawar dha	Kolha pur	Mandya	Nava sari	Pade gaon	Perumal lapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean	Rank
Co 14005		17.81	19.62	20.26	21.37	19.51	19.56	22.20	19.49	19.33	19.23	19.39	20.99*	18.82	21.67	19.95	4
Co 15002		16.82	21.61	18.96	20.07	20.05	19.17	21.54	18.24	20.66	19.06	17.90	19.17	19.75	19.40	19.46	
Co 15005		18.87	20.82	20.55	21.65	19.94	19.57	22.72	19.19	20.01	19.69	18.51	21.49*	20.82	21.61	20.39	2
Co 15006		18.57	19.78	21.19	21.57	20.04	20.21	21.33	16.90	20.03	18.28	19.95	19.49	19.29	20.35	19.78	
Co 15007		18.03	21.76	20.54	22.01	20.72	19.52	21.97	15.67	18.91	19.36	20.13	21.07*	21.11	21.82	20.19	3
CoSnk15101		18.66	18.47	18.3	20.75	18.82	18.43	20.62	16.67	20.44	16.67	17.92	20.35	19.18	19.32	18.90	
CoSnk15102		18.66	19.39	18.98	21.60	19.50	19.68	20.75	18.97	20.77	18.70	19.89	18.99	19.93	20.71	19.75	
CoVSI 15121		17.33	18.43	18.02	18.58	18.00	20.40	20.11	15.59	18.47	15.60	16.67	18.06	20.01	18.66	18.14	
Co 15009		18.24	21.13	18.5	20.04	19.99	19.92	21.74	17.10	21.81	17.24	18.49	20.35	19.19	17.49	19.37	
Co 15010		17.83	21.94	19.72	21.07	20.82	19.72	22.02	12.58	21.99	18.10	17.12	17.78	20.10	18.92	19.26	
Co 15015		17.70	16.93	17.77	20.47	20.80	19.36	18.85	16.49	18.69	15.76	16.84	19.38	17.26	18.63	18.21	
Co 15017		19.77	19.44	20.25	21.40	20.76	17.66	22.53	17.90	19.29	19.69	19.52	18.82	18.76	22.70	19.89	
Co 15018		17.77	15.76	16.08	18.39	17.46	19.25	18.94	16.30	19.33	15.44	16.07	18.92	17.27	18.07	17.50	
Co 15020		18.57	19.64	16.7	19.99	18.38	19.11	19.80	18.12	21.33	19.48	17.07	18.97	18.99	18.29	18.89	
Co 15021		17.80	21.20	18.26	19.72	19.95	19.24	20.98	16.77	18.80	16.14	18.73	20.15	19.77	18.62	19.01	
CoN 15071		18.17	19.09	17.82	19.42	18.94	18.29	21.38	18.61	19.20	16.17	16.74	19.55	16.97	18.45	18.49	
CoN 15072		17.54	19.01	18.33	20.77	19.56	19.11	22.34	19.16	19.09	17.40	17.31	18.00	19.74	18.75	19.01	
CoSnk 15103		16.43	17.82	17.47	20.10	17.14	19.36	19.81	17.65	19.52	16.69	18.87	18.87	16.13	18.13	18.14	
CoSnk 15104		18.78	18.18	17.13	19.85	18.48	19.58	19.44	17.86	21.15	19.06	16.76	19.12	19.98	18.81	18.87	
CoVC 15061		19.24	20.04	19.26	19.12	20.27	18.15	20.12	14.85	20.83	15.82	17.00	20.86*	19.34	18.76	18.83	
CoVC 15062		17.68	18.24	18.45	18.95	19.73	20.64	20.39	15.77	16.90	17.12	18.56	18.24	20.48	18.35	18.53	
CoVC 15063		18.99	19.25	21.29	20.42	20.46	20.29	19.04	17.81	20.50	17.04	18.85	18.28	19.41	20.02	19.40	
CoVC 15064		16.58	16.26	17.42	18.55	20.26	18.55	18.83	13.68	20.23	18.08	18.56	18.63	17.88	17.67	17.94	

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PI 15131		17.41	20.64	20.06	21.13	20.58	18.89	19.71	16.00	18.92	17.49	19.68	18.10	20.00	20.57	19.23	
PI 15132		19.02	18.15	21.84	21.43	20.92	20.34	18.46	19.62	18.78	19.14	19.44	19.65	20.40	21.40	19.90	5
VSI 15122		17.69	19.55	17.37	20.15	18.70	20.61	20.64	17.23	17.28	17.08	16.26	19.10	19.65	16.79	18.43	
Top three qualifying entries at each location																	
Co 86032		17.63	19.72	19.84	20.89	19.69	21.22	21.06	19.12	20.12	18.29	18.51	19.13	18.76	19.27	19.52	
CoC 671		18.54	23.49	19.86	21.21	21.02	21.50	23.09	18.28	22.19	18.80	21.18	19.21	21.22	21.88	20.82	1
CoSnk 05103		17.00	17.20	19.34	19.84	19.23	20.96	21.20	16.67	18.64	16.91	18.96	20.26	19.03	20.43	18.98	
Co 85004		15.87	21.19	21.17	19.32	21.06	19.99	21.91	17.66	19.92	19.37	20.11	18.28	20.88		19.75	
Grand Mean		17.97	19.46	19.02	20.33	19.69	19.61	20.78	17.20	19.77	17.76	18.37	19.31	19.34	19.50	19.15	
SE (m)±			0.60		0.54	0.38	0.41	0.54	1.88	0.57	0.20	0.34	0.07	0.96	0.77		
CD %			1.73		1.60	1.11	1.19	1.55	0.65	1.67	0.59	0.98	0.20	NS	2.22		
CV (%)			4.34		3.78	2.75	2.97	3.65	5.31	4.13	2.30	2.60	0.49	7.04	5.55		
		Co 15017											Co 15005				

* Significant with the best standard at 5% level. Data of Akola centre was not considered for calculating grand mean because the trial mean of cane yield (t/ha) was lower than state average.

Qualifying entries: Co 15017 (1), Co 15005 (1)

Performance across locations: No entry performed better than the best standard CoC 671 (20.82 %) for sucrose content across locations of the zone. The entries Co 15017 and Co 15005 showed >5% improvement over the best standard at Basmathnagar and Rudrur respectively.

Table 2.5.5: Juice brix (%) at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005		21.30	21.35	22.27	23.00	20.70	20.66	24.69	21.77	21.09	20.72	21.32	22.79	20.85	24.48	21.93
Co 15002		19.78	23.34	21.37	21.25	21.40	20.79	23.81	20.82	21.43	20.90	19.78	20.79	21.85	22.47	21.41
Co 15005		21.58	22.23	22.44	22.50	21.00	20.96	24.46	20.97	21.54	21.24	20.40	22.98	22.60	23.73	22.05
Co 15006		21.28	21.38	23.04	22.25	21.20	21.20	22.94	19.47	22.19	19.86	22.26	21.02	21.14	22.47	21.55
Co 15007		23.22	23.19	21.92	22.50	22.20	20.64	23.26	19.77	21.04	20.54	22.00	22.09	22.60	23.73	22.05
CoSnk15101		21.56	19.97	19.87	21.25	19.90	19.91	22.14	19.17	22.08	18.23	19.85	20.98	21.05	21.47	20.53
CoSnk15102		21.56	21.12	20.52	22.25	21.00	20.96	22.46	20.67	22.29	20.04	21.47	22.55	21.95	23.47	21.59
CoVSI 15121		21.02	20.03	20.27	20.25	19.60	21.83	22.07	17.12	20.14	17.37	18.54	19.95	21.70	20.97	20.06
Co 15009		20.96	22.89	20.28	21.00	21.80	20.88	23.96	19.97	23.33	18.85	20.77	22.28	21.29	19.37	21.26
Co 15010		20.60	23.66	21.66	21.75	22.25	20.84	24.18	14.17	23.69	19.66	20.26	20.98	22.10	21.47	21.23
Co 15015		20.82	19.01	20.06	21.25	22.30	20.32	21.06	18.37	20.69	17.61	18.54	19.90	19.51	21.22	20.05
Co 15017		22.56	20.94	21.78	21.75	22.60	19.73	23.98	18.92	21.13	20.74	21.33	22.17	20.66	24.98	21.66
Co 15018		20.38	17.72	18.18	19.50	19.10	20.26	20.70	19.27	20.79	17.37	17.69	18.78	19.31	20.72	19.27
Co 15020		21.44	21.22	18.58	20.00	19.45	21.26	21.81	19.27	22.73	21.14	18.55	20.62	20.81	20.47	20.53
Co 15021		21.30	22.80	20.46	21.00	21.10	21.83	23.36	19.57	20.79	18.17	20.47	20.53	21.95	21.72	21.08
CoN 15071		20.92	20.56	20.36	20.50	19.90	20.03	23.25	20.62	20.69	17.65	18.44	19.98	18.70	20.97	20.18
CoN 15072		22.78	21.04	20.02	21.92	21.10	20.28	24.11	21.37	20.89	19.28	19.47	19.97	21.65	21.72	21.11
CoSnk 15103		19.02	19.32	19.42	21.00	18.10	20.30	21.42	18.97	20.78	18.11	20.47	19.73	18.30	20.22	19.65
CoSnk 15104		21.64	19.81	19.42	20.25	19.60	20.83	21.85	19.47	22.13	20.65	18.67	19.35	21.65	21.49	20.49
CoVC 15061		22.04	21.83	21.52	20.00	21.60	19.60	23.04	17.42	22.34	17.91	18.85	19.88	21.60	21.72	20.67
CoVC 15062		22.00	20.27	20.54	19.50	20.80	21.43	21.59	18.32	17.34	19.10	20.25	20.08	22.25	20.97	20.32
CoVC 15063		21.72	20.87	23.12	21.50	22.30	20.96	21.64	20.12	21.93	18.97	20.38	21.69	21.54	23.22	21.43
CoVC 15064		18.96	18.71	19.64	20.50	21.50	20.75	21.46	16.47	21.64	19.91	20.23	21.39	19.83	19.97	20.07
PI 15131		20.06	22.24	22.22	22.25	22.20	20.28	22.18	18.37	19.49	19.39	21.36	20.70	22.00	23.22	21.14
PI 15132		21.86	20.76	23.32	23.00	22.30	21.28	22.49	22.97	20.58	21.04	22.46	21.15	22.55	24.48	22.16
VSI 15122		19.14	21.18	19.54	21.00	19.80	21.52	22.85	18.17	19.78	18.93	17.97	19.17	21.55	19.72	20.02
Standards																
Co 86032		22.88	21.50	21.84	22.00	21.30	22.09	22.80	20.37	21.54	19.79	20.49	20.58	20.95	21.47	21.40
CoC 671		21.24	24.83	21.64	22.25	22.50	22.51	24.93	20.27	23.78	20.21	22.84	21.92	23.05	23.48	22.53
CoSnk 05103		19.48	18.76	21.34	20.50	20.30	21.56	23.25	19.27	20.94	19.52	21.34	19.49	21.14	22.47	20.67
Co 85004		21.00	22.80	22.92	20.00	22.30	20.71	23.91	20.52	20.79	20.86	21.76	20.71	22.40		21.59
Grand Mean		21.14	21.18	20.99	21.26	21.04	20.87	22.86	19.40	21.32	19.46	20.27	20.81	21.28	22.00	20.99
SE (m)±			0.41		0.52	0.37	0.49	0.49	1.58	0.72	0.30	0.35	0.06	0.83	0.71	
CD %			1.57		1.55	1.08	1.43	1.40	0.54	2.08	0.86	1.02	0.17	2.41	2.07	
CV (%)			3.61		3.49	2.51	3.34	3.01	3.96	4.78	2.14	2.45	0.41	5.51	4.59	

Table 2.5.6: Purity % at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005		83.62	91.88	90.97	93.01	94.50	94.68	89.92	89.48	91.63	92.81	91.59	92.08	90.18	88.54	91.06
Co 15002		85.04	92.61	88.72	94.41	93.50	92.21	90.46	87.45	96.38	91.23	90.48	92.19	90.38	86.35	90.81
Co 15005		87.44	93.66	91.58	96.20	95.00	93.37	92.88	91.54	92.87	92.70	90.27	93.50	92.07	91.07	92.44
Co 15006		87.27	92.50	91.97	96.94	95.00	95.33	92.98	86.75	90.26	92.05	89.63	92.73	91.10	90.56	91.79
Co 15007		77.65	93.86	93.70	97.84	93.50	94.57	94.42	79.24	89.89	94.25	91.52	95.40	93.35	91.97	91.51
CoSnk15101		86.55	92.47	92.10	97.68	94.50	92.57	93.11	87.02	92.55	91.42	90.30	91.34	91.08	89.99	91.62
CoSnk15102		86.55	91.78	92.50	97.06	93.00	93.89	92.40	91.77	93.17	93.30	92.64	90.53	90.76	88.24	91.97
CoVSI 15121		82.45	92.04	88.90	91.67	92.00	93.45	91.08	90.97	91.62	89.77	89.92	90.73	91.96	88.96	90.39
Co 15009		87.02	92.31	91.22	95.39	92.00	95.40	90.69	85.61	93.48	91.45	89.04	91.82	90.08	90.37	91.13
Co 15010		86.55	92.71	91.04	96.79	94.00	94.63	91.05	88.73	92.82	92.07	84.53	94.69	91.00	88.12	91.34
Co 15015		85.01	89.07	88.58	96.33	93.50	95.28	89.46	89.70	90.33	89.47	90.83	94.00	88.46	87.85	90.56
Co 15017		87.63	92.37	92.98	98.37	92.00	89.51	93.97	94.59	91.34	94.94	91.51	91.68	90.79	90.89	92.33
Co 15018		87.19	88.78	88.45	94.30	91.50	95.01	91.51	84.56	92.95	88.94	90.87	95.18	89.41	87.21	90.42
Co 15020		86.61	92.57	89.88	99.92	94.50	89.89	90.73	93.99	93.84	92.12	91.99	94.46	91.13	89.38	92.21
Co 15021		83.57	92.98	89.25	93.87	94.50	88.14	89.80	85.63	93.37	88.80	91.52	92.90	95.05	85.74	90.37
CoN 15071		86.85	92.85	87.52	94.77	95.00	91.31	91.95	90.10	92.87	91.62	90.77	91.39	90.74	88.09	91.13
CoN 15072		77.00	90.40	91.55	94.75	93.00	94.23	92.65	89.63	91.58	90.25	88.92	90.07	91.18	86.35	90.11
CoSnk 15103		86.38	92.19	89.96	95.74	95.00	95.37	92.49	92.93	93.94	92.16	92.18	94.47	88.52	89.71	92.22
CoSnk 15104		86.78	91.76	88.21	97.94	94.50	94.00	88.94	91.65	95.54	92.28	89.78	91.14	92.21	87.53	91.59
CoVC 15061		87.30	91.78	89.52	95.53	94.00	92.60	87.40	85.17	94.27	88.30	90.18	92.53	89.47	86.39	90.32
CoVC 15062		80.36	89.97	89.82	97.15	95.00	96.31	94.45	86.29	93.84	89.63	91.65	92.44	92.05	87.51	91.18
CoVC 15063		87.43	92.24	92.08	94.96	92.00	96.80	87.99	88.70	93.49	89.83	92.48	94.48	90.12	86.18	91.34
CoVC 15064		87.45	86.91	88.70	90.54	94.50	89.40	87.76	83.05	93.45	90.81	91.74	93.37	90.17	88.39	89.73
PI 15131		86.79	92.80	90.28	94.96	93.00	93.15	89.14	87.09	93.76	90.18	92.16	94.44	90.90	88.57	91.23
PI 15132		87.01	87.46	93.65	93.18	94.00	95.58	82.06	85.43	91.25	90.94	86.55	94.91	90.45	87.42	89.99
VSI 15122		92.42	92.33	88.89	95.93	94.50	95.77	90.33	94.79	87.66	90.20	90.49	90.29	91.16	84.80	91.40
Standards																
Co 86032		77.05	91.29	90.84	94.94	92.50	96.06	92.38	94.02	93.40	92.40	90.34	92.39	89.53	89.70	91.20
CoC 671		87.29	94.63	91.77	95.35	93.50	95.51	92.62	90.05	93.27	92.99	92.73	93.36	92.03	93.35	92.75
CoSnk 05103		87.27	91.69	90.63	96.82	95.00	97.22	91.21	86.53	88.97	86.63	88.85	92.43	90.00	90.95	91.01
Co 85004		75.57	92.91	92.36	96.58	94.50	96.52	91.67	86.05	93.60	92.82	92.42	93.79	93.19		91.69
Grand Mean		85.00	91.76	90.59	95.63	93.77	93.93	90.92	88.61	92.58	91.21	90.60	92.82	90.95	88.63	91.23
SE (m)±			0.97		1.57	1.20	2.20	1.61	6.92	1.17	0.63	0.24	0.26	1.43	1.31	
CD %			2.82		NS	NS	NS	4.66	2.38	3.39	1.83	0.71	0.74	NS	3.99	
CV (%)			1.49		2.32	1.90	3.31	2.51	3.80	1.79	0.98	0.39	0.39	2.22	2.10	

Table 2.5.7: pol% cane at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Mean
Co 14005						15.19	15.36	16.97			15.81	14.52		13.93		15.30
Co 15002						15.30	14.82	16.37			15.69	13.59		14.62		15.07
Co 15005						15.57	14.95	17.34			16.10	14.00		15.40		15.56
Co 15006						15.49	15.57	16.53			14.99	15.36		14.28		15.37
Co 15007						15.71	15.04	16.98			15.98	15.35		15.63		15.78
CoSnk15101						14.79	14.18	15.76			13.63	13.16		14.19		14.29
CoSnk15102						15.11	15.42	16.14			15.32	15.12		14.75		15.31
CoVSI 15121						13.53	15.35	15.22			12.83	12.62		14.81		14.06
Co 15009						14.90	15.14	16.45			14.13	13.83		14.20		14.78
Co 15010						15.85	15.22	17.11			14.86	13.57		14.87		15.25
Co 15015						15.96	14.73	14.48			12.95	12.50		12.77		13.90
Co 15017						16.01	13.51	17.05			16.23	14.35		13.88		15.17
Co 15018						13.28	14.83	14.47			12.68	12.14		12.78		13.36
Co 15020						14.06	14.61	15.11			15.97	12.51		14.05		14.39
Co 15021						15.14	14.69	16.18			13.23	13.92		14.63		14.63
CoN 15071						14.48	14.09	16.07			13.30	12.52		12.56		13.84
CoN 15072						15.03	14.51	16.85			14.28	12.78		14.61		14.68
CoSnk 15103						13.09	14.80	15.26			13.72	13.96		11.94		13.80
CoSnk 15104						14.25	15.02	15.02			15.70	12.55		14.79		14.56
CoVC 15061						15.54	13.88	15.47			13.00	12.79		14.31		14.16
CoVC 15062						15.00	15.76	15.66			14.06	14.00		15.16		14.94
CoVC 15063						15.65	15.26	14.70			13.94	14.04		14.36		14.66
CoVC 15064						15.48	14.41	14.57			15.00	14.21		13.23		14.48
PI 15131						15.71	14.34	14.88			14.39	14.87		14.80		14.83
PI 15132						16.05	15.76	14.01			15.71	14.64		15.10		15.21
VSI 15122						14.16	15.67	15.90			14.21	12.62		14.54		14.52
Standards																
Co 86032						14.97	16.39	16.26			15.04	14.22		13.89		15.13
CoC 671						16.18	16.41	17.73			15.44	15.65		15.70		16.18
CoSnk 05103						14.75	16.16	16.28			13.94	14.01		14.08		14.87
Co 85004						16.21	15.30	16.61			15.91	14.67		15.45		15.69
Grand Mean						15.08	15.04	15.91			14.60	13.80		14.31		14.79
SE (m)±						0.33	0.35	0.40			0.24	0.24		0.71		
CD %						0.94	1.01	1.16			0.70	0.69		NS		
CV (%)						3.06	3.28	3.58			2.34	2.43		7.04		

Table 2.5.8: Fibre % at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Mean
Co 14005						12.09	13.34	13.52			12.78	15.09				13.36
Co 15002						13.68	12.66	13.97			12.67	14.08				13.41
Co 15005						11.91	13.64	13.65			13.25	14.34				13.36
Co 15006						12.68	12.94	12.49			12.97	13.00				12.82
Co 15007						14.17	12.94	12.71			12.48	13.76				13.21
CoSnk15101						11.43	13.05	13.56			13.21	16.57				13.56
CoSnk15102						12.48	11.64	12.24			13.06	13.96				12.68
CoVSI 15121						14.82	14.74	14.32			12.76	14.30				14.19
Co 15009						15.44	13.97	14.33			13.02	15.20				14.39
Co 15010						13.89	12.81	12.31			12.88	10.75				12.53
Co 15015						13.29	13.94	13.18			12.83	15.79				13.81
Co 15017						12.90	13.46	14.33			12.60	16.46				13.95
Co 15018						13.95	12.94	13.59			12.87	14.48				13.57
Co 15020						13.53	13.54	13.66			12.99	16.67				14.08
Co 15021						14.09	13.64	12.89			13.01	15.68				13.86
CoN 15071						13.55	12.94	14.81			12.74	15.16				13.84
CoN 15072						13.18	14.02	14.55			12.93	16.18				14.17
CoSnk 15103						13.60	13.54	12.98			12.79	15.98				13.78
CoSnk 15104						12.87	13.28	12.75			12.59	15.12				13.32
CoVC 15061						13.32	13.50	13.13			12.81	14.75				13.50
CoVC 15062						13.94	13.64	13.14			12.84	14.54				13.62
CoVC 15063						13.49	14.80	12.80			13.19	15.51				13.96
CoVC 15064						13.60	12.30	12.64			11.99	13.43				12.79
PI 15131						13.66	14.04	14.49			12.70	14.43				13.86
PI 15132						13.30	12.54	14.08			12.90	14.68				13.50
VSI 15122						14.30	13.95	12.94			11.80	12.41				13.08
Standards																
Co 86032						13.94	12.76	12.78			12.77	13.14				13.08
CoC 671						13.04	13.64	13.23			12.85	16.11				13.77
CoSnk 05103						13.29	12.90	13.20			12.58	16.08				13.61
Co 85004						13.03	13.45	14.21			12.85	17.04				14.12
Grand Mean						13.42	13.35	13.42			12.79	14.82				13.56
SE (m)±						0.83	0.35	0.30			0.23	0.22				
CD %						NS	1.02	0.88			N/A	0.63				
CV (%)						8.73	3.74	3.20			2.49	2.09				

Table 2.5.9: Juice extraction % at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawar dha	Kolhapur	Mandya	Nava sari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			41.09	53.61	41.88	53.57	55.66	55.19	58.36	55.50	49.21	60.72			52.48	52.48
Co 15002			43.25	59.58	53.16	57.91	56.53	53.89	56.90	53.96	50.15	58.85			57.21	54.67
Co 15005			37.09	53.47	43.60	56.95	59.86	55.01	57.44	56.36	51.52	57.97			57.26	53.32
Co 15006			49.19	57.46	47.63	57.15	56.83	53.17	56.44	54.56	54.40	55.96			57.06	54.53
Co 15007			49.76	56.07	56.27	59.98	59.72	54.80	56.96	54.29	58.12	59.36			61.25	56.96
CoSnk15101			37.79	52.99	44.15	49.22	59.36	53.42	53.21	54.85	46.06	45.69			51.97	49.88
CoSnk15102			41.14	54.83	43.21	49.72	55.53	54.37	54.51	58.18	51.64	51.24			53.09	51.59
CoVSI 15121			51.02	53.79	56.21	61.08	57.15	54.55	58.76	53.81	49.70	56.29			58.01	55.49
Co 15009			47.34	54.69	47.25	55.87	59.67	55.39	50.89	53.82	45.49	50.84			57.91	52.65
Co 15010			47.86	53.31	49.81	51.52	58.07	54.93	53.84	53.94	53.07	62.85			59.36	54.41
Co 15015			49.43	61.86	54.64	57.76	59.20	54.04	56.54	57.48	55.49	53.38			60.39	56.38
Co 15017			42.20	60.57	43.68	52.98	62.12	55.31	55.60	56.44	51.21	50.16			60.96	53.75
Co 15018			47.98	61.72	52.39	52.54	55.12	53.68	58.69	53.42	50.85	56.94			57.40	54.61
Co 15020			43.58	61.13	48.33	49.42	58.58	53.60	54.49	52.58	60.17	57.19			58.70	54.34
Co 15021			46.92	56.12	52.14	54.29	56.17	52.69	53.19	54.51	56.10	50.42			58.03	53.69
CoN 15071			49.69	60.29	58.34	55.09	54.71	56.62	52.97	56.36	48.53	53.91			62.54	55.37
CoN 15072			42.76	58.16	51.75	54.35	59.01	54.48	56.28	53.78	52.57	61.21			46.61	53.72
CoSnk 15103			43.34	53.84	57.02	50.34	59.51	53.60	50.67	54.07	29.06	54.58			51.89	50.72
CoSnk 15104			45.17	57.90	55.24	56.03	57.68	51.95	54.24	57.72	55.95	51.97			58.91	54.80
CoVC 15061			45.60	59.29	44.79	51.09	53.85	56.02	55.35	57.33	55.37	55.59			59.29	53.96
CoVC 15062			45.51	58.26	50.47	53.02	55.47	55.04	51.77	55.68	46.47	53.76			58.53	53.09
CoVC 15063			47.07	59.22	47.58	56.64	57.99	54.63	55.62	57.36	48.69	58.08			56.06	54.45
CoVC 15064			40.06	58.66	46.39	55.08	56.39	56.15	52.03	52.91	53.06	53.65			58.31	52.97
PI 15131			49.85	55.83	49.66	57.54	57.52	53.34	54.52	54.52	42.56	53.45			55.97	53.16
PI 15132			48.31	59.73	51.60	51.31	60.44	58.91	58.21	55.07	47.65	58.87			55.47	55.05
VSI 15122			48.08	58.74	52.41	51.35	53.44	53.73	53.63	56.18	45.04	56.68			55.14	53.13
Standards																
Co 86032			48.23	54.13	56.19	54.79	56.90	54.39	60.06	58.69	48.61	60.42			60.53	55.72
CoC 671			44.38	54.74	50.75	55.26	54.49	52.69	54.73	52.08	56.10	55.12			55.17	53.23
CoSnk 05103			39.87	53.83	46.04	46.79	53.03	54.96	48.25	50.78	48.76	55.61			50.89	49.89
Co 85004			39.38	53.33	44.97	50.00	57.33	56.23	51.78	49.62	51.08	61.21				51.49
Grand Mean			45.10	56.91	49.92	53.95	57.24	54.56	54.86	54.86	50.42	55.73			56.77	53.65
SE (m)±			2.03		2.93	3.81	1.06	1.67	5.06	0.94	2.50	1.30			2.65	
CD %			5.91		8.63	NS	3.07	N.S.	1.74	2.73	7.25	3.75			7.69	
CV (%)			6.38		8.29	9.99	2.62	4.33	4.48	2.44	7.00	3.29			6.61	

Table 2.5.10: Number of millable canes (*000/ha) at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawar dha	Kolhapur	Mandya	Nava sari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankeshwar	Mean
Co 14005	29.17	104.00	94.57	97.08	97.57	103.97	114.22	105.56	96.41	103.09	109.73		89.54	96.30	81.59	99.51
Co 15002	21.39	83.78	53.72	77.71	63.31	60.98	114.22	66.25	80.80	73.13	89.04		70.93	79.63	75.44	76.07
Co 15005	10.28	90.22	75.51	102.08	48.03	75.79	105.38	99.72	76.79	83.65	107.70		100.19	105.33	76.98	88.26
Co 15006	13.47	93.68	63.53	74.58	63.66	70.37	117.34	95.28	92.70	73.98	120.85		120.56	71.53	61.60	86.13
Co 15007	12.22	91.57	47.09	64.79	65.28	71.43	114.83	70.42	74.62	84.24	95.57		113.06	62.96	64.17	78.46
CoSnk15101	12.64	98.22	85.90	73.96	77.20	60.45	114.68	79.03	77.10	85.86	91.23		97.78	80.79	73.49	84.28
CoSnk15102	16.25	91.11	67.57	83.75	64.70	67.99	109.01	80.56	85.13	92.50	94.42		91.67	80.56	81.08	83.85
CoVSI 15121	12.92	78.00	51.99	63.96	79.17	59.13	116.71	81.39	80.49	81.25	93.60		112.69	71.30	66.22	79.68
Co 15009	33.06	89.56	42.28	67.08	49.54	73.68	114.82	83.19	64.58	104.24	107.58		113.52	76.86	68.27	81.17
Co 15010	23.89	98.11	52.15	86.88	59.26	81.22	116.73	95.97	65.35	71.11	109.30		115.09	79.86	72.47	84.88
Co 15015	24.44	95.33	45.52	67.08	56.37	72.88	114.49	82.08	73.85	88.72	95.14		92.78	73.15	72.26	79.20
Co 15017	17.50	98.22	69.09	74.17	74.77	81.61	108.58	89.72	83.74	91.81	121.45		114.17	77.78	68.78	88.76
Co 15018	11.53	88.89	58.11	87.29	63.66	66.40	121.74	59.86	73.08	102.80	106.42		106.67	62.04	48.59	80.43
Co 15020	20.28	101.11	75.62	81.25	71.87	53.97	117.68	83.89	60.26	110.26	95.22		117.96	78.01	85.49	87.12
Co 15021	14.44	89.68	54.84	75.42	62.85	87.04	118.82	68.47	67.05	84.57	96.86		100.93	83.33	67.96	81.37
CoN 15071	34.86	98.22	54.30	66.04	74.31	73.54	124.42	82.36	73.85	108.68	101.46		105.93	70.83	78.41	85.57
CoN 15072	28.61	80.89	35.35	44.38	41.78	61.77	113.55	71.25	63.65	84.92	109.28		115.19	56.95	46.95	71.22
CoSnk 15103	22.36	92.44	59.91	88.13	71.41	71.30	119.33	75.56	73.70	112.11	98.86		113.43	80.09	72.26	86.81
CoSnk 15104	13.89	98.22	57.60	93.54	68.17	60.05	117.04	85.14	70.14	94.07	67.90		101.20	82.41	78.82	82.64
CoVC 15061	40.00	93.66	48.28	91.88	50.46	109.66	119.79	90.97	80.96	92.96	93.38		111.39	88.20	69.50	87.78
CoVC 15062	31.25	89.78	55.62	42.71	62.73	97.49	128.58	84.31	73.54	107.12	108.21		113.80	72.92	61.40	84.48
CoVC 15063	33.89	95.33	72.56	96.67	52.43	77.12	121.19	104.17	87.76	99.32	112.66		114.44	78.94	64.58	90.55
CoVC 15064	28.61	94.36	-	86.04	46.87	137.57	107.65	83.33	50.83	89.69	32.90		116.76	77.55	74.52	83.17
PI 15131	40.69	95.33	55.04	71.88	50.58	80.69	112.53	80.14	78.95	83.65	120.86		102.87	66.20	53.20	80.92
PI 15132	35.69	86.67	57.61	95.00	57.41	63.07	120.93	87.22	70.30	91.68	120.13		127.50	68.75	64.06	85.41
VSI 15122	29.17	85.11	43.31	59.79	60.42	73.15	130.55	65.00	72.15	80.64	81.71		96.39	56.02	60.58	74.22
Standards																
Co 86032	43.05	80.44	53.34	91.04	72.34	96.43	102.83	85.42	79.26	109.84	109.26		94.72	96.07	76.77	88.29
CoC 671	39.30	74.89	44.77	70.63	60.30	71.96	105.33	69.17	60.87	99.71	150.99		96.02	87.73	62.73	81.16
CoSnk 05103	28.89	92.58	100.06	103.54	81.25	103.31	113.39	104.72	64.89	108.72	152.35		114.21	97.23	89.18	101.96
Co 85004	16.53	80.67	108.13	112.50	69.44	116.67	103.41	97.78	95.79	86.62	125.46		117.96	92.60		100.59
Grand Mean	24.68	91.00	61.50	79.69	63.90	79.36	115.33	83.60	74.95	92.70	103.98		106.64	78.40	69.56	84.80
SE (m)±			9.42	10.88	5.21	4.64	4.67	5.08	6.23	1.78	9.30		8.69	5.10	3.92	
CD %			27.41	31.10	15.37	13.43	13.51	14.69	18.10	5.17	27.03		25.13	14.82	11.36	
CV (%)			21.65	19.31	11.53	8.27	5.73	8.59	11.74	2.72	12.65		11.52	9.20	7.97	

Table 2.5.11: Stalk length (cm) at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameerwadi	Sankeshwar	Mean
Co 14005	213.20	269.50	237.50	265.50	198.33	225.00	257.58	217.50	253.50	221.00	259.90	235.34	203.00	241.00	220.50	236.08
Co 15002	201.90	174.00	255.00	221.40	182.50	214.00	258.28	230.00	291.00	190.50	263.50	225.34	198.80	226.50	214.50	224.67
Co 15005	172.30	217.50	222.50	239.70	190.00	203.00	218.04	247.50	320.00	213.00	256.16	247.17	220.50	273.00	223.50	235.11
Co 15006	158.50	271.00	222.50	283.50	175.00	183.00	247.30	252.50	283.50	182.50	271.30	244.00	224.00	191.80	220.00	232.28
Co 15007	160.40	269.00	222.50	218.10	168.33	215.00	253.80	245.00	282.00	193.50	247.00	224.00	245.10	251.50	223.00	232.70
CoSnk15101	163.20	278.00	222.50	326.50	197.50	267.00	244.73	262.50	312.50	209.00	289.70	254.00	187.10	280.00	242.00	255.22
CoSnk15102	183.50	293.00	270.00	275.20	190.00	258.00	253.94	265.00	323.50	212.00	282.70	261.33	228.00	262.00	271.50	260.44
CoVSI	136.10	229.50	225.00	321.10	242.50	242.00	266.35	260.00	295.00	185.50	232.10	271.50	263.10	299.50	244.50	255.55
Co 15009	200.10	236.00	270.00	319.40	197.50	245.00	240.53	247.50	386.00	186.00	288.00	267.00	256.70	306.00	233.50	262.80
Co 15010	225.10	279.50	237.50	283.60	201.67	244.00	247.48	240.00	311.50	218.00	268.00	238.67	212.60	260.00	251.50	249.57
Co 15015	166.00	275.50	235.00	292.20	198.33	224.00	242.33	242.50	287.00	219.00	264.60	239.17	204.40	231.00	245.50	242.90
Co 15017	207.40	230.00	217.50	284.50	158.33	191.00	244.94	252.50	292.00	224.00	230.90	249.67	250.90	256.00	238.00	237.16
Co 15018	199.20	288.50	207.50	273.60	170.00	222.00	248.96	255.00	296.00	232.00	225.80	224.33	258.40	254.00	231.00	241.94
Co 15020	167.00	256.50	250.00	319.10	223.33	195.00	237.35	265.00	271.50	178.00	229.40	259.33	228.80	277.50	251.00	245.84
Co 15021	172.00	202.50	270.00	285.00	190.00	245.00	239.03	252.50	283.50	223.00	295.20	253.67	221.90	253.50	206.00	244.34
CoN 15071	171.20	280.50	282.50	314.70	191.67	252.00	236.25	272.50	255.00	215.00	272.50	276.34	229.20	307.00	259.00	260.30
CoN 15072	153.60	229.00	202.50	248.00	191.00	204.00	236.43	250.00	226.50	224.00	244.60	242.50	209.10	227.00	176.50	222.22
CoSnk	202.70	257.00	240.00	244.60	209.67	253.00	247.99	262.50	294.50	227.00	295.20	164.50	230.90	313.00	255.50	249.67
CoSnk	195.70	284.00	232.50	336.80	222.50	253.00	232.63	265.00	282.50	177.00	284.50	258.34	245.70	264.50	238.00	255.50
CoVC	248.90	287.50	252.50	309.90	162.50	250.00	212.53	287.50	304.00	222.00	276.90	263.84	263.90	298.00	253.50	260.33
CoVC	153.50	250.50	230.00	347.60	204.17	262.00	259.28	235.00	290.00	216.00	249.10	237.84	251.90	302.00	263.00	257.03
CoVC	190.90	225.50	197.50	288.00	151.67	184.00	219.66	252.50	266.00	216.50	178.90	246.92	188.20	228.00	166.50	214.99
CoVC	183.80	223.00	160.00	311.50	177.50	236.00	213.25	205.00	285.00	214.00	140.00	211.00	258.50	260.00	228.00	223.05
PI 15131	179.20	261.50	210.00	271.30	199.17	212.00	231.11	242.50	299.00	191.00	235.30	209.17	209.00	281.50	228.00	234.33
PI 15132	178.60	256.50	192.50	297.00	215.00	233.00	252.28	237.50	356.50	225.50	241.70	245.99	193.30	286.00	226.00	247.06
VSI 15122	188.60	216.00	247.50	362.90	249.17	237.00	260.35	252.50	321.50	230.00	262.90	285.34	234.40	332.00	267.50	268.50
Standards																
Co 86032	190.40	273.50	227.50	261.00	224.82	256.00	215.72	255.00	291.00	212.00	281.90	233.17	178.60	251.00	250.50	243.69
CoC 671	220.40	210.00	212.50	299.60	204.18	249.00	220.83	230.00	324.50	205.50	256.00	235.34	221.40	275.50	206.00	239.31
CoSnk	200.40	270.50	240.00	305.80	223.33	232.00	221.83	267.50	323.50	223.50	295.20	249.67	201.10	318.00	269.00	260.07
Co 85004	163.50	289.50	210.00	260.60	154.17	247.00	212.66	252.50	280.50	188.50	259.90	218.17	225.40	297.30		238.17
Grand	184.91	252.82	230.08	288.92	195.46	231.10	239.11	250.08	296.28	209.15	255.96	242.42	224.80	270.14	234.59	244.37
SE (m)±	5.59		13.65	6.40	10.03	7.23	11.27	8.75	NS	5.75	11.91	11.28	2.30	19.06	13.70	
CD %	15.48		39.68	18.28	29.60	20.90	32.59	25.31		16.63	34.62	32.62	6.65	55.41	39.69	
CV (%)	4.27		8.39	3.13	7.26	4.42	6.66	4.95		3.88	6.58	6.58	1.45	9.98	8.26	

Table 2.5.12: Stalk Diameter (cm) at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankeshwar	Mean
Co 14005	2.60		2.69	2.44	1.91	2.49	2.04	2.83	2.31	2.82	2.33	2.67	2.45	2.95	3.59	2.58
Co 15002	2.89		2.63	2.70	2.31	2.95	2.12	2.83	2.90	2.66	2.85	2.80	3.02	3.00	2.68	2.73
Co 15005	2.78		2.69	2.56	2.19	2.72	2.11	2.99	2.35	2.75	2.46	3.00	2.91	2.95	2.75	2.65
Co 15006	2.37		2.95	2.72	2.27	2.97	2.71	3.07	2.47	2.72	2.58	3.24	2.90	2.80	2.86	2.79
Co 15007	3.10		3.37	3.13	2.99	3.03	2.42	3.62	3.30	2.70	2.89	3.32	3.28	3.25	3.12	3.11
CoSnk15101	2.69		2.65	2.50	2.06	2.77	2.07	2.88	2.30	2.67	2.57	2.79	2.66	2.65	2.64	2.55
CoSnk15102	2.75		2.73	2.76	2.19	2.63	2.49	2.79	2.07	2.65	2.53	2.89	2.70	3.00	2.72	2.63
CoVSI 15121	3.04		3.27	3.07	2.95	3.21	2.31	3.22	3.00	2.74	2.95	3.42	3.38	3.30	3.16	3.08
Co 15009	2.81		2.82	2.88	2.32	2.72	2.35	3.14	2.90	2.56	3.17	2.82	3.04	3.05	2.86	2.82
Co 15010	2.97		3.33	3.13	2.24	2.94	2.19	3.14	2.82	2.70	2.80	2.79	2.76	3.05	2.93	2.83
Co 15015	2.64		3.16	2.90	2.54	3.28	2.13	3.11	2.68	2.77	2.98	3.17	2.93	3.25	3.22	2.93
Co 15017	2.99		2.90	2.46	2.20	2.98	2.14	2.99	2.40	2.76	2.80	3.10	2.70	3.05	2.67	2.70
Co 15018	3.35		2.98	3.56	2.71	3.20	2.12	3.62	3.04	2.63	3.22	3.37	3.71	3.30	3.47	3.15
Co 15020	2.87		2.69	2.72	2.36	3.44	2.11	2.91	2.55	2.64	2.45	2.95	2.88	2.85	2.74	2.71
Co 15021	2.97		3.27	3.12	2.58	3.13	1.94	2.91	2.66	2.65	2.77	3.00	3.26	2.95	2.78	2.85
CoN 15071	3.08		2.83	2.72	2.55	2.85	2.47	2.95	2.89	2.67	2.90	3.25	3.41	3.30	3.06	2.91
CoN 15072	3.23		3.33	3.56	2.64	3.28	2.34	3.14	3.13	2.66	3.11	2.75	3.28	3.55	3.36	3.09
CoSnk 15103	3.00		3.17	2.95	2.75	3.01	2.04	2.87	2.30	2.61	2.19	3.29	3.20	2.45	3.01	2.76
CoSnk 15104	2.91		2.99	2.63	2.66	3.13	2.32	3.07	2.51	2.64	2.37	3.19	2.96	2.90	3.11	2.81
CoVC 15061	3.02		3.15	2.53	2.34	2.58	1.94	3.22	2.72	2.71	2.94	3.05	3.01	3.05	3.10	2.80
CoVC 15062	2.55		2.98	2.82	2.48	2.66	2.37	2.83	2.41	2.55	2.92	3.09	2.79	3.20	2.92	2.77
CoVC 15063	2.74		2.79	2.63	2.41	2.74	2.17	2.83	1.65	2.75	3.05	2.94	2.75	3.05	2.57	2.64
CoVC 15064	2.82		2.72	2.36	2.51	2.46	2.24	2.75	2.40	2.72	1.96	2.94	2.82	3.15	2.93	2.61
PI 15131	2.83		3.43	2.87	2.63	3.52	2.07	2.91	3.20	2.75	2.76	3.14	3.66	3.75	3.01	3.05
PI 15132	2.67		3.13	3.12	2.65	3.38	2.02	2.83	2.90	2.60	2.91	3.02	3.32	3.35	3.14	2.95
VSI 15122	2.95		3.29	3.13	3.08	3.53	2.08	3.22	3.35	2.76	3.44	3.27	3.50	3.50	3.22	3.22
Standards																
Co 86032	2.49		3.54	2.87	2.87	3.03	2.15	3.14	2.15	2.55	2.71	3.14	2.86	2.90	3.13	2.85
CoC 671	2.82		3.23	2.94	2.75	3.38	2.54	3.14	2.25	2.53	2.86	2.95	3.02	3.05	2.89	2.89
CoSnk 05103	2.84		2.53	2.43	2.44	2.78	2.11	2.71	2.35	2.46	2.19	2.74	2.67	3.30	2.72	2.57
Co 85004	2.47		2.48	2.65	2.22	2.56	2.35	2.79	2.15	2.52	2.36	2.72	2.92	2.95		2.56
Grand Mean	2.84		2.99	2.83	2.49	2.98	2.22	3.02	2.60	2.66	2.73	3.03	3.02	3.10	2.98	2.82
SE (m)±	0.06		0.15	0.05	0.13	0.13	0.08	0.08	0.23	0.04	0.10	0.05	0.02	0.14	0.21	
CD %	0.15		0.43	0.14	0.39	0.38	0.22	0.23	0.67	0.13	0.28	0.16	0.06	0.42	0.59	
CV (%)	2.74		7.38	2.37	7.49	6.27	4.82	3.78	12.59	2.49	5.01	2.53	1.04	6.58	9.75	

Table 2.5.13: Single cane weight (Kg) at harvest

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005	1.21	1.22	1.65	1.02	0.99	1.04	1.37	1.06	1.07	1.95	1.24	1.14	1.02	1.29	1.17	1.23
Co 15002	1.34	1.62	2.17	1.27	1.25	1.12	1.24	1.57	1.64	1.33	1.70	1.47	1.09	1.30	1.21	1.43
Co 15005	1.43	1.56	1.72	1.15	1.14	1.02	1.18	1.26	1.17	1.68	1.21	1.68	1.11	1.36	1.33	1.33
Co 15006	1.34	1.19	2.03	1.66	1.43	0.98	1.13	1.43	1.25	1.51	1.46	1.66	1.20	1.27	1.42	1.40
Co 15007	1.40	1.41	2.45	1.56	1.48	1.19	1.19	1.37	1.66	1.63	1.64	1.71	1.42	1.66	1.54	1.56
CoSnk15101	1.23	1.55	1.44	1.46	1.11	1.54	1.22	1.35	1.25	1.51	1.63	1.52	1.04	1.28	1.37	1.38
CoSnk15102	1.30	1.62	1.98	1.45	1.07	1.36	1.15	1.30	1.23	1.53	1.46	1.57	1.39	1.49	1.61	1.44
CoVSI 15121	1.12	1.30	2.55	2.23	1.99	1.71	1.13	1.73	1.80	1.30	1.66	1.73	1.43	2.34	1.96	1.77
Co 15009	1.18	1.02	3.21	2.11	1.62	1.39	1.30	1.65	1.27	1.21	2.13	1.72	1.44	2.09	1.56	1.69
Co 15010	1.36	1.45	2.73	2.22	1.30	1.34	1.11	1.38	1.30	2.10	1.70	1.55	1.37	1.55	1.63	1.62
Co 15015	1.29	1.19	2.39	1.82	1.38	1.40	1.13	1.61	1.40	2.25	1.55	1.60	1.17	1.77	1.97	1.62
Co 15017	1.36	1.25	1.53	1.40	0.98	0.98	1.44	1.31	1.23	1.67	1.32	1.60	1.21	1.54	1.26	1.34
Co 15018	1.37	1.41	1.92	2.05	1.55	1.37	1.42	1.94	2.03	1.35	1.77	1.83	1.46	1.61	1.98	1.69
Co 15020	1.32	1.38	1.99	1.73	1.31	0.86	1.53	1.32	1.06	1.39	1.22	1.77	1.31	1.33	1.53	1.41
Co 15021	1.34	1.31	2.62	2.07	1.44	1.85	1.39	1.45	1.64	2.23	1.82	1.90	1.54	1.51	1.22	1.71
CoN 15071	1.34	1.47	2.94	1.78	1.42	1.67	1.20	1.46	1.62	1.76	1.94	2.47	1.44	2.35	2.05	1.83
CoN 15072	1.37	0.93	2.26	2.29	1.61	1.37	1.22	1.58	1.55	2.13	2.06	1.16	1.41	1.88	1.59	1.65
CoSnk 15103	1.40	1.20	2.35	1.14	1.68	1.89	1.12	1.77	1.10	1.49	1.78	1.60	1.42	2.31	1.76	1.61
CoSnk 15104	1.28	1.59	1.97	1.69	1.56	1.69	1.16	1.55	1.23	1.31	1.49	1.98	1.56	1.51	1.73	1.57
CoVC 15061	1.54	0.98	2.42	1.42	1.07	1.31	1.40	1.55	1.71	2.53	1.66	1.56	1.36	1.87	1.85	1.62
CoVC 15062	1.48	1.21	2.13	2.31	1.35	1.35	1.31	0.99	1.42	1.27	1.52	1.60	1.39	2.26	1.82	1.57
CoVC 15063	1.32	1.26	1.63	1.37	1.01	0.92	1.43	0.99	1.09	1.49	1.12	1.51	0.78	1.09	0.92	1.19
CoVC 15064	1.39	1.56	1.06	1.35	1.31	1.07	1.15	0.83	1.05	1.80	0.38	1.42	1.39	1.54	1.42	1.24
PI 15131	1.32	1.23	2.57	1.80	1.51	1.42	1.49	1.60	2.17	1.68	1.17	1.59	1.53	2.55	1.80	1.72
PI 15132	1.27	1.41	1.81	2.18	1.58	1.47	1.26	1.27	2.08	2.16	1.53	1.82	1.33	1.69	1.67	1.66
VSI 15122	1.36	1.60	3.05	2.48	2.04	1.66	1.17	1.85	2.37	2.20	1.62	2.30	1.56	2.51	2.42	2.06
Standards																
Co 86032	1.17	1.13	2.64	1.64	1.81	1.53	1.20	1.31	1.21	1.54	1.53	1.58	0.99	1.17	1.98	1.52
CoC 671	1.42	1.48	2.22	1.91	1.58	1.52	1.20	1.44	1.24	1.84	1.63	1.69	1.27	1.75	1.55	1.59
CoSnk 05103	1.23	1.26	1.32	1.14	1.30	0.87	1.28	1.06	1.16	1.27	1.49	1.21	0.82	1.10	1.26	1.18
Co 85004	1.32	1.31	1.52	1.34	0.96	1.10	1.31	0.77	1.20	1.32	1.52	0.98	0.93	1.33		1.20
Grand Mean	1.33	1.34	2.14	1.70	1.39	1.33	1.26	1.39	1.44	1.68	1.53	1.63	1.28	1.68	1.61	1.53
SE (m)±	0.53		0.26	0.09	0.07	0.13	0.06	0.10	0.10	0.09	0.11	0.06	0.01	0.18	0.13	
CD %	1.48		0.74	0.24	0.20	0.37	0.18	0.30	0.28	0.27	0.32	0.14	0.04	0.53	0.38	
CV (%)	11.36		16.86	6.08	6.80	13.53	7.15	10.42	9.53	8.04	10.12	4.26	1.46	15.33	11.62	

Table 2.5.14: CCS % at 300 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			13.52		13.98	12.45	12.42	14.30	13.12	13.51	13.03	12.99	14.92	12.33	12.31	13.24
Co 15002			12.64		13.06	12.07	11.00	12.26	11.33	13.37	11.39	11.98	13.23	13.51	11.72	12.30
Co 15005			13.46		13.70	12.93	11.31	14.95	12.35	12.73	11.27	11.41	15.77	14.34	11.62	12.99
Co 15006			13.72		13.77	13.49	10.82	13.95	9.62	14.11	11.77	12.04	13.99	12.98	10.24	12.54
Co 15007			13.03		13.04	14.75	11.05	14.53	11.33	13.93	12.18	12.24	14.99	11.38	11.62	12.84
CoSnk15101			11.98		13.11	12.40	10.13	13.34	10.06	13.60	10.17	11.40	12.36	12.28	11.84	11.89
CoSnk15102			13.27		13.83	13.25	12.45	14.89	11.70	13.50	11.31	12.41	14.69	13.94	12.59	13.15
CoVSI 15121			12.60		12.23	11.27	12.50	12.72	9.87	11.91	10.13	9.08	11.49	11.08	10.86	11.31
Co 15009			12.61		13.42	12.05	10.86	13.17	8.85	14.10	10.87	10.28	13.21	12.65	10.33	11.87
Co 15010			11.96		11.86	12.80	12.26	11.81	8.22	14.46	11.21	9.98	11.37	11.68	9.46	11.42
Co 15015			11.59		12.67	13.67	11.30	12.09	9.62	10.77	10.74	8.96	11.56	11.82	9.50	11.19
Co 15017			13.92		13.23	13.96	11.71	14.74	10.92	12.11	12.40	12.06	15.74	15.73	12.49	13.25
Co 15018			10.26		13.28	11.61	11.15	12.45	10.39	14.02	10.32	9.87	11.90	10.30	8.64	11.18
Co 15020			12.94		12.29	12.27	10.99	13.83	12.17	13.50	12.82	11.13	12.35	12.66	8.14	12.09
Co 15021			12.02		13.12	12.30	11.27	13.04	10.32	12.22	10.83	10.83	12.53	12.91	8.89	11.69
CoN 15071			11.09		13.28	11.80	11.85	12.90	12.07	13.25	11.05	8.72	12.35	11.57	9.55	11.62
CoN 15072			11.22		13.75	12.74	13.13	13.47	11.73	12.18	11.58	9.36	12.29	12.75	9.87	12.01
CoSnk 15103			10.86		13.23	10.48	12.58	13.47	10.98	13.01	10.55	11.16	11.46	12.01	9.78	11.63
CoSnk 15104			12.57		12.00	11.06	11.42	13.62	11.15	13.48	11.49	10.37	11.57	12.60	11.30	11.89
CoVC 15061			11.74		12.76	11.55	12.30	13.21	7.68	13.97	10.23	7.24	11.17	12.99	9.28	11.18
CoVC 15062			12.47		12.60	12.73	12.67	13.50	10.90	10.65	11.03	11.48	13.59	11.86	9.33	11.90
CoVC 15063			13.81		13.33	14.54	12.41	14.87	8.92	13.02	11.59	10.75	13.12	13.16	11.65	12.60
CoVC 15064			11.57		12.11	12.51	12.24	12.51	9.63	14.18	10.24	11.70	13.01	12.09	9.49	11.77
PI 15131			13.98		14.44	14.33	11.83	14.29	10.90	14.17	11.30	12.29	14.24	12.63	11.37	12.98
PI 15132			13.20		14.03	13.42	12.29	11.52	11.29	12.94	10.56	11.49	13.86	14.01	12.08	12.56
VSI 15122			11.91		12.90	12.20	12.62	12.50	10.10	12.51	9.83	8.15	9.99	10.67	7.92	10.94
Standards																
Co 86032			13.20		13.22	12.89	13.62	13.53	11.89	13.91	11.90	11.85	12.43	12.98	9.67	12.59
CoC 671			14.41		13.82	13.98	13.92	15.31	12.22	15.01	11.99	12.65	14.27	13.12	11.53	13.52
CoSnk 05103			12.32		12.73	13.15	12.17	13.85	11.12	12.09	10.87	10.91	12.01	12.58	10.46	12.02
Co 85004			12.50		12.93	13.96	12.38	13.79	12.31	13.22	11.62	12.60	13.49	13.85		12.97
Grand Mean			12.55		13.12	12.75	11.96	13.48	10.76	13.18	11.21	10.91	12.96	12.62	10.47	12.17
SE (m)±			0.62		0.30	0.54	0.32	0.41	0.63	0.56	0.19	0.18	0.05	0.96	0.58	
CD %			1.80		0.89	1.57	0.93	1.18	1.84	1.62	0.55	0.52	0.14	NS	1.67	
CV (%)			6.99		3.23	6.04	3.79	4.28	8.33	6.04	2.39	2.34	0.51	10.73	7.81	

Table 2.5.15: Juice sucrose % at 300 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			19.25		19.73	17.65	17.81	20.27	18.27	19.32	18.37	18.26	18.05	17.86	18.27	18.59
Co 15002			18.12		18.19	17.31	15.87	17.93	16.16	19.02	16.26	16.95	16.47	19.42	17.04	17.39
Co 15005			19.11		19.24	18.14	16.30	20.84	17.53	18.14	16.14	16.25	18.47	20.47	17.06	18.14
Co 15006			19.48		19.46	18.82	15.81	19.64	13.96	20.15	16.83	17.36	17.36	18.68	15.14	17.72
Co 15007			18.73		18.31	20.58	16.08	20.28	16.26	19.55	17.37	17.30	17.11	16.83	16.85	17.94
CoSnk15101			17.11		18.38	17.57	15.00	18.69	15.14	19.30	14.80	16.37	16.38	17.75	17.25	16.98
CoSnk15102			18.82		19.38	18.66	17.87	20.71	16.72	19.39	16.21	17.45	16.20	19.95	18.39	18.31
CoVSI 15121			17.97		17.31	16.27	17.91	17.94	14.31	17.03	14.75	13.07	16.53	16.17	15.77	16.25
Co 15009			18.13		18.76	17.12	15.75	18.53	13.22	20.20	15.67	14.75	18.89	18.21	15.08	17.03
Co 15010			17.36		16.87	18.30	17.37	17.12	12.51	20.65	16.07	14.67	15.22	16.86	13.90	16.41
Co 15015			16.74		17.88	19.47	16.42	17.26	13.86	15.65	15.43	12.99	15.99	17.04	14.16	16.07
Co 15017			19.71		18.65	19.59	16.87	20.49	15.79	17.34	17.62	17.09	15.97	22.13	18.44	18.31
Co 15018			15.44		18.76	16.54	16.22	17.67	14.90	19.42	14.89	14.05	15.02	15.32	12.83	15.92
Co 15020			18.42		17.23	17.16	15.90	19.31	17.40	19.23	18.32	15.72	16.61	18.19	12.09	17.13
Co 15021			17.27		18.54	17.44	16.32	18.68	14.68	17.41	15.60	15.26	16.43	18.49	13.37	16.62
CoN 15071			16.04		18.77	16.75	16.95	18.26	17.09	18.97	15.94	12.53	16.29	16.83	14.22	16.55
CoN 15072			16.32		19.37	17.93	18.56	18.89	16.83	17.46	16.55	13.34	16.25	18.34	14.75	17.05
CoSnk 15103			15.65		18.64	14.93	17.98	18.60	15.50	18.46	15.21	15.89	16.03	17.43	14.52	16.57
CoSnk 15104			18.00		17.02	15.83	16.45	19.18	16.03	19.16	16.32	14.79	15.69	18.09	16.42	16.91
CoVC 15061			16.98		18.05	16.54	17.41	18.71	11.49	20.04	14.92	10.73	18.11	18.65	13.94	16.30
CoVC 15062			17.94		17.74	17.83	18.16	18.98	15.50	15.01	16.10	16.24	16.44	17.11	14.18	16.77
CoVC 15063			19.56		18.60	20.46	17.85	20.98	13.03	18.76	16.71	15.29	16.10	18.91	16.96	17.77
CoVC 15064			16.82		17.05	17.56	17.30	17.73	13.65	20.11	14.93	16.56	15.61	17.45	14.19	16.58
PI 15131			19.92		20.54	20.15	17.15	20.12	15.68	20.31	16.26	17.31	14.23	18.11	16.82	18.05
PI 15132			19.11		19.78	19.02	17.56	16.91	16.45	18.72	15.40	16.61	17.58	20.04	17.69	17.91
VSI 15122			17.21		18.32	17.20	18.25	17.80	14.55	17.64	14.35	11.82	17.95	15.60	11.97	16.05
Standards																
Co 86032			18.79		18.77	18.05	19.37	19.02	17.05	19.61	16.80	16.81	17.70	18.68	14.39	17.92
CoC 671			20.43		19.50	19.60	19.58	21.33	17.50	21.38	17.03	17.77	16.61	18.86	17.08	18.89
CoSnk 05103			17.64		18.01	18.48	17.21	19.47	15.92	17.29	15.77	15.92	18.16	17.97	15.35	17.27
Co 85004			17.81		18.22	19.52	17.66	19.49	17.52	18.86	16.68	17.67	16.25	19.75		18.13
Grand Mean			18.00		18.50	18.02	17.16	19.03	15.48	18.79	16.11	15.56	16.66	18.17	15.45	17.25
SE (m)±			0.73		0.35	0.69	0.30	0.48	0.75	0.73	0.25	0.24	0.09	1.21	0.70	
CD %			2.13		1.04	2.00	0.87	1.40	2.18	2.13	0.74	0.70	0.27	NS	2.04	
CV (%)			5.74		2.70	5.42	2.47	3.59	6.84	5.56	2.22	2.20	0.78	9.41	6.45	

Table 2.5.16: Juice brix (%) at 300 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			21.05		21.19	19.20	19.80	21.98	19.01	21.35	19.67	20.05	20.48	20.27	21.77	20.48
Co 15002			20.14		18.94	19.30	17.88	20.73	17.76	20.77	17.90	18.86	19.11	21.69	19.52	19.38
Co 15005			20.76		20.44	19.25	18.31	21.73	19.06	19.86	17.89	18.34	21.54	22.54	19.91	19.97
Co 15006			21.19		20.94	19.75	18.30	20.98	15.91	22.27	18.59	20.08	19.74	20.92	17.91	19.72
Co 15007			20.91		19.44	21.60	18.45	21.23	18.11	20.65	19.09	19.23	19.86	19.95	19.16	19.81
CoSnk15101			18.86		19.44	19.10	17.83	19.73	18.56	20.96	16.97	18.77	18.50	20.08	19.81	19.05
CoSnk15102			20.41		20.44	20.00	19.92	21.48	18.46	21.66	17.99	19.13	20.25	22.10	21.27	20.26
CoVSI 15121			19.74		18.69	18.40	19.91	19.23	16.26	18.80	16.92	15.06	17.60	18.63	18.01	18.10
Co 15009			20.27		19.69	18.70	17.95	19.73	15.96	22.41	17.61	16.88	18.55	20.40	17.41	18.80
Co 15010			19.79		18.44	20.30	18.79	19.48	15.61	22.72	17.85	17.60	18.11	19.01	16.26	18.66
Co 15015			18.90		19.19	21.40	18.78	18.98	15.56	17.90	17.20	15.20	18.34	19.16	17.01	18.14
Co 15017			21.33		19.94	20.80	18.93	21.23	17.86	19.21	19.17	19.06	21.04	23.60	21.76	20.33
Co 15018			18.89		20.19	18.20	18.63	19.23	16.56	19.95	16.78	15.83	17.34	18.36	15.31	17.94
Co 15020			20.14		18.19	18.10	18.00	20.23	19.21	21.06	20.19	17.42	18.24	20.29	14.41	18.79
Co 15021			19.27		19.94	19.00	18.52	20.73	16.06	18.96	17.51	16.81	18.51	20.51	16.36	18.52
CoN 15071			18.15		20.19	18.30	18.74	19.73	18.46	21.02	17.94	14.38	18.54	19.26	17.06	18.48
CoN 15072			18.70		20.69	19.20	19.99	19.98	18.71	19.40	18.25	15.08	18.69	20.52	17.81	18.92
CoSnk 15103			17.58		19.94	16.45	19.86	19.48	16.66	20.06	17.12	17.90	18.26	19.86	17.31	18.37
CoSnk 15104			19.93		18.44	17.60	18.50	20.48	17.91	20.91	17.76	16.74	17.96	20.16	18.76	18.76
CoVC 15061			19.21		19.44	18.40	18.85	20.23	13.91	22.32	17.16	13.11	17.29	20.82	17.01	18.15
CoVC 15062			20.10		18.94	18.85	20.19	20.23	16.91	16.05	18.57	18.05	18.76	19.29	17.66	18.63
CoVC 15063			21.16		19.44	21.90	19.97	22.48	15.06	21.01	18.78	17.20	19.44	21.13	19.46	19.75
CoVC 15064			19.25		18.19	18.70	18.65	19.23	14.81	21.81	17.18	18.44	18.81	19.68	17.16	18.49
PI 15131			21.82		22.44	21.50	19.50	21.48	17.56	22.55	18.20	18.98	19.76	20.16	19.92	20.32
PI 15132			21.65		21.19	20.70	19.37	19.73	18.91	21.21	17.73	19.31	20.12	22.17	20.52	20.22
VSI 15122			19.44		19.94	18.50	20.66	19.48	16.31	18.91	16.56	13.84	15.70	18.09	14.75	17.68
Standards																
Co 86032			20.56		20.44	19.10	21.15	20.23	18.96	21.00	18.02	18.78	18.51	20.90	17.26	19.58
CoC 671			22.15		20.94	20.80	20.85	22.23	19.41	23.41	18.51	19.58	20.13	21.07	20.26	20.78
CoSnk 05103			19.55		19.44	19.70	18.56	20.73	17.66	19.11	17.97	18.86	18.13	19.82	17.91	18.95
Co 85004			19.54		19.44	20.60	19.44	20.98	19.16	20.75	18.57	19.26	19.56	21.69		19.91
Grand Mean			20.01		19.81	19.45	19.14	20.45	17.35	20.60	17.99	17.59	18.90	20.40	18.23	19.16
SE (m)±			0.50		0.38	0.61	0.55	0.38	0.54	0.86	0.28	0.25	0.05	0.98	0.59	
CD %			1.44		1.12	1.77	1.58	1.11	1.57	2.49	0.81	0.72	0.14	NS	1.71	
CV (%)			3.51		2.72	4.45	4.04	2.64	4.41	5.92	2.18	1.99	0.36	6.79	4.57	

Table 2.5.17: Juice purity % at 300 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumallapalle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankeshwar	Mean
Co 14005			91.42		93.13	92.00	89.94	92.14	96.09	90.52	93.40	91.17	88.15	88.11	83.90	90.83
Co 15002			90.04		96.02	90.00	88.75	86.49	90.85	91.67	90.81	89.90	86.21	89.51	87.32	89.80
Co 15005			92.04		94.12	94.50	89.02	95.89	91.92	91.23	90.21	88.60	85.76	90.82	85.71	90.82
Co 15006			91.95		92.90	95.50	86.40	93.63	87.56	90.71	90.54	86.43	87.96	89.27	84.51	89.78
Co 15007			89.33		94.17	95.50	87.15	95.54	89.76	94.80	90.99	89.99	86.15	83.36	87.91	90.39
CoSnk15101			90.71		94.56	92.00	84.12	94.70	81.57	92.11	87.21	87.19	88.28	88.42	87.04	88.99
CoSnk15102			92.19		94.79	93.50	89.70	96.40	90.58	89.56	90.10	91.19	89.48	90.26	86.49	91.19
CoVSI 15121			91.03		92.62	88.50	89.95	93.28	87.95	90.60	87.18	86.74	90.15	86.67	87.48	89.35
Co 15009			89.45		95.33	92.00	87.74	93.90	82.76	90.17	88.97	87.35	89.78	89.25	86.62	89.44
Co 15010			87.68		91.53	90.50	92.44	87.92	80.05	90.88	90.01	83.32	87.76	88.58	85.37	88.00
Co 15015			88.59		93.13	91.50	87.43	90.92	89.02	87.19	89.68	85.49	87.67	88.94	83.15	88.56
Co 15017			92.43		93.49	94.50	89.12	96.50	88.38	90.17	91.90	89.64	86.28	93.77	84.66	90.90
Co 15018			81.24		92.93	91.00	87.06	91.91	90.02	92.15	88.75	88.75	86.90	82.99	83.65	88.11
Co 15020			91.46		94.69	95.00	88.33	95.45	90.56	91.35	90.71	90.24	88.56	89.61	83.91	90.82
Co 15021			89.65		92.94	92.00	88.12	90.11	91.38	91.89	89.06	90.78	84.54	90.13	81.65	89.35
CoN 15071			88.39		92.90	91.50	90.45	92.48	92.61	90.29	88.82	87.13	86.63	87.04	83.38	89.30
CoN 15072			87.29		93.62	94.00	92.85	94.55	89.89	89.90	90.66	88.49	87.66	89.38	82.79	90.09
CoSnk 15103			88.99		93.48	91.50	90.53	95.12	92.99	91.96	88.82	88.77	85.76	87.49	83.88	89.94
CoSnk 15104			90.28		92.26	90.00	88.92	93.67	89.45	91.65	91.89	88.35	84.79	89.72	87.49	89.87
CoVC 15061			88.39		92.80	90.00	92.36	92.46	82.31	89.86	86.92	81.88	89.42	89.59	81.95	88.16
CoVC 15062			89.25		93.68	95.00	89.95	93.84	91.65	93.55	86.72	89.95	90.07	88.70	80.20	90.21
CoVC 15063			92.45		95.69	94.00	89.38	93.30	86.38	89.05	88.98	88.87	89.69	89.46	87.16	90.37
CoVC 15064			87.40		93.71	94.00	92.76	92.22	92.16	92.22	86.90	89.84	88.69	88.70	82.56	90.10
PI 15131			91.29		91.57	94.00	87.95	93.64	89.20	90.28	89.31	91.07	90.64	89.83	84.25	90.25
PI 15132			88.24		93.35	92.00	90.66	85.38	87.04	88.15	86.87	85.99	88.97	90.40	86.34	88.62
VSI 15122			88.53		91.82	93.50	88.33	91.33	89.14	93.43	86.68	85.41	89.24	86.08	81.16	88.72
Standards																
Co 86032			91.39		91.80	95.00	91.58	94.02	89.87	93.34	93.19	89.49	90.49	89.32	83.34	91.07
CoC 671			92.26		93.25	95.00	93.91	95.96	90.06	91.28	91.98	91.43	89.75	89.47	84.31	91.55
CoSnk 05103			90.18		92.63	94.50	92.73	93.90	90.13	90.53	87.76	84.40	90.24	90.73	85.62	90.28
Co 85004			91.14		93.69	95.00	90.84	92.87	91.41	90.91	89.79	91.72	89.65	91.05		91.64
Grand Mean			89.82		93.42	92.90	89.62	92.98	89.09	91.05	89.49	88.32	88.17	88.89	84.61	89.88
SE (m)±			2.04		1.42	1.50	2.81	1.26	2.54	2.04	0.64	0.33	0.39	2.20	2.14	
CD %			NS		NS	4.20	NS	3.65	7.37	5.91	1.85	0.94	1.12	NS	6.21	
CV (%)			3.21		2.15	2.20	4.42	1.92	4.03	3.17	1.01	0.52	0.62	3.49	3.58	

Table 2.5.18: Fibre % at 300 days

Clone	Navasari	Padegaon	Pugalur	Sankeshwar	Mean
Co 14005	11.87	12.43	12.59	12.26	12.29
Co 15002	12.39	14.23	12.37	10.53	12.38
Co 15005	11.76	12.54	12.93	13.51	12.69
Co 15006	12.06	12.02	12.62	11.33	12.01
Co 15007	10.87	12.64	12.02	12.19	11.93
CoSnk15101	12.57	12.71	12.89	14.66	13.21
CoSnk15102	10.58	12.11	12.79	11.96	11.86
CoVSI 15121	11.67	12.12	12.48	11.61	11.97
Co 15009	11.16	12.25	12.72	11.79	11.98
Co 15010	11.86	12.00	12.45	14.10	12.60
Co 15015	11.26	12.37	12.51	13.39	12.38
Co 15017	12.06	13.60	12.21	15.83	13.43
Co 15018	12.25	14.47	12.40	15.22	13.59
Co 15020	11.87	12.60	12.67	15.36	13.12
Co 15021	12.47	14.27	12.83	15.70	13.82
CoN 15071	11.70	12.10	12.58	11.56	11.99
CoN 15072	12.87	12.35	12.53	10.64	12.10
CoSnk 15103	13.93	14.10	12.54	12.36	13.23
CoSnk 15104	12.73	13.48	12.43	12.41	12.76
CoVC 15061	11.75	12.11	12.53	13.82	12.55
CoVC 15062	12.01	11.82	12.48	13.21	12.38
CoVC 15063	11.86	11.50	12.91	14.58	12.71
CoVC 15064	12.81	11.78	11.74	14.59	12.73
PI 15131	11.70	11.35	12.39	15.78	12.81
PI 15132	11.80	13.53	12.64	16.29	13.57
VSI 15122	11.85	13.46	11.52	11.66	12.12
Standards					
Co 86032	11.95	12.65	12.59	12.88	12.52
CoC 671	12.44	14.61	12.55	14.89	13.62
CoSnk 05103	12.35	14.90	12.30	13.64	13.30
Co 85004	12.58	15.01	12.52		13.37
Grand Mean	12.03	12.90	12.49	13.37	12.70
SE (m)±	0.39	0.54	0.20	0.81	
CD %	1.14	1.56	0.58	2.33	
CV (%)	4.61	5.92	2.27	8.52	

Table 2.5.19: Pol% cane at 300 days

Clone	Navasari	Padegaon	Pugalur	Sameerwadi	Sankeshwar	Mean
Co 14005	14.13	15.72	15.14	13.21	14.20	14.55
Co 15002	12.80	13.58	13.43	14.37	13.54	13.55
Co 15005	12.91	16.14	13.24	15.15	13.05	14.36
Co 15006	12.81	15.32	13.87	13.82	11.91	13.95
Co 15007	13.22	15.69	14.41	12.46	13.11	13.95
CoSnk15101	12.10	14.44	12.15	13.14	13.00	12.96
CoSnk15102	14.69	16.13	13.33	14.76	14.36	14.73
CoVSI 15121	14.52	13.97	12.17	11.96	12.37	13.16
Co 15009	12.91	14.40	12.89	13.48	11.79	13.42
Co 15010	14.06	13.35	13.26	12.47	10.56	13.29
Co 15015	13.42	13.40	12.72	12.61	10.83	13.04
Co 15017	13.63	15.65	14.58	16.38	13.67	15.06
Co 15018	13.10	13.35	12.30	11.34	9.60	12.52
Co 15020	12.91	14.94	15.08	13.46	9.02	14.10
Co 15021	13.13	14.14	12.82	13.68	9.93	13.44
CoN 15071	13.76	14.22	13.13	12.45	11.15	13.39
CoN 15072	14.80	14.67	13.64	13.57	11.70	14.17
CoSnk 15103	14.15	14.11	12.54	12.90	11.27	13.43
CoSnk 15104	13.19	14.68	13.48	13.39	12.74	13.68
CoVC 15061	14.11	14.57	12.30	13.81	10.62	13.70
CoVC 15062	14.65	14.84	13.29	12.67	10.88	13.86
CoVC 15063	14.43	16.47	13.72	14.00	12.79	14.65
CoVC 15064	13.84	13.87	12.43	12.91	10.69	13.26
PI 15131	13.91	15.82	13.43	13.41	12.48	14.14
PI 15132	14.22	12.94	12.68	14.83	13.03	13.67
VSI 15122	14.75	13.62	11.98	11.55	9.38	12.98
Standards						
Co 86032	15.61	14.71	13.84	13.82	11.09	14.50
CoC 671	15.12	16.08	14.04	13.96	12.83	14.80
CoSnk 05103	13.85	14.63	13.04	13.30	11.71	13.70
Co 85004	14.16	14.62	13.75	14.62		14.29
Grand Mean	13.83	14.67	13.29	13.45	11.84	13.81
SE (m)±	0.21	0.39	0.20	0.90	0.53	
CD %	0.62	1.13	0.58	NS	1.53	
CV (%)	2.19	3.77	2.12	9.42	6.29	

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Table 2.5.20: Juice extraction % at 300 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			41.22		51.16		51.60	51.19	54.86	45.63	52.40				55.80	50.48
Co 15002			49.56		64.04		54.64	50.84	56.16	46.22	53.79				59.24	54.31
Co 15005			45.18		47.35		53.96	51.96	55.66	48.39	54.84				58.61	51.99
Co 15006			51.69		59.28		53.16	50.12	55.32	43.43	50.57				61.93	53.19
Co 15007			51.89		62.66		48.69	51.75	60.85	44.52	61.89				61.61	55.48
CoSnk15101			43.57		54.93		50.69	50.37	56.77	42.44	50.38				54.26	50.43
CoSnk15102			42.98		41.60		52.68	51.32	53.57	47.03	53.91				53.96	49.63
CoVSI 15121			52.68		58.72		50.01	51.50	56.42	44.49	53.48				61.24	53.57
Co 15009			46.60		48.25		53.31	51.64	49.28	42.80	48.30				57.84	49.75
Co 15010			48.55		50.84		54.17	51.18	56.03	46.19	54.44				64.23	53.20
Co 15015			51.55		65.68		54.51	50.29	57.82	46.15	60.81				62.89	56.21
Co 15017			45.75		54.95		52.00	51.56	54.67	44.94	55.84				61.94	52.71
Co 15018			53.62		60.00		54.51	49.93	58.43	44.20	53.07				55.68	53.68
Co 15020			51.58		55.89		52.56	50.40	55.24	42.25	56.81				56.38	52.64
Co 15021			48.16		55.68		52.83	49.49	53.15	44.33	58.28				59.02	52.62
CoN 15071			50.18		74.98		52.26	53.42	57.50	46.52	49.69				61.71	55.78
CoN 15072			49.57		59.17		52.22	51.28	52.76	47.29	52.46				52.69	52.18
CoSnk 15103			44.57		60.40		53.45	50.40	50.43	43.62	26.81				52.55	47.78
CoSnk 15104			46.62		58.14		51.58	48.75	57.06	46.17	58.61				60.03	53.37
CoVC 15061			50.86		66.02		49.22	52.77	56.63	48.36	54.16				57.80	54.48
CoVC 15062			45.47		55.79		47.95	50.94	52.34	42.25	50.84				60.52	50.76
CoVC 15063			45.77		52.82		50.12	50.83	56.87	48.69	51.97				58.58	51.96
CoVC 15064			46.16		53.00		50.00	52.35	45.67	42.43	55.31				57.34	50.28
PI 15131			50.19		54.18		50.44	49.54	55.56	44.28	46.45				58.59	51.15
PI 15132			52.30		59.02		52.89	55.11	57.92	45.48	53.24				57.82	54.22
VSI 15122			51.11		59.27		53.77	49.93	56.15	45.22	47.33				53.13	51.99
Standards																
Co 86032			47.60		58.74		51.95	50.59	60.81	47.69	54.45				60.95	54.10
CoC 671			45.74		52.26		51.97	48.89	52.96	43.73	52.25				59.98	50.97
CoSnk 05103			40.37		47.46		52.56	51.16	56.03	42.49	48.03				55.74	49.23
Co 85004			41.57		51.79		50.91	52.43	58.12	42.61	55.91					50.48
Grand Mean			47.76		56.47		52.02	51.06	55.37	44.99	52.54				58.35	52.29
SE (m)±			1.59		2.98		1.27	1.57	2.18	0.89	3.56				1.85	
CD %			4.60		8.79		3.68	4.53	6.35	2.59	10.35				5.37	
CV (%)			4.68		7.46		3.46	4.34	5.58	2.81	9.59				4.49	

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Table 2.5.21: Number of millable canes ('000/ha) at 300 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005							124.02	119.72	99.34	106.51	133.12			96.30		113.17
Co 15002							121.22	73.47	85.59	77.26	112.84			79.63		91.67
Co 15005							116.32	101.39	94.25	87.46	131.82			105.33		106.09
Co 15006							128.35	111.11	94.09	78.19	144.95			71.53		104.70
Co 15007							125.72	90.14	84.67	87.04	119.46			62.96		95.00
CoSnk15101							124.73	84.72	80.34	89.31	115.03			80.79		95.82
CoSnk15102							119.93	86.80	89.76	96.92	118.86			80.56		98.80
CoVSI 15121							140.99	86.66	80.80	84.63	119.16			71.30		97.26
Co 15009							128.24	88.05	87.14	107.99	133.88			76.86		103.69
Co 15010							123.81	103.19	78.02	74.87	135.30			79.86		99.17
Co 15015							125.11	88.61	77.25	92.33	119.64			73.15		96.01
Co 15017							131.98	95.83	90.23	95.99	145.40			77.78		106.20
Co 15018							124.67	65.97	94.09	108.45	131.90			62.04		97.85
Co 15020							125.30	89.72	69.37	113.02	121.36			78.01		99.46
Co 15021							127.19	78.75	89.15	87.55	121.01			83.33		97.83
CoN 15071							124.03	88.75	75.71	111.77	127.57			70.83		99.78
CoN 15072							130.64	77.22	72.00	86.94	130.62			56.95		92.39
CoSnk 15103							131.92	82.22	85.75	116.92	122.86			80.09		103.29
CoSnk 15104							129.45	91.39	76.01	98.47	92.92			82.41		95.11
CoVC 15061							127.36	101.39	84.05	97.46	116.93			88.20		102.56
CoVC 15062							133.13	91.66	98.73	111.79	128.21			72.92		106.07
CoVC 15063							127.89	113.47	88.07	105.65	136.68			78.94		108.45
CoVC 15064							120.71	86.94	66.74	94.27	38.70			77.55		80.82
PI 15131							139.81	86.39	80.96	89.76	143.34			66.20		101.08
PI 15132							131.11	94.72	75.71	95.64	144.12			68.75		101.67
VSI 15122							140.59	66.39	93.63	84.23	106.20			56.02		91.18
Standards																
Co 86032							129.82	93.61	89.30	113.97	134.27			96.07		109.51
CoC 671							126.65	69.72	63.35	103.66	175.97			87.73		104.51
CoSnk 05103							126.15	123.33	67.98	113.03	176.77			97.23		117.42
Co 85004							119.00	105.27	108.30	89.09	151.41			92.60		110.95
Grand Mean							127.53	91.22	84.01	96.67	127.67			78.40		100.92
SE (m)±							4.14	6.91	5.92	1.56	9.54			5.10		
CD %							11.99	19.97	17.21	4.52	27.73			14.82		
CV (%)							4.60	10.71	9.96	2.28	10.57			9.20		

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Table 2.5.22: Stalk length (cm) at 300 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			232.50		183.50	207.00	234.04	227.50	252.62	181.50	236.00			248.50	199.00	220.22
Co 15002			265.00		160.00	188.00	244.64	225.00	248.96	162.50	239.00			288.00	188.00	220.91
Co 15005			220.00		168.50	174.00	255.74	227.50	319.74	197.00	234.50			273.00	183.00	225.30
Co 15006			227.50		164.00	166.00	229.43	247.50	268.55	168.50	252.00			232.00	193.50	214.90
Co 15007			225.00		151.50	207.00	235.02	227.50	319.39	179.50	232.00			260.50	187.00	222.44
CoSnk15101			250.00		175.50	237.00	228.66	252.50	298.85	188.50	263.50			256.50	178.50	232.95
CoSnk15102			245.00		174.00	237.00	234.54	237.50	355.35	193.00	254.50			258.00	184.50	237.34
CoVSI			237.50		196.50	236.00	249.24	237.50	265.45	166.00	208.45			315.00	203.50	231.51
Co 15009			262.50		177.00	222.00	220.89	222.50	351.90	169.50	264.00			299.00	207.50	239.68
Co 15010			235.00		161.68	237.00	219.72	215.00	313.96	197.00	242.50			278.00	225.00	232.49
Co 15015			237.50		180.50	217.00	223.88	232.50	283.60	207.00	246.50			236.50	196.00	226.10
Co 15017			237.50		143.00	183.00	220.91	232.50	271.14	200.00	211.00			282.50	203.00	218.45
Co 15018			232.50		156.00	200.00	231.07	252.50	257.53	209.00	206.80			304.50	195.50	224.54
Co 15020			245.00		201.00	151.00	218.69	242.50	280.63	160.50	199.50			285.00	209.50	219.33
Co 15021			252.50		172.00	227.00	220.01	235.50	219.17	208.00	265.00			255.50	173.50	222.82
CoN 15071			267.50		174.50	245.00	228.01	245.00	224.21	203.50	246.50			247.50	229.00	231.07
CoN 15072			190.00		160.67	180.00	223.84	207.50	233.90	206.50	221.50			236.60	151.00	201.15
CoSnk			245.00		182.50	230.00	229.51	255.00	331.29	211.00	266.50			285.00	214.00	244.98
CoSnk			222.50		198.00	198.00	224.04	242.50	281.62	150.50	255.50			261.50	194.50	222.87
CoVC			255.00		128.50	204.00	204.10	242.50	356.33	201.50	251.90			300.50	212.00	235.63
CoVC			202.50		194.00	243.00	214.37	192.50	280.37	199.50	224.10			310.00	231.00	229.13
CoVC			195.00		130.50	155.00	211.07	237.50	274.17	179.00	153.90			216.50	145.00	189.76
CoVC			157.50		140.17	213.00	227.33	175.00	362.00	200.00	115.00			271.00	169.00	203.00
PI 15131			220.00		181.83	201.00	222.52	227.50	314.53	173.00	210.30			309.50	181.50	224.17
PI 15132			232.50		191.00	226.00	232.69	225.00	326.95	212.00	216.70			296.50	207.50	236.68
VSI 15122			267.50		233.00	222.00	238.16	252.50	306.30	212.50	237.90			333.00	220.00	252.29
Standards																
Co 86032			212.50		212.00	232.00	206.05	212.50	249.51	201.50	256.90			275.00	213.50	227.15
CoC 671			212.50		178.50	238.00	212.24	187.50	308.42	190.00	231.00			297.00	175.50	223.07
CoSnk			250.00		208.00	222.00	210.81	245.00	286.62	207.00	270.20			312.00	220.00	243.16
Co 85004			252.50		140.00	242.00	204.07	212.50	309.75	152.00	234.90			285.40		225.90
Grand			232.92		173.93	211.33	225.18	229.18	291.76	189.57	231.60			276.98	196.22	225.97
SE (m)±			15.17		12.20	4.97	10.58	7.57	NS	1.57	13.34			23.78	1.85	
CD %			44.11		35.98	14.37	NS	21.91		4.55	38.79			NS	5.37	
CV (%)			9.22		9.92	3.32	6.64	4.67		1.17	8.15			12.14	4.49	

Table 2.5.23: Stalk diameter (cm) at 300 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			2.64		1.87	2.28	2.60	2.59	2.30	2.65	2.31			2.45	2.70	2.44
Co 15002			2.66		2.18	2.86	2.12	2.67	2.53	2.51	2.80			2.70	2.79	2.58
Co 15005			2.90		2.00	2.43	2.54	3.07	2.77	2.60	2.44			2.90	2.88	2.65
Co 15006			2.81		2.15	2.71	2.71	2.83	2.38	2.62	2.56			3.25	2.94	2.70
Co 15007			3.14		2.85	2.60	2.42	3.22	3.18	2.58	2.85			3.30	3.23	2.94
CoSnk15101			2.54		1.88	2.57	2.07	2.71	1.76	2.50	2.54			2.75	2.75	2.41
CoSnk15102			2.85		2.05	2.54	2.49	2.71	2.43	2.57	2.44			2.25	2.78	2.51
CoVSI			3.20		2.62	3.11	2.31	3.03	2.69	2.61	2.87			3.35	3.17	2.90
Co 15009			2.62		2.18	2.57	2.35	2.83	2.71	2.44	3.16			2.80	2.98	2.66
Co 15010			2.95		2.07	2.90	2.19	2.59	2.86	2.58	2.80			2.45	3.17	2.66
Co 15015			2.81		2.47	2.93	2.13	2.67	2.32	2.65	2.93			3.35	3.15	2.74
Co 15017			2.79		2.10	2.70	2.14	3.07	2.37	2.59	2.72			2.85	2.92	2.62
Co 15018			3.37		2.57	2.97	2.12	2.83	2.64	2.54	2.70			4.10	3.56	2.94
Co 15020			2.64		2.23	2.26	2.11	3.22	2.46	2.53	2.44			2.40	2.73	2.50
Co 15021			2.73		2.48	3.09	2.18	2.71	2.07	2.51	2.75			2.55	2.84	2.59
CoN 15071			2.74		2.42	3.17	2.47	2.71	2.55	2.51	2.86			3.10	3.00	2.75
CoN 15072			3.57		2.69	3.13	2.34	3.03	2.74	2.55	3.04			3.40	3.43	2.99
CoSnk			2.91		2.64	2.75	2.04	2.83	2.31	2.39	2.16			2.40	2.94	2.54
CoSnk			2.66		2.55	3.08	2.32	2.95	2.64	2.53	2.36			2.85	2.86	2.68
CoVC			3.06		2.20	2.55	2.24	2.91	2.34	2.68	2.92			2.50	2.94	2.63
CoVC			2.67		2.49	2.60	2.37	2.83	2.31	2.37	2.90			3.10	2.77	2.64
CoVC			2.83		2.29	2.57	2.17	3.34	1.71	2.60	3.03			2.10	2.83	2.55
CoVC			2.57		2.29	2.27	2.24	2.75	3.05	2.52	1.94			2.85	2.77	2.52
PI 15131			3.04		2.50	3.21	2.07	2.67	3.09	2.60	2.72			3.45	3.28	2.86
PI 15132			3.08		2.42	2.71	2.02	2.91	2.68	2.48	2.88			3.55	2.94	2.77
VSI 15122			3.31		2.95	3.24	2.08	2.99	3.18	2.55	3.42			3.35	3.45	3.05
Standards																
Co 86032			2.88		2.81	2.81	2.15	2.71	1.91	2.48	2.66			2.75	3.14	2.63
CoC 671			2.63		2.61	3.00	2.54	2.99	2.27	2.50	2.86			2.70	3.05	2.71
CoSnk			2.52		2.31	2.49	2.11	3.14	2.22	2.30	2.16			2.80	2.80	2.49
Co 85004			2.73		1.78	2.48	2.35	2.75	2.40	2.35	2.35			2.55		2.41
Grand			2.86		2.36	2.75	2.27	2.88	2.50	2.53	2.68			2.90	2.99	2.67
SE (m)±			0.16		0.13	0.15	0.08	0.05	NS	0.03	0.14			0.35	0.09	
CD %			0.46		0.38	0.45	0.22	0.14		0.10	0.39			NS	0.26	
CV (%)			7.84		7.80	7.91	4.87	2.31		2.08	7.15			17.28	4.32	

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Table 2.5.24: Single cane weight (kg) at 300 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			0.94		0.63	1.00	1.12	1.06	1.07	1.76	1.13			1.21	1.22	1.11
Co 15002			1.52		0.82	1.05	1.14	1.65	1.41	1.15	1.26			1.37	1.17	1.25
Co 15005			1.03		0.63	0.78	1.00	1.50	1.39	1.46	1.24			1.27	1.24	1.15
Co 15006			1.22		0.88	0.88	1.03	1.43	1.20	1.41	1.35			1.38	1.36	1.21
Co 15007			1.38		1.36	1.00	1.32	1.42	1.98	1.51	1.25			1.75	1.45	1.44
CoSnk15101			0.97		0.68	1.21	1.06	1.27	1.19	1.39	1.28			1.15	1.36	1.16
CoSnk15102			1.15		0.70	1.25	1.11	1.05	1.55	1.34	1.18			1.18	1.51	1.20
CoVSI 15121			1.65		1.23	1.53	1.04	1.85	1.61	1.12	1.11			2.68	1.59	1.54
Co 15009			1.37		0.99	1.19	1.17	1.45	1.32	1.01	2.04			1.71	1.61	1.39
Co 15010			1.28		0.92	1.20	1.04	1.55	1.55	2.09	1.17			1.57	1.78	1.41
Co 15015			1.37		0.96	1.30	1.00	1.65	1.47	2.16	1.07			1.41	1.52	1.39
Co 15017			1.14		0.60	0.90	1.37	1.20	1.20	1.61	1.58			1.55	1.35	1.25
Co 15018			1.58		0.98	1.24	1.32	1.77	1.77	1.21	1.28			2.02	1.98	1.51
Co 15020			1.23		0.89	0.63	1.42	1.32	1.14	1.08	0.90			1.52	1.39	1.15
Co 15021			1.44		1.08	1.48	1.22	1.52	1.27	2.21	1.18			1.31	1.14	1.38
CoN 15071			1.63		1.09	1.53	1.03	1.55	1.42	1.79	1.49			1.36	1.75	1.46
CoN 15072			1.59		1.19	1.35	1.08	1.68	1.59	2.07	1.74			2.02	1.50	1.58
CoSnk 15103			1.21		1.26	1.51	1.04	1.40	1.43	1.35	1.41			1.49	1.50	1.36
CoSnk 15104			1.05		1.14	1.32	1.02	1.28	1.28	1.11	1.32			1.21	1.30	1.20
CoVC 15061			1.50		0.70	1.24	1.17	1.43	2.00	2.35	1.35			1.59	1.44	1.48
CoVC 15062			0.96		1.00	1.00	1.15	1.10	1.35	1.07	1.23			1.59	1.46	1.19
CoVC 15063			0.77		0.63	0.77	1.46	1.08	1.12	1.41	0.98			1.36	0.92	1.05
CoVC 15064			0.61		0.81	0.89	1.37	0.64	1.33	1.53	0.40			1.16	1.02	0.98
PI 15131			1.42		1.19	1.41	1.30	1.43	2.29	1.51	1.06			2.04	1.47	1.51
PI 15132			1.49		1.18	1.31	1.24	1.00	1.92	2.06	1.31			2.11	1.37	1.50
VSI 15122			1.97		1.60	1.21	1.08	1.95	2.25	2.04	1.44			2.05	1.95	1.75
Standards																
Co 86032			1.3		1.32	1.46	1.13	1.30	1.09	1.28	1.35			1.17	1.65	1.30
CoC 671			1.27		1.17	1.42	1.09	1.25	1.25	1.71	1.44			1.31	1.25	1.32
CoSnk 05103			0.82		0.83	0.78	1.30	0.97	1.10	1.10	1.28			1.53	1.20	1.09
Co 85004			0.89		0.50	0.98	1.21	0.80	1.34	1.10	1.26			1.29		1.04
Grand Mean			1.26		0.97	1.16	1.17	1.35	1.46	1.53	1.27			1.55	1.43	1.31
SE (m)±			0.12		0.06	0.09	0.07	0.11	0.14	0.66	0.10			0.24	0.12	
CD %			0.34		0.19	0.27	0.20	0.32	0.39	0.19	0.30			0.68	0.36	
CV (%)			13.09		9.22	11.55	8.68	11.46	13.06	6.13	11.59			21.53	12.16	

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Table 2.5.25: Stalk length (cm) at 240 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			185.00			124.00	217.33	195.00	193.60	169.50	220.50			204.40	124.50	181.54
Co 15002			215.00			113.00	218.66	175.00	186.24	150.00	227.50			216.40	103.00	178.31
Co 15005			187.50			101.00	228.45	212.50	212.15	184.50	220.50			251.20	108.50	189.59
Co 15006			182.50			129.00	208.28	235.00	205.37	155.00	240.50			204.35	102.00	184.67
Co 15007			140.00			113.00	212.15	202.50	167.98	162.50	214.50			232.65	95.00	171.14
CoSnk15101			207.50			143.00	210.70	227.50	236.25	176.50	247.50			259.15	144.00	205.79
CoSnk15102			157.50			154.00	216.83	237.50	268.61	179.00	235.50			241.10	138.00	203.12
CoVSI 15121			175.00			117.00	230.34	222.50	191.63	151.50	190.50			255.00	141.50	186.11
Co 15009			225.00			123.00	207.33	212.50	299.16	156.00	247.50			268.35	127.50	207.37
Co 15010			175.00			136.00	198.65	202.50	199.91	182.50	226.00			250.80	124.50	188.43
Co 15015			177.50			130.00	209.19	215.00	233.34	192.50	230.00			235.80	112.50	192.87
Co 15017			195.00			111.00	208.33	205.00	189.24	184.00	195.50			221.90	132.50	182.50
Co 15018			190.00			113.00	216.65	232.50	174.73	196.00	189.00			245.90	116.50	186.03
Co 15020			200.00			98.00	204.36	207.50	184.19	142.00	181.50			241.00	129.50	176.45
Co 15021			187.50			121.00	200.56	197.50	199.54	194.00	244.00			229.05	102.00	186.13
CoN 15071			187.50			131.00	211.12	222.50	189.00	190.00	227.50			260.15	115.00	192.64
CoN 15072			200.00			105.00	204.95	157.50	172.28	193.50	206.50			207.50	86.00	170.36
CoSnk 15103			212.50			106.00	212.31	222.50	237.74	198.00	247.50			268.40	122.50	203.05
CoSnk 15104			185.00			143.00	207.36	227.50	233.10	129.50	236.50			250.80	115.00	191.97
CoVC 15061			197.50			138.00	193.10	225.00	217.00	184.00	230.50			242.55	121.50	194.35
CoVC 15062			182.50			151.00	196.91	175.00	203.56	185.50	196.00			267.00	152.00	189.94
CoVC 15063			180.00			116.00	192.23	212.50	200.94	156.00	138.50			162.50	110.50	163.24
CoVC 15064			215.00			147.00	219.59	135.00	290.49	190.50	95.00			230.25	116.50	182.15
PI 15131			195.00			136.00	202.80	210.00	162.90	159.00	193.50			250.00	110.00	179.91
PI 15132			195.00			112.00	219.00	195.00	224.88	196.50	196.50			242.50	126.50	189.76
VSI 15122			192.50			141.00	219.59	237.50	183.88	198.50	216.00			262.50	124.50	197.33
Standards																
Co 86032			172.50			142.00	191.26	180.00	240.02	181.00	237.00			230.25	114.00	187.56
CoC 671			177.50			144.00	199.35	167.50	199.68	175.50	209.00			245.00	105.50	180.34
CoSnk 05103			202.50			134.00	194.59	227.50	219.12	194.50	251.50			267.25	126.50	201.94
Co 85004			227.50			158.00	187.47	200.00	198.29	142.00	209.50			222.75		193.19
Grand Mean			190.75			127.67	207.98	205.83	210.49	174.98	213.38			238.88	118.88	187.93
SE (m)±			8.77			6.36	9.18	4.12	NS	2.49	11.54			16.93	7.09	
CD %			24.49			18.40	NS	11.92		7.21	33.56			49.22	20.54	
CV (%)			6.25			7.05	6.24	2.83		2.01	7.65			10.02	8.44	

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Table 2.5.26: Stalk diameter (cm) at 240 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			2.64			2.27	1.11	2.59	1.77	2.49	2.20			2.85	2.97	2.32
Co 15002			2.66			1.92	1.33	2.75	1.92	2.41	2.66			2.95	2.79	2.38
Co 15005			2.90			2.75	1.26	2.71	1.83	2.52	2.37			2.80	3.00	2.46
Co 15006			2.81			2.29	1.40	2.91	1.86	2.50	2.44			3.00	3.18	2.49
Co 15007			3.57			2.48	1.89	2.83	1.95	2.47	2.73			3.25	3.64	2.76
CoSnk15101			2.54			2.39	1.35	2.51	1.74	2.31	2.33			2.95	2.67	2.31
CoSnk15102			2.57			2.34	1.63	2.63	1.73	2.53	2.30			2.75	2.83	2.37
CoVSI			3.14			2.76	1.63	3.07	1.95	2.46	2.70			3.30	3.30	2.70
Co 15009			2.62			2.58	1.52	2.67	2.70	2.36	2.95			2.90	3.06	2.60
Co 15010			2.95			2.53	1.33	2.91	2.15	2.44	2.61			3.15	3.21	2.59
Co 15015			2.81			2.62	1.34	2.75	2.33	2.47	2.76			3.60	3.43	2.68
Co 15017			2.79			2.68	1.39	2.79	1.65	2.52	2.58			2.90	2.98	2.48
Co 15018			3.37			2.69	1.18	3.30	1.79	2.46	2.54			3.80	3.77	2.77
Co 15020			2.64			2.06	0.68	2.63	1.74	2.44	2.30			2.50	2.87	2.21
Co 15021			2.73			2.88	0.78	2.59	1.88	2.53	2.58			2.95	2.94	2.43
CoN 15071			2.74			3.17	0.57	2.67	2.15	2.36	2.68			3.40	3.42	2.57
CoN 15072			2.85			2.52	1.55	2.83	2.38	2.47	2.82			3.95	3.99	2.82
CoSnk 15103			2.91			2.55	1.79	2.71	1.84	2.29	1.99			2.90	2.75	2.41
CoSnk 15104			2.66			2.77	1.37	2.83	2.09	2.52	2.16			2.85	3.09	2.48
CoVC 15061			3.06			2.51	0.81	2.59	1.98	2.53	2.76			3.00	2.98	2.47
CoVC 15062			2.67			2.55	1.61	2.59	1.71	2.31	2.75			2.95	3.21	2.48
CoVC 15063			2.83			2.39	0.68	2.59	1.23	2.52	2.89			2.75	2.99	2.32
CoVC 15064			3.20			2.17	1.02	2.43	2.49	2.45	0.97			3.00	2.90	2.29
PI 15131			3.04			2.42	1.23	2.91	1.74	2.52	2.56			3.60	3.51	2.61
PI 15132			3.08			2.50	1.04	2.75	1.80	2.35	2.72			3.40	3.51	2.57
VSI 15122			3.31			2.55	1.72	2.83	1.92	2.48	2.80			3.50	3.71	2.76
Standards																
Co 86032			2.73			2.50	0.68	2.67	1.83	2.43	2.50			2.95	3.25	2.39
CoC 671			2.88			2.77	0.72	2.75	1.45	2.44	2.67			2.90	3.30	2.43
CoSnk 05103			2.63			2.28	0.88	2.43	1.70	2.26	2.03			3.30	2.91	2.27
Co 85004			2.52			2.43	0.96	2.59	1.57	2.29	2.22			2.50		2.13
Grand			2.86			2.51	1.22	2.73	1.90	2.44	2.48			3.09	3.18	2.48
SE (m)±			0.16			0.19	0.04	0.04	NS	0.04	0.08			0.20	0.12	
CD %			0.46			0.54	0.11	0.11		0.12	0.22			0.59	0.34	
CV (%)			7.84			10.44	4.39	2.04		2.46	4.33			9.23	5.27	

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Table 2.5.27: Single cane weight (kg) at 240 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			0.82			0.55	1.04	0.85	0.82	1.51	1.01			0.86	0.75	0.91
Co 15002			1.21			0.65	1.06	0.89	1.05	0.92	1.43			1.20	0.58	1.00
Co 15005			0.99			0.55	0.91	1.10	0.92	1.06	1.09			1.32	0.74	0.96
Co 15006			1.10			0.80	0.95	1.00	0.92	1.16	1.20			1.13	0.77	1.00
Co 15007			1.23			0.65	0.79	1.08	1.04	1.19	1.18			1.44	0.81	1.05
CoSnk15101			1.09			0.70	0.93	1.13	0.95	1.16	1.30			1.38	0.82	1.05
CoSnk15102			0.78			0.85	0.83	0.94	1.03	1.00	1.03			1.18	0.83	0.94
CoVSI			1.32			0.75	1.25	1.24	1.17	0.93	1.02			1.63	1.19	1.17
Co 15009			1.42			0.70	0.97	1.20	1.12	0.79	1.84			1.69	0.95	1.19
Co 15010			1.18			0.90	1.11	1.02	0.99	1.87	0.99			1.41	0.97	1.16
Co 15015			1.24			0.85	0.95	1.04	1.21	1.89	0.90			1.57	0.86	1.17
Co 15017			1.05			0.80	0.85	1.28	0.84	1.34	1.37			1.09	0.70	1.03
Co 15018			1.47			0.65	0.89	1.03	1.20	0.94	1.13			1.79	1.22	1.15
Co 15020			1.13			0.50	0.81	1.15	0.75	0.84	0.77			1.00	0.81	0.86
Co 15021			1.11			0.70	0.80	1.08	1.15	1.95	1.02			1.22	0.65	1.08
CoN 15071			1.49			0.95	1.18	1.23	1.20	1.51	1.29			1.74	1.01	1.29
CoN 15072			1.04			0.70	1.26	0.95	1.18	1.89	1.51			1.47	0.98	1.22
CoSnk			1.20			0.55	1.21	1.25	0.90	1.03	1.23			1.46	0.79	1.07
CoSnk			1.08			0.90	1.13	1.18	1.00	0.88	1.14			1.32	0.78	1.04
CoVC			1.19			0.70	1.10	1.10	1.20	2.00	1.21			1.15	0.82	1.16
CoVC			1.27			0.80	1.48	1.02	1.01	0.90	1.09			1.62	1.20	1.15
CoVC			0.89			0.60	1.09	0.83	0.82	1.10	0.84			0.72	0.72	0.84
CoVC			1.63			0.75	0.96	1.05	1.07	1.16	0.27			1.36	0.76	1.00
PI 15131			1.37			1.00	0.89	1.05	1.18	1.20	0.91			1.87	1.02	1.17
PI 15132			1.39			0.85	1.23	1.31	1.29	2.11	1.16			1.59	1.14	1.34
VSI 15122			1.76			1.10	1.10	1.36	1.36	1.66	1.29			2.01	1.28	1.44
Standards																
Co 86032			0.89			0.85	0.96	1.14	1.04	1.06	1.20			1.16	0.88	1.02
CoC 671			1.24			1.05	0.94	1.13	0.80	1.51	1.29			1.42	0.87	1.14
CoSnk			1.35			0.70	0.79	1.15	0.84	0.91	1.13			1.41	0.73	1.00
Co 85004			0.98			0.75	0.85	0.75	0.87	0.89	1.11			0.85		0.88
Grand			1.20			0.76	1.01	1.08	1.03	1.28	1.13			1.37	0.88	1.08
SE (m)±			0.29			0.08	0.06	0.18	0.08	0.05	0.09			0.18	0.08	
CD %			0.27			0.24	0.18	N.S.	0.22	0.16	0.25			0.53	0.22	
CV (%)			11.07			15.63	8.69	23.23	10.32	6.39	10.59			18.80	12.01	

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Table 2.5.28: CCS (%) at 240 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005	10.35		12.69			8.84	9.24	12.73	11.67	13.18	12.32	10.78	12.81	11.12	4.81	10.93
Co 15002	10.57		11.13			9.21	8.17	13.11	9.86	11.89	10.06	9.88	11.09	10.84	4.12	9.94
Co 15005	11.62		11.70			9.09	9.41	12.36	11.13	12.53	10.95	9.37	14.01	8.68	4.53	10.34
Co 15006	11.55		11.68			7.56	8.94	12.03	7.77	13.32	11.39	9.75	12.14	8.87	3.83	9.75
Co 15007	10.90		10.42			6.35	8.45	12.17	8.32	12.38	11.50	9.21	11.05	11.16	3.95	9.54
CoSnk15101	11.39		12.03			9.70	9.24	12.73	8.92	12.77	9.46	8.21	11.54	10.88	4.66	10.01
CoSnk15102	10.89		10.73			10.60	8.61	12.58	10.39	13.07	10.18	8.69	12.88	12.66	5.17	10.50
CoVSI 15121	11.70		11.15			6.94	9.65	10.22	8.41	11.38	9.06	6.86	8.68	9.21	5.31	8.81
Co 15009	10.88		10.13			7.93	9.33	10.35	7.98	12.26	10.57	8.21	9.93	10.20	2.37	9.02
Co 15010	12.30		8.97			7.39	9.20	9.04	9.09	13.85	9.51	8.57	7.99	8.86	2.19	8.60
Co 15015	11.94		9.46			6.87	8.82	10.13	9.54	11.54	8.56	6.77	11.62	8.64	2.33	8.57
Co 15017	11.16		11.83			8.88	9.68	13.06	9.70	11.80	12.09	8.59	11.54	11.23	3.70	10.19
Co 15018	10.83		9.71			5.75	8.57	9.74	8.87	12.29	8.46	7.14	11.19	9.32	2.02	8.46
Co 15020	11.52		11.92			8.49	9.49	11.87	10.72	12.75	10.42	7.92	8.35	9.95	3.76	9.60
Co 15021	11.11		10.86			7.06	8.70	11.19	7.13	11.66	9.81	6.75	10.42	10.21	2.22	8.73
CoN 15071	10.66		9.53			7.37	9.34	10.20	9.60	13.26	10.46	5.75	10.11	8.56	2.37	8.78
CoN 15072	11.49		12.96			6.45	9.65	9.61	7.06	11.73	9.90	7.08	11.10	9.28	2.90	8.88
CoSnk 15103	11.91		8.21			8.30	9.44	10.36	10.13	13.04	10.13	8.15	9.86	10.60	3.18	9.22
CoSnk 15104	11.70		11.90			7.82	9.24	10.83	10.88	13.02	10.66	6.98	11.22	10.42	6.31	9.93
CoVC 15061	10.69		10.20			8.01	8.86	10.79	7.27	12.96	9.36	5.26	10.87	8.83	1.87	8.57
CoVC 15062	11.80		11.03			7.27	9.87	12.03	10.62	11.66	10.21	8.42	10.18	9.20	3.16	9.42
CoVC 15063	10.85		11.87			6.97	10.48	12.34	7.94	12.39	10.24	7.67	10.64	10.48	3.81	9.53
CoVC 15064	11.01		10.94			6.53	9.78	11.36	8.55	11.75	9.39	8.71	11.09	11.31	5.07	9.50
PI 15131	10.38		12.07			7.85	9.51	12.61	9.86	13.31	10.88	9.40	12.73	10.20	4.06	10.23
PI 15132	12.19		11.21			8.80	10.47	8.86	12.25	13.19	9.86	9.43	12.27	11.51	2.13	10.00
VSI 15122	11.16		9.33			7.07	9.34	9.53	6.54	12.41	9.57	5.81	8.51	8.66	4.14	8.26
Standards																
Co 86032	9.66		11.85			7.56	10.15	11.76	7.12	12.11	11.37	9.61	12.05	10.98	2.75	9.75
CoC 671	11.83		11.50			7.67	10.71	12.87	10.58	13.66	10.14	10.70	9.17	11.18	2.68	10.08
CoSnk 05103	11.24		11.40			5.34	10.46	11.32	9.86	13.48	10.13	8.78	9.20	9.45	2.79	9.29
Co 85004	10.21		11.39			8.00	10.64	11.07	10.87	12.09	11.20	10.26	11.05	11.40		10.80
Grand Mean	11.18		10.99			7.72	9.45	11.30	9.29	12.56	10.26	8.29	10.84	10.13	3.52	9.51
SE (m)±	0.39		0.49			0.81	0.33	0.49	0.48	0.78	0.19	0.09	0.05	0.97	0.72	
CD %	1.07		1.41			2.35	0.94	1.43	1.40	2.28	0.54	0.27	0.13	NS	2.07	
CV (%)	4.25		6.25			14.89	4.89	6.18	7.35	8.89	2.55	1.57	0.60	13.48	28.70	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's report (2018-19)- Peninsular zone, Initial Varietal Trial

Table 2.5.29: Juice sucrose (%) at 240 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005			18.19			12.82	13.80	18.15	16.72	18.45	17.51	15.46	16.05	16.26	8.42	15.62
Co 15002			16.25			13.40	12.22	18.16	14.21	16.86	14.79	14.11	14.10	16.09	7.75	14.36
Co 15005			16.83			12.95	13.95	17.50	16.30	17.57	15.70	13.54	16.60	13.58	7.86	14.76
Co 15006			16.83			11.26	13.37	17.11	12.06	18.79	16.35	13.86	15.37	13.64	6.82	14.13
Co 15007			15.37			9.81	12.76	17.24	12.97	17.45	16.39	13.37	14.28	16.15	7.22	13.91
CoSnk15101			17.25			13.89	13.79	17.87	12.99	17.77	13.83	12.50	12.82	15.94	8.20	14.26
CoSnk15102			15.62			15.05	12.80	17.93	15.15	18.00	14.69	12.75	12.30	18.18	8.99	14.68
CoVSI 15121			16.23			10.65	14.57	14.76	12.07	18.94	13.32	10.13	13.39	13.71	8.83	13.33
Co 15009			15.02			11.64	13.95	14.89	12.15	17.20	15.31	11.96	14.56	15.00	5.04	13.34
Co 15010			13.81			10.60	13.50	13.61	13.26	19.47	14.08	12.49	13.74	13.70	5.00	13.02
Co 15015			14.06			10.63	13.10	14.92	13.74	16.34	12.71	10.12	12.35	13.12	5.13	12.38
Co 15017			17.17			13.03	14.25	18.47	14.96	16.52	17.12	12.65	14.12	16.35	7.05	14.70
Co 15018			14.21			8.97	12.70	14.03	12.94	17.19	12.40	10.75	13.61	13.83	4.70	12.30
Co 15020			17.08			12.34	13.83	16.80	15.32	17.81	15.07	11.77	13.71	14.63	6.89	14.11
Co 15021			15.72			10.66	12.97	16.14	11.93	16.15	14.23	10.50	13.52	15.04	4.89	12.89
CoN 15071			14.17			11.03	13.85	14.82	14.19	18.49	15.02	8.83	14.07	12.90	5.17	12.96
CoN 15072			18.47			9.94	14.32	14.17	12.37	16.70	14.43	10.42	13.28	13.83	5.55	13.04
CoSnk 15103			12.18			12.11	13.78	14.69	14.38	18.35	14.88	12.05	14.07	15.31	6.25	13.46
CoSnk 15104			17.17			11.72	13.66	15.58	15.75	18.16	15.50	10.77	14.61	15.38	9.96	14.39
CoVC 15061			15.00			11.87	13.45	15.54	10.84	18.28	13.72	8.01	16.13	13.34	4.90	12.82
CoVC 15062			15.92			10.80	14.60	17.24	15.02	16.25	15.01	12.48	14.55	14.05	6.16	13.82
CoVC 15063			17.07			10.65	15.30	17.62	11.75	17.61	14.94	11.30	14.27	15.54	7.16	13.93
CoVC 15064			15.82			10.06	14.47	16.31	12.48	16.70	13.90	12.79	12.75	16.37	8.46	13.65
PI 15131			17.38			11.74	13.97	17.74	14.30	18.72	15.73	13.74	12.51	14.99	7.47	14.39
PI 15132			16.63			12.92	15.17	13.43	17.41	18.43	14.66	13.80	15.93	16.81	4.58	14.52
VSI 15122			13.76			10.78	13.99	14.02	10.42	17.39	14.04	8.90	15.59	12.89	7.34	12.65
Standards																
Co 86032			17.09			11.37	14.91	16.84	12.26	16.95	16.18	14.01	14.02	16.05	5.83	14.14
CoC 671			16.54			11.60	15.74	18.21	15.29	19.51	14.88	15.28	15.13	16.57	5.97	14.97
CoSnk 05103			16.62			8.82	15.50	16.34	14.21	18.64	14.88	13.05	13.44	13.90	5.87	13.75
Co 85004			16.41			11.97	15.59	15.88	16.08	17.16	15.99	14.70	13.65	16.53		15.40
Grand Mean			16.00			11.50	14.00	16.20	13.78	17.73	14.91	12.20	14.15	14.99	6.67	13.86
SE (m)±			0.62			0.94	0.30	0.60	0.56	1.08	0.23	0.12	0.06	1.15	0.89	
CD %			1.79			2.73	0.87	1.72	1.63	3.15	0.68	0.36	0.17	NS	2.59	
CV (%)			0.62			11.62	3.02	5.21	5.74	8.73	2.22	1.43	0.60	10.82	18.97	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's report (2018-19)- Peninsular zone, Initial Varietal Trial

Table 2.5.30: Juice brix (%) at 240 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005	18.67		20.20			14.70	16.68	19.92	18.54	19.46	19.08	17.70	18.94	18.83	12.98	17.91
Co 15002	19.52		18.76			15.45	14.80	19.67	15.99	18.32	17.29	15.99	17.54	19.18	13.03	16.91
Co 15005	19.32		18.84			14.30	16.61	18.92	18.94	18.61	17.46	15.74	19.72	17.79	11.98	17.17
Co 15006	20.32		18.90			13.60	16.18	18.67	15.59	20.16	18.21	16.64	18.75	17.34	10.73	16.80
Co 15007	19.92		18.09			12.70	15.71	18.67	16.89	18.66	17.97	15.70	17.64	18.33	11.73	16.55
CoSnk15101	17.88		19.17			15.50	16.63	18.92	14.89	18.46	16.02	16.02	18.01	18.53	12.73	16.81
CoSnk15102	20.07		17.89			16.50	15.32	19.67	17.44	19.81	16.55	15.24	19.00	20.29	13.73	17.40
CoVSI 15121	18.42		18.63			13.60	17.94	16.67	13.44	16.81	15.60	12.27	14.85	16.48	12.73	15.37
Co 15009	20.72		17.86			13.70	16.89	16.67	15.19	18.21	17.39	14.11	15.87	17.58	9.49	15.72
Co 15010	17.74		17.61			11.90	15.77	16.67	15.29	20.71	16.70	14.76	15.77	17.63	9.99	15.71
Co 15015	17.09		16.79			13.80	15.63	17.67	15.44	17.66	15.17	12.54	16.04	16.33	9.99	15.19
Co 15017	16.16		19.56			15.30	16.74	19.92	19.14	17.11	18.50	15.27	17.74	18.78	11.98	17.28
Co 15018	15.66		16.46			11.80	15.13	15.92	14.89	18.06	14.40	13.35	15.84	16.49	9.53	14.72
Co 15020	17.56		18.94			14.20	15.93	18.17	16.89	18.66	17.03	14.44	14.75	17.11	11.23	16.12
Co 15021	18.75		17.83			13.25	15.62	18.17	17.34	16.61	16.22	13.95	16.66	17.68	9.49	15.71
CoN 15071	17.41		16.94			13.45	16.51	16.92	16.79	19.31	16.76	11.45	16.53	15.83	9.99	15.50
CoN 15072	16.26		20.24			12.80	17.06	16.67	19.09	18.26	16.57	12.54	17.22	16.64	9.49	16.05
CoSnk 15103	18.53		14.50			14.05	15.92	15.92	15.64	19.56	17.37	14.65	17.20	17.29	10.99	15.74
CoSnk 15104	17.76		19.34			14.35	16.18	17.42	17.89	17.46	17.76	13.77	17.58	18.16	13.23	16.65
CoVC 15061	19.23		17.56			14.20	16.73	17.42	13.04	19.61	15.97	10.25	16.10	16.44	10.74	15.28
CoVC 15062	16.78		17.96			13.00	17.31	19.17	16.19	16.96	17.57	15.21	16.61	17.66	10.74	16.22
CoVC 15063	19.44		19.07			13.50	17.67	19.42	13.94	19.22	17.19	13.64	16.76	18.49	11.98	16.44
CoVC 15064	16.96		17.92			12.95	17.19	18.17	14.39	18.21	16.48	15.35	17.22	18.56	12.23	16.24
PI 15131	18.70		19.51			14.30	16.32	18.92	16.29	19.91	17.81	16.32	18.83	17.53	12.23	17.09
PI 15132	19.80		19.81			15.20	17.22	16.67	18.99	19.41	17.55	16.43	19.43	19.43	8.74	17.17
VSI 15122	16.17		16.21			13.60	16.99	16.42	14.09	18.36	16.37	11.52	14.55	15.48	11.49	15.01
Standards																
Co 86032	20.00		19.22			14.00	17.42	18.67	18.54	17.86	17.67	16.55	18.03	18.58	10.99	17.05
CoC 671	18.45		18.51			14.45	18.43	19.67	17.29	21.51	17.34	17.32	15.62	19.73	11.73	17.42
CoSnk 05103	19.75		19.10			12.70	18.45	18.42	15.99	19.06	17.37	16.00	16.18	16.28	10.98	16.41
Co 85004	19.81		18.43			14.60	18.14	17.67	19.04	18.61	17.62	16.79	17.36	18.81		17.71
Grand Mean	18.43		18.33			13.92	16.64	18.06	16.44	18.69	17.03	14.72	17.08	17.78	11.27	16.38
SE (m)±	0.44		0.52			0.56	0.49	0.52	0.49	1.25	0.22	0.14	0.05	0.78	0.86	
CD %	1.21		1.50			1.63	1.42	1.50	1.43	3.63	0.63	0.40	0.16	2.27	2.49	
CV (%)	3.35		0.59			5.74	4.19	4.05	4.24	9.50	1.80	1.34	0.45	6.21	10.79	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's report (2018-19)- Peninsular zone, Initial Varietal Trial

Table 2.5.31: Juice purity (%) at 240 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005	82.99		90.04			86.00	82.73	91.11	90.17	94.78	91.74	87.32	84.75	86.37	64.65	86.33
Co 15002	81.68		86.61			87.50	82.57	92.36	88.93	92.28	85.51	88.21	80.41	83.96	59.47	84.35
Co 15005	87.49		89.35			91.50	83.99	92.44	86.27	94.38	89.93	86.05	84.20	76.29	65.54	85.45
Co 15006	84.29		89.03			83.00	82.63	91.63	77.30	93.20	89.75	85.12	81.97	77.74	63.81	83.20
Co 15007	82.16		84.93			78.00	81.22	92.31	76.83	93.53	91.18	85.16	80.98	88.10	61.36	83.05
CoSnk15101	91.04		89.99			90.00	82.92	94.39	87.16	96.25	86.33	78.06	80.83	85.91	64.38	85.11
CoSnk15102	81.67		87.28			91.50	83.55	91.14	86.88	93.18	88.74	83.63	77.97	89.54	65.03	85.31
CoVSI	90.82		87.13			78.50	81.22	88.35	89.78	94.76	85.39	82.52	83.49	83.22	69.35	83.97
Co 15009	80.05		83.85			85.50	82.59	89.30	80.07	94.51	88.04	84.75	82.08	85.18	53.19	82.64
Co 15010	96.46		78.44			90.00	85.61	81.65	86.74	94.00	84.27	84.59	86.73	77.76	50.15	81.81
Co 15015	96.93		83.72			77.50	83.81	84.41	88.98	92.62	83.79	80.70	83.76	80.34	51.42	81.00
Co 15017	96.13		87.75			85.50	85.13	92.68	78.36	94.85	92.51	82.87	84.78	87.10	58.65	84.56
Co 15018	96.24		86.30			77.00	83.94	88.38	86.86	95.22	86.07	80.15	84.58	83.90	49.35	81.98
Co 15020	92.87		90.15			87.50	86.82	92.55	90.69	95.41	88.46	81.54	82.59	85.47	61.31	85.68
Co 15021	86.56		88.19			81.00	83.03	88.80	68.62	97.22	87.72	75.28	80.68	84.93	51.40	80.62
CoN 15071	88.89		83.58			83.00	83.89	87.55	84.51	95.76	89.64	77.08	81.73	81.48	51.79	81.82
CoN 15072	97.69		91.25			78.00	83.94	84.89	64.78	91.63	87.05	83.10	80.33	83.01	58.57	80.59
CoSnk 15103	91.63		83.97			86.50	86.56	92.04	91.94	93.86	85.63	82.25	81.71	88.69	57.00	84.56
CoSnk 15104	93.03		88.76			81.50	84.43	89.31	88.04	95.73	87.26	77.44	81.14	84.65	75.21	84.86
CoVC 15061	82.96		85.37			84.00	80.39	89.10	83.10	93.17	85.92	78.10	84.87	81.00	46.28	81.03
CoVC 15062	97.36		88.66			83.50	84.34	89.90	92.72	95.74	85.42	82.03	84.63	79.49	56.93	83.94
CoVC 15063	83.19		89.49			79.50	86.59	90.73	84.24	91.77	86.89	82.84	81.15	83.92	59.56	83.33
CoVC 15064	92.36		88.26			78.50	84.18	89.73	86.73	91.94	84.32	83.56	85.90	88.20	68.50	84.53
PI 15131	82.90		89.11			82.50	85.60	93.75	87.80	94.01	88.32	84.18	85.95	85.30	61.08	85.24
PI 15132	88.84		83.95			82.00	88.10	80.44	91.71	95.01	83.51	83.99	84.63	86.52	52.64	82.95
VSI 15122	96.08		84.86			80.00	82.34	85.33	73.97	94.72	85.76	77.26	80.28	82.36	60.99	80.72
Standards																
Co 86032	75.86		88.84			81.50	85.59	90.22	66.13	94.78	91.54	84.66	80.81	86.31	53.10	82.13
CoC 671	91.47		89.36			81.00	85.40	92.57	88.40	90.71	85.78	88.22	83.92	83.84	50.72	83.63
CoSnk 05103	84.28		86.93			70.00	84.01	88.67	88.86	97.79	85.63	81.53	86.07	85.39	53.26	82.56
Co 85004	79.02		89.04			82.50	85.94	89.83	84.28	92.24	90.75	87.55	84.37	89.54		87.60
Grand	88.43		87.14			82.80	84.10	89.52	84.03	94.17	87.43	82.66	82.91	84.18	58.44	83.49
SE (m)±	1.84		1.21			4.00	2.98	1.55	2.17	1.74	0.64	0.33	0.25	3.55	4.63	
CD %	5.10		3.50			11.50	NS	4.49	6.32	5.03	1.87	0.96	0.71	NS	13.42	
CV (%)	3.06		1.95			6.80	4.97	2.45	3.66	2.61	1.04	0.57	0.42	5.96	11.21	

Varietal Improvement Programme- AICRP (Sugarcane)
Principal Investigator's report (2018-19)- Peninsular zone, Initial Varietal Trial

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

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005	29.17			233.00		120.90	160.44	119.72	116.34	112.90	155.38	94.71	111.92	145.38	83.13	132.17
Co 15002	21.39			187.00		77.65	157.64	70.97	93.01	81.94	125.11	74.93	83.66	87.59	102.71	103.84
Co 15005	10.28			245.00		84.13	153.92	101.39	120.51	90.30	150.16	97.98	125.23	117.22	88.15	124.91
Co 15006	13.47			179.00		93.65	144.65	111.11	97.03	82.69	171.22	94.75	150.69	114.82	96.45	121.46
Co 15007	12.22			156.00		91.67	141.42	76.25	94.55	88.91	134.50	72.75	141.32	100.00	75.65	106.64
CoSnk15101	12.64			178.00		92.59	164.66	84.72	84.36	93.96	130.33	77.55	122.22	109.82	79.85	110.73
CoSnk15102	16.25			201.00		95.11	157.20	86.80	96.41	99.68	133.46	85.07	114.58	70.00	75.75	110.46
CoVSI 15121	12.92			154.00		63.76	172.33	86.66	81.27	87.61	133.63	78.35	140.86	97.41	86.72	107.51
Co 15009	33.05			161.00		90.08	138.75	88.05	101.82	112.30	152.25	94.39	148.15	98.70	89.69	115.92
Co 15010	23.89			209.00		119.44	150.63	103.19	97.03	77.02	153.99	98.15	156.37	160.74	108.65	130.38
Co 15015	24.44			161.00		94.44	153.52	88.61	83.12	97.60	135.20	88.20	115.97	82.78	85.08	107.77
Co 15017	17.50			178.00		100.13	144.78	95.83	100.73	99.16	172.78	101.95	142.71	88.15	83.33	118.87
Co 15018	11.53			210.00		75.79	146.94	65.97	103.05	112.73	151.38	60.07	133.33	106.48	66.63	112.03
Co 15020	20.28			195.00		66.14	147.68	89.72	80.80	117.05	135.72	77.08	147.45	132.97	79.03	115.33
Co 15021	14.44			181.00		98.28	151.24	78.75	105.52	89.94	136.94	76.86	138.66	98.15	75.13	111.86
CoN 15071	34.86			159.00		91.14	156.98	88.75	78.02	116.05	144.94	65.28	132.41	108.15	94.10	112.26
CoN 15072	28.61			107.00		84.79	165.27	77.22	93.01	89.78	154.69	102.47	143.98	115.19	56.58	108.18
CoSnk 15103	22.36			212.00		80.42	162.07	82.22	90.54	120.96	140.59	71.88	141.78	130.19	89.69	120.21
CoSnk 15104	13.89			225.00		80.42	142.93	91.39	83.43	101.52	96.92	80.21	126.50	118.34	94.81	112.86
CoVC 15061	40.00			221.00		124.34	150.72	112.77	87.14	100.60	132.76	83.77	139.24	123.15	74.83	122.76
CoVC 15062	31.25			103.00		123.94	130.16	91.66	112.79	116.16	156.08	77.10	142.25	103.71	76.26	112.10
CoVC 15063	33.89			232.00		80.56	135.79	113.47	92.24	109.29	160.25	75.09	143.06	132.96	95.12	124.53
CoVC 15064	28.61			207.00		177.65	151.70	90.28	90.85	97.42	46.28	83.07	145.95	97.78	86.20	115.83
PI 15131	40.69			173.00		113.76	167.20	86.39	85.75	92.34	171.22	73.70	141.09	123.33	86.72	119.50
PI 15132	35.69			228.00		107.14	144.56	94.72	82.97	99.08	170.17	81.81	169.38	125.93	75.95	125.43
VSI 15122	29.17			144.00		80.82	158.81	66.39	104.60	87.71	116.06	67.61	120.49	73.71	57.81	98.00
Standards																
Co 86032	43.05			219.00		108.47	137.90	93.61	93.32	117.23	156.08	92.71	118.40	127.78	85.90	122.76
CoC 671	39.30			170.00		90.08	136.34	69.72	92.55	107.63	215.06	73.85	120.02	107.41	57.20	112.71
CoSnk 05103	28.89			249.00		122.35	150.95	123.33	77.87	118.10	218.72	100.62	142.77	127.78	98.09	139.05
Co 85004	16.53			270.00		141.93	143.68	105.27	120.82	93.98	179.22	98.50	147.45	113.52		141.44
Grand Mean	24.68			191.57		99.05	150.70	91.16	94.71	100.39	147.70	83.35	134.93	111.30	82.94	117.25
SE (m)±	5.41					5.25	6.42	5.79	6.68	1.28	13.51	4.10	11.76	15.14	1.10	
CD %	15.00					15.19	18.58	16.75	19.42	3.72	39.27	11.85	34.02	NS	3.18	
CV (%)	31.01					7.50	6.03	8.98	9.98		12.93	6.95	12.33	19.23	1.87	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's report (2018-19)- Peninsular zone, Initial Varietal Trial

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

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005	55.44		113.77	248.00	163.89	184.26	187.89	258.74	212.28	117.39	205.67	267.74	84.14	181.71	187.17	185.59
Co 15002	61.46		89.58	238.00	81.48	98.94	182.75	164.58	149.56	84.89	165.65	119.56	51.50	109.49	121.46	127.50
Co 15005	27.32		103.47	195.00	68.17	94.71	172.39	167.91	181.07	93.73	198.88	149.76	103.59	146.53	108.86	137.24
Co 15006	49.08		90.63	203.00	92.82	112.83	203.35	188.33	172.11	85.60	226.03	176.84	123.96	143.52	118.59	149.05
Co 15007	47.92		81.60	236.00	75.46	102.51	180.00	141.33	170.10	93.28	173.13	141.92	113.89	125.00	118.39	134.82
CoSnk15101	52.90		80.09	217.00	89.00	128.57	164.77	142.91	165.47	98.46	174.35	144.14	80.67	137.27	146.47	136.09
CoSnk15102	30.91		53.94	182.00	96.53	105.03	167.25	162.83	140.13	103.90	170.87	153.32	96.53	87.50	108.55	125.26
CoVSI 15121	34.26		85.53	249.00	92.36	69.44	189.75	130.91	141.68	90.60	169.30	136.28	117.59	121.76	103.12	130.56
Co 15009	51.74		83.33	205.00	66.55	109.79	193.94	154.16	158.83	117.41	187.75	150.47	133.22	123.38	87.33	136.24
Co 15010	40.98		91.09	215.00	82.52	134.92	178.87	186.66	147.86	80.29	200.45	147.92	141.78	200.93	98.61	146.68
Co 15015	24.89		64.58	196.00	76.16	99.87	188.73	151.33	141.68	100.89	172.96	139.86	86.00	103.47	89.69	123.94
Co 15017	51.16		101.62	192.00	81.48	110.45	201.40	172.08	184.01	104.72	231.94	181.39	123.38	110.19	117.16	147.06
Co 15018	49.89		69.21	228.00	70.49	104.37	196.83	147.08	188.49	117.51	196.10	128.20	113.43	133.11	71.44	135.71
Co 15020	69.91		78.36	200.00	98.15	76.72	177.85	167.49	114.02	120.77	175.39	179.28	111.11	166.21	144.83	139.24
Co 15021	58.45		78.47	192.00	69.33	106.75	186.10	135.83	188.64	93.05	176.61	137.24	91.32	122.69	93.79	128.60
CoN 15071	64.94		105.67	221.00	120.02	102.38	199.78	160.41	143.84	119.45	188.27	170.23	140.63	135.19	149.24	150.47
CoN 15072	39.24		67.59	211.00	62.73	95.63	177.92	178.74	148.17	92.95	207.93	199.75	128.82	143.99	62.63	136.76
CoSnk 15103	65.51		72.34	200.00	82.99	93.12	188.51	186.66	118.66	123.23	186.88	145.92	105.44	162.73	120.85	137.49
CoSnk 15104	14.12		79.63	214.00	83.22	118.92	188.31	147.91	153.42	105.38	123.37	138.67	114.35	147.92	130.59	134.28
CoVC 15061	70.38		87.96	220.00	66.20	141.01	192.07	199.99	156.20	105.57	182.53	142.02	117.82	153.94	111.32	144.36
CoVC 15062	50.81		80.56	201.00	116.20	173.94	184.61	189.99	182.16	119.96	205.84	147.19	125.23	129.63	141.04	153.64
CoVC 15063	48.62		115.39	216.00	61.69	103.84	190.60	205.41	120.20	113.93	203.23	143.75	146.88	166.20	135.81	147.92
CoVC 15064	36.35		86.11	201.00	67.13	191.01	183.05	134.50	203.94	100.35	50.63	124.46	130.90	122.23	103.42	130.67
PI 15131	45.03		95.60	211.00	128.70	158.73	182.27	180.83	223.87	96.79	221.33	168.96	133.80	154.17	115.52	159.35
PI 15132	59.03		95.83	243.00	117.24	159.39	172.58	214.57	95.94	102.07	232.12	136.97	135.88	157.41	114.08	152.08
VSI 15122	46.99		66.78	203.00	69.68	92.99	189.13	133.83	165.47	89.53	151.03	131.92	102.20	92.13	85.59	121.02
Standards																
Co 86032	68.87		103.36	223.00	96.87	157.67	191.12	175.41	124.99	119.95	214.02	185.73	91.55	159.73	131.82	151.94
CoC 671	46.42		83.68	210.00	74.54	113.10	185.47	116.25	146.00	110.99	294.23	105.83	110.30	134.26	96.86	137.04
CoSnk 05103	69.68		80.67	191.00	107.18	160.05	161.14	229.33	201.00	121.49	294.23	200.70	114.00	159.72	167.49	168.31
Co 85004	61.23		133.10	247.00	136.69	171.69	162.14	214.99	186.64	98.81	236.99	167.01	100.58	141.90		166.46
Grand Mean	49.78		87.32	213.60	89.85	122.42	184.02	171.37	160.88	104.10	193.92	155.43	112.35	139.13	116.61	142.51
SE (m)±	8.45		5.62		7.59	8.27	7.79	13.50	9.68	1.39	17.98	5.71	15.31	18.92	9.23	
CD %	23.42		16.34		22.40	23.92	22.52	39.05	28.14	4.02	52.27	16.51	44.29	NS	26.74	
CV (%)	24.01		9.10		11.95	9.55	5.98	11.14	8.51	1.08	13.11	5.19	19.28	19.23	11.20	

Varietal Improvement Programme- AICRP (Sugarcane)

Principal Investigator's report (2018-19)- Peninsular zone, Initial Varietal Trial

Table 2.5.34: Germination (%) at 30 days

Clone	Akola	Basmath nagar	Coimbatore	Kawardha	Kolhapur	Mandya	Navasari	Padegaon	Perumalla palle	Pravara nagar	Pugalur	Pune	Rudrur	Sameer wadi	Sankesh war	Mean
Co 14005	36.25		70.10	67.00	59.26	50.00	51.43	48.50	81.42	45.91	67.88	50.66	21.00	67.92	65.03	57.39
Co 15002	27.36		39.58	55.00	41.44	47.50	48.24	34.50	51.29	29.13	44.97	28.47	13.56	57.36	59.02	42.31
Co 15005	12.50		62.71	59.00	38.43	41.50	46.49	47.00	70.04	29.17	69.10	48.84	35.00	63.33	49.43	50.77
Co 15006	42.78		48.85	65.00	46.30	54.50	51.61	51.50	73.72	34.78	60.76	41.39	31.00	50.28	59.60	51.48
Co 15007	43.47		48.44	67.00	37.96	55.00	55.93	52.00	68.54	35.55	72.74	51.51	40.33	50.56	54.17	53.06
CoSnk15101	37.22		41.35	50.00	39.00	45.00	55.03	43.50	61.99	39.08	50.00	48.38	28.78	56.81	61.10	47.69
CoSnk15102	24.58		37.92	39.00	45.14	38.50	50.98	36.00	60.03	37.56	47.22	37.19	23.78	65.97	46.08	43.49
CoVSI 15121	31.67		62.71	62.00	49.31	38.01	56.18	38.00	50.83	30.67	52.26	46.64	37.11	54.17	53.13	48.54
Co 15009	25.00		47.92	54.00	34.72	50.00	50.99	37.50	62.56	42.36	69.27	43.17	38.78	70.98	53.48	50.44
Co 15010	16.67		49.48	60.00	42.94	38.50	54.85	57.00	49.80	33.78	56.42	60.11	35.22	63.34	50.13	50.12
Co 15015	24.31		34.79	47.00	34.72	52.50	51.10	38.00	53.82	40.46	62.15	42.36	31.67	62.50	38.69	45.37
Co 15017	34.31		46.67	48.00	33.33	52.38	46.22	35.50	65.78	33.00	65.28	37.32	31.33	64.17	58.79	47.52
Co 15018	45.00		54.69	73.00	32.18	40.00	45.71	45.00	59.46	45.50	59.55	49.19	40.22	64.86	46.08	50.42
Co 15020	44.86		45.94	41.00	48.73	45.00	45.84	32.00	40.71	45.12	47.22	41.90	21.00	69.45	52.44	44.33
Co 15021	33.75		46.56	41.00	34.14	50.00	50.56	39.50	71.07	29.18	59.20	44.45	26.67	64.45	47.59	46.49
CoN 15071	49.72		71.35	61.00	51.27	58.50	49.46	48.50	60.03	53.96	54.69	52.78	31.44	56.95	63.41	54.87
CoN 15072	22.22		48.33	58.00	33.80	50.00	47.17	50.00	56.01	38.25	51.74	51.51	38.78	52.92	35.81	47.10
CoSnk 15103	40.14		46.04	53.00	42.71	45.00	50.03	52.00	51.75	42.41	67.19	54.32	39.11	70.42	51.40	51.18
CoSnk 15104	10.00		52.50	47.00	38.89	42.50	48.83	47.00	69.35	34.81	41.84	47.88	37.11	50.00	51.28	46.85
CoVC 15061	28.61		48.23	56.00	31.25	41.75	46.97	61.00	66.13	40.30	51.74	37.85	37.89	61.12	53.01	48.71
CoVC 15062	52.22		52.92	44.00	49.54	40.00	46.17	49.00	83.03	45.32	73.44	50.70	36.11	53.47	53.94	52.13
CoVC 15063	46.39		61.88	59.00	37.62	40.00	51.08	58.00	66.47	38.60	60.94	46.61	38.00	55.56	45.39	50.70
CoVC 15064	28.33		47.29	52.00	40.05	46.00	52.69	42.50	77.97	33.56	18.40	44.45	42.67	62.64	43.54	46.44
PI 15131	31.67		64.27	51.00	53.59	46.50	51.10	49.00	82.00	39.88	70.66	57.53	38.56	57.92	47.70	54.59
PI 15132	50.28		69.90	59.00	51.62	50.00	50.50	43.00	42.09	46.79	51.74	63.08	37.22	51.81	49.43	51.24
VSI 15122	19.44		37.40	58.00	38.77	45.00	55.15	42.00	74.75	39.17	54.17	41.90	29.11	64.59	42.50	47.89
Standards																
Co 86032	50.97		59.90	55.00	47.57	47.50	53.20	50.00	37.72	47.04	72.22	45.95	28.11	67.64	47.93	50.75
CoC 671	55.56		55.94	53.00	40.97	42.50	54.57	39.50	49.11	42.58	78.13	45.60	37.78	47.50	41.81	48.38
CoSnk 05103	66.39		50.31	58.00	51.50	48.50	54.55	56.50	74.41	48.54	78.13	64.35	28.67	50.42	53.13	55.15
Co 85004	40.97		66.35	50.00	53.01	45.15	48.43	51.00	92.81	42.56	78.82	50.93	36.11	61.67		56.40
Grand Mean	35.75		52.34	54.73	42.66	46.24	50.70	45.82	63.49	39.50	59.59	47.57	33.07	59.69	50.86	49.73
SE (m)±	--		2.83	7.02	2.97	1.37	2.23	3.47	4.85	1.83	4.49	2.54	3.62	9.30	5.19	
CD %	--		8.23	20.21	8.78	3.98	6.45	10.03	14.08	5.30	13.06	7.35	10.47	NS	15.04	
CV (%)	--		7.65	18.26	9.86	4.20	6.22	10.71	10.79	6.56	10.66	7.56	15.48	22.04	14.44	

2.5.35 Assessment of performance of entries by monitoring team

S.No	Entries	Perumallpalle	Pugulur	Coimbatore	Thiruvalla	Mandya	Sankeshwar	Sameerwadi	Kolhapur
1	Co 14005	On par	On par	On par	On par)	Poor	On par	Poor	On par
2	Co 15002	On par	Poor	Better	Poor)	Poor	Poor	Poor	Poor
3	Co 15005	Poor	Poor	Poor	On par	Poor	Poor	On par	Poor
4	Co 15006	On par	On par	Poor	Poor	Poor	Poor	Poor	Poor
5	Co 15007	Better	Poor	Poor	Poor	On par	Better	On par	On par
6	CoSnk 15101	Better	Better	Better	On par	Better	Better	Better	Better
7	CoSnk 15102	Better	On par	On par	Better	Better	Better	Better	Poor
8	CoVSI 15121	Better	On par	Poor	On par	Better	Better	Better	Better
9	Co 15009	On par	On par	Better	Poor	Better	Better	On par	Poor
10	Co 15010	Poor	On par	On par	On par	Better	Better	Poor	Poor
11	Co 15015	On par	On par	On par	Poor	On par	On par	Poor	Poor
12	Co 15017	Better	On par)	Poor	Poor	Poor	Poor	Poor	On par
13	Co 15018	Better	Poor	On par	Poor	Better	Better	Better	Better
14	Co 15020	On par	Better	On par	Better	Poor	On par	On par	On par
15	Co 15021	On par	Better	On par	Poor	Poor	Poor	On par	On par
16	CoN 15071	Better	Better	Better	On par	Better	Better	Better	Poor
17	CoN 15072	On par	Poor	Poor	Poor	Poor	Poor	On par	Poor
18	CoSnk 15103	Better	Better	Better	Better	Better	Better	Better	Better
19	CoSnk 15104	Better	Better	On par	Better	Better	Better	On par	Better
20	CoVC 15061	On par	Poor	On par	Poor	On par	On par	On par	Poor
21	CoVC 15062	Better	On par	Poor	Poor	Better	Poor	Poor	On par
22	CoVC 15063	On par	Poor	Poor	On par	Poor	Poor	Poor	Poor
23	CoVC 15064	Poor	Poor	Poor	Poor	Better	Poor	Poor	Poor
24	PI 15131	Better	Poor	On par	Poor	On par	Poor	Better	Poor
25	PI 15132	On par	On par	On par	Better	On par	Poor	Poor	Poor
26	VSI 15122	Better	Better	Better	On par	On par	Better	Better	Better
Standards									
27	Co 86032						Best		Best
28	CoC 671								
29	CoSnk 05103	Best	Best	Best	Best	Best		Best	
30	Co 85004								

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S. No.	Variety	Navsari	PowerKheda	Rudrur	VSI, Pune	Padegaon	Pravarnagar	Akola
1	Co 14005	Average	Good	Good	Very Good	Average	Good	Average
2	Co 15002	Good	Average	Average	Average	Average	Average	Good
3	Co 15005	Average	Poor	Good	Good	Good	Average	Poor
4	Co 15006	Good	Good	Good	Good	Average	Good	Poor
5	Co 15007	Average	Average	Good	Good	Good	Good	Good
6	CoSnK 15101	Average	Poor	Good	Good	Average	Average	Average
7	CoSnk 15102	Good	Poor	Poor	Good	Average	Good	Average
8	CoVSI 15121	Good	Good	Good	Good	Very Good	Average	Poor
9	Co 15009	Good	Good	Good	Average	Good	Average	Good
10	Co 15010	Average	Very Good	Good	Very Good	Average	Good	Good
11	Co 15015	Very Good	Average	Good	Very Good	Very Good	Very Good	Poor
12	Co 15017	Average	Poor	Good	Average	Average	Good	Poor
13	Co 15018	Good	Good	Good	Very Good	Good	Very Good	Average
14	Co 15020	Good	Good	Good	Good	Good	Good	Poor
15	Co 15021	Average	Average	Average	Average	Good	Very Good	Average
16	CoN 15071	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Good
17	CoN 15072	Very Good	Good	Good	Very Good	Good	Very Good	Poor
18	CoSnk 15103	Very Good	Average	Poor	Average	Very Good	Poor	Good
19	CoSnk 15104	Good	Poor	Poor	Good	Good	Average	Poor
20	CoVC 15061	Good	Poor	Very Good	Good	Very Good	Very Good	Good
21	CoVC 15062	Average	Good	Good	Good	Poor	Good	Poor
22	CoVC 15063	Average	Poor	Poor	Average	Poor	Average	Good
23	CoVC 15064	Poor	Poor	Poor	Poor	Poor	Average	Poor
24	PI 15131	Good	Good	Good	Average	Poor	Poor	Average
25	PI 15132	Good	Good	Poor	Good	Poor	Average	Average
26	VSI 15122	Very Good	Average	Good	Very Good	Very Good	Good	Very Good
Standards :								
27	Co 86032	Very Good	Good	Poor	Very Good	Average	Good	Good
28	CoC 671	Good	Average	Average	Very Good	Poor	Very Good	Good
29	CoSnk 05103	Very Good	Very Good	Good	Good	Good	Average	Very Good
30	Co 85004	Average	Poor	Good	Good	Poor	Good	Poor

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

Seven AICRP(S) trials were planned in the zone during 2018-19. The number of trials conducted at each center during 2018-19 is given below.

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

C=Conducted

3.1 ADVANCED VARIETAL TRIAL (EARLY – II PLANT)

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (3)	Co 13023, CoA 14321 and CoC 14336
Standards (3)	CoA 92081, CoC 01061 and CoOr 03151
Design	Randomized Block Design
Replications	Four
Plot size	Gross : 8 Rows x 6m x 0.9 m Net : 6 Rows x 5m x 0.9 m
Seed rate	12 buds/ metre
Planting time	February / March, 2018
Crop duration	10 months

Results of the previous year

The entry CoA 14321 was the best performer across locations for both cane yield (120.41 t/ha) and CCS yield (15.64 t/ha). CoC 14336 was the next best entry for cane yield (110.29 t/ha) and CCS yield (14.53 t/ha). For juice quality (CCS% and sucrose %) the entry CoC 14336 was the top ranking in the zone. At 10th month, CoC 14336 recorded a mean sucrose content of 18.51% and CCS % of 13.15. CoA 14321 was identified as the qualifying entry as it recorded 14.29% improvement for cane yield and numerically superior performance for juice sucrose compared to the best standard CoA 92081.

Results of the current year

CoA 14321 (14.35 t/ha) was the best entry across locations for CCS yield followed by CoC 14336 (13.37 t/ha). The best entry CoA 14321 recorded 9.88 % improvement for CCS yield across locations over the best standard CoOr 03151 (13.06 t/ha). For cane yield, none of the entries was found to be superior over the best standard CoOr 03151 that recorded the highest cane yield of 113.50 t/ha. However, all three entries recorded numerically superior cane yield as compared to the better standard CoA 92081 (96.22 t/ha). For juice quality, CoA 92081 was the best standard that recorded CCS% of 12.29 and sucrose of 17.65%. The entry CoC 14336 was the best in the trial for juice quality that recorded the highest CCS % of 13.33 and sucrose of 18.99 %. CoC 14336 recorded an improvement of 8.46% for CCS % and 7.59 % for sucrose % over the best standard CoA 92081 across locations. The entry CoA 14321 is identified as the qualifying entry with more than 10.0 % improvement for CCS yield, cane yield and numerically superior values for sucrose % compared to the better standard CoA 92081. 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	Anaka palle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean	Rank
1	Co 13023	9.99	15.92*	11.16	14.20	9.99	12.25	
2	CoA 14321	11.45*	16.37*	10.81	20.66	12.44	14.35	1
3	CoC 14336	11.35	17.47*	11.28	14.88	11.89	13.37	2
	Standards							
1	CoA 92081	9.31	15.05	10.18	15.27	9.08	11.78	
2	CoC 01061	10.09	13.32	12.19	12.61	11.36	11.91	
3	CoOr 03151	9.84	14.94	11.68	18.99	9.85	13.06	3
	GM	10.34	15.51	11.22	16.10	10.77		
	SE	0.43	0.29	0.42	0.65	0.51		
	CD (0.05)	1.30	0.61	NS	1.97	1.53		
	CV	8.27	2.60	7.45	8.12	9.50		
	Qualifying entries at each location							
	1	CoA 14321	CoC 14336	-	-	-		
	2	CoC 14336	-	-	-	-		
	3		-	-	-	-		

* Significant over the best standard

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

CoA 14321 (1), CoC 14336 (2)

Performance of the entries across locations: CoA 14321 (14.35 t/ha) was the best entry for CCS yield followed by CoC 14336 (13.37 t/ha) while the best standard CoOr 03151 recorded 13.06 t/ha. The best entry CoA 14321 recorded 9.88 % improvement for CCS yield across the locations over the best standard CoOr 03151.

Table 3.1.2 Cane yield (t/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean	Rank
1	Co 13023	73.99	125.01*	99.03	114.88	90.12	100.61	
2	CoA 14321	83.01	126.68*	94.13	155.63	98.23	111.54	
3	CoC 14336	76.26	134.25*	95.96	111.24	87.27	101.00	
	Standards							
1	CoA 92081	70.20	118.82	89.41	124.43	78.24	96.22	
2	CoC 01061	85.80	106.31	104.54	97.23	94.98	97.77	
3	CoOr 03151	88.61	119.43	103.70	159.45	96.30	113.50	1
	GM	79.65	121.75	97.79	127.14	90.86		
	SE	2.33	2.02	3.36	5.10	4.00		
	CD (0.05)	7.08	4.30	10.12	15.38	12.06		
	CV	5.85	2.34	6.87	8.03	8.80		
	Qualifying entries at each location							
	1	-	CoC 14336	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

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

CoC 14336 (1)

Performance of the entries across locations: The standard CoOr 03151 was the best in this trial that recorded the highest cane yield of 113.50 t/ha.

Table 3.1.3 CCS % at 10th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	Co 13023	13.49	12.74	11.26	12.36	11.12	12.19	
2	CoA 14321	13.78	12.93*	11.51	13.28	12.64*	12.83	2
3	CoC 14336	14.89*	13.02*	11.76	13.37	13.61*	13.33	1
	Standards							
1	CoA 92081	13.26	12.67	11.63	12.29	11.58	12.29	3
2	CoC 01061	11.74	12.53	11.40	12.95	11.96	12.12	
3	CoOr 03151	11.07	12.51	11.26	11.90	10.21	11.39	
	GM	13.04	12.73	11.47	12.69	11.85		
	SE	0.23	0.10	0.15	0.15	0.22		
	CD (0.05)	0.71	0.21	NS	0.45	0.67		
	CV	3.56	1.11	2.57	2.37	3.70		
	Qualifying entries at each location							
	1	CoC 14336	-	-	-	CoC 14336		
	2	-	-	-	-	CoA 14321		
	3	-	-	-	-	-		

* Significant over the best standard

No. of locations where an entry recorded > 5 % improvement over the best standard:
CoC 14336 (2), CoA 14321 (1)

Performance of the entries across locations: The entry CoC 14336 was the best in the trial that recorded the highest CCS% of 13.33 followed by CoA 14321 (12.83%). The best entry CoC 14336 recorded 8.46% improvement over the best standard CoA 92081 (12.29%).

Table 3.1.4 Sucrose % at 10th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	Co 13023	19.19	18.44	16.50	17.80	15.97	17.58	
2	CoA 14321	19.52	18.67*	16.93	18.98	17.75*	18.37	2
3	CoC 14336	20.95*	18.95*	17.35	19.09	18.63*	18.99	1
	Standards							
1	CoA 92081	18.86	18.28	17.05	17.75	16.31	17.65	3
2	CoC 01061	16.92	18.20	16.65	18.47	16.74	17.40	
3	CoOr 03151	16.01	18.26	16.60	17.13	14.80	16.56	
	GM	18.58	18.47	16.85	18.20	16.70		
	SE	0.30	0.11	0.23	0.21	0.25		
	CD (0.05)	0.90	0.23	NS	0.64	0.76		
	CV	3.20	0.83	2.76	2.33	3.00		
	Qualifying entries at each location							
	1	CoC 14336	-	-	-	CoC 14336		
	2	-	-	-	-	CoA 14321		
	3	-	-	-	-	-		

* Significant over the best standard

No. of locations where an entry recorded > 5 % improvement over the best standard: CoC 14336 (2), CoA 14321 (1)

Performance of the entries across locations: The entry CoC 14336 was the best in the trial that recorded the highest sucrose of 18.99 % followed by CoA 14321 (18.37 %). The best entry CoC 14336 recorded 7.59% improvement over the best standard CoA 92081(17.65%).

Table 3.1.5 Brix % at 10th month

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	20.98	20.91	19.18	19.97	18.75	19.96
2	CoA 14321	21.13	21.08	19.83	20.93	20.00	20.59
3	CoC 14336	22.34	21.75	20.45	21.03	19.85	21.08
	Standards						
1	CoA 92081	20.60	20.61	19.85	20.03	18.50	19.92
2	CoC 01061	19.00	20.78	19.25	20.27	18.73	19.61
3	CoOr 03151	18.12	21.06	19.53	19.17	17.75	19.13
	GM	20.36	21.03	19.68	20.23	18.93	
	SE	0.30	0.10	0.36	0.28	0.19	
	CD (0.05)	0.92	0.22	NS	0.85	0.57	
	CV	2.97	0.68	3.66	2.79	2.00	

Table 3.1.6 Purity % at 10th month

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	91.49	88.19	86.09	89.13	85.17	88.01
2	CoA 14321	92.40	88.58	85.38	90.72	88.74	89.16
3	CoC 14336	93.77	87.12	84.85	90.79	93.85	90.08
	Standards						
1	CoA 92081	91.63	88.70	85.94	88.59	88.17	88.61
2	CoC 01061	89.02	87.59	86.56	91.11	89.39	88.73
3	CoOr 03151	88.33	86.70	85.04	89.33	83.33	86.55
	GM	91.11	87.81	85.64	89.94	88.11	
	SE	0.76	0.48	0.7	0.59	0.73	
	CD (0.05)	2.30	1.02	NS	0.18	2.19	
	CV	1.66	0.77	1.64	1.32	1.60	

Table 3.1.7 Pol % cane at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	14.39	15.12	-	14.83	-	14.78
2	CoA 14321	14.64	15.30	-	15.81	-	15.25
3	CoC 14336	15.73	15.50	-	16.06	-	15.76
	Standards						
1	CoA 92081	14.27	15.02	-	14.99	-	14.76
2	CoC 01061	12.65	14.95	-	15.54	-	14.38
3	CoOr 03151	12.10	14.94	-	14.41	-	13.82
	GM	13.96	15.14	-	15.27	-	
	SE	0.22	0.09	-	0.19	-	
	CD (0.05)	0.66	0.19	-	0.58	-	
	CV	3.12	0.84	-	2.51	-	

Table 3.1.8 Extraction % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	49.88	59.74	53.18	56.13	-	54.73
2	CoA 14321	50.05	54.91	51.63	54.51	-	52.78
3	CoC 14336	48.16	54.29	52.81	50.36	-	51.41
	Standards						
1	CoA 92081	48.97	57.63	52.50	54.74	-	53.46
2	CoC 01061	49.54	58.55	51.12	52.17	-	52.85
3	CoOr 03151	49.88	52.56	52.45	54.97	-	52.47
	GM	49.41	56.28	52.28	53.81	-	
	SE	0.79	1.78	0.54	1.53	-	
	CD (0.05)	NS	3.79	NS	4.61	-	
	CV	3.21	4.47	2.08	5.70	-	

Table 3.1.9 Fiber % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	14.99	13.00	13.84	12.39	-	13.56
2	CoA 14321	14.99	13.07	13.15	12.47	-	13.42
3	CoC 14336	14.90	13.18	14.11	12.37	-	13.64
	Standards						
1	CoA 92081	14.35	12.86	13.80	12.54	-	13.39
2	CoC 01061	15.22	12.87	13.14	12.37	-	13.40
3	CoOr 03151	14.45	13.18	12.98	12.38	-	13.25
	GM	14.82	13.03	13.50	12.42	-	
	SE	0.12	0.12	0.21	0.17	-	
	CD (0.05)	0.34	0.26	0.62	0.50	-	
	CV	1.52	1.31	3.04	2.70	-	

Table 3.1.10 NMC ('000/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	64.91	119.58	100.93	100.49	66.59	90.50
2	CoA 14321	66.94	115.02	117.97	104.57	65.59	94.02
3	CoC 14336	64.63	119.36	115.86	105.97	73.77	95.92
	Standards						
1	CoA 92081	60.00	113.68	93.54	104.57	63.19	87.00
2	CoC 01061	97.50	114.29	110.51	96.05	75.23	98.72
3	CoOr 03151	67.13	115.87	117.11	104.49	69.75	94.87
	GM	70.19	116.30	109.32	102.69	69.02	
	SE	2.07	2.85	4.31	4.08	2.60	
	CD (0.05)	6.28	6.08	12.98	12.28	7.84	
	CV	5.88	3.47	7.88	7.93	7.50	

Table 3.1.11 Stalk length (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	230.30	242.00	301.50	253.25	217.10	248.83
2	CoA 14321	230.78	253.00	309.30	220.50	217.10	246.14
3	CoC 14336	229.35	260.00	308.80	277.50	222.10	259.55
	Standards						
1	CoA 92081	231.53	228.00	271.80	248.75	220.60	240.14
2	CoC 01061	240.00	250.00	290.80	246.00	212.00	247.76
3	CoOr 03151	261.35	252.00	321.30	270.00	254.60	271.85
	GM	237.22	247.00	300.50	252.66	223.90	
	SE	4.03	3.58	5.56	7.94	9.17	
	CD (0.05)	12.25	7.64	16.76	23.94	NS	
	CV	3.40	2.05	3.70	6.28	8.20	

Table 3.1.12 Stalk diameter (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	2.36	2.75	2.75	2.90	2.66	2.68
2	CoA 14321	2.72	3.00	2.08	3.17	2.93	2.78
3	CoC 14336	2.57	2.98	2.93	2.79	2.68	2.79
	Standards						
1	CoA 92081	2.39	2.66	2.65	2.94	2.78	2.68
2	CoC 01061	1.98	2.40	2.88	2.56	2.38	2.44
3	CoOr 03151	2.60	2.72	3.1	3.00	2.83	2.85
	GM	2.44	2.75	2.9	2.90	2.71	
	SE	0.44	0.08	0.07	0.53	0.08	
	CD (0.05)	0.13	0.17	0.22	0.16	0.23	
	CV	3.60	4.10	4.95	3.67	5.70	

Table 3.1.13 Single cane weight (kg)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	1.13	1.27	1.21	1.43	1.05	1.22
2	CoA 14321	1.29	1.40	1.35	1.41	1.29	1.35
3	CoC 14336	1.20	1.49	1.26	1.34	1.04	1.27
	Standards						
1	CoA 92081	1.04	1.32	1.24	1.42	1.10	1.22
2	CoC 01061	0.86	1.09	1.03	1.09	0.72	0.96
3	CoOr 03151	1.27	1.23	1.24	1.51	1.30	1.31
	GM	1.13	1.30	1.22	1.36	1.08	
	SE	0.02	0.07	0.06	0.47	0.06	
	CD (0.05)	0.07	0.14	0.18	0.14	0.19	
	CV	3.90	7.10	9.88	6.90	11.60	

Table 3.1.14 CCS % at 8 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	9.99	11.13	10.09	9.17	9.62	10.00
2	CoA 14321	10.15	10.83	10.62	10.00	10.16	10.35
3	CoC 14336	10.39	11.23	11.15	9.60	12.19	10.91
	Standards						
1	CoA 92081	10.13	10.69	10.30	8.92	9.49	9.91
2	CoC 01061	9.74	10.62	10.75	9.04	10.37	10.10
3	CoOr 03151	9.02	10.44	10.59	8.52	8.60	9.43
	GM	9.90	10.82	10.58	9.20	10.07	
	SE	0.21	0.08	0.23	0.95	0.21	
	CD (0.05)	0.64	0.18	NS	0.29	0.64	
	CV	4.26	1.10	4.36	2.07	4.20	

Table 3.1.15 Sucrose % at 8 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	14.97	16.33	15.08	13.51	13.94	14.77
2	CoA 14321	15.14	16.00	15.85	14.47	14.53	15.20
3	CoC 14336	15.44	16.42	16.63	14.04	16.66	15.84
	Standards						
1	CoA 92081	15.21	15.85	15.35	13.28	13.77	14.69
2	CoC 01061	14.67	15.70	16.00	13.39	14.79	14.91
3	CoOr 03151	13.70	15.42	15.75	12.63	12.78	14.06
	GM	14.86	15.95	15.78	13.55	14.41	
	SE	0.22	0.08	0.36	0.14	0.25	
	CD (0.05)	0.67	0.16	NS	0.42	0.74	
	CV	2.98	0.67	4.53	2.04	3.40	

Table 3.1.16 Brix % at 8 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	18.19	19.00	18.23	15.87	16.70	17.60
2	CoA 14321	18.24	18.90	19.13	16.42	16.98	17.93
3	CoC 14336	18.46	19.00	20.00	16.27	17.70	18.29
	Standards						
1	CoA 92081	18.54	18.90	18.45	15.92	16.55	17.67
2	CoC 01061	17.99	18.50	19.20	15.89	17.18	17.75
3	CoOr 03151	17.06	18.20	18.88	15.04	16.05	17.05
	GM	18.08	18.80	18.98	15.90	16.86	
	SE	0.08	0.07	0.47	0.16	0.22	
	CD (0.05)	0.24	0.15	NS	0.49	0.68	
	CV	0.88	0.54	4.96	2.02	2.70	

Table 3.1.17 Purity % at 8 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	82.29	85.77	82.80	85.13	83.42	83.88
2	CoA 14321	83.01	84.57	82.87	88.13	85.57	84.83
3	CoC 14336	83.66	86.39	83.13	86.26	94.18	86.72
	Standards						
1	CoA 92081	82.05	84.02	83.24	83.39	83.22	83.18
2	CoC 01061	81.52	84.62	83.35	84.26	86.10	83.97
3	CoOr 03151	80.30	84.68	83.48	83.97	79.61	82.41
	GM	82.14	85.01	83.14	85.19	85.35	
	SE	1.01	0.57	0.40	0.20	1.02	
	CD (0.05)	NS	1.21	NS	0.60	3.09	
	CV	2.45	0.95	0.96	0.46	2.40	

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

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	72.78	124.56	108.51	149.90	77.62	106.67
2	CoA 14321	69.08	120.37	125.69	151.38	71.07	107.52
3	CoC 14336	71.76	124.23	123.60	153.82	83.72	111.43
	Standards						
1	CoA 92081	62.60	119.68	99.32	161.21	70.45	102.65
2	CoC 01061	112.69	120.68	117.84	129.28	82.95	112.69
3	CoOr 03151	72.22	121.39	122.93	152.25	72.84	108.33
	GM	76.86	121.82	116.31	149.63	76.44	
	SE	3.16	2.98	4.44	5.46	3.31	
	CD (0.05)	9.54	6.35	13.38	16.46	9.98	
	CV	8.16	3.46	7.63	7.30	8.70	

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

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	94.71	131.05	114.56	180.87	115.12	127.26
2	CoA 14321	74.05	124.67	135.06	176.44	98.23	121.69
3	CoC 14336	80.30	129.62	129.80	181.31	107.41	125.69
	Standards						
1	CoA 92081	74.57	126.74	109.81	178.79	102.78	118.54
2	CoC 01061	108.16	131.84	126.26	175.83	112.11	130.84
3	CoOr 03151	84.72	128.65	128.86	186.88	95.76	124.97
	GM	86.09	128.76	124.06	180.01	105.23	
	SE	7.01	2.89	4.59	6.51	4.95	
	CD (0.05)	21.33	6.15	12.82	19.65	NS	
	CV	16.29	3.17	7.40	7.24	9.40	

Table 3.1.20 Germination % at 30 days

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	57.92	43.73	44.55	84.11	55.79	57.22
2	CoA 14321	61.67	58.17	48.31	82.64	45.66	59.29
3	CoC 14336	58.96	54.54	55.44	84.46	56.37	61.95
	Standards						
1	CoA 92081	62.71	52.06	57.09	84.38	52.60	61.77
2	CoC 01061	62.09	47.17	54.73	78.56	56.60	59.83
3	CoOr 03151	64.58	40.21	51.23	86.55	50.41	58.60
	GM	61.32	49.31	51.89	83.44	52.90	
	SE	3.14	1.70	2.48	3.12	2.31	
	CD (0.05)	NS	3.63	7.47	9.43	6.97	
	CV	10.24	4.89	9.56	7.50	8.70	

Table 3.1.21 Assessment of performance of entries by monitoring team

	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
Co 13023	On par	On par	On par	Better	On par
CoA 14321	Better	On par	Better	On par	On par
CoC 14336	On par	On par	Poor	On par	On par
Standards					
CoA 92081	Poor	Poor	Poor	Better	On par
CoC 01061	Better	Better	Better	Better	Better
CoOr 03151	Best	Best	Best	Best	Best

3.2 ADVANCED VARIETAL TRIAL (EARLY – RATOON)

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (3)	Co 13023, CoA 14321 and CoC 14336
Standards (3)	CoA 92081, CoC 01061 and CoOr 03151*
Design	Randomized Block Design
Replications	Four
Plot size	Gross : 8 Rows x 6m x 0.9 m Net : 6 Rows x 5m x 0.9 m
Ratooning time	February / March, 2018
Crop duration	9 months

*Values of CoOr 03151 are not considered for comparison as two centres did not include this standard in the trials.

Results of the previous year

The entry CoA 14321 was the best performer across locations for both cane yield (120.41 t/ha) and CCS yield (15.64 t/ha). CoC 14336 was the next best entry for cane yield (110.29 t/ha) and CCS yield (14.53 t/ha). For juice quality (CCS% and sucrose %) the entry CoC 14336 was the top ranking in the zone. At 10th month it recorded a mean sucrose content of 18.51% and CCS % of 13.15. CoA 14321 was identified as the qualifying entry as it recorded 14.82% improvement for cane yield over the best standard CoA 92081 across the locations.

Results of the current year

The entry CoA 14321 was the best performer across locations for CCS yield (14.11 t/ha) followed by CoC 14336 (12.69 t/ha) while the best standard CoC 01061 recorded 12.64 t/ha. The entry CoA 14321 recorded the highest cane yield of 109.03 t/ha over the better standard CoC 01061(100.45 t/ha). For juice quality, CoA 14321 was the top ranking entry across locations with a CCS % of 12.98 and juice sucrose of 18.32%. No qualifying entry was identified from this trial. 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	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	Co 13023	9.70	15.80*	8.58	12.38	4.90	10.27	
2	CoA 14321	14.04	16.45*	8.94	18.52*	12.61	14.11	1
3	CoC 14336	11.87	17.62*	9.92	14.26*	9.80	12.69	2
	Standards							
1	CoA 92081	11.16	13.47	8.50	10.03	9.37	10.51	
2	CoC 01061	13.15	14.94	9.32	12.28	13.50	12.64	3
3	CoOr 03151	-	14.97	8.31	15.32	-	12.87**	
	GM	11.98	15.54	8.76	13.79	10.03		
	SE	0.53	0.38	0.28	0.62	0.63		
	CD (0.05)	1.64	0.80	0.83	1.88	1.94		
	CV	8.81	3.41	6.29	9.02	12.60		
	Qualifying entries at each location							
	1	-	CoC 14336	-	CoA 14321	-		
	2	-	CoA 14321	-	CoC 14336	-		
	3	-		-	-	-		

* Significant over the best standard

** Values of CoOr 03151 are not considered for comparison as two centres did not include this standard in the trials.

No. of locations where an entry recorded >10 % improvement over the best standard:
CoA 14321 (2) and CoC 14336 (2)

Performance of the entries across locations: The entry CoA 14321 (14.11 t/ha) was the best in the trial followed by CoC 14336 (12.69 t/ha) while the best standard CoC 01061 recorded 12.64 t/ha. The best entry CoA 14321 recorded 11.63 % improvement over the best standard CoC 01061.

Table 3.2.2 Cane yield (t/ha) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean	Rank
1	Co 13023	84.03	123.99	74.97	102.03	36.88	84.38	
2	CoA 14321	108.13	127.86*	75.90	146.13*	87.11	109.03	1
3	CoC 14336	89.32	135.35*	82.55*	122.41	66.13	99.15	
	Standards							
1	CoA 92081	90.19	107.75	74.26	82.47	79.94	86.92	
2	CoC 01061	103.70	118.80	70.34	112.28	97.15	100.45	2
3	CoOr 03151	-	118.51	72.95	123.85	-	105.10	
	GM	95.07	122.04	75.13	114.86	73.44		
	SE	4.86	2.50	2.36	4.92	4.53		
	CD (0.05)	15.15	5.32	7.12	14.84	13.95		
	CV	10.23	2.89	6.29	8.58	12.30		
	Qualifying entries at each location							
	1	-	CoC 14336	CoC 14336	CoA 14321	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Values of CoOr 03151 are not considered for comparison as two centres did not include this standard in the trials.

No. of locations where an entry recorded >10 % improvement over the best standard:
CoC 14336 (2) and CoA 14321 (1)

Performance of the entries across locations: The entry CoA 14321 was the best in the trial which recorded the highest cane yield of 109.03 t/ha. The best standard CoC 01061 recorded 100.45 t/ha. The best entry CoA 14321 recorded 8.54 % improvement over the best standard CoC 01061 across the locations.

Table 3.2.3 CCS % at 9th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	Co 13023	11.54	12.74	11.44	12.14	13.26	12.22	
2	CoA 14321	13.03	12.87	11.82	12.68*	14.48*	12.98	1
3	CoC 14336	13.29	13.01*	12.00	11.66	14.80*	12.95	2
	Standards							
1	CoA 92081	12.37	12.50	11.46	12.15	11.73	12.04	
2	CoC 01061	12.71	12.58	11.84	10.93	13.89	12.39	3
3	CoOr 03151	-	12.63	11.39	12.36	-	12.13	
	GM	12.59	12.72	11.66	11.98	13.63		
	SE	0.22	0.15	0.15	0.17	0.11		
	CD (0.05)	0.69	0.33	NS	0.50	0.33		
	CV	3.50	1.71	2.63	2.77	1.60		
	Qualifying entries at each location							
	1	-	-	-	-	CoC 14336		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Values of CoOr 03151 are not considered for comparison as two centres did not include this standard in the trials.

No. of locations where an entry recorded >5 % improvement over the best standard:
CoC 14336 (1)

Performance of the entries across locations: CoA 14321 was the top ranking entry across locations with a CCS % of 12.98 followed by CoC 14336 (12.95 %). The best entry CoA 14321 recorded 4.76 % improvement over the better standard CoC 01061(12.39%).

Table 3.2.4 Sucrose % at 9th month

S. No.	Entry	Anaka pale	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	Co 13023	16.37	18.33	16.68	17.31	18.35	17.41	
2	CoA 14321	18.33	18.51*	17.00	17.84*	19.93*	18.32	1
3	CoC 14336	18.62	18.77*	17.40	16.56	20.15*	18.30	2
	Standards							
1	CoA 92081	17.45	18.12	16.85	17.13	16.22	17.15	
2	CoC 01061	17.92	18.21	17.30	15.65	19.16	17.65	3
3	CoOr 03151	-	18.38	16.68	17.47	-	17.51	
	GM	17.74	18.38	16.98	16.99	18.76		
	SE	0.27	0.13	0.18	0.23	0.10		
	CD (0.05)	0.83	0.28	NS	0.69	0.30		
	CV	2.99	1.02	2.15	2.70	1.00		
	Qualifying entries at each location							
	1	-	-	-	-	CoC 14336		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Values of CoOr 03151 are not considered for comparison as two centres did not include this standard in the trials.

No. of locations where an entry recorded >5 % improvement over the best standard:
CoC 14336 (1)

Performance of the entries across locations: CoA 14321 was the top ranking entry across locations with a mean sucrose content of 18.32 % followed by CoC 14336 (18.30 %). The best entry CoA 14321 recorded 3.80 % improvement over the better standard CoC 01061 (17.65 %).

Table 3.2.5 Brix % at 9thmonth

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	17.75	20.50	19.20	19.01	20.00	19.29
2	CoA 14321	19.53	20.70	19.03	19.01	21.50	19.95
3	CoC 14336	19.65	21.11	19.83	18.02	21.18	19.96
	Standards						
1	CoA 92081	18.71	20.61	19.73	18.36	17.65	19.01
2	CoC 01061	19.19	20.65	20.03	17.37	20.75	19.60
3	CoOr 03151	-	21.06	19.35	18.80	-	19.74
	GM	18.97	20.77	19.53	18.42	20.22	
	SE	0.20	0.29	0.16	0.24	0.18	
	CD (0.05)	0.61	0.62	0.49	0.72	0.54	
	CV	2.05	1.99	1.68	2.60	1.70	

Table 3.2.6 Purity % at 9thmonth

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	92.18	89.40	86.87	91.05	91.73	90.25
2	CoA 14321	93.81	89.44	89.37	93.80	92.69	91.82
3	CoC 14336	94.79	88.92	87.78	91.87	95.13	91.70
	Standards						
1	CoA 92081	93.28	87.96	85.42	93.29	91.90	90.37
2	CoC 01061	93.34	88.19	86.39	90.14	92.41	90.09
3	CoOr 03151	-	87.32	86.18	92.90	-	88.80
	GM	93.48	88.54	87.00	92.17	92.77	
	SE	0.66	1.35	0.62	0.22	0.84	
	CD (0.05)	NS	2.89	1.87	0.66	NS	
	CV	1.41	2.16	1.43	0.48	1.80	

Table 3.2.7 Pol % cane at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	12.27	15.04	-	14.29	-	13.87
2	CoA 14321	13.73	15.17	-	14.72	-	14.54
3	CoC 14336	13.99	15.36	-	13.68	-	14.34
	Standards						
1	CoA 92081	13.20	14.89	-	14.16	-	14.08
2	CoC 01061	13.38	14.91	-	12.97	-	13.75
3	CoOr 03151	-	15.07	-	14.48	-	14.78
	GM	13.31	15.07	-	14.30	-	
	SE	0.19	0.10	-	0.21	-	
	CD (0.05)	0.60	0.21	-	0.63	-	
	CV	2.88	0.94	-	2.92	-	

Table 3.2.8 Extraction % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	52.06	58.88	53.27	48.25	-	53.12
2	CoA 14321	52.30	57.67	52.07	47.29	-	52.33
3	CoC 14336	50.38	56.50	53.40	48.50	-	52.20
	Standards						
1	CoA 92081	51.15	55.60	52.68	51.83	-	52.82
2	CoC 01061	51.71	57.44	51.16	52.04	-	53.09
3	CoOr 03151	-	55.35	52.67	50.63	-	52.88
	GM	51.52	56.91	52.54	53.63	-	
	SE	0.87	2.47	0.43	1.52	-	
	CD (0.05)	NS	5.26	1.29	4.59	-	
	CV	3.37	6.14	1.63	5.68	-	

Table 3.2.9 Fibre % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	15.02	12.92	14.02	12.44	-	13.60
2	CoA 14321	15.07	13.04	13.16	12.44	-	13.43
3	CoC 14336	14.89	13.15	14.04	12.35	-	13.61
	Standards						
1	CoA 92081	14.36	12.85	13.86	12.35	-	13.36
2	CoC 01061	15.33	13.11	13.15	12.15	-	13.44
3	CoOr 03151	-	12.96	12.90	12.10	-	12.65
	GM	14.93	13.00	13.52	12.30	-	
	SE	0.11	0.11	0.21	0.13	-	
	CD (0.05)	0.36	0.23	0.63	0.39	-	
	CV	1.53	1.18	3.09	2.10	-	

Table 3.2.10 NMC ('000/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	71.20	121.42	80.79	102.75	33.41	81.91
2	CoA 14321	81.30	121.28	88.12	117.62	70.45	95.75
3	CoC 14336	72.04	126.18	90.39	106.05	41.59	87.25
	Standards						
1	CoA 92081	78.43	118.88	79.45	106.75	61.03	88.91
2	CoC 01061	111.48	113.77	76.76	98.57	84.88	97.09
3	CoOr 03151	-	120.54	79.69	92.83	-	97.69
	GM	82.89	120.35	82.53	104.10	58.27	
	SE	4.89	5.21	3.17	6.19	3.94	
	CD (0.05)	15.16	11.10	9.54	18.66	12.14	
	CV	11.74	6.12	7.67	11.90	13.50	

Table 3.2.11 Stalk length (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	243.20	243.00	221.50	221.75	218.00	229.49
2	CoA 14321	246.80	250.00	248.50	268.25	240.20	250.75
3	CoC 14336	241.43	262.00	261.00	206.00	222.70	238.63
	Standards						
1	CoA 92081	243.50	252.00	230.00	248.00	236.30	241.96
2	CoC 01061	250.53	229.00	251.00	208.00	241.20	235.95
3	CoOr 03151	-	251.00	231.00	273.00	-	251.67
	GM	245.09	248.00	240.50	237.50	231.70	
	SE	6.44	3.51	5.14	3.42	7.67	
	CD (0.05)	NS	7.48	15.48	10.31	NS	
	CV	5.26	2.00	4.27	2.89	6.60	

Table 3.2.12 Stalk diameter (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	2.58	2.84	2.48	2.62	2.66	2.64
2	CoA 14321	2.94	2.89	2.45	2.96	3.06	2.86
3	CoC 14336	2.77	3.01	2.48	2.67	2.40	2.67
	Standards						
1	CoA 92081	2.55	2.34	2.68	2.21	2.79	2.51
2	CoC 01061	2.08	2.62	2.60	2.67	2.40	2.47
3	CoOr 03151	-	2.68	2.83	2.96	-	2.82
	GM	2.58	2.73	2.58	2.68	2.66	
	SE	0.05	0.07	0.07	0.41	0.07	
	CD (0.05)	0.15	0.14	0.21	0.12	0.23	
	CV	3.63	3.39	5.26	3.07	5.50	

Table 3.2.13 Single cane weight (kg)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	1.19	1.29	1.18	1.36	1.21	1.25
2	CoA 14321	1.39	1.42	1.29	1.81	1.35	1.45
3	CoC 14336	1.28	1.48	1.21	1.29	0.40	1.13
	Standards						
1	CoA 92081	1.10	1.08	1.16	1.05	1.19	1.12
2	CoC 01061	0.91	1.33	0.96	1.73	0.93	1.17
3	CoOr 03151	-	1.28	1.18	1.83	-	1.43
	GM	1.17	1.31	1.16	1.51	1.12	
	SE	0.03	0.07	0.06	0.47	0.05	
	CD (0.05)	0.09	0.15	0.19	0.14	0.16	
	CV	4.86	7.36	10.70	6.15	9.30	

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

S. No.	Entry	Anaka palle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	52.93	129.18	89.24	152.25	42.52	93.22
2	CoA 14321	77.78	126.95	95.57	152.08	77.55	105.99
3	CoC 14336	54.94	130.73	96.89	144.59	46.68	94.77
	Standards						
1	CoA 92081	72.69	129.78	87.11	145.46	78.01	102.61
2	CoC 01061	104.86	127.38	81.25	155.38	99.00	113.57
3	CoOr 03151	-	130.75	83.8	155.64	-	123.40
	GM	77.98	129.13	88.98	152.36	68.75	
	SE	4.72	3.57	3.68	4.72	4.74	
	CD (0.05)	14.76	7.61	11.08	14.25	14.59	
	CV	12.11	3.91	8.27	8.14	13.80	

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

S. No.	Entry	Anaka palle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13023	108.42	146.78	94.17	182.18	63.04	118.92
2	CoA 14321	127.78	138.62	104.37	183.40	102.24	131.28
3	CoC 14336	121.70	132.84	101.86	197.58	68.83	124.56
	Standards						
1	CoA 92081	139.84	133.26	91.52	178.18	94.06	127.37
2	CoC 01061	164.32	135.26	89.96	183.66	124.69	139.58
3	CoOr 03151	-	133.76	87.44	186.27	-	135.82
	GM	132.41	136.75	94.88	185.20	90.57	
	SE	13.19	4.30	3.91	6.66	4.09	
	CD (0.05)	NS	9.16	11.77	20.10	12.60	
	CV	19.84	4.37	8.24	7.20	9.00	

Table 3.2.16 Assessment of performance of entries by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
Co 13023	On par	On par	Poor	On par	On par
CoA 14321	On par	On par	On par	On par	Poor
CoC 14336	Better	On par	Poor	Better	On par
Standards					
CoA 92081	Poor	Better	Best	Best	Poor
CoC 01061	Better	On par	Better	Better	Better
CoOr 03151	Best	Best	Not available	Not available	Best

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

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (3)	Co 13023, CoA 14321 and CoC 14336
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 2017-18 and AVT II Plant and AVT Ratoon during 2018-19 at five locations. 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 CoA 14321 (14.70 t/ha) ranked first in the zone for CCS yield and it recorded 11.79 % improvement over the best standard CoOr 03151 (13.15 t/ha). The entry CoC 14336 (13.53 t/ha) recorded numerically superior CCS yield than the best standard.

Cane Yield (t/ha):

For cane yield, the entry CoA 14321 ranked first in the zone with an overall mean of 113.66 t/ha and it recorded numerically superior cane yield over the best standard CoOr 03151 (111.91 t/ha).

Commercial Cane Sugar (%):

The entry CoC 14336 ranked first with a mean CCS % of 12.85 followed by CoA 14321 (12.75 %) and were better than the standard CoA 92081 (12.39 %). The best entry CoC 14366 recorded 3.71 % improvement for CCS % over the standard CoA 92081.

Sucrose (%):

The entry CoC 14336 ranked first with a mean sucrose % of 18.60 and it recorded 5.03 % improvement over the better standard CoC 01061 (17.71 %).

Overall performance:

Based on the pooled mean of two plant and one ratoon crops at five centres, the entry CoA 14321 recorded 11.79 % improvement in CCS yield over the best standard CoOr 03151 (13.15 t/ha). CoA 14321 recorded numerically superior cane yield of 113.66 t/ha over the best standard CoOr 13151 (111.91 t/ha). CoA 14321 is identified as the qualifying entry under early maturing group with an improvement of more than 10.0 % for CCS yield and 8.45 % for sucrose content over the best standard CoOr 03151.

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	Co 13023	12.57	9.99	9.70	10.75	15.64	15.92	15.80	15.79	9.04	11.16	8.58	9.59
2	CoA 14321	14.24	11.45	14.04	13.24	16.21	16.37	16.45	16.34	11.27	10.81	8.94	10.34
3	CoC 14336	11.13	11.35	11.87	11.45	17.67	17.47	17.62	17.59	10.30	11.28	9.92	10.50
	Standards												
1	CoA 92081	12.80	9.31	11.16	11.09	13.52	15.05	13.47	14.01	10.03	10.18	8.50	9.57
2	CoC 01061	9.54	10.09	13.15	10.93	13.49	13.32	14.94	13.92	11.97	12.19	9.32	11.16
3	CoOr 03151	-	9.84	-	9.84	14.36	14.94	14.97	14.76	10.70	11.68	8.31	10.23
	GM	12.06	10.34	11.98		15.15	15.51	15.54		10.55	11.22	8.93	
S. No.	Clone	Nellikuppam				Vuyyuru				GM (Wt. Avg.)	Rank		
		I P	II P	R	Mean	I P	II P	R	Mean				
1	Co 13023	13.42	14.20	12.38	13.33	14.02	9.99	4.90	9.64	11.82			
2	CoA 14321	21.34	20.66	18.52	20.17	15.12	12.44	12.61	13.39	14.70	1		
3	CoC 14336	18.24	14.88	14.26	15.79	15.30	11.89	9.80	12.33	13.53	2		
	Standards												
1	CoA 92081	15.90	15.27	10.03	13.73	13.62	9.08	9.37	10.69	11.82			
2	CoC 01061	12.80	12.61	12.28	12.56	17.74	11.36	13.50	14.20	12.55			
3	CoOr 03151	15.72	18.99	15.32	16.68	-	9.85	-	9.85	13.15	3		
	GM	16.24	16.10	13.80		15.16	10.77	10.04					

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			
		I P	II P	R	Mean	I P	II P	R	Mean	I P	II P	R	Mean
1	Co 13023	95.93	73.99	84.03	84.65	125.04	125.01	123.99	124.68	80.44	99.03	74.97	84.81
2	CoA 14321	109.54	83.01	108.13	100.23	128.32	126.68	127.86	127.62	96.97	94.13	75.90	89.00
3	CoC 14336	87.59	76.26	89.32	84.39	135.41	134.25	135.35	135.00	87.64	95.96	82.55	88.72
	Standards												
1	CoA 92081	98.06	70.20	90.19	86.15	107.54	118.82	107.75	111.37	87.25	89.41	74.26	83.64
2	CoC 01061	76.11	85.80	103.70	88.54	106.54	106.31	118.80	110.55	100.39	104.54	70.34	91.76
3	CoOr 03151	-	88.61	-	88.61	117.00	119.43	118.51	118.31	94.15	103.70	72.95	90.27
	GM	93.45	79.65	95.07		119.98	121.75	122.04		91.14	97.80	75.16	
S. No.	Clone	Nellikuppam				Vuyyuru				GM (Wt. Avg.)	Rank		
		I P	II P	R	Mean	I P	II P	R	Mean				
1	Co 13023	111.40	114.88	102.03	109.44	101.23	90.12	36.88	76.08	95.93			
2	CoA 14321	162.44	155.63	146.13	154.73	104.78	98.23	87.11	96.71	113.66	1		
3	CoC 14336	140.10	111.24	122.41	124.58	100.69	87.27	66.13	84.70	103.48			
	Standards												
1	CoA 92081	124.42	124.43	82.47	110.44	107.02	78.24	79.94	88.40	96.00			
2	CoC 01061	100.12	97.23	112.28	103.21	125.15	94.98	97.15	105.76	99.96			
3	CoOr 03151	137.04	159.45	123.85	140.11	-	96.30	-	96.30	111.91	2		
	GM	129.25	127.14	114.86		107.77	90.86	73.44					

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	Co 13023	13.06	13.49	11.54	12.70	12.71	12.74	12.74	12.73	11.24	11.26	11.44	11.31
2	CoA 14321	13.01	13.78	13.03	13.27	12.86	12.93	12.87	12.89	11.62	11.51	11.82	11.65
3	CoC 14336	12.71	14.89	13.29	13.63	13.11	13.02	13.01	13.05	11.75	11.76	12.00	11.84
	Standards												
1	CoA 92081	13.04	13.26	12.37	12.89	12.51	12.67	12.50	12.56	11.49	11.63	11.46	11.53
2	CoC 01061	12.49	11.74	12.71	12.31	12.70	12.53	12.58	12.60	11.92	11.40	11.84	11.72
3	CoOr 03151	-	11.07	-	11.07	12.47	12.51	12.63	12.54	11.35	11.26	11.39	11.33
	GM	12.86	13.04	12.59		12.73	12.73	12.72		11.56	11.47	11.66	
S. No.	Clone	Nellikuppam				Vuyyuru				GM (Wt. Avg.)	Rank		
		I P	II P	R	Mean	I P	II P	R	Mean				
1	Co 13023	12.05	12.36	12.14	12.18	13.85	11.12	13.26	12.74	12.33			
2	CoA 14321	13.15	13.28	12.68	13.04	14.42	12.64	14.48	13.85	12.75	2		
3	CoC 14336	13.01	13.37	11.66	12.68	15.17	13.61	14.80	14.53	12.85	1		
	Standards												
1	CoA 92081	12.79	12.29	12.15	12.41	12.74	11.58	11.73	12.02	12.39	3		
2	CoC 01061	12.79	12.95	10.93	12.22	14.20	11.96	13.89	13.35	12.29			
3	CoOr 03151	11.47	11.90	12.36	11.91	-	10.21	-	10.21	11.69			
	GM	12.54	12.69	11.99		14.08	11.85	13.63					

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	Co 13023	18.80	19.19	16.37	18.12	17.60	18.44	18.33	18.12	16.41	16.50	16.68	16.53
2	CoA 14321	18.88	19.52	18.33	18.91	17.93	18.67	18.51	18.37	16.84	16.93	17.00	16.92
3	CoC 14336	18.41	20.95	18.62	19.33	18.10	18.95	18.77	18.61	16.89	17.35	17.40	17.21
	Standards												
1	CoA 92081	18.68	18.86	17.45	18.33	17.45	18.28	18.12	17.95	16.60	17.05	16.85	16.83
2	CoC 01061	18.05	16.92	17.92	17.63	17.71	18.20	18.21	18.04	17.14	16.65	17.30	17.03
3	CoOr 03151	-	16.01	-	16.01	17.68	18.26	18.38	18.11	16.50	16.60	16.68	16.59
	GM	18.56	18.58	17.74		17.75	18.47	18.39		16.73	16.85	16.99	
S. No.	Clone	Nellikuppam				Vuyyuru				GM (Wt. Avg.)	Rank		
		I P	II P	R	Mean	I P	II P	R	Mean				
1	Co 13023	17.36	17.80	17.31	17.49	19.13	15.97	18.35	17.82	17.62			
2	CoA 14321	18.60	18.98	17.84	18.47	19.61	17.75	19.93	19.10	18.35	2		
3	CoC 14336	18.46	19.09	16.56	18.04	20.71	18.63	20.15	19.83	18.60	1		
	Standards												
1	CoA 92081	18.29	17.75	17.13	17.72	17.65	16.31	16.22	16.73	17.51			
2	CoC 01061	18.24	18.47	15.65	17.45	19.34	16.74	19.16	18.41	17.71	3		
3	CoOr 03151	16.58	17.13	17.47	17.06	-	14.80	-	14.80	16.92			
	GM	17.92	18.20	16.99		19.29	16.70	18.76					

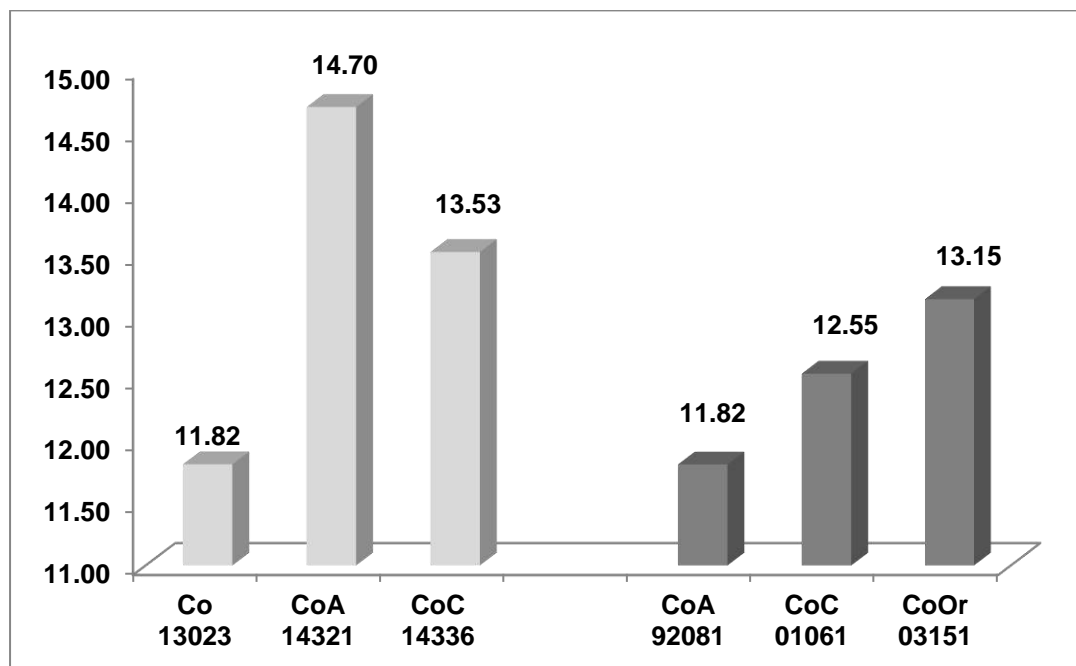


Fig.3.3.1. Mean performance of (2P+1R) of AVT early clones for CCS (t/ha)

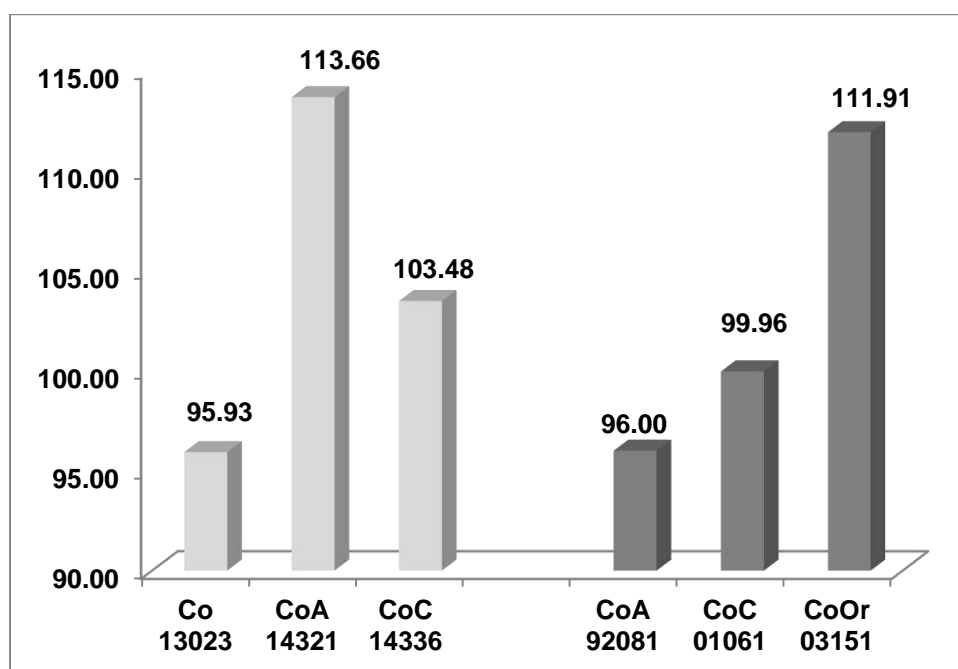


Fig.3.3.2 Mean performance of (2P+1R) of AVT early clones for Cane Yield (t/ha)

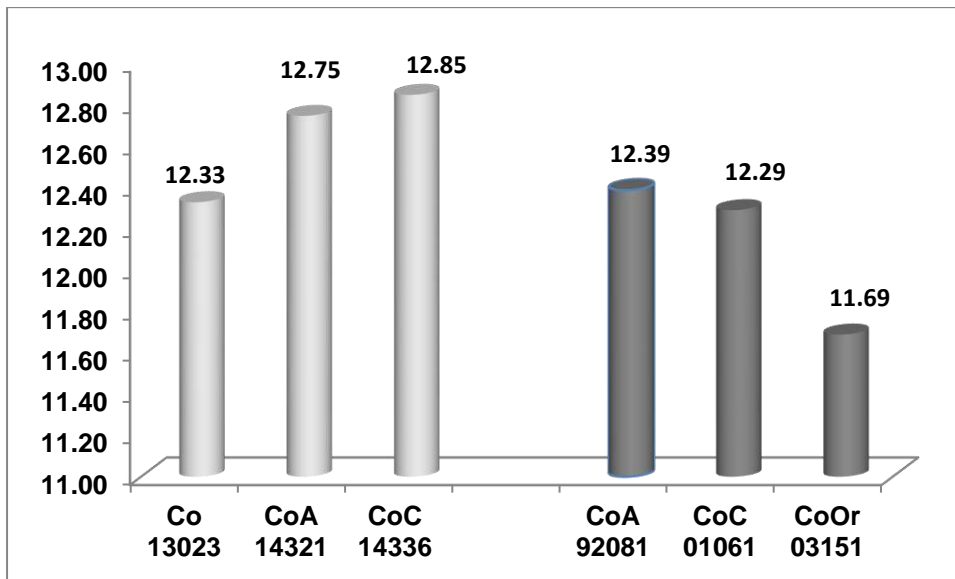


Fig.3.3.3. Mean performance of (2P+1R) of AVT early clones for CCS (%)

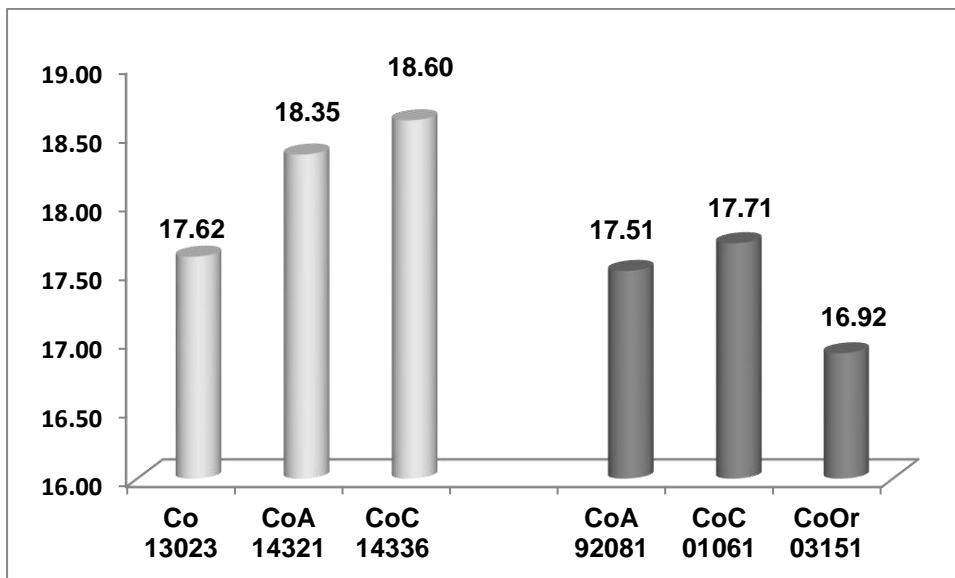


Fig.3.3.4 Mean performance of (2P+1R) of AVT early clones for Sucrose (%)

3.4 ADVANCED VARIETAL TRIAL (EARLY – I PLANT)

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru*
Entries (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 8r x 0.90 m Net : 5.0 m x 6r x 0.90 m
Seed rate	12 buds/ metre
Planting time	February / March, 2018
Crop duration	10 months

* Data of Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

Results of the previous year

The IVT trial was conducted by five centres with four entries. CoV 15356 was the top ranking entry across the locations for CCS yield (15.78 t/ha) and cane yield (117.32 t/ha). Among the standards, CoA 92081 performed well with a CCS yield of 13.57 t/ha and CoOr 03151 for cane yield with 119.72 t/ha. For juice quality (CCS % and sucrose %), CoV 15356 was again the top ranking entry in the zone. Its mean CCS % at 10th month was 13.40 and sucrose % was 18.94. No qualifying entry were identified from the trial as none of them recorded either 10% improvement for yield or 5% improvement for quality over the respective best standards.

Results of the current 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 14356 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. At Vuyyuru centre, low yield due to incidence of wilt disease has been reported. 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	Cuddalore	Naya garh	Nelliku ppam	Vuyyuru**	Mean	Rank
1	CoC 15336	10.12	16.80*	9.21	14.03	3.87	12.54	
2	CoC 15338	10.06	17.22*	11.61	15.80	4.94	13.67	2
3	CoV 15356	12.81	16.06	10.05	17.63	7.22	14.14	1
	Standards							
1	CoA 92081	11.54	15.35	9.90	14.94	5.09	12.93	
2	CoC 01061	13.71	14.30	11.42	11.50	8.33	12.73	
3	CoOr 03151	10.46	15.53	10.61	15.76	4.68	13.09	3
	GM	11.45	15.88	10.47	14.94	5.69		
	SE	0.63	0.41	0.41	0.66	0.24		
	CD (0.05)	1.93	0.88	1.24	2.00	-		
	CV	11.08	3.68	7.85	8.86	8.60		
	Qualifying entries at each location							
	1	-	CoC 15338	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Data of Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

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

Performance of the entries across locations: CoV 15356 (14.14 t/ha) was the best entry for CCS yield followed by CoC 15338 (13.67 t/ha) while the best standard CoOr 03151 recorded 13.09 t/ha. The best entry CoV 14356 recorded 8.02 % improvement over the best standard CoOr 03151 across the locations.

Table 3.4 .2 Cane yield (t/ha) at harvest

S. No.	Entry	Anaka pale	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	CoC 15336	74.11	130.24*	79.08	129.93	36.42	103.34	
2	CoC 15338	82.73	130.69*	95.25	150.76	51.70	114.86	2
3	CoV 15356	86.89	124.56	87.09	155.11	53.63	113.41	
	Standards							
1	CoA 92081	89.19	120.69	84.15	136.01	42.44	107.51	
2	CoC 01061	96.40	115.25	95.68	106.78	70.76	103.53	
3	CoOr 03151	87.56	122.52	91.07	160.02	45.29	115.29	1
	GM	86.15	123.99	88.72	139.76	50.04		
	SE	3.43	3.21	3.17	6.07	2.16		
	CD (0.05)	10.43	6.85	9.55	18.30	6.51		
	CV	7.96	3.65	7.15	8.70	8.60		
Qualifying entries at each location								
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Data of Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

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 115.29 t/ha. None of the entries was found to be superior for cane yield over the best standard CoOr 03151 across locations.

Table 3.4.3 CCS % at 10th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	CoC 15336	13.66	12.98*	11.64	10.81	10.60	12.27	
2	CoC 15338	12.17	13.02*	12.19*	10.48	9.56	11.97	
3	CoV 15356	14.75	12.82	11.52	11.37	13.46	12.62	1
	Standards							
1	CoA 92081	12.89	12.65	11.70	10.97	11.98	12.05	
2	CoC 01061	14.22	12.41	11.94	10.77	11.78	12.34	2
3	CoOr 03151	11.94	12.68	11.65	9.84	10.31	11.53	
	GM	13.27	12.76	11.72	10.70	11.28		
	SE	0.42	0.08	0.07	0.14	0.12		
	CD (0.05)	1.29	0.16	0.22	0.43	0.37		
	CV	6.39	0.84	1.21	2.65	2.20		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Data of Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

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

Performance of the entries across locations: CoV 15356 was the best entry across locations with CCS % of 12.62 while the best standard CoC 01061 recorded 12.34 %. No entry qualified for CCS% over the best standard across locations.

Table 3.4.4 Sucrose % at 10th month

S. No.	Entry	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru**	Mean	Rank
1	CoC 15336	19.52	18.70*	16.85	15.55	15.04	17.66	
2	CoC 15338	17.67	18.69*	17.52*	15.11	13.93	17.25	
3	CoV 15356	20.74	18.32	16.82	16.26	18.30	18.04	1
	Standards							
1	CoA 92081	18.65	18.25	16.92	15.77	16.53	17.40	
2	CoC 01061	20.06	18.15	17.22	15.49	16.70	17.73	2
3	CoOr 03151	17.23	18.33	16.81	14.34	15.00	16.68	
	GM	18.98	18.41	17.02	15.42	15.92		
	SE	0.54	0.07	0.08	0.18	0.16		
	CD (0.05)	1.63	0.15	0.23	0.55	0.49		
	CV	5.66	0.52	0.89	2.37	2.00		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Data of Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

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

Performance of the entries across locations: CoV 15356 was the best entry across locations with sucrose % of 18.04 while the best standard CoC 01061 recorded 17.73 %. No entry qualified for sucrose % over the best standard across locations.

Table 3.4.5 Brix % at 10th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	21.55	21.00	19.09	17.39	17.18	19.76
2	CoC 15338	20.16	20.82	19.59	17.00	16.88	19.39
3	CoV 15356	22.06	20.23	19.41	17.98	19.20	19.92
	Standards						
1	CoA 92081	21.14	20.56	19.14	17.59	18.00	19.61
2	CoC 01061	21.53	21.05	19.36	17.36	19.18	19.83
3	CoOr 03151	19.40	20.74	18.92	16.48	18.13	18.89
	GM	20.97	20.73	19.25	17.29	18.09	
	SE	0.47	0.08	0.24	0.19	0.19	
	CD (0.05)	1.43	0.16	NS	0.56	0.57	
	CV	4.48	0.52	2.16	2.15	2.10	

Table 3.4.6 Purity % at 10th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	90.58	89.06	88.26	89.42	86.93	89.33
2	CoC 15338	87.63	89.78	89.49	88.88	82.51	88.95
3	CoV 15356	93.98	90.57	86.69	90.48	95.33	90.43
	Standards						
1	CoA 92081	88.18	88.77	88.41	89.62	92.23	88.75
2	CoC 01061	93.20	86.24	88.95	89.26	87.07	89.41
3	CoOr 03151	88.80	88.39	88.85	87.02	82.88	88.27
	GM	90.40	88.8	88.44	89.11	87.82	
	SE	0.99	0.49	0.93	0.51	0.37	
	CD (0.05)	3.02	1.05	NS	1.52	1.12	
	CV	2.20	0.78	2.10	1.14	0.80	

Table 3.4.7 Pol % cane at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	14.81	15.36	-	12.10	-	14.09
2	CoC 15338	13.32	15.31	-	11.77	-	13.47
3	CoV 15356	15.76	15.04	-	12.63	-	14.48
	Standards						
1	CoA 92081	14.04	14.97	-	11.31	-	13.44
2	CoC 01061	14.97	14.97	-	12.46	-	14.13
3	CoOr 03151	13.00	15.07	-	11.50	-	13.19
	GM	14.32	15.12	-	11.82	-	
	SE	0.41	0.06	-	0.15	-	
	CD (0.05)	1.25	0.12	-	0.45	-	
	CV	5.75	0.52	-	2.55	-	

Table 3.4.8 Extraction % at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	51.49	55.28	52.50	50.41	-	52.42
2	CoC 15338	48.65	54.20	51.39	54.87	-	52.28
3	CoV 15356	53.24	55.48	50.74	51.53	-	52.75
	Standards						
1	CoA 92081	52.68	53.74	51.63	53.42	-	52.87
2	CoC 01061	49.67	54.48	51.69	53.98	-	52.46
3	CoOr 03151	51.76	52.46	52.34	55.22	-	52.95
	GM	51.25	54.27	51.71	53.23	-	
	SE	1.30	1.69	0.59	1.40	-	
	CD (0.05)	NS	3.60	NS	4.24	-	
	CV	5.06	4.41	2.30	5.28	-	

Table 3.4.9 Fiber % at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	14.13	12.85	14.05	12.20	-	13.31
2	CoC 15338	14.60	13.09	13.94	12.10	-	13.43
3	CoV 15356	13.97	12.90	12.93	12.40	-	13.05
	Standards						
1	CoA 92081	14.71	12.98	13.23	12.24	-	13.29
2	CoC 01061	15.37	12.55	13.88	12.50	-	13.58
3	CoOr 03151	14.52	12.80	13.39	12.50	-	13.30
	GM	14.55	12.86	13.57	12.32	-	
	SE	0.12	0.15	0.18	0.15	-	
	CD (0.05)	0.35	0.32	0.53	0.46	-	
	CV	1.59	1.65	2.60	2.50	-	

Table 3.4.10 NMC ('000/ha) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	64.45	125.20	92.72	103.97	30.32	96.59
2	CoC 15338	63.15	120.78	105.56	107.97	41.28	99.37
3	CoV 15356	62.97	92.22	97.24	106.05	42.52	89.62
	Standards						
1	CoA 92081	73.71	89.17	92.90	106.84	33.64	90.66
2	CoC 01061	105.93	120.85	100.21	103.44	53.94	107.61
3	CoOr 03151	67.87	101.98	100.17	105.36	34.57	93.85
	GM	73.01	108.37	98.13	105.60	39.38	
	SE	3.14	3.74	2.62	4.17	2.75	
	CD (0.05)	9.55	7.98	7.89	12.56	8.28	
	CV	8.60	4.88	5.34	7.89	13.90	

Table 3.4.11 Stalk length (cm)

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	242.00	250.0	266.5	246.5	125.58	251.25
2	CoC 15338	226.03	247.0	239.3	269.0	166.68	245.33
3	CoV 15356	221.45	234.0	277.5	258.5	179.15	247.86
	Standards						
1	CoA 92081	227.90	223.0	276.3	242.8	172.10	242.49
2	CoC 01061	218.08	214.0	265.3	242.3	162.10	234.91
3	CoOr 03151	267.98	229.0	272.5	281.2	165.43	262.66
	GM	233.91	233.0	265.5	256.7	161.84	
	SE	6.45	4.41	6.35	3.64	3.22	
	CD (0.05)	19.61	9.41	19.14	10.99	9.72	
	CV	5.51	2.68	4.78	2.84	4.00	

Table 3.4.12 Stalk diameter (cm)

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	2.80	3.01	2.73	2.48	2.52	2.76
2	CoC 15338	2.78	3.10	2.78	2.72	2.82	2.85
3	CoV 15356	3.04	2.90	2.50	2.86	2.61	2.83
	Standards						
1	CoA 92081	2.51	2.79	2.53	2.69	2.68	2.63
2	CoC 01061	2.25	2.53	2.50	2.05	2.27	2.33
3	CoOr 03151	2.65	2.70	2.70	3.05	2.56	2.78
	GM	2.67	2.84	2.62	2.64	2.58	
	SE	0.06	0.05	0.05	0.35	0.06	
	CD (0.05)	0.19	0.12	0.15	0.11	0.19	
	CV	4.72	2.72	3.79	2.67	5.00	

Table 3.4.13 Single cane weight (kg)

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	1.15	1.31	1.32	1.16	0.68	1.24
2	CoC 15338	1.31	1.36	1.38	1.77	0.85	1.46
3	CoV 15356	1.39	1.29	1.35	2.09	0.94	1.53
	Standards						
1	CoA 92081	1.21	1.23	1.43	2.13	0.84	1.50
2	CoC 01061	0.91	1.09	1.06	1.09	0.72	1.04
3	CoOr 03151	1.29	1.19	1.34	2.19	0.75	1.50
	GM	1.21	1.24	1.31	1.73	0.79	
	SE	0.03	0.04	0.05	0.49	0.02	
	CD (0.05)	0.10	0.08	0.16	0.15	0.06	
	CV	5.43	4.02	8.00	5.58	4.90	

Table 3.4.14 CCS % at 8 months

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	10.39	11.26	9.58	10.13	9.09	10.34
2	CoC 15338	9.70	11.15	10.02	9.71	7.62	10.15
3	CoV 15356	10.81	11.14	9.60	11.38	11.28	10.73
	Standards						
1	CoA 92081	10.59	10.97	9.48	9.87	9.59	10.23
2	CoC 01061	10.02	10.59	9.82	10.43	10.06	10.22
3	CoOr 03151	9.41	10.63	9.71	8.97	8.76	9.68
	GM	10.15	10.96	9.70	10.08	9.40	
	SE	0.16	0.17	0.16	0.14	0.15	
	CD (0.05)	0.47	0.35	NS	0.42	0.45	
	CV	3.06	2.15	3.25	2.76	3.20	

Table 3.4.15 Sucrose % at 8 months

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	15.35	16.69	14.05	14.76	13.00	15.21
2	CoC 15338	14.59	16.66	14.68	14.21	11.44	15.04
3	CoV 15356	15.94	16.42	14.25	16.21	15.74	15.71
	Standards						
1	CoA 92081	15.70	16.12	14.08	14.45	13.76	15.09
2	CoC 01061	15.00	15.84	14.5	15.09	14.48	15.11
3	CoOr 03151	14.11	15.81	14.18	13.33	12.81	14.36
	GM	15.12	16.26	14.29	14.67	13.54	
	SE	0.17	0.19	0.17	0.18	0.18	
	CD (0.05)	0.59	0.40	NS	0.56	0.54	
	CV	2.26	1.63	2.39	2.50	2.60	

Table 3.4.16 Brix % at 8 months

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	18.14	19.86	16.36	16.96	15.20	17.83
2	CoC 15338	17.84	20.11	17.03	16.46	14.65	17.86
3	CoV 15356	18.78	19.32	16.98	17.78	17.48	18.22
	Standards						
1	CoA 92081	18.71	18.84	16.80	16.78	16.23	17.78
2	CoC 01061	18.18	19.17	17.09	17.10	17.18	17.89
3	CoOr 03151	17.15	18.96	16.37	15.92	15.63	17.10
	GM	18.13	19.38	16.77	16.83	16.06	
	SE	0.12	0.14	0.13	0.18	0.14	
	CD (0.05)	0.35	0.30	0.38	0.53	0.42	
	CV	1.27	1.04	1.50	2.12	1.70	

Table 3.4.17 Purity % at 8 months

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoC 15336	84.60	84.01	85.91	87.05	85.52	85.39
2	CoC 15338	81.80	82.83	86.16	86.32	78.10	84.28
3	CoV 15356	84.90	85.00	83.91	91.19	90.04	86.25
	Standards						
1	CoA 92081	83.95	85.56	83.83	86.14	84.80	84.87
2	CoC 01061	82.50	82.63	84.79	88.22	84.33	84.54
3	CoOr 03151	82.30	83.42	86.60	83.70	81.96	84.01
	GM	83.34	83.91	85.20	87.10	84.13	
	SE	0.75	0.72	0.92	0.36	0.59	
	CD (0.05)	2.28	1.53	NS	1.08	1.78	
	CV	1.80	1.21	2.15	0.82	1.40	

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	CoC 15336	73.98	130.56	101.56	140.51	39.20	111.65
2	CoC 15338	68.61	127.68	114.02	152.69	48.38	115.75
3	CoV 15356	71.94	97.70	103.84	151.73	50.46	106.30
	Standards						
1	CoA 92081	85.55	94.70	98.29	145.38	44.68	105.98
2	CoC 01061	125.84	130.52	107.63	146.68	62.89	127.67
3	CoOr 03151	77.31	107.33	109.32	144.59	46.14	109.64
	GM	83.87	114.75	105.78	146.93	48.62	
	SE	3.90	3.84	3.23	6.83	3.20	
	CD (0.05)	11.86	8.19	9.73	20.59	9.65	
	CV	9.30	4.74	6.10	9.30	13.20	

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	CoC 15336	84.55	139.01	105.48	181.40	61.27	127.61
2	CoC 15338	70.57	135.30	120.89	181.31	72.53	127.02
3	CoV 15356	89.41	117.60	111.04	182.87	72.99	125.23
	Standards						
1	CoA 92081	95.23	106.59	109.67	177.65	67.44	122.29
2	CoC 01061	130.90	138.28	116.54	185.57	90.51	142.82
3	CoOr 03151	86.02	129.77	118.18	176.87	74.85	127.71
	GM	92.78	127.76	113.63	180.94	73.26	
	SE	4.49	3.03	3.40	6.79	2.51	
	CD (0.05)	13.65	6.46	10.25	20.48	7.56	
	CV	9.68	3.35	5.99	7.51	6.80	

Table 3.4.20 Germination % at 30 days

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoC 15336	56.67	46.55	50.35	89.15	30.15	60.68
2	CoC 15338	64.79	45.73	43.78	81.25	35.53	58.89
3	CoV 15356	64.38	42.10	49.50	85.16	35.59	60.29
	Standards						
1	CoA 92081	62.71	54.76	51.10	87.76	32.81	64.08
2	CoC 01061	62.29	50.14	55.48	88.8	36.86	64.18
3	CoOr 03151	66.88	50.46	51.73	84.72	34.73	63.45
	GM	62.95	48.29	50.27	86.14	34.28	
	SE	2.264	2.32	1.87	3.3	1.80	
	CD (0.05)	NS	4.94	5.63	9.94	NS	
	CV	8.338	6.79	7.43	7.66	10.50	

Table 3.4.21 Assessment of performance of entries by monitoring team

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

3.5 INITIAL VARIETAL TRIAL (EARLY)

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (4)	1. CoA 16321 (81 V 48 GC) 2. CoC 16336 (Co 85002 x ISH 229) 3. CoC 16337 (Co 85002 GC) 4. CoV 16356(C 79218 x CoT 8201)
Standards (3)	CoA 92081 , CoC 01061 and CoOr 03151
Design	Randomized Block Design
Replications	Three
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/ metre
Planting time	February / March 2018
Crop duration	10 months

Results of the previous year

The entries were under multiplication in the respective centres.

Results of the current year

CoV 16356 was the top ranking entry across the locations for CCS yield (15.75 t/ha) that recorded 15.89 % improvement over the best standard CoOr 03151 (13.59 t/ha) across the locations. For cane yield, CoV 16356 was the best in the trial which recorded 123.29 t/ha followed by CoC 16337 (123.13 t/ha) while the best standard CoOr 03151 recorded 121.17 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 % while the best standard CoC 01061 recorded CCS % 12.59 % and 17.75 % sucrose. No entry recorded more than 5 % improvement over the best standard CoC 01061 for CCS % and sucrose % across the locations. The entry CoV 16356 is 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 across 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	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru	Mean	Rank
1	CoA 16321	13.51	15.80	10.44	18.85	13.33	14.39	2
2	CoC 16336	14.08	17.78*	11.01	14.76	10.14	13.55	
3	CoC 16337	11.57	16.43*	11.74*	17.92	13.12	14.16	3
4	CoV 16356	14.84	16.48*	10.43	19.21	17.80*	15.75	1
	Standards							
1	CoA 92081	15.07	14.40	10.32	14.24	13.58	13.52	
2	CoC 01061	15.26	14.91	9.52	14.91	10.57	13.03	
3	CoOr 03151	14.85	15.22	10.38	17.58	9.91	13.59	4
	GM	14.17	15.86	10.55	16.79	12.64		
	SE	0.61	0.34	0.35	0.84	0.96		
	CD (0.05)	1.90	1.04	1.08	2.59	2.95		
	CV	7.46	3.68	5.76	8.68	13.10		
	Qualifying entries at each location							
	1	-	CoC 16336	CoC 16337	-	CoV 16356		
	2	-	-		-	-		
	3	-	-		-	-		

*Significant over the best standard

No. of locations where an entry recorded 10 % improvement over the best standard: CoC 16336 (1), CoC 16337 (1) and CoV 16356 (1)

Performance of the entries across locations: The entry CoV 16356 (15.75 t/ha) was the best in the trial for CCS yield followed by CoA 16321 (14.39 t/ha) and CoC 16337 (14.16 t/ha) while the best standard CoOr 03151 recorded 13.59 t/ha. The best entry CoV 16356 recorded 15.89 % improvement over the best standard CoOr 03151 across the locations.

Table 3.5.2 Cane yield (t/ha) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	CoA 16321	106.46	125.14	89.81	163.21	109.11	118.75	
2	CoC 16336	103.39	131.80*	98.88	125.78	84.72	108.91	
3	CoC 16337	110.24	130.29*	98.49	163.21	113.43	123.13	2
4	CoV 16356	117.59	130.16*	90.81	159.35	118.52	123.29	1
	Standards							
1	CoA 92081	113.98	118.00	91.84	122.70	104.78	110.26	
2	CoC 01061	117.54	119.46	82.25	125.01	100.77	109.01	
3	CoOr 03151	126.56	121.92	91.22	167.84	98.30	121.17	3
	GM	113.68	125.25	91.90	146.72	104.23		
	SE	5.25	2.89	2.52	7.62	7.42		
	CD (0.05)	NS	6.29	7.77	23.46	NS		
	CV	8.01	2.82	4.75	9.00	12.30		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

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

Performance of the entries across locations: CoV 16356 was the best entry which recorded the highest cane yield of 123.29 t/ha followed by CoC 16337(123.13 t/ha) while the best standard CoOr 03151 recorded 121.17 t/ha. None of the entries recorded more than 10% improvement over the best standard CoOr 03151 across locations.

Table 3.5.3 CCS % at 10th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean	Rank
1	CoA 16321	12.76	12.62	11.62	11.55	12.18	12.15	
2	CoC 16336	13.62	13.49*	11.14	11.75	11.97	12.39	
3	CoC 16337	10.52	12.61	11.92*	10.98	11.57	11.52	
4	CoV 16356	12.63	12.66	11.47	12.06	15.00*	12.76	1
	Standards							
1	CoA 92081	13.24	12.21	11.24	11.61	10.08	11.68	
2	CoC 01061	13.01	12.48	11.57	11.92	13.49	12.49	2
3	CoOr 03151	11.76	12.48	11.38	10.48	10.09	11.24	
	GM	12.51	12.65	11.48	11.47	12.05		
	SE	0.49	0.18	0.10	0.14	0.10		
	CD (0.05)	1.52	0.38	0.31	0.44	0.32		
	CV	6.75	1.71	1.50	2.15	1.50		
	Qualifying entries at each location							
	1	-	CoC 16336	-	-	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) and CoC 16336 (1)

Performance of the entries across locations: The entry CoV 16356 recorded the highest mean CCS % of 12.76 while the best standard CoC 01061 recorded 12.59 %. 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 16321	18.10	17.84	17.20	16.47	17.02	17.33	
2	CoC 16336	19.05	19.19*	16.80	16.94	16.92	17.78	2
3	CoC 16337	15.38	17.76	17.53*	15.75	15.98	16.48	
4	CoV 16356	18.04	17.94	17.07	17.55*	20.38*	18.20	1
	Standards							
1	CoA 92081	18.49	17.37	16.73	16.62	14.38	16.72	
2	CoC 01061	18.30	17.94	17.00	17.03	18.49	17.75	3
3	CoOr 03151	16.60	17.65	16.73	14.89	14.57	16.09	
	GM	17.71	17.96	17.01	16.46	16.82		
	SE	0.61	0.16	0.07	0.17	0.15		
	CD (0.05)	1.89	0.34	0.21	0.51	0.47		
	CV	5.95	1.07	0.69	1.75	1.60		
	Qualifying entries at each location							
	1	-	CoC 16336	-	-	CoV 16356		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

*Significant over the best standard

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

CoC 16336 (1) and CoV 16356 (1)

Performance of the entries across locations: The entry CoV 16356 recorded the highest sucrose content of 18.20 % followed by CoC 16336 (17.78 %) across locations while the best standard CoC 01061 recorded 17.75 %. No entry recorded more than 5 % improvement over the best standard CoC 01061 for sucrose % across the locations.

Table 3.5.5 Brix % at 10th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	19.66	19.22	20.40	18.09	18.97	19.27
2	CoC 16336	20.01	20.99	20.67	19.07	19.33	20.01
3	CoC 16337	17.79	18.98	20.53	17.51	17.33	18.43
4	CoV 16356	19.87	19.43	20.43	20.13	21.33	20.24
	Standards						
1	CoA 92081	19.38	18.99	20.07	18.42	16.73	18.72
2	CoC 01061	19.50	20.05	19.87	18.77	19.77	19.59
3	CoOr 03151	17.85	19.05	19.60	16.21	17.37	18.02
	GM	19.15	19.53	20.22	18.31	18.69	
	SE	0.53	0.12	0.20	0.18	0.25	
	CD (0.05)	1.64	0.26	0.60	0.57	0.76	
	CV	4.75	0.76	1.68	1.75	2.30	

Table 3.5.6 Purity % at 10th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	91.97	92.85	84.31	91.03	89.74	89.98
2	CoC 16336	95.16	91.46	81.30	88.86	87.54	88.86
3	CoC 16337	86.48	93.59	85.40	89.95	93.52	89.79
4	CoV 16356	90.77	92.34	83.55	87.20	95.55	89.88
	Standards						
1	CoA 92081	95.40	91.49	83.42	90.21	85.94	89.29
2	CoC 01061	93.91	89.48	85.57	90.80	93.54	90.66
3	CoOr 03151	92.97	92.68	85.39	91.87	83.89	89.36
	GM	92.38	91.98	84.14	89.99	89.96	
	SE	1.42	1.13	0.96	0.76	0.61	
	CD (0.05)	4.43	2.47	NS	2.36	1.88	
	CV	2.67	1.51	1.97	1.48	1.20	

Table 3.5.7 Pol % cane at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	13.62	14.62	-	13.58	-	13.94
2	CoC 16336	14.13	15.68	-	13.97	-	14.59
3	CoC 16337	11.56	14.62	-	13.02	-	13.07
4	CoV 16356	13.66	14.72	-	14.53	-	14.30
	Standards						
1	CoA 92081	13.81	14.75	-	13.73	-	14.10
2	CoC 01061	13.53	14.24	-	14.04	-	13.94
3	CoOr 03151	12.44	14.47	-	12.29	-	13.07
	GM	13.25	14.73	-	13.59	-	
	SE	0.45	0.13	-	0.13	-	
	CD (0.05)	1.40	0.29	-	0.40	-	
	CV	5.89	1.09	-	1.66	-	

Table 3.5.8 Extraction % at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	48.88	52.71	51.19	51.24	-	51.01
2	CoC 16336	49.49	56.29	52.84	50.60	-	52.31
3	CoC 16337	56.68	58.23	52.97	55.27	-	55.79
4	CoV 16356	48.83	52.39	52.66	52.32	-	51.55
	Standards						
1	CoA 92081	53.51	58.65	52.87	56.13	-	55.29
2	CoC 01061	46.47	55.2	51.17	53.36	-	51.55
3	CoOr 03151	49.67	54.63	52.47	53.58	-	52.59
	GM	50.50	55.44	52.31	53.21	-	
	SE	1.46	2.48	0.29	1.33	-	
	CD (0.05)	4.55	5.41	0.91	4.10	-	
	CV	5.01	5.49	0.97	4.33	-	

Table 3.5.9 Fiber % at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	14.72	13.05	13.30	12.55	-	13.41
2	CoC 16336	15.84	13.29	13.43	12.52	-	13.77
3	CoC 16337	14.83	12.70	13.09	12.34	-	13.24
4	CoV 16356	14.28	12.97	13.01	12.20	-	13.12
	Standards						
1	CoA 92081	15.31	13.04	13.80	12.39	-	13.64
2	CoC 01061	16.06	12.81	14.17	12.57	-	13.90
3	CoOr 03151	15.05	13.02	13.73	12.45	-	13.56
	GM	15.16	12.98	13.51	12.43	-	
	SE	0.17	0.15	0.09	0.24	-	
	CD (0.05)	0.52	0.32	0.28	0.75	-	
	CV	1.90	1.39	1.15	3.37	-	

Table 3.5.10 NMC ('000/ha) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	83.85	119.86	109.63	116.20	67.59	99.43
2	CoC 16336	89.24	121.40	121.43	96.06	56.79	96.98
3	CoC 16337	84.03	136.13	121.26	94.44	80.71	103.31
4	CoV 16356	82.81	126.20	114.8	98.60	73.61	99.20
	Standards						
1	CoA 92081	93.40	116.43	116.46	96.29	74.23	99.36
2	CoC 01061	122.92	115.05	113.79	96.17	84.57	106.50
3	CoOr 03151	92.36	116.53	105.24	93.63	60.49	93.65
	GM	92.66	121.66	114.66	98.77	71.14	
	SE	2.64	3.17	3.22	6.86	3.87	
	CD (0.05)	8.21	6.91	9.93	21.13	12.04	
	CV	4.93	3.19	4.87	12.03	9.50	

Table 3.5.11 Stalk length (cm)

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	258.90	232.00	244.00	285.00	242.90	252.56
2	CoC 16336	257.27	264.00	255.00	220.67	234.90	246.37
3	CoC 16337	291.27	245.00	240.00	251.33	219.90	249.50
4	CoV 16356	256.70	256.00	248.67	287.93	271.10	264.08
	Standards						
1	CoA 92081	244.73	225.00	253.33	290.00	255.00	253.61
2	CoC 01061	278.03	224.00	237.33	267.67	254.70	252.35
3	CoOr 03151	281.43	230.00	259.00	302.07	294.90	273.48
	GM	266.90	239.00	247.90	272.10	253.30	
	SE	6.40	5.85	3.82	4.33	10.41	
	CD (0.05)	19.95	12.74	11.76	13.35	32.08	
	CV	4.16	2.99	2.66	2.76	7.10	

Table 3.5.12 Stalk diameter (cm)

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	2.56	2.87	2.99	2.75	2.92	2.82
2	CoC 16336	2.71	3.24	2.35	2.25	2.47	2.60
3	CoC 16337	2.72	3.11	2.93	2.89	2.86	2.90
4	CoV 16356	2.65	3.05	2.94	2.95	3.10	2.94
	Standards						
1	CoA 92081	2.62	2.75	3.04	2.79	2.59	2.76
2	CoC 01061	1.69	2.64	3.16	2.21	2.37	2.41
3	CoOr 03151	2.76	2.93	2.57	3.09	3.09	2.89
	GM	2.53	2.94	2.85	2.70	2.77	
	SE	0.08	0.07	0.08	0.44	0.10	
	CD (0.05)	0.23	0.15	0.27	0.19	0.29	
	CV	5.13	2.86	5.36	2.86	5.90	

Table 3.5.13 Single cane weight (kg)

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	1.26	1.27	1.42	2.00	1.32	1.45
2	CoC 16336	1.16	1.45	1.52	0.80	1.03	1.19
3	CoC 16337	1.31	1.28	1.28	1.68	1.22	1.35
4	CoV 16356	1.35	1.38	1.41	1.48	1.47	1.42
	Standards						
1	CoA 92081	1.22	1.29	1.34	1.64	0.98	1.29
2	CoC 01061	0.96	1.11	1.27	1.18	0.88	1.08
3	CoOr 03151	1.37	1.29	1.61	2.00	0.98	1.45
	GM	1.23	1.30	1.41	1.54	1.13	
	SE	0.03	0.05	0.05	0.60	0.06	
	CD (0.05)	0.09	0.11	1.14	0.18	0.17	
	CV	4.22	4.74	5.67	6.65	8.40	

Table 3.5.14 CCS % at 8 months

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	10.05	11.34	11.47	9.11	9.76	10.35
2	CoC 16336	10.04	11.92	10.82	10.04	9.00	10.36
3	CoC 16337	8.26	11.18	11.85	8.32	9.45	9.81
4	CoV 16356	9.75	11.38	11.26	10.46	12.32	11.03
	Standards						
1	CoA 92081	10.71	11.14	10.49	9.64	9.12	10.22
2	CoC 01061	10.38	11.22	10.96	10.52	10.82	10.78
3	CoOr 03151	9.26	11.44	11.28	9.59	8.35	9.98
	GM	9.78	11.38	11.16	9.67	9.83	
	SE	0.28	0.11	0.15	0.13	0.22	
	CD (0.05)	0.86	0.24	0.46	0.40	0.69	
	CV	4.88	1.18	2.32	2.33	3.90	

Table 3.5.15 Sucrose % at 8 months

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	14.86	16.28	16.83	13.69	13.99	15.13
2	CoC 16336	14.94	17.11	16.40	14.85	13.50	15.36
3	CoC 16337	12.58	15.99	17.27	12.46	13.47	14.35
4	CoV 16356	14.59	16.35	16.73	15.44	16.99	16.02
	Standards						
1	CoA 92081	15.69	15.82	15.87	14.19	13.14	14.94
2	CoC 01061	15.36	16.02	16.30	15.27	15.23	15.64
3	CoOr 03151	13.88	16.32	16.50	14.03	12.17	14.58
	GM	14.56	16.27	16.56	14.28	14.07	
	SE	0.29	0.11	0.09	0.16	0.28	
	CD (0.05)	0.92	0.24	0.29	0.5	0.86	
	CV	3.50	0.84	0.98	1.98	3.50	

Table 3.5.16 Brix % at 8 months

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	17.61	18.12	19.63	16.70	16.43	17.70
2	CoC 16336	17.91	19.05	20.33	17.59	17.23	18.42
3	CoC 16337	15.77	17.68	19.83	15.12	15.67	16.81
4	CoV 16356	17.65	18.26	20.00	18.22	18.40	18.51
	Standards						
1	CoA 92081	18.25	17.22	19.60	16.65	15.60	17.46
2	CoC 01061	18.22	17.65	19.07	17.44	17.23	17.92
3	CoOr 03151	16.88	17.94	19.10	16.27	14.77	16.99
	GM	17.47	17.99	19.65	16.85	16.48	
	SE	0.18	0.20	0.31	0.15	0.28	
	CD (0.05)	0.56	0.44	NS	0.45	0.85	
	CV	1.77	1.38	2.78	1.51	2.90	

Table 3.5.17 Purity % at 8 months

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	84.39	89.88	85.61	81.96	85.11	85.39
2	CoC 16336	83.39	89.82	80.69	84.43	78.31	83.33
3	CoC 16337	79.80	90.43	87.08	82.41	85.99	85.14
4	CoV 16356	82.65	89.53	83.68	84.75	92.33	86.59
	Standards						
1	CoA 92081	86.00	91.87	81.03	85.21	84.23	85.67
2	CoC 01061	84.31	90.78	83.64	87.59	88.39	86.94
3	CoOr 03151	82.22	90.97	86.44	86.25	82.43	85.66
	GM	83.25	90.47	84.02	84.65	85.26	
	SE	1.42	1.00	1.49	0.50	0.74	
	CD (0.05)	NS	2.17	NS	1.53	2.28	
	CV	2.95	1.35	3.06	1.01	1.50	

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

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	81.60	123.67	114.75	159.02	73.92	110.59
2	CoC 16336	102.26	126.37	126.58	134.02	64.35	110.72
3	CoC 16337	91.67	146.39	131.19	155.66	85.65	122.11
4	CoV 16356	98.78	132.63	121.10	153.23	79.78	117.10
	Standards						
1	CoA 92081	110.94	121.88	122.48	144.32	81.33	116.19
2	CoC 01061	140.28	121.95	120.44	142.47	98.15	124.66
3	CoOr 03151	113.89	123.12	115.14	148.72	76.24	115.42
	GM	105.63	128.00	121.67	148.20	79.92	
	SE	5.18	2.62	2.95	7.98	6.27	
	CD (0.05)	16.13	5.70	9.09	24.59	NS	
	CV	8.49	2.50	4.20	9.33	13.60	

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

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru	Mean
1	CoA 16321	173.61	128.47	120.74	182.24	130.25	147.06
2	CoC 16336	174.69	138.75	128.38	184.79	111.27	147.58
3	CoC 16337	183.02	151.04	140.47	186.06	124.69	157.06
4	CoV 16356	183.18	141.07	127.26	183.74	129.17	152.88
	Standards						
1	CoA 92081	182.56	130.08	126.25	174.46	125.46	147.76
2	CoC 01061	179.17	130.04	124.38	187.11	141.67	152.47
3	CoOr 03151	176.39	131.13	118.38	176.67	117.59	144.03
	GM	178.95	135.80	126.55	182.15	125.73	
	SE	4.08	3.57	3.34	7.62	10.18	
	CD (0.05)	NS	7.78	12.30	23.48	NS	
	CV	3.95	3.22	4.57	7.25	14.00	

Table 3.5.20 Germination % at 30 days

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16321	61.11	49.74	52.49	84.84	70.72	63.78
2	CoC 16336	60.37	46.57	54.62	85.30	50.46	59.46
3	CoC 16337	57.04	58.34	50.73	80.56	57.87	60.91
4	CoV 16356	75.93	68.15	66.12	86.34	59.72	71.25
	Standards						
1	CoA 92081	70.00	66.20	49.71	89.93	52.89	65.75
2	CoC 01061	64.44	73.73	50.70	85.07	52.43	65.27
3	CoOr 03151	66.30	64.52	55.61	85.07	58.10	65.92
	GM	65.03	61.04	54.28	85.30	57.46	
	SE	4.83	1.97	2.85	3.71	3.51	
	CD (0.05)	NS	4.30	8.77	11.44	10.81	
	CV	12.87	3.96	9.08	7.54	10.60	

Table 3.5.21 Assessment of performance of entries by monitoring team

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

3.6 ADVANCED VARIETAL TRIAL (MIDLATE – II PLANT)

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru*
Entries (6)	Co 13028, Co 13029, Co 13031, CoA 14323, CoC 14337 and PI 14377
Standards (3)	CoV 92102, Co 86249 and Co 06030
Design	Randomized Block Design
Replications	Three
Plot size	Gross : 6.0 m x 8r x 0.90 m Net : 5.0 m x 6r x 0.90 m
Seed rate	12 buds/ metre
Planting time	February / March, 2018
Crop duration	12 months

* Data of Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

Results of the previous year

The entry CoA 14323 was the best performer across locations combining yield and quality. It recorded cane yield (124.56 t/ha), CCS yield (16.37 t/ha) and mean sucrose % of 18.51 at 12th month. The best standard CoV 92102 recorded 109.39 t/ha, 14.21 t/ha and 18.27% for these traits respectively. However, the entry PI 14377 recorded the highest CCS % of 13.08 at 12th month. No qualifying entries were identified from the trial as none of them recorded either 10% improvement for yield or 5% improvement for quality over the respective best standards.

Results of the current year

The entry PI 14377 was the best performer that recorded numerically superior CCS yield (15.93 t/ha) and cane yield (124.20 t/ha) over the best standard CoV 92102 (15.60 t/ha, 121.50 t/ha) across the locations. No entry recorded more than 10 % improvement for CCS yield and cane yield over the best standard CoV 92102 across locations. For juice quality, the standard Co 06030 recorded the highest mean CCS % of 12.99 and sucrose content of 18.70 % across locations. None of the entries registered either 10% improvement for cane yield or 5 % improvement for sucrose % over the respective best standards. No qualifying entry was identified 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	Cudda lore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	Co 13028	9.95	16.07	10.49	17.83	8.19	13.59	
2	Co 13029	8.63	16.04	10.57	15.96	13.35	12.80	
3	Co 13031	10.84	15.58	11.07	18.54	4.66	14.01	
4	CoA 14323	12.92	16.98	11.76	18.94	14.45	15.15	
5	CoC 14337	12.31	17.53*	11.07	17.91	13.45	14.71	
6	PI 14377	15.48	15.19	12.22	20.84	16.09	15.93	1
	Standards							
1	CoV 92102	15.44	14.44	12.37	20.13	7.19	15.60	2
2	Co 86249	12.04	12.93	10.80	15.24	7.42	12.75	
3	Co 06030	11.45	15.98	11.80	21.17	-	15.10	
	GM	12.12	15.64	11.35	18.5	10.60		
	SE	0.40	0.51	0.40	1.09	-		
	CD (0.05)	1.20	1.08	1.20	3.26	-		
	CV	5.65	3.98	6.13	10.19	-		
	Qualifying entries at each location							
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

* Significant over the best standard

** Data of Vuyyuru centre not included for mean due to low cane yield recorded by the standards.

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

Performance of the entries across locations: PI 14377 (15.93 t/ha) was the best entry in this trial for CCS yield. The best standard CoV 92102 recorded 15.60 t/ha across the locations. None of the entries recorded more than 10 % improvement over the best standard for CCS yield across locations.

Table 3.6.2 Cane yield (t/ha) at harvest

S. No.	Entry	Anaka pale	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	Co 13028	73.64	124.69	90.81	150.09	68.26	109.81	
2	Co 13029	75.49	124.61	87.76	153.18	131.94	110.26	
3	Co 13031	81.85	122.92	94.89	140.44	38.89	110.03	
4	CoA 14323	97.84	131.89*	98.58	139.67	98.05	117.00	
5	CoC 14337	93.83	134.94*	91.32	142.37	99.38	115.62	
6	PI 14377	119.88	121.21	101.37	154.33	120.52	124.20	1
	Standards							
1	CoV 92102	114.81	115.66	103.89	151.63	52.26	121.50	2
2	Co 86249	91.36	105.96	91.24	118.45	61.01	101.75	
3	Co 06030	84.26	124.48	96.38	159.74	19.24	116.22	
	GM	92.55	122.93	95.14	145.54	76.62		
	SE	2.56	3.49	3.34	7.89	-		
	CD (0.05)	7.75	7.39	10.00	23.63	-		
	CV	4.80	3.47	6.08	9.38	-		
	Qualifying entries at each location							
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

* Significant over the best standard

** Data of Vuyyuru centre not included for mean due to low cane yield recorded by the standards.

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

Performance of the entries across locations: PI 14377 (124.20 t/ha) was the best entry in the trial that recorded numerically superior cane yield over the best standard CoV 92102 (121.50 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	Vuyyuru**	Mean	Rank
1	Co 13028	13.51	12.89	11.56	11.88	12.01	12.46	
2	Co 13029	11.41	12.87	12.06	10.42	10.10	11.69	
3	Co 13031	13.24	12.67	11.67	13.21	12.01	12.70	
4	CoA 14323	13.21	12.87	11.93	13.54	14.70*	12.89	
5	CoC 14337	13.12	12.99	12.12	12.57	13.50	12.70	
6	PI 14377	12.91	12.53	12.04	13.48	13.35	12.74	
	Standards							
1	CoV 92102	13.45	12.48	11.90	13.28	13.76	12.78	
2	Co 86249	13.18	12.20	11.84	12.84	12.03	12.52	
3	Co 06030	13.58	12.84	12.25	13.29	-	12.99	1
	GM	13.07	12.70	11.94	12.72	12.68		
	SE	0.26	0.15	0.19	0.21	0.18		
	CD (0.05)	0.78	0.32	NS	0.62	0.56		
	CV	3.42	1.46	2.73	2.81	2.50		
	Qualifying entries at each location							
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

* Significant over the best standard

** Data of Vuyyuru centre not included for mean due to low cane yield recorded by the standards.

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

Performance of the entries across locations: The standard Co 06030 recorded the highest mean CCS % of 12.99 across locations.

Table 3.6.4 Sucrose % at 12th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	Co 13028	19.49	18.80	16.67	17.03	16.92	18.00	
2	Co 13029	16.73	18.71	17.30	15.12	14.57	16.97	
3	Co 13031	19.06	18.62	16.80	18.73	16.61	18.30	
4	CoA 14323	19.25	18.88	17.37	19.13	20.23*	18.66	
5	CoC 14337	18.92	19.04*	17.20	17.93	18.87	18.27	
6	PI 14377	18.59	18.43	17.20	19.10	18.20	18.33	
	Standards							
1	CoV 92102	19.38	18.37	17.33	18.93	18.73	18.50	
2	Co 86249	19.05	17.90	17.20	18.22	16.70	18.09	
3	Co 06030	19.42	18.73	17.67	18.97	-	18.70	1
	GM	18.88	18.61	17.19	18.13	17.60		
	SE	0.30	0.14	0.22	0.28	0.23		
	CD (0.05)	0.91	0.29	NS	0.85	0.71		
	CV	2.77	0.89	2.26	2.69	2.30		
	Qualifying entries at each location							
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

* Significant over the best standard

** Data of Vuyyuru centre not included for mean due to low cane yield recorded by the standards.

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

Performance of the entries across locations: The standard Co 06030 recorded the highest sucrose content of 18.70 % across the locations.

Table 3.6.5 Brix % at 12th month

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	21.95	21.67	18.73	18.91	19.17	20.32
2	Co 13029	19.46	21.43	19.27	17.24	17.33	19.35
3	Co 13031	21.36	21.78	18.83	20.34	18.10	20.58
4	CoA 14323	22.12	22.01	19.93	20.59	21.80	21.16
5	CoC 14337	21.26	22.15	18.80	19.69	21.07	20.48
6	PI 14377	20.84	21.62	19.30	20.67	19.23	20.61
	Standards						
1	CoV 92102	21.78	21.56	19.90	20.76	19.67	21.00
2	Co 86249	21.52	20.84	19.67	19.80	18.33	20.46
3	Co 06030	21.45	21.58	19.87	20.89	-	20.95
	GM	21.30	21.63	19.37	19.87	19.34	
	SE	0.28	0.12	0.36	0.29	0.22	
	CD (0.05)	0.83	0.25	NS	0.88	0.68	
	CV	2.24	0.67	3.18	2.54	2.00	

Table 3.6.6 Purity % at 12th month

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	88.82	86.76	89.06	90.09	88.25	88.68
2	Co 13029	85.94	87.31	89.80	87.68	84.09	87.68
3	Co 13031	89.21	85.50	89.23	92.08	91.77	89.01
4	CoA 14323	87.03	85.80	87.14	92.90	92.78	88.22
5	CoC 14337	88.98	85.97	91.69	91.07	89.91	89.43
6	PI 14377	89.24	85.28	89.70	92.39	94.64	89.15
	Standards						
1	CoV 92102	89.02	85.19	87.11	91.19	91.07	88.13
2	Co 86249	88.53	85.87	87.49	92.05	95.24	88.49
3	Co 06030	90.57	86.78	88.94	90.78	-	89.27
	GM	88.59	86.05	88.91	91.13	90.97	
	SE	1.01	0.88	1.29	0.37	0.45	
	CD (0.05)	NS	1.87	NS	1.11	1.37	
	CV	1.97	1.25	2.51	0.70	0.90	

Table 3.6.7 Pol % cane at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	14.83	15.40	-	13.97	-	14.73
2	Co 13029	12.66	15.36	-	12.39	-	13.47
3	Co 13031	14.51	15.27	-	15.45	-	15.08
4	CoA 14323	14.65	15.45	-	15.82	-	15.31
5	CoC 14337	14.35	15.58	-	14.74	-	14.89
6	PI 14377	14.14	15.13		15.71		14.99
	Standards			-		-	
1	CoV 92102	14.65	15.07	-	15.60	-	15.11
2	Co 86249	14.46	14.73	-	15.03	-	14.74
3	Co 06030	14.91	15.34	-	15.57	-	15.27
	GM	14.35	15.26	-	14.91	-	
	SE	0.23	0.12	-	0.23	-	
	CD (0.05)	0.68	0.24	-	0.69	-	
	CV	2.73	0.92	-	2.67	-	

Table 3.6 .8 Extraction % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	53.67	50.98	52.23	53.26	-	52.54
2	Co 13029	48.56	55.79	53.79	50.59	-	52.18
3	Co 13031	50.43	59.23	52.09	58.98	-	55.18
4	CoA 14323	47.75	53.90	50.64	54.00	-	51.57
5	CoC 14337	49.06	58.25	50.17	53.43	-	52.73
6	PI 14377	51.95	55.22	50.18	50.37		51.93
	Standards					-	
1	CoV 92102	51.93	56.69	53.05	54.89	-	54.14
2	Co 86249	47.80	60.62	53.26	55.69	-	54.34
3	Co 06030	49.47	53.43	51.92	53.82	-	52.16
	GM	50.07	56.01	51.93	53.89	-	
	SE	0.24	2.36	0.74	1.98	-	
	CD (0.05)	0.72	5.00	2.22	5.94	-	
	CV	0.82	5.15	2.47	6.37	-	

Table 3.6.9 Fibre % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	13.92	13.08	12.59	12.97	-	13.14
2	Co 13029	14.28	12.92	12.80	13.06	-	13.27
3	Co 13031	13.84	13.03	13.29	12.52	-	13.17
4	CoA 14323	13.88	13.20	13.94	12.32	-	13.34
5	CoC 14337	14.12	13.18	14.22	12.78	-	13.58
6	PI 14377	13.95	12.94	13.92	12.75		13.39
	Standards					-	
1	CoV 92102	14.39	12.94	12.95	12.58	-	13.22
2	Co 86249	14.10	12.69	13.12	12.53	-	13.11
3	Co 06030	13.20	13.11	13.13	12.95	-	13.10
	GM	13.96	13.01	13.30	12.71	-	
	SE	0.08	0.16	0.36	0.21	-	
	CD (0.05)	0.24	0.34	1.08	0.62	-	
	CV	0.99	1.49	4.71	2.82	-	

Table 3.6.10 NMC ('000/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	79.75	106.17	96.84	110.20	57.41	98.24
2	Co 13029	72.59	98.88	94.47	107.53	98.77	93.37
3	Co 13031	63.46	90.63	105.96	89.55	29.84	87.40
4	CoA 14323	72.47	88.70	104.10	111.59	73.15	94.22
5	CoC 14337	78.77	105.54	102.74	97.79	56.79	96.21
6	PI 14377	96.67	92.56	110.49	111.48	76.85	102.80
	Standards						
1	CoV 92102	95.68	103.79	111.39	110.66	45.78	105.38
2	Co 86249	84.32	113.52	98.05	98.83	38.58	98.68
3	Co 06030	68.52	93.40	102.70	109.85	16.15	93.62
	GM	79.14	99.24	102.97	146.80	54.81	
	SE	2.30	3.54	3.57	6.04	-	
	CD (0.05)	6.96	7.51	10.69	18.11	-	
	CV	5.04	4.37	6.00	7.13	-	

Table 3.6.11 Stalk length (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	211.73	265.00	249.70	269.00	160.60	248.86
2	Co 13029	216.63	259.00	251.30	265.33	220.00	248.07
3	Co 13031	230.10	252.00	261.00	252.00	175.50	248.78
4	CoA 14323	249.93	276.00	276.30	286.00	231.70	272.06
5	CoC 14337	225.33	275.00	264.70	264.00	182.20	257.26
6	PI 14377	237.83	272.00	268.00	257.67	236.90	258.88
	Standards						
1	CoV 92102	252.80	254.00	252.30	282.33	171.10	260.36
2	Co 86249	249.73	234.00	274.70	242.67	186.60	250.28
3	Co 06030	241.33	256.00	280.70	290.00	209.20	267.01
	GM	235.05	260.00	264.30	267.70	197.10	
	SE	5.61	6.92	6.99	9.23	6.35	
	CD (0.05)	16.96	14.67	20.95	27.66	19.03	
	CV	4.13	3.26	4.58	5.97	5.60	

Table 3.6.12 Stalk diameter (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	2.35	2.86	2.73	3.01	2.74	2.74
2	Co 13029	2.65	2.83	2.53	3.08	2.58	2.77
3	Co 13031	2.57	2.71	2.46	3.26	3.22	2.75
4	CoA 14323	2.82	3.05	2.73	3.01	2.94	2.90
5	CoC 14337	2.62	3.02	2.97	3.23	2.97	2.96
6	PI 14377	2.69	2.76	2.43	2.93	2.77	2.70
	Standards						
1	CoV 92102	2.37	2.56	2.43	2.93	2.77	2.57
2	Co 86249	2.25	2.45	2.63	2.50	2.55	2.46
3	Co 06030	2.54	2.73	2.53	3.21	3.28	2.75
	GM	2.54	2.77	2.61	3.01	2.87	
	SE	0.03	0.07	0.05	0.61	0.07	
	CD (0.05)	0.09	0.15	0.14	0.18	0.19	
	CV	2.12	3.13	3.12	3.52	3.90	

Table 3.6.13 Single cane weight (kg)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	0.85	1.29	1.29	1.82	0.99	1.31
2	Co 13029	1.09	1.34	1.10	1.51	1.19	1.26
3	Co 13031	1.20	1.23	1.39	1.50	0.93	1.33
4	CoA 14323	1.40	1.47	1.18	1.59	1.44	1.41
5	CoC 14337	1.12	1.43	1.56	1.95	1.16	1.52
6	PI 14377	1.30	1.30	0.95	1.71	1.24	1.32
	Standards						
1	CoV 92102	1.23	1.20	1.10	1.58	0.90	1.28
2	Co 86249	1.14	1.12	1.17	1.21	0.86	1.16
3	Co 06030	1.21	1.28	1.12	1.96	1.20	1.39
	GM	1.17	1.29	1.21	1.65	1.10	
	SE	0.04	0.06	0.06	0.51	0.04	
	CD (0.05)	0.13	0.13	0.19	0.15	0.13	
	CV	6.15	5.62	9.24	5.38	6.60	

Table 3.6.14 CCS % at 10 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	10.91	10.99	9.62	9.65	9.88	10.29
2	Co 13029	10.47	11.15	9.97	9.81	7.85	10.35
3	Co 13031	11.16	11.10	9.70	12.96	11.62	11.23
4	CoA 14323	11.37	11.07	9.72	12.84	13.47	11.25
5	CoC 14337	10.96	11.09	9.55	12.37	12.86	10.99
6	PI 14377	11.45	11.00	9.60	11.77	10.68	10.96
	Standards						
1	CoV 92102	11.39	10.86	9.68	12.78	12.45	11.18
2	Co 86249	10.96	10.68	9.56	12.20	10.11	10.85
3	Co 06030	11.09	11.11	9.83	12.81	14.80	11.21
	GM	11.08	11.01	9.69	11.91	11.53	
	SE	0.22	0.17	0.16	0.16	0.25	
	CD (0.05)	NS	0.35	NS	0.47	0.75	
	CV	3.45	1.86	2.82	2.27	3.80	

Table 3.6.15 Sucrose % at 10 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	16.11	16.37	14.33	14.15	14.25	15.24
2	Co 13029	15.55	16.46	14.80	14.38	11.91	15.30
3	Co 13031	16.53	16.53	14.27	18.48	15.88	16.45
4	CoA 14323	16.68	16.56	14.47	18.31	18.73	16.51
5	CoC 14337	16.10	16.61	14.20	17.74	18.15	16.16
6	PI 14377	16.62	16.33	14.23	16.97	15.27	16.04
	Standards						
1	CoV 92102	16.64	16.19	14.33	18.21	17.19	16.34
2	Co 86249	15.97	15.82	14.17	17.49	14.75	15.86
3	Co 06030	16.15	16.45	14.63	18.24	20.29	16.37
	GM	16.26	16.37	14.38	17.11	16.27	
	SE	0.25	0.15	0.24	0.20	0.29	
	CD (0.05)	NS	0.32	NS	0.59	0.86	
	CV	2.65	1.14	2.91	2.00	3.00	

Table 3.6.16 Brix % at 10 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	19.01	19.63	17.23	16.47	16.93	18.09
2	Co 13029	18.54	19.44	17.67	16.75	15.50	18.10
3	Co 13031	19.64	19.84	16.70	20.31	16.87	19.12
4	CoA 14323	19.45	20.02	17.33	20.09	20.67	19.22
5	CoC 14337	18.84	20.15	17.00	19.73	20.67	18.93
6	PI 14377	18.95	19.50	16.93	19.08	17.83	18.62
	Standards						
1	CoV 92102	19.22	19.45	17.03	19.97	18.67	18.92
2	Co 86249	18.35	18.79	16.83	19.43	17.93	18.35
3	Co 06030	18.53	19.55	17.57	19.99	21.67	18.91
	GM	18.95	19.60	17.14	19.09	18.53	
	SE	0.17	0.11	0.35	0.16	0.29	
	CD (0.05)	0.51	0.22	NS	0.51	0.87	
	CV	1.54	0.66	3.57	1.53	2.70	

Table 3.6.17 Purity % at 10 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	84.70	83.38	83.23	85.91	84.16	84.31
2	Co 13029	83.86	84.67	83.76	85.85	76.81	84.54
3	Co 13031	84.15	83.35	85.45	90.98	94.30	85.98
4	CoA 14323	85.76	82.69	83.47	91.13	90.79	85.76
5	CoC 14337	85.46	82.40	83.54	89.90	87.85	85.33
6	PI 14377	87.68	83.75	84.07	88.96	85.64	86.12
	Standards						
1	CoV 92102	86.57	83.24	84.17	91.16	92.06	86.29
2	Co 86249	87.03	84.20	84.20	90.02	82.21	86.36
3	Co 06030	87.12	84.17	83.29	91.25	93.66	86.46
	GM	85.81	83.54	83.91	89.46	87.50	
	SE	0.92	1.00	0.71	0.40	1.16	
	CD (0.05)	NS	2.13	NS	1.19	3.47	
	CV	1.85	1.47	1.47	0.77	2.30	

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

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	71.71	113.71	112.61	167.04	71.40	116.27
2	Co 13029	66.77	107.80	104.15	148.13	101.85	106.71
3	Co 13031	53.09	96.55	124.01	143.84	56.69	104.37
4	CoA 14323	53.39	91.43	117.75	155.21	79.94	104.45
5	CoC 14337	74.18	111.28	114.46	154.86	78.19	113.70
6	PI 14377	98.35	97.64	122.57	157.76	85.08	119.08
	Standards						
1	CoV 92102	98.15	110.60	123.58	157.30	53.70	122.41
2	Co 86249	79.53	119.98	112.20	154.28	41.77	116.50
3	Co 06030	58.64	99.53	119.63	154.74	24.18	108.14
	GM	72.65	105.39	116.78	107.60	65.87	
	SE	3.67	4.12	3.54	5.27	-	
	CD (0.05)	11.09	-	10.60	15.81	-	
	CV	8.74	-	5.24	8.49	-	

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

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	144.65	122.75	120.42	177.83	103.50	141.41
2	Co 13029	129.40	117.26	111.47	178.64	121.40	134.19
3	Co 13031	107.87	110.42	132.16	178.06	104.94	132.13
4	CoA 14323	120.48	106.33	126.01	176.78	118.72	132.40
5	CoC 14337	145.83	120.18	122.64	179.34	152.78	142.00
6	PI 14377	160.76	106.43	137.90	177.25	120.47	145.59
	Standards						
1	CoV 92102	133.68	119.55	129.96	173.30	102.57	139.12
2	Co 86249	147.45	126.41	120.48	173.54	103.81	141.97
3	Co 06030	105.44	114.22	129.45	175.04	109.26	131.04
	GM	132.84	115.95	125.61	178.78	115.27	
	SE	5.00	4.13	4.14	7.93	8.69	
	CD (0.05)	15.11	-	12.42	23.78	26.05	
	CV	6.52	-	5.71	7.68	13.10	

Table 3.6.20 Germination % at 30 days

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nelli kuppam	Vuyyuru	Mean
1	Co 13028	51.94	67.36	49.80	85.07	57.10	63.54
2	Co 13029	48.89	37.95	49.33	88.66	52.70	56.21
3	Co 13031	55.55	66.55	52.27	87.73	65.74	65.53
4	CoA 14323	51.94	44.25	46.97	91.32	52.54	58.62
5	CoC 14337	56.94	64.85	40.83	89.12	76.70	62.94
6	PI 14377	55.83	38.12	54.47	85.30	59.57	58.43
	Standards						
1	CoV 92102	53.33	55.76	52.43	87.85	53.16	62.34
2	Co 86249	55.83	48.12	52.30	81.13	52.31	59.35
3	Co 06030	51.39	52.23	50.97	82.18	68.06	59.19
	GM	53.52	52.80	50.71	86.26	59.76	
	SE	2.98	2.37	3.04	3.65	3.82	
	CD (0.05)	NS	5.02	9.11	10.95	11.44	
	CV	9.63	5.49	10.38	7.34	11.10	

Table 3.6.21 Assessment of performance of entries by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
Co 13028	On par	On par	On par	On par	Better
Co 13029	On par	Better	On par	Better	On par
Co 13031	Better	Better	Poor	On par	On par
CoA 14323	On par	Better	On par	On par	On par
CoC 14337	Poor	On par	Poor	On par	Better
PI 14377	On par	Better	On par	On par	On par
Standards					
CoV 92102	Best	Better	Best	Poor	Better
Co 86249	Poor	Better	Poor	Better	Best
Co 06030	Better	Best	Poor	Best	Better

3.7 ADVANCED VARIETAL TRIAL (MIDLATE – RATOON)

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru*
Entries (6)	Co 13028, Co 13029, Co 13031, CoA 14323, CoC 14337 and PI 14377
Standards (3)	CoV 92102, Co 86249 and Co 06030
Design	Randomized Block Design
Replications	Three
Plot size	Gross : 6.0 m x 8r x 0.90 m Net : 5.0 m x 6r x 0.90 m
Ratooning time	February / March, 2018
Crop duration	11 months

* Data of Vuyyuru centre not included for mean due to low cane yield recorded by the standards.

Results of the previous year

The entry CoA 14323 was the best performer across locations combining yield and quality. It recorded cane yield (124.56 t/ha), CCS yield (16.37 t/ha) and mean sucrose % of 18.51 at 12th month. The best standard CoV 92102 recorded 109.39 t/ha, 14.21 t/ha and 18.27% for these three traits respectively. However, the entry PI 14377 recorded the highest CCS % of 13.08 at 12th month. No qualifying entries were identified from the trial as none of them recorded either 10% improvement for yield or 5% improvement for quality over the respective best standards.

Results of the current year

In the ratoon evaluation, PI 14377 (13.83 t/ha) was the best entry for CCS yield followed by CoA 14323 (13.81 t/ha) and CoC 14337 (13.53 t/ha). The best standard Co 06030 recorded 13.27 t/ha across locations. None of the entries recorded more than 10 % improvement over the best standard Co 06030 for CCS yield across locations. CoA 14323 was the best entry that recorded the highest mean cane yield of 112.48 t/ha followed by PI 14377 (109.92 t/ha) and CoC 14337 (107.24 t/ha). The best standard Co 06030 recorded a mean cane yield of 106.48 t/ha. None of the entries recorded more than 10 % improvement for cane yield over the best standard Co 06030 across locations. The standard CoV 92102 recorded the highest mean CCS % of 12.73 and sucrose content of 18.15 % across locations. None of the entries registered either 10% improvement for cane yield or 5 % improvement for sucrose % over the respective best standards. Hence, no qualifying entry was identified from this trial. Further details are presented in Tables 3.7.1 to 3.7.15.

Table 3.7.1 CCS (t/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	Co 13028	7.72	16.85	9.81	12.97	5.46	11.84	
2	Co 13029	6.82	15.69	9.32	11.64	7.56	10.87	
3	Co 13031	8.54	17.64*	10.45	14.99	3.00	12.91	
4	CoA 14323	12.69*	16.42	10.44	15.67	13.32	13.81	2
5	CoC 14337	11.56	18.10*	10.35	14.12	1.36	13.53	3
6	PI 14377	13.55*	16.27	9.32	16.17	9.88	13.83	1
	Standards							
1	CoV 92102	9.64	15.12	9.05	15.43	2.64	12.31	
2	Co 86249	10.76	14.75	9.18	8.55	8.18	10.81	
3	Co 06030	-	15.84	9.47	14.51	-	13.27	4
	GM	10.16	16.30	9.71	13.78	6.42		
	SE	0.59	0.54	0.43	0.61	-		
	CD (0.05)	1.80	1.14	NS	1.83	-		
	CV	10.03	4.06	7.66	7.69	-		
	Qualifying entries at each location							
	1	PI 14377	CoC 14337	-	-	-	-	
	2	CoA 14323	Co 13031	-	-	-	-	
	3	-	-	-	-	-	-	

* Significant over the best standard

** Data of Vuyyuru centre not included for mean due to low cane yield recorded by the standards.

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

Co 13031 (1), CoA 14323 (1), CoC 14337 (1), PI 14377 (1)

Performance of the entries across locations: PI 14377 (13.83 t/ha) was the best entry for CCS yield followed by CoA 14323 (13.81 t/ha) and CoC 14337 (13.53 t/ha). Co 06030 was the best among standards that recorded CCS yield of 13.27 t/ha across the locations. None of the entries recorded more than 10 % improvement over the best standard for CCS yield across locations.

Table 3.7.2 Cane yield (t/ha) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	Co 13028	61.63	130.77	79.41	119.22	40.02	97.76	
2	Co 13029	67.59	123.23	76.43	111.51	62.04	94.69	
3	Co 13031	72.89	136.90*	82.46	113.82	21.09	101.52	
4	CoA 14323	98.61	128.40	87.46	135.43*	81.07	112.48	1
5	CoC 14337	95.99	137.86*	85.15	109.96	8.95	107.24	3
6	PI 14377	108.95*	127.92	73.54	129.25	65.84	109.92	2
	Standards							
1	CoV 92102	73.66	120.92	72.62	119.99	19.03	96.80	
2	Co 86249	90.43	117.03	73.99	79.87	56.17	90.33	
3	Co 06030	-	124.27	78.25	116.91	-	106.48	4
	GM	83.72	127.48	78.81	115.10	44.28		
	SE	4.32	4.08	3.11	4.74	-		
	CD (0.05)	13.24	8.64	9.31	14.20	-		
	CV	8.95	3.92	6.83	7.12	-		
Qualifying entries at each location								
	1	PI 14377	Co 13031	-	CoA 14323	-	-	
	2	-	CoC 14337	-	-	-	-	
	3	-		-	-	-	-	

* Significant over the best standard

** Data of Vuyyuru centre not included for mean due to low cane yield recorded by the standards

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

Co 13031 (1), CoA 14323 (1), CoC 14337 (1), PI 14377 (1)

Performance of the entries across locations: CoA 14323 was the top ranking entry that recorded the highest mean cane yield of 112.48 t/ha followed by PI 14377 (109.92 t/ha) and CoC 14337 (107.24 t/ha). The best standard Co 06030 recorded a mean cane yield of 106.48 t/ha. No entry recorded more than 10 % improvement for cane yield over the best standard Co 06030 across locations.

Table 3.7.3 CCS % at 11th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	Co 13028	12.54	12.89	12.34	10.87	13.54	12.16	
2	Co 13029	10.07	12.73	12.21	10.46	12.18	11.37	
3	Co 13031	11.75	12.88	12.69	13.15	14.22	12.62	
4	CoA 14323	12.86	12.78	11.93	11.57	16.42*	12.29	
5	CoC 14337	12.03	13.13*	12.19	12.85	15.14*	12.55	
6	PI 14377	12.45	12.72	12.69	12.49	15.02*	12.59	
	Standards							
1	CoV 92102	13.09	12.50	12.48	12.86	13.88	12.73	1
2	Co 86249	11.90	12.60	12.38	10.72	14.49	11.90	
3	Co 06030	-	12.74	12.10	12.41	-	12.42	
	GM	12.09	12.78	12.33	11.93	14.36		
	SE	0.37	0.09	0.32	0.12	0.16		
	CD (0.05)	1.13	0.20	NS	0.35	0.48		
	CV	5.28	0.90	4.49	1.72	1.90		
	Qualifying entries at each location							
	1	-	-	-	-	CoA 14323		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Data of Vuyyuru centre not included for mean due to low cane yield recorded by the standards

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

CoA 14323 (1)

Performance of the entries across locations: The standard CoV 92102 recorded the highest mean CCS % of 12.73 across locations.

Table 3.7.4 Sucrose % at 11th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	Co 13028	17.80	18.54	17.77	15.70	18.60	17.45	
2	Co 13029	14.77	18.27	17.67	15.29	17.03	16.50	
3	Co 13031	16.76	18.56	18.17	18.78*	19.43	18.07	
4	CoA 14323	18.20	18.53	17.30	16.68	22.16*	17.68	
5	CoC 14337	17.14	18.85*	17.73	18.34	20.64*	18.02	
6	PI 14377	17.62	18.17	18.17	17.92	20.37*	17.97	
	Standards							
1	CoV 92102	18.35	18.04	17.93	18.28	19.07	18.15	1
2	Co 86249	16.84	18.33	17.80	15.54	19.76	17.13	
3	Co 06030	-	18.47	17.60	17.72	-	17.93	
	GM	17.19	18.42	17.79	17.14	19.63		
	SE	0.43	0.10	0.38	0.13	0.20		
	CD (0.05)	1.30	0.21	NS	0.39	0.60		
	CV	4.29	0.67	3.74	1.31	1.70		
Qualifying entries at each location								
	1	-	-	-	-	CoA 14323	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

* Significant over the best standard

** Data of Vuyyuru centre not included for mean due to low cane yield recorded by the standards

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

CoA 14323 (1)

Performance of the entries across locations: The standard CoV 92102 recorded the highest mean sucrose content of 18.15 % across the locations.

Table 3.7.5 Brix % at 11thmonth

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	19.34	20.74	19.93	17.73	19.97	19.44
2	Co 13029	17.21	20.35	20.00	17.70	19.00	18.82
3	Co 13031	18.44	20.83	20.13	20.71	20.60	20.03
4	CoA 14323	19.64	21.08	19.70	18.78	22.83	19.80
5	CoC 14337	18.82	21.01	20.33	20.21	21.77	20.09
6	PI 14377	19.05	20.04	20.13	19.95	21.23	19.79
	Standards						
1	CoV 92102	19.39	20.32	20.03	19.93	20.47	19.92
2	Co 86249	18.18	21.01	19.90	17.67	20.87	19.19
3	Co 06030	-	21.01	20.17	19.53	-	20.24
	GM	18.76	20.71	20.04	19.30	20.84	
	SE	0.29	0.16	0.31	0.12	0.21	
	CD (0.05)	0.89	0.34	NS	0.35	0.63	
	CV	2.69	0.95	2.66	1.04	1.70	

Table 3.7.6 Purity % at 11thmonth

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	92.01	89.40	89.14	88.55	93.17	89.78
2	Co 13029	85.82	89.80	88.32	86.38	89.66	87.58
3	Co 13031	90.85	89.07	90.24	90.68	94.33	90.21
4	CoA 14323	92.66	87.91	87.79	88.84	97.05	89.30
5	CoC 14337	91.09	89.72	87.20	90.78	94.82	89.70
6	PI 14377	92.44	90.66	90.24	89.82	95.93	90.79
	Standards						
1	CoV 92102	94.64	88.80	89.51	91.74	93.16	91.17
2	Co 86249	92.63	87.26	89.43	87.93	94.71	89.31
3	Co 06030	-	87.91	87.26	90.75	-	88.64
	GM	91.52	88.95	88.79	89.49	94.10	
	SE	1.36	0.66	1.04	0.58	0.51	
	CD (0.05)	4.15	1.39	3.12	1.73	1.54	
	CV	2.57	0.91	2.03	1.12	0.90	

Table 3.7.7 Pol % cane at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	13.55	15.19	-	12.96	-	13.90
2	Co 13029	11.19	15.01	-	12.65	-	12.95
3	Co 13031	12.77	15.26	-	15.57	-	14.53
4	CoA 14323	13.86	15.18	-	13.82	-	14.29
5	CoC 14337	13.02	15.47	-	15.17	-	14.55
6	PI 14377	13.41	14.94	-	14.84	-	14.40
	Standards						
1	CoV 92102	13.88	14.87	-	15.13	-	14.63
2	Co 86249	12.79	15.08	-	12.87	-	13.58
3	Co 06030	-	15.14	-	14.69	-	14.92
	GM	13.06	15.13	-	14.19	-	
	SE	0.32	0.09	-	0.12	-	
	CD (0.05)	0.98	0.19	-	0.35	-	
	CV	4.26	0.72	-	1.41	-	

Table 3.7.8 Extraction % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	54.29	52.91	52.31	50.99	-	52.63
2	Co 13029	48.67	56.20	53.78	50.71	-	52.34
3	Co 13031	50.40	52.91	52.41	55.25	-	52.74
4	CoA 14323	47.93	52.75	51.28	51.68	-	50.91
5	CoC 14337	49.22	55.90	50.37	50.64	-	51.53
6	PI 14377	51.85	58.28	50.99	48.98	-	52.53
	Standards						
1	CoV 92102	51.66	60.19	53.13	55.73	-	55.18
2	Co 86249	47.74	52.86	53.45	54.43	-	52.12
3	Co 06030	-	60.87	52.62	51.31	-	54.93
	GM	50.22	55.87	52.26	52.19	-	
	SE	0.44	2.25	0.66	1.35	-	
	CD (0.05)	1.35	4.78	1.99	4.06	-	
	CV	1.52	4.94	2.20	4.50	-	

Table 3.7.9 Fibre % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	13.86	13.04	17.17	12.45	-	14.13
2	Co 13029	14.25	12.85	13.93	12.24	-	13.32
3	Co 13031	13.81	12.78	14.20	12.11	-	13.23
4	CoA 14323	13.84	13.07	14.27	12.15	-	13.33
5	CoC 14337	14.08	12.94	13.63	12.29	-	13.24
6	PI 14377	13.89	12.79	14.30	12.18	-	13.29
	Standards						
1	CoV 92102	14.33	12.58	13.23	12.23	-	13.09
2	Co 86249	14.04	12.74	12.83	12.17	-	12.95
3	Co 06030	-	13.07	13.03	12.12	-	12.74
	GM	14.01	12.87	13.62	12.21	-	
	SE	0.04	0.12	0.30	0.16	-	
	CD (0.05)	0.12	0.26	0.91	0.48	-	
	CV	0.50	1.16	3.84	2.29	-	

Table 3.7.10 NMC ('000/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	68.21	111.39	85.71	91.64	25.31	89.24
2	Co 13029	66.67	106.19	79.90	104.05	58.23	89.20
3	Co 13031	57.41	99.37	87.74	83.75	12.14	82.07
4	CoA 14323	74.69	100.18	92.72	97.09	78.19	91.17
5	CoC 14337	79.12	106.87	90.49	98.14	6.89	93.66
6	PI 14377	88.58	100.00	77.73	100.34	52.47	91.66
	Standards						
1	CoV 92102	60.39	97.27	76.17	102.54	13.99	84.09
2	Co 86249	84.98	101.83	77.84	95.12	44.86	89.94
3	Co 06030	-	104.17	82.88	98.83	-	95.29
	GM	72.51	103.03	83.46	96.83	36.51	
	SE	4.03	4.15	3.41	6.60	-	
	CD (0.05)	12.34	8.79	10.21	19.72	-	
	CV	9.63	4.93	7.07	11.80	-	

Table 3.7.11 Stalk length (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	215.43	253.00	222.00	226.00	182.90	229.11
2	Co 13029	217.37	262.00	222.33	237.67	210.20	234.84
3	Co 13031	235.03	247.00	225.00	292.00	175.50	249.76
4	CoA 14323	252.30	245.00	220.00	292.00	266.70	252.33
5	CoC 14337	223.17	258.00	235.00	281.33	164.50	249.38
6	PI 14377	245.27	241.00	187.00	293.33	216.10	241.65
	Standards						
1	CoV 92102	256.27	240.00	226.67	260.00	229.50	245.74
2	Co 86249	248.67	230.00	214.67	209.67	267.80	225.75
3	Co 06030	-	240.00	227.00	231.67	-	232.89
	GM	236.69	246.00	219.96	258.18	214.20	
	SE	3.31	4.46	6.86	4.24	8.52	
	CD (0.05)	10.14	9.45	20.57	12.72	25.85	
	CV	2.42	2.22	5.40	2.85	6.90	

Table 3.7.12 Stalk diameter (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	2.30	2.93	2.30	2.99	2.32	2.63
2	Co 13029	2.60	2.73	1.93	2.69	2.42	2.49
3	Co 13031	2.57	2.73	2.23	1.94	2.73	2.37
4	CoA 14323	2.85	2.77	2.17	2.45	2.85	2.56
5	CoC 14337	2.63	2.99	2.37	2.56	2.54	2.64
6	PI 14377	2.65	2.69	2.43	2.39	2.46	2.54
	Standards						
1	CoV 92102	2.34	2.69	2.20	2.60	2.65	2.46
2	Co 86249	2.29	2.50	2.17	2.41	2.50	2.34
3	Co 06030	-	2.78	2.07	2.86	-	2.57
	GM	2.53	2.76	2.21	2.54	2.56	
	SE	0.04	0.11	0.09	0.46	0.06	
	CD (0.05)	0.12	0.23	0.26	0.14	0.17	
	CV	2.66	4.92	6.87	3.10	3.70	

Table 3.7.13 Single cane weight (kg)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	0.88	1.39	1.20	1.29	0.85	1.19
2	Co 13029	1.04	1.43	1.09	1.22	0.91	1.20
3	Co 13031	1.32	1.40	1.35	1.02	0.93	1.27
4	CoA 14323	1.49	1.43	1.14	1.70	1.41	1.44
5	CoC 14337	1.24	1.51	1.49	1.40	0.73	1.41
6	PI 14377	1.26	1.36	0.93	1.54	1.22	1.27
	Standards						
1	CoV 92102	1.24	1.26	1.07	1.38	1.00	1.24
2	Co 86249	1.11	1.16	1.19	1.00	1.28	1.12
3	Co 06030	-	1.30	1.05	1.52	-	1.29
	GM	1.20	1.36	1.17	1.34	1.04	
	SE	0.04	0.09	0.06	0.45	0.03	
	CD (0.05)	0.12	0.19	0.18	0.15	0.10	
	CV	5.79	8.03	8.81	6.34	5.70	

Table 3.7.14 Number of shoots ('000/ha) at 180 days

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh*	Nellikuppam*	Vuyyuru	Mean
1	Co 13028	75.10	120.48	96.78	160.08	34.67	97.79
2	Co 13029	74.49	116.23	89.82	166.23	74.79	95.36
3	Co 13031	47.33	108.48	95.30	158.22	16.67	77.91
4	CoA 14323	84.87	111.22	100.48	160.54	83.75	98.05
5	CoC 14337	81.28	114.24	106.77	160.89	10.49	97.76
6	PI 14377	111.83	110.50	90.32	168.08	62.35	111.16
	Standards						
1	CoV 92102	69.14	109.49	84.07	162.86	30.04	89.32
2	Co 86249	92.08	115.26	88.21	153.35	62.55	103.67
3	Co 06030	-	119.43	92.76	165.07	-	119.43
	GM	79.52	113.92	93.83	161.7	46.91	
	SE	6.89	4.28	4.19	8.82	2.74	
	CD (0.05)	21.09	9.07	12.57	26.46	8.31	
	CV	15.00	4.60	7.74	9.45	10.10	

* At 120 days

Table 3.7.15 Number of tillers ('000/ha) at 90 days

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	Co 13028	124.30	132.49	108.69	193.84	59.77	139.83
2	Co 13029	116.32	124.75	99.92	184.79	92.18	131.45
3	Co 13031	69.79	122.46	104.22	178.87	19.55	118.84
4	CoA 14323	130.79	120.47	110.05	183.05	101.44	136.09
5	CoC 14337	145.49	128.63	117.25	188.15	13.27	144.88
6	PI 14377	145.60	119.29	100.49	190.01	91.87	138.85
	Standards						
1	CoV 92102	98.73	120.47	95.95	192.56	47.84	126.93
2	Co 86249	115.16	124.68	102.91	165.07	77.78	126.96
3	Co 06030	-	128.74	103.55	182.58	-	138.29
	GM	118.27	124.66	104.78	184.32	62.96	
	SE	8.01	3.94	3.18	7.87	4.63	
	CD (0.05)	24.54	8.35	9.53	23.61	14.03	
	CV	11.73	3.87	5.25	7.40	12.70	

Table 3.7.16 Assessment of performance of entries by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
Co 13028	On par	On par	Poor	On par	On par
Co 13029	On par	On par	On par	Better	Better
Co 13031	Poor	Poor	Poor	On par	Better
CoA 14323	On par	Better	On par	On par	On par
CoC 14337	Better	Poor	Poor	On par	Poor
PI 14377	On par	Better	On par	On par	Better
Standards					
CoV 92102	Best	Better	Poor	Poor	Poor
Co 86249	Better	Better	Best	Best	Best
Co 06030	On par	Best	Not available	Not available	Not available

3.8 ADVANCED VARIETAL TRIAL (MIDLATE) Pooled data of 2 Plant + 1Ratoon

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru*
Entries (6)	Co 13028, Co 13029, Co 13031, CoA 14323, CoC 14337 and PI 14377
Standards (3)	CoV 92102, Co 86249 and Co 06030
Design	Randomized Block Design
Replications	Three
Plot size	Gross : 6.0 m x 0.9 m x 8 R Net : 5.0 m x 0.9 m x 6 R

* Data of Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards in both II plant crop and ratoon crop

Six midlate maturing clones and three standards were evaluated under AVT I Plant during 2017-18, AVT II Plant and AVT Ratoon during 2018-19 at five locations. 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 3.8.1 to 3.8.4 and figures 3.8.1 to 3.8.4. The salient results pertaining to CCS (t/ha), cane yield (t/ha), CCS % and sucrose % are given below.

Commercial Cane Sugar (t/ha):

The entry PI 14377 (14.96 t/ha) ranked first in the zone for CCS yield. The second best entry CoA 14323 recorded a CCS yield of 14.86 t/ha. Co 06030 was the better standard that recorded 14.78 t/ha.

Cane Yield (t/ha):

For cane yield, the entry CoA 14323 ranked first in the zone with an overall mean of 117.87 t/ha followed by the entry PI 14377 (117.32 t/ha). The better standard Co 06030 recorded an overall mean cane yield of 115.50 t/ha across locations.

Commercial Cane Sugar (%):

The standard Co 06030 was the best in the zone across locations that recorded the highest mean CCS of 12.76 %.

Sucrose (%):

The standard Co 06030 was the best in the zone across locations that recorded the highest mean sucrose of 18.31 %.

Overall performance:

Based on the pooled mean of two plant and one ratoon crops at five centres, none of the midlate entries recorded either 10 % improvement for cane yield or 5 % improvement for sucrose % over the best standard Co 06030 across locations. Therefore, no qualifying entry was identified from this zone.

Table 3.8.1 CCS at harvest (t/ha) - Pooled data of two plant and one ratoon crops

Clone	Anakapalle				Cuddalore				Nayagarh			
	I P	II P	R	Mean	I P	II P	R	Mean	I P	II P	R	Mean
Co 13028	9.21	9.95	7.72	8.96	16.28	16.07	16.85	16.40	10.63	10.49	9.81	10.31
Co 13029	12.81	8.63	6.82	9.42	16.42	16.04	15.69	16.05	10.85	10.57	9.32	10.25
Co 13031	12.79	10.84	8.54	10.72	15.90	15.58	17.64	16.37	12.89	11.07	10.45	11.47
CoA 14323	15.8	12.92	12.69	13.80	17.16	16.98	16.42	16.85	9.42	11.76	10.44	10.54
CoC 14337	12.56	12.31	11.56	12.14	18.37	17.53	18.10	18.00	10.86	11.07	10.35	10.76
PI 14377	13.91	15.48	13.55	14.31	17.04	15.19	16.27	16.17	9.46	12.22	9.32	10.33
Standards												
CoV 92102	11.53	15.44	9.64	12.20	15.31	14.44	15.12	14.96	10.46	12.37	9.05	10.63
Co 86249	13.18	12.04	10.76	11.99	13.99	12.93	14.75	13.89	11.71	10.80	9.18	10.56
Co 06030	-	11.45	-	11.45	15.58	15.98	15.84	15.80	-	11.80	9.47	10.64
GM	12.72	12.12	10.16		16.23	15.64	16.30		10.79	11.35	9.71	
Clone	Nellikuppam				GM (Wt. Avg.)	Rank						
	I P	II P	R	Mean								
Co 13028	15.30	17.83	12.97	15.37	11.90							
Co 13029	12.79	15.96	11.64	13.46	12.30							
Co 13031	18.04	18.54	14.99	17.19	13.94							
CoA 14323	20.08	18.94	15.67	18.23	14.86	2						
CoC 14337	17.46	17.91	14.12	16.50	14.35							
PI 14377	20.10	20.84	16.17	19.04	14.96	1						
Standards												
CoV 92102	17.95	20.13	15.43	17.84	13.91							
Co 86249	12.02	15.24	8.55	11.94	12.10							
Co 06030	17.19	21.17	14.51	17.62	14.78	3						
GM	16.77	18.51	13.78									

Table 3.8.2 Cane yield at harvest (t/ha) - Pooled data of two plant and one ratoon crops

Clone	Anakapalle				Cuddalore				Nayagarh			
	IP	IP	R	Mean	IP	IP	R	Mean	IP	IP	R	Mean
Co 13028	68.64	73.64	61.63	67.97	128.74	124.69	130.77	128.07	93.46	90.81	79.41	87.89
Co 13029	111.92	75.49	67.59	85.00	129.51	124.61	123.23	125.78	95.33	87.76	76.43	86.51
Co 13031	100.99	81.85	72.89	85.24	124.50	122.92	136.90	128.11	109.55	94.89	82.46	95.63
CoA 14323	115.57	97.84	98.61	104.01	131.87	131.89	128.40	130.72	85.31	98.58	87.46	90.45
CoC 14337	99.29	93.83	95.99	96.37	142.10	134.94	137.86	138.30	89.35	91.32	85.15	88.61
PI 14377	106.60	119.88	108.95	111.81	132.94	121.21	127.92	127.36	78.81	101.37	73.54	84.57
Standards												
CoV 92102	95.77	114.81	73.66	94.75	119.77	115.66	120.92	118.78	88.43	103.89	72.62	88.31
Co 86249	103.90	91.36	90.43	95.23	114.65	105.96	117.03	112.55	98.37	91.24	73.99	87.87
Co 06030	-	84.26	-	84.26	121.98	124.48	124.27	123.58	-	96.38	78.25	87.32
GM	100.34	92.55	83.72		127.34	122.93	127.48		92.33	95.14	78.81	
Clone	Nellikuppam				GM (Wt. Avg.)	Rank						
	IP	IP	R	Mean								
Co 13028	133.49	150.09	119.22	134.27	104.55							
Co 13029	115.66	153.18	111.51	126.78	106.02							
Co 13031	130.40	140.44	113.82	128.22	109.30							
CoA 14323	163.81	139.67	135.43	146.30	117.87	1						
CoC 14337	129.55	142.37	109.96	127.29	112.64							
PI 14377	153.01	154.33	129.25	145.53	117.32	2						
Standards												
CoV 92102	133.72	151.63	119.99	135.11	109.24							
Co 86249	106.79	118.45	79.87	101.70	99.34							
Co 06030	133.26	159.74	116.91	136.64	115.50	3						
GM	133.30	145.54	115.11									

Table 3.8.3 CCS (%) at harvest - Pooled data of two plant and one ratoon crops

Clone	Anakapalle				Cuddalore				Nayagarh			
	I P	II P	R	Mean	I P	II P	R	Mean	I P	II P	R	Mean
Co 13028	13.41	13.51	12.54	13.15	12.65	12.89	12.89	12.81	11.37	11.56	12.34	11.76
Co 13029	11.45	11.41	10.07	10.98	12.68	12.87	12.73	12.76	11.41	12.06	12.21	11.89
Co 13031	12.67	13.24	11.75	12.55	12.77	12.67	12.88	12.77	11.76	11.67	12.69	12.04
CoA 14323	13.67	13.21	12.86	13.25	13.01	12.87	12.78	12.89	11.05	11.93	11.93	11.64
CoC 14337	12.65	13.12	12.03	12.60	12.92	12.99	13.13	13.01	12.15	12.12	12.19	12.15
PI 14377	13.05	12.91	12.45	12.80	12.81	12.53	12.72	12.69	12.00	12.04	12.69	12.24
Standards												
CoV 92102	12.04	13.45	13.09	12.86	12.78	12.48	12.50	12.59	11.50	11.90	12.48	11.96
Co 86249	12.68	13.18	11.90	12.59	12.21	12.20	12.60	12.34	11.88	11.84	12.38	12.03
Co 06030	-	13.58	-	13.58	12.77	12.84	12.74	12.78	-	12.25	12.10	12.18
GM	12.70	13.07	12.09		12.73	12.70	12.77		11.64	11.93	12.33	
Clone	Nellikuppam				GM (Wt. Avg.)	Rank						
	I P	II P	R	Mean								
Co 13028	11.46	11.88	10.87	11.40	12.28							
Co 13029	11.10	10.42	10.46	10.66	11.57							
Co 13031	13.82	13.21	13.15	13.39	12.69							
CoA 14323	12.24	13.54	11.57	12.45	12.56							
CoC 14337	13.47	12.57	12.85	12.96	12.68							
PI 14377	13.11	13.48	12.49	13.03	12.69							
Standards												
CoV 92102	13.42	13.28	12.86	13.19	12.65							
Co 86249	11.29	12.84	10.72	11.62	12.14							
Co 06030	12.89	13.29	12.41	12.86	12.76	1						
GM	12.53	12.72	11.93									

Table 3.8.4 Sucrose (%) at harvest - Pooled data of two plant and one ratoon crops

Clone	Anakapalle				Cuddalore				Nayagarh			
	I P	II P	R	Mean	I P	II P	R	Mean	I P	II P	R	Mean
Co 13028	19.38	19.49	17.80	18.89	17.64	18.80	18.54	18.33	16.53	16.67	17.77	16.99
Co 13029	16.62	16.73	14.77	16.04	17.85	18.71	18.27	18.28	16.70	17.30	17.67	17.22
Co 13031	18.44	19.06	16.76	18.09	17.92	18.62	18.56	18.37	17.21	16.80	18.17	17.39
CoA 14323	19.70	19.25	18.20	19.05	18.12	18.88	18.53	18.51	16.49	17.37	17.30	17.05
CoC 14337	18.46	18.92	17.14	18.17	17.93	19.04	18.85	18.61	17.46	17.20	17.73	17.46
PI 14377	18.98	18.59	17.62	18.40	17.96	18.43	18.17	18.19	17.31	17.20	18.17	17.56
Standards												
CoV 92102	17.64	19.38	18.35	18.46	17.80	18.37	18.04	18.07	17.24	17.33	17.93	17.50
Co 86249	18.60	19.05	16.84	18.16	17.35	17.90	18.33	17.86	17.26	17.20	17.80	17.42
Co 06030	-	19.42	-	19.42	17.81	18.73	18.47	18.34	-	17.67	17.60	17.64
GM	18.48	18.88	17.19		17.82	18.61	18.42		17.03	17.19	17.79	
Clone	Nellikuppam				GM (Wt. Avg.)	Rank						
	I P	II P	R	Mean								
Co 13028	16.47	17.03	15.70	16.40	17.65							
Co 13029	16.11	15.12	15.29	15.51	16.76							
Co 13031	19.67	18.73	18.78	19.06	18.23							
CoA 14323	17.56	19.13	16.68	17.79	18.10							
CoC 14337	19.16	17.93	18.34	18.48	18.18							
PI 14377	18.73	19.10	17.92	18.58	18.18							
Standards												
CoV 92102	19.04	18.93	18.28	18.75	18.19							
Co 86249	16.31	18.22	15.54	16.69	17.53							
Co 06030	18.39	18.97	17.72	18.36	18.31	1						
GM	17.94	18.13	17.14									

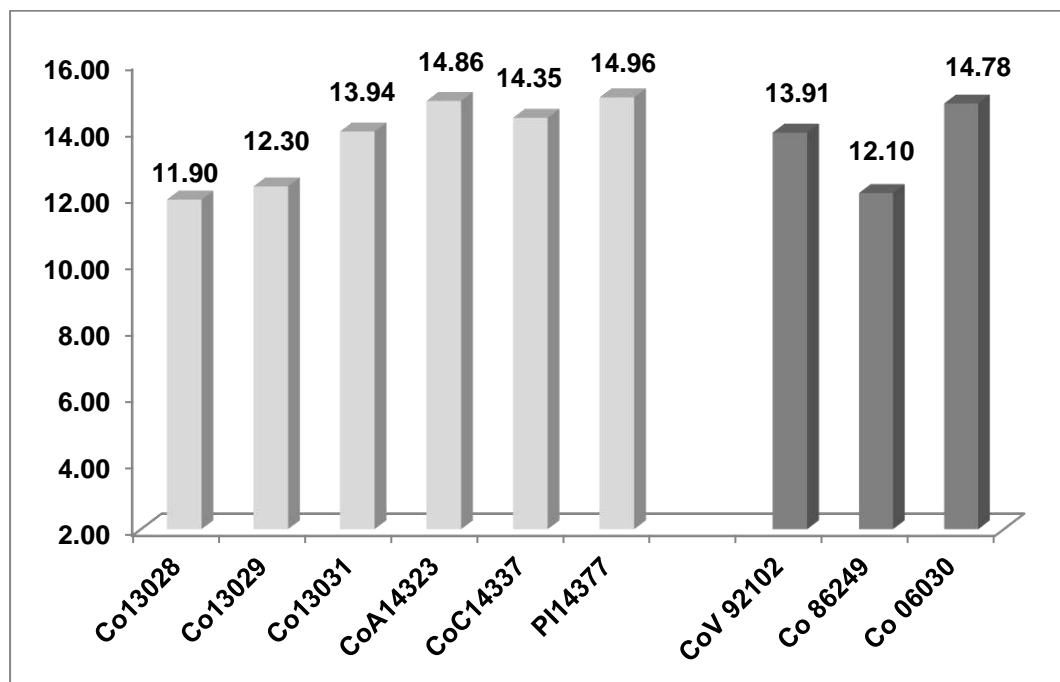


Fig.3.8.1 Mean performance of (2P+1R) of AVT midlate clones for CCS (t/ha)

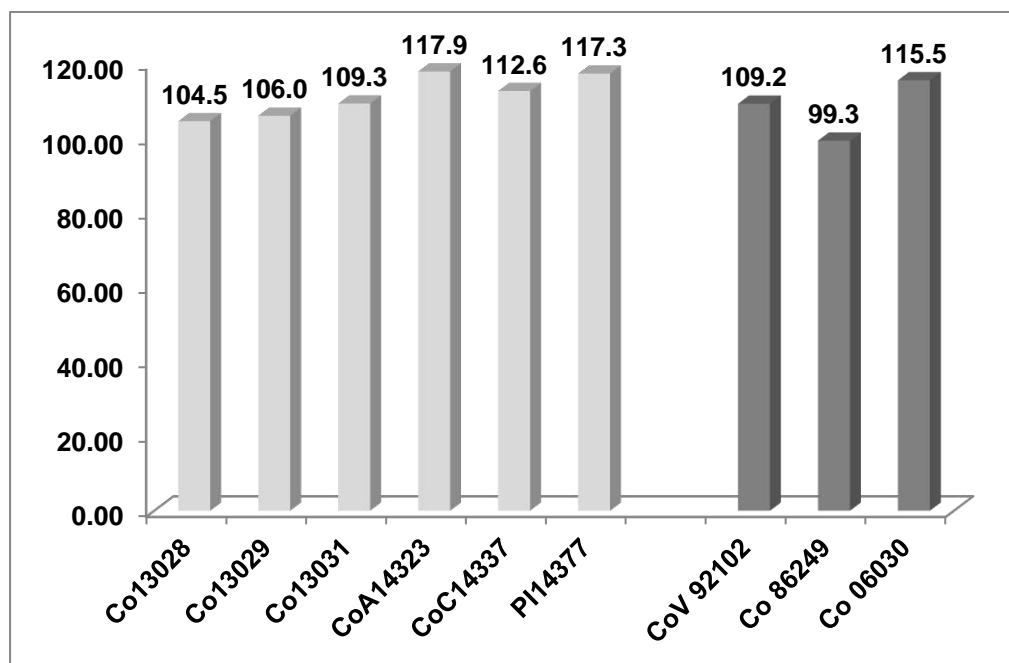


Fig.3.8.2 Mean performance of (2P+1R) of AVT midlate clones for Cane Yield (t/ha)

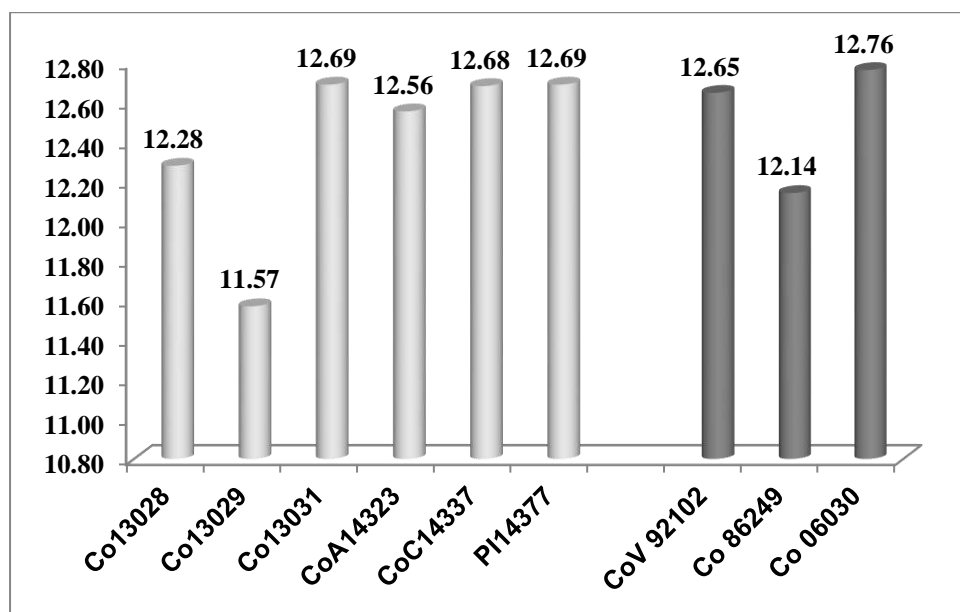


Fig.3.8.3. Mean performance of (2P+1R) of AVT midlate clones for CCS (%)

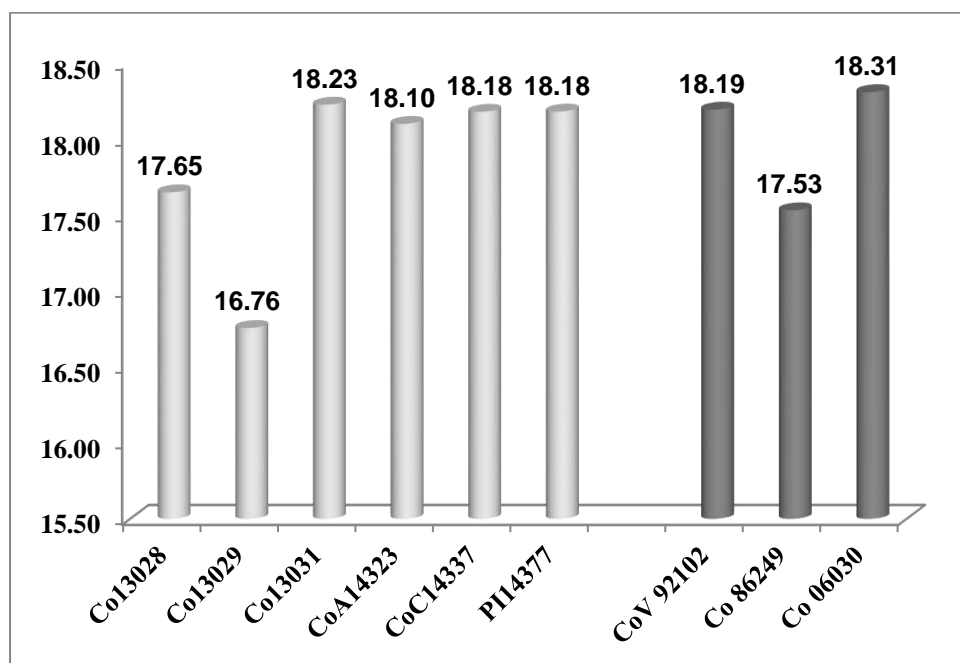


Fig.3.8.4. Mean performance of (2P+1R) of AVT midlate clones for Sucrose (%)

3.9 INITIAL VARIETAL TRIAL (MIDLATE)

Centres (5)	Anakapalle, Cuddalore, Nayagarh, Nellikuppam and Vuyyuru
Entries (4)	1. CoA 16322 (C 79218 GC) 2. CoC 16338 (81 V 48 GC) 3. CoC 16339 (Co 86002 x Co 1148) 4. CoV 16357 (CoV 89101 GC)
Standards (3)	Co 86249, Co 06030 and CoV 92102
Design	Randomized Block Design
Replications	Three
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/ metre
Planting time	February / March, 2018
Crop duration	12 months

* Data from Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

Results of the previous year

The entries were under multiplication in the respective centres.

Results of the current year

The entry CoC 16339 (15.75 t/ha) was the top ranking entry for CCS yield followed by CoC 16338 (15.36 t/ha) and CoV 16357 (14.83 t/ha). The best entry CoC 16339 recorded 6.49 % improvement over the best standard CoV 92102 (14.79 t/ha) across locations. The entry CoC 16339 (129.66 t/ha) was the best yielder in the trial followed by CoC 16338 (125.93 t/ha) and CoV 16357 (119.21 t/ha). The best entry CoC 16339 recorded 9.68 % improvement over the best standard CoV 92102 (118.22 t/ha) across locations. 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 %. No qualifying entry with either 10% improvement for cane yield or 5 % improvement over the best standard was identified across the locations. Further details are presented in tables 3.9.1 to 3.9.20.

Table 3.9.1 CCS (t/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru**	Mean	Rank
1	CoA 16322	11.52	16.98	11.15	13.86	12.10	13.38	
2	CoC 16338	14.97	18.10*	11.40	16.96	9.31	15.36	2
3	CoC 16339	13.52	16.54	13.42*	19.53	10.09	15.75	1
4	CoV 16357	14.68	16.20	11.04	17.39	13.46	14.83	3
	Standards							
1	CoV 92102	16.02	14.84	10.99	17.31	5.90	14.79	4
2	Co 86249	15.02	13.58	10.58	11.15	2.81	12.58	
3	Co 06030	10.46	16.04	10.50	14.66	4.37	12.92	
	GM	13.74	16.04	11.30	15.84	8.29		
	SE	0.54	0.45	0.47	0.97	-		
	CD (0.05)	1.69	0.99	1.45	3.00	-		
	CV	6.89	3.45	7.19	10.65	-		
	Qualifying entries at each location							
	1	-	CoC 16338	CoC 16339	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Data from Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

No. of locations where an entry recorded >10 % improvement over the best standard: CoC 16338 (1) and CoC 16339 (1)

Performance of the entries across locations: The entry CoC 16339 (15.75 t/ha) was the best in the trial followed by CoC 16338 (15.36 t/ha) and CoV 16357 (14.83 t/ha). The best entry CoC 16339 recorded 6.49 % improvement over the best standard CoV 92102 (14.79 t/ha) across locations.

Table 3.9.2 Cane yield (t/ha) at harvest

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	CoA 16322	99.57	131.93*	95.18	120.38	93.21	111.77	
2	CoC 16338	114.79	138.24*	95.20	155.49	71.45	125.93	2
3	CoC 16339	98.51	128.94	112.15*	179.03*	72.84	129.66	1
4	CoV 16357	109.90	127.60	94.64	144.69	96.45	119.21	3
	Standards							
1	CoV 92102	114.77	119.45	95.52	143.14	42.13	118.22	4
2	Co 86249	118.06	116.69	90.60	103.25	23.15	107.15	
3	Co 06030	78.12	122.70	89.56	128.10	29.17	104.62	
	GM	104.82	126.51	96.12	139.15	61.20		
	SE	3.78	3.67	3.50	6.94	-		
	CD (0.05)	11.61	8.00	10.78	21.38	-		
	CV	6.16	3.55	6.31	8.64	-		
	Qualifying entries at each location							
	1	-	CoC 16338	CoC 16339	CoC 16339	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Data from Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

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

CoC 16339 (2) and CoC 16338 (1)

Performance of the entries across locations: The entry CoC 16339 (129.66 t/ha) was the best yielder in the trial followed by CoC 16338 (125.93 t/ha) and CoV 16357 (119.21 t/ha). The best entry CoC 16339 recorded 9.68 % improvement over the best standard CoV 92102 (118.22 t/ha) across locations.

Table 3.9.3 CCS % at 12th month

S. No.	Entry	Anakapalle	Cuddalore	Naya garh	Nellikuppam	Vuyyuru**	Mean	Rank
1	CoA 16322	11.58	12.87	11.71	11.52	13.01	11.92	
2	CoC 16338	13.05	13.09	11.97*	10.89	13.06	12.25	
3	CoC 16339	13.73	12.82	11.96	10.90	13.66	12.35	
4	CoV 16357	13.33	12.70	11.66	11.98	13.96	12.42	
	Standards							
1	CoV 92102	13.97	12.42	11.50	12.09	14.07	12.50	1
2	Co 86249	12.73	11.64	11.68	10.80	12.15	11.71	
3	Co 06030	13.37	13.07	11.71	11.45	15.01	12.40	
	GM	13.11	12.66	11.74	11.38	13.56		
	SE	0.21	0.10	0.08	0.19	0.19		
	CD (0.05)	0.64	0.22	0.25	0.60	0.59		
	CV	2.73	0.98	1.20	2.95	2.50		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Data from Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

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 12.50. None of the entries performed better than the best standard CoV 92102 for CCS % across locations.

Table 3.9.4 Sucrose % at 12th month

S. No.	Entry	Anaka palle	Cuddalore	Naya garh	Nelli kuppam	Vuyyuru**	Mean	Rank
1	CoA 16322	16.84	18.61	17.51	16.58	18.23	17.39	
2	CoC 16338	18.41	19.13	17.65	15.61	18.06	17.70	
3	CoC 16339	19.40	18.22	17.75*	15.42	18.83	17.70	
4	CoV 16357	18.99	17.99	17.38	17.03	19.47	17.85	
	Standards							
1	CoV 92102	19.94	17.49	17.18	17.18	19.26	17.95	1
2	Co 86249	18.13	16.67	17.40	15.51	16.78	16.93	
3	Co 06030	18.88	19.15	17.41	16.35	20.74	17.95	1
	GM	18.66	18.18	17.47	16.23	18.77		
	SE	0.24	0.08	0.08	0.23	0.24		
	CD (0.05)	0.74	0.18	0.25	0.70	0.74		
	CV	2.21	0.57	0.80	2.41	2.20		
	Qualifying entries at each location							
	1	-	-	-	-	-		
	2	-	-	-	-	-		
	3	-	-	-	-	-		

* Significant over the best standard

** Data from Vuyyuru centre not included for calculation of mean due to low cane yield recorded by the standards.

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

Performance of the entries across locations: Both the standards CoV 92102 and Co 06030 recorded numerically on par mean sucrose of 17.95 %. None of the entries performed better than the standards CoV 92102 and Co 06030 for sucrose % across locations.

Table 3.9.5 Brix % at 12th month

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	19.26	21.04	21.18	18.56	20.43	20.01
2	CoC 16338	19.74	22.11	20.80	17.33	19.68	20.00
3	CoC 16339	20.89	19.85	21.15	16.62	20.40	19.63
4	CoV 16357	20.81	19.50	20.90	18.60	21.61	19.95
	Standards						
1	CoV 92102	21.95	18.69	20.74	18.72	20.54	20.03
2	Co 86249	19.86	18.46	20.89	17.28	18.22	19.12
3	Co 06030	20.27	22.24	20.81	18.02	22.54	20.34
	GM	20.40	20.27	20.93	17.88	20.49	
	SE	0.25	0.35	0.13	0.17	0.24	
	CD (0.05)	0.79	0.76	NS	0.52	0.73	
	CV	2.15	2.11	1.07	1.65	2.00	

Table 3.9.6 Purity % at 12th month

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	87.47	88.48	82.68	89.31	89.21	86.99
2	CoC 16338	93.25	86.52	84.88	90.06	91.79	88.68
3	CoC 16339	92.91	91.82	83.93	92.75	92.28	90.35
4	CoV 16357	91.24	92.30	83.17	91.57	90.13	89.57
	Standards						
1	CoV 92102	90.82	93.60	82.82	91.76	93.80	89.75
2	Co 86249	91.30	90.38	83.31	89.71	92.14	88.68
3	Co 06030	93.13	86.10	83.63	90.73	92.01	88.40
	GM	91.45	89.89	83.49	90.84	91.62	
	SE	1.01	1.47	0.56	0.74	0.57	
	CD (0.05)	3.15	3.21	NS	2.29	1.74	
	CV	1.92	2.01	1.16	1.42	1.10	

Table 3.9.7 Pol % cane at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	12.86	15.18	-	13.62	-	13.89
2	CoC 16338	13.87	15.64	-	12.84	-	14.12
3	CoC 16339	14.69	14.94	-	12.68	-	14.10
4	CoV 16357	14.35	14.77	-	14.02	-	14.38
	Standards						
1	CoV 92102	14.92	14.36	-	14.15	-	14.48
2	Co 86249	13.54	13.69	-	12.74	-	13.32
3	Co 06030	14.17	15.68	-	13.42	-	14.42
	GM	14.06	14.90	-	13.35	-	
	SE	0.19	0.08	-	0.19	-	
	CD (0.05)	0.60	0.17	-	0.57	-	
	CV	2.37	0.65	-	2.40	-	

Table 3.9.8 Extraction % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	50.49	62.60	52.22	48.23	-	53.39
2	CoC 16338	50.11	56.95	51.88	49.73	-	52.17
3	CoC 16339	50.69	61.43	53.98	48.6	-	53.68
4	CoV 16357	51.79	55.59	51.09	48.47	-	51.74
	Standards						
1	CoV 92102	51.06	57.04	51.83	47.65	-	51.90
2	Co 86249	51.01	59.74	49.92	50.35	-	52.76
3	Co 06030	50.51	53.27	52.41	51.52	-	51.93
	GM	50.81	58.09	51.90	49.22	-	
	SE	0.72	2.11	0.46	1.36	-	
	CD (0.05)	NS	4.59	1.42	4.19	-	
	CV	2.44	4.44	1.54	4.79	-	

Table 3.9.9 Fiber % at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	13.61	13.41	14.49	12.82	-	13.58
2	CoC 16338	14.65	13.26	14.90	12.74	-	13.89
3	CoC 16339	14.27	12.97	13.22	12.73	-	13.30
4	CoV 16357	14.41	12.94	14.95	12.70	-	13.75
	Standards						
1	CoV 92102	15.14	12.89	14.58	12.65	-	13.82
2	Co 86249	15.30	12.83	14.78	12.86	-	13.94
3	Co 06030	14.94	13.09	14.22	12.93	-	13.80
	GM	14.62	13.06	14.45	12.77	-	
	SE	0.21	0.13	0.14	0.93	-	
	CD (0.05)	0.65	0.28	0.43	0.29	-	
	CV	2.48	1.20	1.67	1.25	-	

Table 3.9.10 NMC ('000/ha) at harvest

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	83.68	111.48	120.56	93.84	62.81	102.39
2	CoC 16338	92.53	113.07	116.96	102.78	53.70	106.34
3	CoC 16339	84.90	119.45	120.89	112.06	48.30	109.33
4	CoV 16357	80.21	103.11	116.10	109.85	65.74	102.32
	Standards						
1	CoV 92102	98.09	113.92	114.24	89.90	35.96	104.04
2	Co 86249	105.38	112.08	112.25	94.42	25.15	106.03
3	Co 06030	65.10	109.05	110.13	110.90	26.24	98.80
	GM	87.13	111.74	115.88	103.85	45.42	
	SE	3.04	6.17	2.23	6.47	-	
	CD (0.05)	9.46	13.44	6.87	19.84	-	
	CV	6.04	6.76	3.33	10.79	-	

Table 3.9.11 Stalk length (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	274.43	230.00	239.33	257.67	217.80	250.36
2	CoC 16338	246.40	264.00	291.33	309.67	246.70	277.85
3	CoC 16339	274.80	267.00	252.67	339.00	235.00	283.37
4	CoV 16357	262.90	242.00	299.33	264.67	227.80	267.23
	Standards						
1	CoV 92102	289.87	229.00	254.67	304.67	232.80	269.55
2	Co 86249	287.00	211.00	312.67	169.33	193.90	245.00
3	Co 06030	267.80	228.00	268.00	288.20	178.00	263.00
	GM	271.89	239.00	274.00	276.17	218.80	
	SE	3.89	4.47	12.76	4.62	11.37	
	CD (0.05)	12.12	9.74	39.32	14.25	35.03	
	CV	2.48	2.29	8.07	2.90	9.00	

Table 3.9.12 Stalk diameter (cm)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	2.87	2.55	2.53	2.52	2.97	2.62
2	CoC 16338	2.66	2.96	3.00	2.59	2.65	2.80
3	CoC 16339	2.89	3.03	2.63	2.55	2.74	2.78
4	CoV 16357	2.97	2.64	3.03	2.64	2.49	2.82
	Standards						
1	CoV 92102	2.48	2.62	2.49	2.51	2.70	2.53
2	Co 86249	2.39	2.40	2.96	2.35	2.36	2.53
3	Co 06030	2.82	2.87	2.51	3.04	2.95	2.81
	GM	2.73	2.73	2.74	2.60	2.69	
	SE	0.08	0.07	0.09	0.52	0.10	
	CD (0.05)	0.23	0.14	0.29	0.16	0.30	
	CV	4.78	2.93	5.88	3.47	6.20	

Table 3.9.13 Single cane weight (kg)

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	1.19	1.58	1.34	0.93	1.19	1.26
2	CoC 16338	1.24	1.62	1.42	1.84	1.14	1.53
3	CoC 16339	1.16	1.58	1.44	2.53	1.36	1.68
4	CoV 16357	1.37	1.55	1.44	1.33	1.02	1.42
	Standards						
1	CoV 92102	1.17	1.39	1.32	0.90	1.05	1.20
2	Co 86249	1.12	1.29	1.36	0.98	0.86	1.19
3	Co 06030	1.20	1.54	1.05	1.92	1.17	1.43
	GM	1.21	1.51	1.34	1.50	1.11	
	SE	0.03	0.08	0.06	0.57	0.05	
	CD (0.05)	0.08	0.17	0.19	0.18	0.16	
	CV	3.71	6.25	7.82	6.60	7.90	

Table 3.9.14 CCS % at 10 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	11.00	11.26	11.52	9.88	10.87	10.92
2	CoC 16338	10.98	12.04	11.72	8.75	10.64	10.87
3	CoC 16339	12.74	10.92	11.72	7.46	10.89	10.71
4	CoV 16357	11.98	11.06	11.47	10.37	12.77	11.22
	Standards						
1	CoV 92102	13.50	10.39	11.33	11.21	13.75	11.61
2	Co 86249	12.35	9.58	11.56	8.70	9.64	10.55
3	Co 06030	12.27	12.13	11.37	9.33	13.94	11.28
	GM	12.12	11.05	11.53	9.38	11.63	
	SE	0.37	0.09	0.66	0.15	0.22	
	CD (0.05)	1.14	0.19	0.20	0.46	0.66	
	CV	5.25	0.98	0.99	2.77	3.20	

Table 3.9.15 Sucrose % at 10 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	15.84	16.04	17.08	14.61	15.76	15.89
2	CoC 16338	15.99	17.20	17.22	13.04	15.18	15.86
3	CoC 16339	17.99	15.38	17.26	11.42	15.66	15.51
4	CoV 16357	17.20	15.56	16.94	14.97	17.72	16.17
	Standards						
1	CoV 92102	19.11	14.61	16.75	16.03	18.67	16.63
2	Co 86249	17.41	13.66	17.10	12.82	13.80	15.25
3	Co 06030	17.34	17.32	16.85	13.88	19.23	16.35
	GM	17.27	15.68	17.03	13.82	16.57	
	SE	0.46	0.07	0.06	0.22	0.27	
	CD (0.05)	1.43	0.16	0.20	0.68	0.83	
	CV	4.60	0.56	0.67	2.78	2.80	

Table 3.9.16 Brix % at 10 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	17.75	17.59	20.33	17.33	18.93	18.25
2	CoC 16338	18.38	18.97	20.14	15.68	17.67	18.29
3	CoC 16339	19.32	16.43	20.26	14.40	18.50	17.60
4	CoV 16357	19.17	16.59	20.02	16.86	19.47	18.16
	Standards						
1	CoV 92102	20.66	15.57	19.83	17.74	19.50	18.45
2	Co 86249	18.64	15.01	20.24	15.06	16.17	17.24
3	Co 06030	18.67	19.08	20.16	16.65	20.83	18.64
	GM	18.94	17.03	20.14	16.25	18.72	
	SE	0.41	0.09	0.17	0.28	0.29	
	CD (0.05)	1.26	0.19	NS	0.85	0.90	
	CV	3.71	0.62	1.45	2.94	2.70	

Table 3.9.17 Purity % at 10 months

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	89.27	91.22	84.06	84.34	83.23	87.22
2	CoC 16338	87.01	90.65	85.52	83.18	85.90	86.59
3	CoC 16339	93.09	93.61	85.20	79.29	84.62	87.80
4	CoV 16357	89.69	93.81	84.65	88.76	91.04	89.23
	Standards						
1	CoV 92102	92.48	93.86	84.49	90.36	95.75	90.30
2	Co 86249	93.39	91.03	84.50	85.12	85.39	88.51
3	Co 06030	92.86	90.76	83.58	83.37	92.30	87.64
	GM	91.11	92.14	84.57	84.91	88.32	
	SE	1.31	0.85	0.65	0.30	0.85	
	CD (0.05)	3.52	1.84	NS	0.93	2.62	
	CV	2.15	1.12	1.34	0.61	1.70	

Table 3.9.18 Number of shoots ('000/ha) at 240 days

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	91.84	121.35	127.98	157.30	69.29	124.62
2	CoC 16338	99.65	124.50	123.35	151.73	63.43	124.81
3	CoC 16339	92.71	129.46	127.15	163.10	54.94	128.11
4	CoV 16357	87.50	118.74	123.66	156.02	76.08	121.48
	Standards						
1	CoV 92102	110.94	127.11	121.85	142.68	49.69	125.65
2	Co 86249	118.75	128.66	116.59	141.64	39.20	126.41
3	Co 06030	72.05	124.77	121.50	158.57	29.17	119.22
	GM	96.21	124.94	123.14	153.00	54.54	
	SE	3.71	3.80	1.93	8.70		
	CD (0.05)	11.57	8.28	5.95	26.80		
	CV	6.68	3.73	2.72	9.85		

Table 3.9.19 Number of tillers ('000/ha) at 120 days

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	192.28	136.64	131.41	174.93	146.61	158.82
2	CoC 16338	163.73	132.49	126.48	189.20	143.21	152.98
3	CoC 16339	116.82	141.23	132.89	180.38	87.04	142.83
4	CoV 16357	177.31	127.88	130.51	186.64	143.83	155.59
	Standards						
1	CoV 92102	143.06	136.24	129.59	187.69	130.09	149.15
2	Co 86249	160.18	132.52	121.58	190.82	105.09	151.28
3	Co 06030	137.81	130.76	125.18	176.09	106.33	142.46
	GM	155.88	133.96	128.24	183.68	123.17	
	SE	8.61	4.89	2.04	7.63	5.73	
	CD (0.05)	26.83	10.66	6.28	23.50	17.65	
	CV	9.57	4.47	2.75	7.19	8.10	

Table 3.9.20 Germination % at 30 days

S. No.	Entry	Anakapalle	Cuddalore	Nayagarh	Nellikuppam	Vuyyuru	Mean
1	CoA 16322	71.11	45.90	44.38	91.32	72.22	63.18
2	CoC 16338	65.55	54.49	59.26	88.43	54.28	66.93
3	CoC 16339	56.29	60.00	53.81	88.08	38.54	64.55
4	CoV 16357	68.15	51.69	51.16	90.97	69.56	65.49
	Standards						
1	CoV 92102	73.70	50.83	51.52	82.18	60.42	64.56
2	Co 86249	72.96	43.54	49.75	84.72	50.93	62.74
3	Co 06030	64.07	54.54	59.02	84.61	51.74	65.56
	GM	67.40	51.57	52.70	87.18	56.81	
	SE	3.02	2.18	2.47	4.61	2.69	
	CD (0.05)	9.40	4.76	5.60	14.20	8.29	
	CV	7.75	5.18	8.11	9.16	8.20	

Table 3.9.21 Assessment of performance of entries by monitoring team

Entries	Nellikuppam	Cuddalore	Vuyyuru	Anakapalle	Nayagarh
CoA 16322	Better	On par	On par	On par	Better
CoC 16338	On par	On par	Better	On par	Better
CoC 16339	Better	On par	On par	Better	Better
CoV 16357	Better	On par	On par	Better	On par
Standards					
CoV 92102	On par	Better	Better	Better	Poor
Co 86249	Poor	Better	Better	On par	Better
Co 06030	Best	Best	Best	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 its location 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 was planned in NWZ during 2018-19. 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	-	-	-	-
4	Kota	C	C	C	NC	C	C	C	NC
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	NC	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= 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 (3)	Co 13034, CoPb 13181 and CoS 13231
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
Bud rate	12 buds per metre
Planting time	February / March, 2018
Crop duration	10 months

Results of the previous year

In AVT (Early) I Plant trial, Co 0238 was the best standard for CCS yield with zonal mean of 11.15 t/ha. Among the test entries, Co 13034 was the only entry performed better in the zone with 11.37 t/ha of CCS yield or 7.34% improvement over the best standard. Co 0238 was the best standard for cane yield with zonal mean of 89.45 t/ha. Test entry CoPb 13181 alone recorded higher cane yield (89.79 t/ha) than Co 0238. Co 13034 and CoS 13231 recorded numerically higher sucrose and CCS % than the best standard Co 0238 and occupied first and second positions, respectively. However, none of the test entries could be adjudged as qualifying entry based on mean performance across the zone for yield and quality traits.

Results of the current year

In the AVT (Early) II Plant trial, the mean cane yield of all entries across 9 locations in the zone was 81.40 t/ha and Co 0238 (91.06 t/ha) was the best among the standards. No test entry in the zone recorded higher cane yield than Co 0238, although CoPb 13181 showed >10% improvement at Faridkot and Sriganaganagar, Co 13034 showed >10% improvement at Faridkot and CoS 13231 at Sriganaganagar. For CCS yield, Co 0238 was the best standard in the zone (11.58 t/ha). No test entry in the zone recorded higher CCS yield (zonal mean) than Co 0238, although Co 13034 showed >10% improvement over Co 0238 at Faridkot and Kota, CoPb 13181 at Faridkot and Sriganaganagar and CoS 13231 at Kota and Sriganaganagar. For juice quality, CoS 13231 ranked first for sucrose % (19.05) and CCS % (13.20), followed by Co 13034 (sucrose %: 18.79; CCS %: 13.10). The best standard for juice quality was CoJ 64 (sucrose %: 18.41; CCS %: 12.74). On the basis of pooled data, no entry could be selected as qualifying entry as they did not fulfil the required criteria for cane yield and juice quality. 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	Pant nagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 13034	14.13	9.86	15.96	12.97	5.30	10.42	12.55	10.09	11.00	11.36	2
2	CoPb 13181	15.80	11.18	9.99	11.14	4.71	11.07	10.39	8.30	12.36	10.55	3
3	CoS 13231	11.73	9.83	9.67	12.94	8.88	10.39	8.47	10.48	12.29	10.52	
	Standards											
1	CoJ 64	11.16	9.81	12.45	10.00	7.77	8.61	10.66	8.88	10.09	9.94	
2	Co 0238	10.32	11.74	14.61	11.47	10.90	11.43	14.30	10.77	8.67	11.58	1
3	Co 05009	10.29	9.86	12.60	10.42	4.46	8.44	11.31	8.38	8.68	9.38	
	Mean	12.19	10.38	12.55	11.48	7.01	10.06	11.28	8.01	10.52	10.39	
	SE (m)	0.77		0.42	0.58	0.35	0.55	0.29	0.23	0.27		
	CD at 5%	2.27	1.04	1.28	1.34	0.76	1.16	0.63	0.50	0.59		
	CV	12.65	6.65	6.72	9.89	7.17	7.70	3.65	4.92	7.48		
Top three entries recorded >10 % improvement over the best standard at each location												
Rank 1		CoPb 13181			Co 13034					CoPb 13181		
Rank 2		Co 13034			CoS 13231					CoS 13231		
Rank 3												

No. of locations where an entry recorded >10 % improvement: Co 13034 (2), CoPb 13181 (2) and CoS 13231 (2).

Performance across locations: Co 0238 was the best standard in the zone with mean CCS yield of 11.58 t/ha. No test clones in the zone recorded higher CCS yield than Co 0238, although Co 13034 showed >10% improvement over Co 0238 at two locations (Faridkot and Kota), CoPb 13181 showed >10% improvement at Faridkot and Sriganganagar and CoS 13231 at Kota and Sriganganagar.

Table 4.1.2 Cane yield (t/ha) at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 13034	114.71	75.94	114.53	92.65	41.04	79.25	92.18	81.02	87.47	86.53	2
2	CoPb 13181	131.69	89.26	80.42	88.52	42.25	89.16	82.96	69.54	103.37	86.35	3
3	CoS 13231	93.36	73.40	69.86	91.12	65.51	80.64	62.10	84.07	99.16	79.91	
	Standards											
1	CoJ 64	91.31	76.03	91.00	82.89	58.39	65.92	82.24	74.81	79.84	78.05	
2	Co 0238	88.22	99.21	110.01	85.87	80.34	88.79	108.73	88.06	70.27	91.06	1
3	Co 05009	88.22	77.03	94.45	81.40	35.61	66.57	86.68	69.07	75.55	74.95	
	Mean	101.05	81.81	93.38	87.07	53.86	78.39	85.82	65.29	85.95	81.40	
	SE (m)	6.43		2.24	3.70	3.15	3.78	1.27	2.10	2.28		
	CD at 5%	18.90	6.56	6.81	8.73	6.71	8.06	2.72	4.48	4.86		
	CV	12.72	5.32	4.80	8.50	8.27	6.82	2.09	5.41	7.51		
Top three entries recorded >10 % improvement over the best standard at each location												
Rank 1		CoPb 13181								CoPb 13181		
Rank 2		Co 13034								CoS 13231		
Rank 3												

No. of locations where an entry recorded >10 % improvement: CoPb 13181 (2), Co 13034 (1) and CoS 13231 (1).

Performance across locations: Co 0238 was the best among standards for cane yield in the zone. Its zonal mean was 91.06 t/ha. No test clones in the zone recorded higher cane yield than Co 0238, although CoPb 13181 showed >10% improvement at Faridkot and Sriganganagar, Co 13034 showed >10% improvement at Faridkot and CoS 13231 at Sriganganagar.

Table 4.1.3 CCS % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 13034	12.27	12.98	13.93	14.00	12.91	13.16	13.61	12.46	12.58	13.10	2
2	CoPb 13181	12.02	12.54	12.42	12.59	11.20	12.42	12.52	12.05	11.95	12.19	
3	CoS 13231	12.57	13.39	13.84	14.17	13.58	12.89	13.64	12.37	12.39	13.20	1
	Standards											
1	CoJ 64	12.23	12.89	13.67	12.07	13.33	13.07	12.96	11.79	12.63	12.74	3
2	Co 0238	11.69	11.83	13.29	13.35	13.58	12.88	13.15	12.18	12.34	12.70	
3	Co 05009	11.69	12.81	13.31	12.80	12.52	12.68	13.05	10.82	11.49	12.35	
	Mean	12.06	12.74	13.41	13.16	12.85	12.85	13.16	11.93	12.23	12.71	
	SE (m)	0.11		0.19	0.27	0.31	0.16	0.22	0.09	0.33		
	CD at 5%	0.34	0.58	0.59	0.65	0.66	0.34	0.47	0.19	0.72		
	CV	1.90	3.01	2.89	4.23	3.40	1.76	2.34	1.48	7.83		
Top three entries recorded >5 % improvement over the best standard at each location												
Rank 1					CoS 13231							
Rank 2												
Rank 3												

No. of locations where an entry recorded >5 % improvement: CoS 13231 (1).

Performance across locations: Two test cones namely, CoS 13231 (13.20) and Co 13034 (13.10) recorded numerically higher CCS % than the best standard CoJ 64 (12.74). However, their per cent improvement over CoJ 64 was less than 5.

Table 4.1.4 Sucrose % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 13034	17.60	18.43	19.74	20.16	18.56	18.85	19.66	18.03	18.12	18.79	2
2	CoPb 13181	17.21	17.90	17.71	18.25	16.30	17.96	18.11	17.45	17.42	17.59	
3	CoS 13231	18.20	19.22	19.59	20.39	19.54	18.62	19.67	18.07	18.13	19.05	1
	Standards											
1	CoJ 64	17.52	18.36	19.40	17.56	19.20	18.87	18.77	17.78	18.21	18.41	3
2	Co 0238	16.81	16.98	19.01	19.28	19.49	18.60	19.00	18.26	17.89	18.37	
3	Co 05009	16.84	17.96	18.81	18.54	18.05	18.36	18.88	17.62	16.74	17.98	
	Mean	17.38	18.14	19.04	19.03	18.52	18.54	19.02	17.87	17.75	18.37	
	SE (m)	0.16	0.00	0.24	0.37	0.41	0.24	0.28	0.10	0.34		
	CD at 5%	0.46	0.65	0.72	0.89	0.88	0.51	0.59	0.21	0.72		
	CV	1.80	2.39	2.50	3.96	3.15	1.81	2.04	1.10	5.42		
Top three entries recorded >5 % improvement over the best standard at each location												
Rank 1					CoS 13231							
Rank 2												
Rank 3												

No. of locations where an entry recorded >5 % improvement: CoS 13231 (1).

Performance across locations: Two test entries namely, CoS 13231 (19.05) and Co 13034 (18.79) recorded numerically higher sucrose % than the best standard CoJ 64 (18.41). However, their per cent improvement over CoJ 64 was 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 13034	19.58	20.05	21.37	22.63	20.76	21.17	22.20	20.49	20.34	20.95
2	CoPb 13181	19.05	19.70	19.45	20.78	18.69	20.29	20.53	19.96	20.03	19.83
3	CoS 13231	20.68	21.43	21.17	22.85	21.88	21.02	22.13	20.53	21.01	21.41
	Standards										
1	CoJ 64	19.43	20.10	21.09	20.10	21.53	21.27	21.33	20.27	20.47	20.62
2	Co 0238	18.80	18.90	21.05	21.78	21.73	20.99	21.48	20.69	20.34	20.64
3	Co 05009	18.90	19.68	20.24	21.05	20.27	20.79	21.40	20.11	19.25	20.19
	Mean	19.52	19.98	20.73	21.52	20.81	20.92	21.51	20.34	20.24	20.62
	SE (m)	0.20		0.20	0.36	0.42	0.26	0.27	0.09	0.22	
	CD at 5%	0.58	0.45	0.62	0.86	0.90	0.54	0.57	0.19	0.47	
	CV	2.01	1.48	1.97	3.39	2.88	1.72	1.74	0.88	3.10	

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 13034	89.90	91.85	92.38	89.10	89.40	89.05	88.56	87.98	89.12	89.70
2	CoPb 13181	90.33	90.84	91.08	87.85	87.27	88.49	88.25	87.42	87.08	88.73
3	CoS 13231	88.05	89.72	92.59	89.24	89.82	88.59	88.89	88.02	87.69	89.18
	Standards										
1	CoJ 64	90.18	91.35	91.99	87.34	89.14	88.72	88.03	87.73	89.56	89.34
2	Co 0238	89.44	89.84	90.33	88.51	89.75	88.62	88.47	88.24	88.10	89.03
3	Co 05009	89.11	91.28	92.92	88.05	89.06	88.28	88.23	87.61	87.24	89.09
	Mean	89.09	90.81	91.88	88.34	89.07	88.62	88.41	87.83	88.13	89.13
	SE (m)	0.46			0.25	0.75	0.25	0.64	0.10	0.38	
	CD at 5%	1.36	NS	NS	0.59	1.61	NS	1.38	0.21	0.82	
	CV	1.03	1.60	1.92	0.56	1.20	0.40	1.03	0.23	1.23	

Table 4.1.7 Pol % in cane and Fibre % at harvest

SI No	Entries	Pol % in cane						Fibre % at harvest					
		Kapurthala	Karnal	Lucknow	Muzaffarnagar	Shahjahanpur	Mean	Kapurthala	Karnal	Lucknow	Muzaffarnagar	Shahjahanpur	Mean
1	Co 13034	14.33	15.08	14.28	13.76	13.90	14.27	13.89	13.61	13.07	13.34	14.48	13.68
2	CoPb 13181	13.39	13.29	12.59	13.29	13.62	13.24	14.34	14.94	12.72	13.45	14.79	14.05
3	CoS 13231	15.02	14.25	14.99	13.57	13.97	14.36	14.28	17.24	13.29	13.90	14.72	14.69
	Standards												
1	CoJ 64	13.82	15.12	14.71	13.70	13.81	14.23	11.69	12.07	13.39	13.28	14.63	13.01
2	Co 0238	13.68	14.77	14.91	13.57	14.11	14.21	14.93	12.32	13.53	13.56	14.58	13.78
3	Co 05009	13.55	14.25	13.93	13.50	13.76	13.80	14.82	14.22	12.81	13.72	14.67	14.05
	Mean	13.97	14.46	14.24	13.56		14.05	13.99	14.07	13.13	13.54		13.68
	SE (m)		0.17	0.36					0.20	0.66			
	CD at 5%	0.43	0.52	0.77				1.60	0.60	NS			
	CV	2.03	2.35	3.59				7.61	2.80	7.14			

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 13034	56.16	50.39	51.23	53.88	56.95	53.78		53.74	46.24	52.80
2	CoPb 13181	59.22	52.21	41.94	52.95	49.61	55.55		52.71	54.37	52.32
3	CoS 13231	55.16	49.00	38.40	52.46	47.99	46.29		57.18	51.29	49.72
	Standards										
1	CoJ 64	60.16	51.29	46.02	51.04	55.91	55.00		53.14	50.46	52.88
2	Co 0238	57.98	53.36	54.74	52.50	57.79	50.86		56.15	50.55	54.24
3	Co 05009	58.36	50.60	47.99	51.18	52.14	51.16		54.51	48.76	51.84
	Mean	56.22	51.14	46.72	52.33	53.40	52.11		54.57	50.28	52.10
	SE (m)	0.65		1.26	0.51	3.00			0.96	1.02	
	CD at 5%	1.92	NS	3.84	1.20	6.39			2.05	2.18	
	CV	2.33	6.61	5.40	1.95	7.94			3.53	5.74	

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 13034	18.30	16.10	20.47	20.85	21.10	20.46	21.15	20.17	18.49	19.68
2	CoPb 13181	17.45	17.75	18.33	18.91	18.64	19.74	20.05	19.81	17.87	18.73
3	CoS 13231	18.13	19.18	20.39	21.28	20.83	21.14	21.70	20.33	18.43	20.16
	Standards										
1	CoJ 64	18.13	18.48	20.17	18.57	20.53	20.74	20.65	19.71	18.94	19.55
2	Co 0238	17.20	17.55	20.58	20.46	20.19	20.81	20.58	20.16	18.24	19.53
3	Co 05009	17.48	17.83	19.61	19.21	18.07	20.61	20.15	18.49	17.73	18.80
	Mean	17.76	17.82	19.92	19.87	19.89	20.58	20.71	19.78	18.52	19.43
	SE (m)	0.17		0.20	0.30	0.33	0.30	0.44	0.10	0.24	
	CD at 5%	0.50	1.36	0.61	0.72	0.71	0.64	0.95	0.22	0.51	
	CV	1.90	5.06	2.00	3.08	2.36	2.06	3.02	1.04	3.67	

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 13034	15.49	14.31	18.53	18.33	18.87	17.81	17.89	17.69	15.90	17.20
2	CoPb 13181	15.34	15.57	16.24	16.33	15.99	17.10	16.66	17.28	15.18	16.19
3	CoS 13231	15.80	16.63	18.73	18.77	18.34	18.45	18.21	17.85	15.48	17.58
	Standards										
1	CoJ 64	15.45	16.07	18.09	15.97	18.22	18.18	17.39	17.17	16.09	16.96
2	Co 0238	14.47	15.01	18.42	17.93	17.03	18.02	17.27	17.67	15.32	16.79
3	Co 05009	15.07	15.79	18.03	16.64	15.99	18.05	16.94	15.86	14.89	16.36
	Mean	15.30	15.56	18.01	17.32	17.41	17.93	17.39	17.25	15.48	16.85
	SE (m)	0.14		0.21	0.31	0.43	0.31	0.51	0.11	0.39	
	CD at 5%	0.41	NS	0.64	0.74	0.91	0.67	1.10	0.24	0.82	
	CV	1.80	7.93	2.34	3.04	3.47	2.48	4.16	1.28	7.07	

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 13034	84.64	88.57	90.53	87.91	89.50	87.01	84.54	87.67	86.36	87.41
2	CoPb 13181	87.93	87.67	88.61	86.35	86.33	86.59	83.27	87.24	85.28	86.59
3	CoS 13231	87.17	86.67	91.86	88.21	88.15	87.39	83.89	87.79	84.71	87.32
	Standards										
1	CoJ 64	85.25	87.00	89.70	86.04	88.40	87.63	84.17	87.38	85.54	86.79
2	Co 0238	84.10	84.26	89.47	87.60	84.35	86.54	83.94	87.64	84.62	85.84
3	Co 05009	86.24	88.57	91.98	86.61	88.56	87.53	84.05	85.81	84.37	87.08
	Mean	86.14	87.12	90.36	87.11	87.55	87.11	83.98	87.25	85.15	86.86
	SE (m)	0.48		0.43	0.23	1.20	0.58	0.74	0.11	0.42	
	CD at 5%	1.40	NS	1.29	0.56	2.56	NS	1.59	0.24	0.90	
	CV	1.11	5.67	0.94	0.54	1.94	0.94	1.24	0.26	1.40	

Table 4.1.12 CCS % at 8th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 13034	10.48	9.92	12.96	12.65	13.13	12.22	12.10	12.19	10.85	11.83
2	CoPb 13181	10.58	10.73	11.25	11.17	10.90	11.70	11.18	11.87	10.30	11.08
3	CoS 13231	10.86	11.40	13.19	12.97	12.67	12.68	12.27	12.30	10.44	12.09
	Standards										
1	CoJ 64	10.50	11.02	12.60	10.90	12.62	12.52	11.74	11.79	10.91	11.62
2	Co 0238	9.76	10.14	12.81	12.35	11.51	12.33	11.65	12.18	10.33	11.45
3	Co 05009	10.29	10.93	12.70	11.40	11.06	12.41	11.43	10.82	10.04	11.23
	Mean	10.45	10.69	12.58	11.90	11.98	12.31	11.73	11.86	10.48	11.55
	SE (m)	0.10		0.16	0.23	0.36	0.24	0.40	0.08	0.13	
	CD at 5%	0.31	NS	0.50	0.55	0.78	0.52	0.85	0.18	0.29	
	CV	1.11	5.67	0.94	0.54	1.94	0.94	1.24	0.26	1.40	

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 13034	88.99	92.71	91.09	92.17	53.62	90.18	68.82	86.57	90.57	83.86
2	CoPb 13181	116.77	100.06	97.45	90.91	63.08	98.24	66.11	79.63	109.29	91.28
3	CoS 13231	107.25	90.63	92.53	87.94	94.78	116.29	64.51	94.91	98.41	94.14
	Standards										
1	CoJ 64	93.24	90.41	90.91	85.90	87.42	109.16	78.68	90.37	90.67	90.75
2	Co 0238	80.25	82.92	75.81	87.30	78.24	89.35	66.74	89.63	81.22	81.27
3	Co 05009	88.86	76.80	89.35	84.27	60.74	94.53	70.49	79.35	93.55	81.99
	Mean	94.07	88.92	89.53	88.08	72.98	99.62	69.23	86.74	93.95	87.01
	SE (m)	4.11		2.42	2.27	3.76	3.16	0.63	3.48	2.32	
	CD at 5%	12.10	11.38	7.36	5.36	8.02	6.73	1.36	7.42	4.94	
	CV	8.75	8.49	5.40	5.16	7.29	4.48	1.29	8.03	6.98	

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 13034	276.83	229.25	245.00	210.00	153.10	213.00	232.00	191.50	195.55	216.25
2	CoPb 13181	251.66	262.25	236.00	250.00	150.05	217.00	261.00	218.75	205.27	228.00
3	CoS 13231	278.83	224.25	228.00	243.00	191.35	207.00	216.00	235.75	204.36	225.39
	Standards										
1	CoJ 64	241.91	224.25	218.00	215.00	147.30	194.00	215.00	219.75	180.57	206.20
2	Co 0238	220.91	242.75	250.00	210.00	176.90	221.00	248.00	236.50	191.29	221.93
3	Co 05009	262.25	231.00	249.00	212.00	136.05	204.00	234.00	209.00	182.43	213.30
	Mean	258.60	235.63	238.00	223.00	159.13	209.00	234.33	218.54	190.75	218.55
	SE (m)	4.57		7.00	10.00	9.99	8.00	13.00	7.14	5.84	
	CD at 5%	13.44	18.55	21.00	24.00	21.28	17.00	30.00	15.21	12.43	
	CV	3.53	5.23	5.87	9.18	8.87	5.34	7.79	6.53	8.66	

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 13034	2.73	2.33	2.50	2.20	2.22	2.72	2.28	2.41	2.31	2.41
2	CoPb 13181	2.52	2.38	2.00	1.95	1.97	1.94	2.21	2.13	2.39	2.17
3	CoS 13231	2.42	2.25	2.00	1.70	1.94	1.85	1.91	2.15	2.27	2.05
	Standards										
1	CoJ 64	2.61	2.21	2.40	1.95	2.15	2.35	2.24	2.19	2.29	2.27
2	Co 0238	2.93	2.51	2.70	2.78	2.44	2.76	2.46	2.49	2.58	2.63
3	Co 05009	2.59	2.40	2.20	2.28	2.28	2.26	2.21	2.36	2.38	2.33
	Mean	2.64	2.35	2.31	2.14	2.16	2.31	2.22	2.29	2.37	2.31
	SE (m)	0.06		0.10	0.05	0.10	0.08	0.13	0.05	0.04	
	CD at 5%	0.18	0.18	0.30	0.13	0.21	0.18	0.28	0.10	0.08	
	CV	4.72	5.12	8.61	5.39	6.59	5.13	8.34	4.07	4.31	

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 13034	1.40	1.36	1.26	1.01	0.77	0.99	1.34	0.96	0.96	1.12
2	CoPb 13181	1.14	1.39	0.83	0.97	0.67	0.94	1.26	0.79	1.06	1.01
3	CoS 13231	1.04	1.11	0.76	1.03	0.70	0.74	0.96	0.80	0.87	0.89
	Standards										
1	CoJ 64	1.11	1.13	1.00	0.97	0.67	0.64	1.05	0.78	0.88	0.91
2	Co 0238	1.29	1.37	1.45	0.98	1.03	1.09	1.63	1.07	0.94	1.20
3	Co 05009	1.18	1.23	1.06	0.97	0.59	0.66	1.23	0.92	0.86	0.97
	Mean	1.20	1.27	1.06	0.98	0.74	0.84	1.25	0.89	0.93	1.02
	SE (m)	0.04		0.03	0.02	0.04	0.03	0.07	0.04	0.02	
	CD at 5%	0.12	0.14	0.09	0.07	0.09	0.06	0.15	0.08	0.05	
	CV	6.72	7.14	5.63	6.03	7.76	4.49	7.97	8.13	6.87	

Table 4.1.17 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 13034	135.16	118.11	118.00	108.00	93.80	145.09	93.33	182.31	148.56	126.93
2	CoPb 13181	163.32	135.66	100.29	109.50	87.71	169.26	105.35	164.44	162.28	133.09
3	CoS 13231	154.58	128.62	109.61	115.50	131.89	197.13	78.96	198.24	153.55	140.90
	Standards										
1	CoJ 64	127.44	120.02	113.60	102.00	106.04	202.96	102.85	183.15	135.71	132.64
2	Co 0238	119.34	106.67	120.89	105.75	137.38	158.61	95.00	181.76	130.28	128.41
3	Co 05009	131.94	116.28	105.56	102.50	92.30	168.14	92.29	167.50	141.41	124.21
	Mean	136.98	120.89	111.32	107.20	108.19	173.53	94.63	179.57	145.30	130.85
	SE (m)	4.27		3.97	1.90	8.66	6.06	3.84	6.22	3.56	
	CD at 5%	12.56	12.22	12.09	4.50	18.46	12.91	8.25	12.78	7.58	
	CV	6.23	8.05	7.14	3.50	11.32	4.94	5.73	6.68	6.93	

Table 4.1.18 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 13034	109.61	94.91		191.57	72.36					117.11
2	CoPb 13181	136.57	123.46		194.24	75.64					132.48
3	CoS 13231	131.60	119.47		204.88	118.23					143.54
	Standards										
1	CoJ 64		112.14		180.93	97.92					130.33
2	Co 0238	124.65	82.95		187.58	101.10					124.07
3	Co 05009	90.51	101.34		181.82	72.09					111.44
	Mean	118.59	105.71		190.17	89.56					126.01
	SE (m)	9.16	0.00		3.38	5.69					
	CD at 5%	5.39	10.38		7.99	12.12					
	CV		7.04		3.56	8.98					

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 13034	34.12	49.46	54.86	46.66	28.29	35.83	30.25	50.00	32.24	40.19
2	CoPb 13181	38.58	54.56	54.69	46.02	28.29	37.15	36.44	48.06	39.71	42.61
3	CoS 13231	34.81	50.61	53.65	44.52	37.33	44.79	24.19	57.92	38.36	42.91
	Standards										
1	CoJ 64	35.49	55.80	65.84	43.49	37.01	40.27	29.81	52.78	41.29	44.64
2	Co 0238	35.92	52.11	55.47	44.20	38.80	37.08	35.12	50.83	36.48	42.89
3	Co 05009	36.18	50.00	47.48	42.66	30.28	33.68	29.19	47.85	40.57	39.77
	Mean	35.12	52.09	55.33	44.51	33.33	38.13	30.83	51.24	38.11	42.08
	SE (m)	1.64		1.91	1.51	2.11	2.68	1.34	1.87	0.93	
	CD at 5%	4.84	NS	5.82	2.71	4.49	5.71	2.88	3.98	1.98	
	CV	9.36	13.04	6.91	5.16	8.93	9.95	6.15	7.29	6.92	

Table 4.1.19 Assessment of performance of entries by monitoring team constituted by AICRP(S)

Entries	Lucknow	Shahja hanpur	Pantnagar	Muzaffar nagar	Karnal	Kapurthala	Faridkot	Sriganga nagar	Kota
Co 13034	Poor	Good	Good	Good	On par	Good	OnPar	On Par	On Par
CoPb 13181	Poor	Poor	Poor	Good	Good	Good	On par	On par	Good
CoS 13231	Good	Good	Poor	Good	Poor	Good	On par	On par	Good
Standards									
CoJ 64									
Co 0238	Best	Better	Best	Best	Better	Best	Better	Better	Best
Co 05009									

4.2 ADVANCED VARIETAL TRIAL (EARLY) – RATOON

Centres (9)	Faridkot, Kapurthala, Karnal, Kota*, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur and Sriganaganagar.
Entries (3)	Co 13034, CoPb 13181 and CoS 13231
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 Ratooning	February / March, 2018
Crop duration	9 months

*Kota centre did not conduct ratoon trial.

Results of the previous year

In AVT (Early) I Plant trial, Co 0238 was the best standard for CCS yield with zonal mean of 11.15 t/ha. Among the test entries, Co 13034 was the only entry performed better in the zone with 11.37 t/ha of CCS yield or 7.34% improvement over the best standard. Co 0238 was the best standard for cane yield with zonal mean of 89.45 t/ha. Test entry CoPb 13181 alone recorded higher cane yield (89.79 t/ha) than Co 0238. Co 13034 and CoS 13231 recorded numerically higher sucrose and CCS % than the best standard Co 0238 and occupied first and second positions, respectively. However, none of the test entries could be adjudged as qualifying entry based on mean performance across the zone for yield and quality traits.

Results of the current year

In the ratoon trial, Co 0238 was the best among standards in the zone for CCS yield (10.48 t/ha) as well as cane yield (81.41 t/ha). None of the test entries registered >10 % improvement over the best standard for either CCS yield or cane yield. As regard to juice quality, CoJ 64 was the best standard for CCS % (12.87) as well as sucrose % (18.16). Two test clones namely, CoS 13231 and Co 13034 recorded numerically higher CCS % (13.23 and 13.13, respectively) and higher sucrose % (18.75 and 18.16, respectively) than the best standard but the improvement was lesser than 5.0 per cent when compared to CoJ 64. Hence, as per the criteria, none of the test entries could be identified as qualifying entry based on performance for yield and quality traits. Further details are presented in Tables 4.2.1 to 4.2.13.

Table 4.2.1 CCS yield (t/ha) at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean	Rank
1	Co 13034	11.80	10.22	13.35	4.31	7.59	2.51	9.25	6.19	9.73	2
2	CoPb 13181	13.21	11.20	7.63	4.98	6.17	3.99	7.43	11.10	9.46	
3	CoS 13231	10.95	10.50	11.35	6.52	7.91	5.49	9.54	8.04	9.72	3
	Standards										
1	CoJ 64	10.10	8.97	10.36	6.85	5.82	4.29	8.62	7.10	8.50	
2	Co 0238	11.01	12.23	13.93	8.72	8.23	4.50	9.49	7.98	10.48	1
3	Co 05009*	10.30	11.98	12.27	4.04	6.40	#	8.09	7.21	9.38	
	Mean	11.56	10.85	11.48	5.90	7.02	4.16	8.74	7.94	9.60	
	SE (m)	0.59		0.37	0.36	0.33	0.22	0.24	0.21		
	CD at 5%	1.75	1.39	1.14	0.78	0.71	0.48	0.52	0.45		
	CV	10.21	8.62	6.52	8.74	6.67	7.49	5.54	7.50		
Top three recorded >10 % improvement over the best standard at each location											
Rank 1		CoPb 13181							CoPb 13181		
Rank 2											
Rank 3											

* Due to low yield, data from Lucknow and Pantnagar centres were not considered for calculating mean. # Co 05009 not planted at Pantnagar centre

No. of locations where an entry recorded >10 % improvement over the best standard: CoPb 13181 (2)

Performance of the entries across locations: Co 0238 was the best standard in the zone for CCS yield (10.48 t/ha). None of the test entry registered >10 % improvement for this trait over the best standard, although CoPb 13181 registered >10 % improvement at two locations (Faridkot and Sriganganagar).

Table 4.2.2 Cane yield (t/ha) at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean	Rank
1	Co 13034	88.33	72.16	95.74	36.13	59.81	18.84	69.17	54.28	73.25	
2	CoPb 13181	108.89	82.81	64.26	43.32	50.74	32.63	63.15	90.73	76.76	2
3	CoS 13231	85.83	69.95	78.05	52.46	60.62	42.56	75.19	74.48	74.02	
	Standards										
1	CoJ 64	81.39	63.31	74.19	52.13	46.02	33.79	69.07	61.63	65.94	
2	Co 0238	93.61	88.69	100.52	74.15	63.70	34.94	73.70	68.24	81.41	1
3	Co 05009	85.83	85.94	98.19	36.59	50.18		63.70	65.57	74.90	3
	Mean	93.73	77.14	85.16	49.13	55.18	32.55	69.00	69.16	74.90	
	SE (m)	4.66		3.00	2.86	2.43	1.44	2.33	1.86		
	CD at 5%	13.84	9.37	9.13	6.09	5.19	3.16	4.96	3.97		
	CV	9.94	8.06	7.05	8.23	6.22	6.25	6.75	7.62		
Top three entries recorded >10 % improvement over the best standard at each location											
Rank 1		CoPb 13181							CoPb 13181		
Rank 2											
Rank 3											

Note: * Due to low yield, data from Lucknow and Pantnagar centres were not considered for calculating mean.

No. of locations where an entry recorded >10 % improvement over the best standard: CoPb 13181 (2)

Performance of the entries across locations: Co 0238 was the best standard in the zone with zonal mean cane yield of 81.41 t/ha. None of the test entry registered >10 % improvement for cane yield over the best standard, although CoPb 13181 registered >10 % improvement at two locations (Faridkot and Sriganganagar).

Table 4.2.3 CCS % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean	Rank
1	Co 13034	13.36	14.16	13.94	12.00	12.70	13.31	13.21	11.41	13.13	2
2	CoPb 13181	12.13	13.52	11.86	11.53	12.17	12.21	11.50	12.24	12.24	
3	CoS 13231	12.77	15.02	14.54	12.43	13.05	12.90	13.19	10.79	13.23	1
	Standards										
1	CoJ 64	12.42	14.16	13.96	13.13	12.66	12.69	12.48	11.52	12.87	3
2	Co 0238	11.76	13.80	13.86	11.76	12.93	12.88	12.87	11.70	12.82	
3	Co 05009	12.00	13.94	12.50	11.03	12.77	*	12.33	11.00	12.42	
	Mean	12.36	14.10	13.45	11.98	12.71	12.80	12.60	11.44	12.78	
	SE (m)	0.13		0.15	0.58	0.16	0.22	0.18	0.21		
	CD at 5%	0.38	0.45	0.45	1.23	0.35	0.49	0.39	0.44		
	CV	2.04	2.12	2.21	6.84	1.83	2.44	2.91	5.16		
Top three entries recorded >5 % improvement over the best standard at each location											
Rank 1		Co 13034	CoS 13231								
Rank 2											
Rank 3											

Note: * Due to low yield, data from Lucknow and Pantnagar centres were not considered for calculating mean.

No. of locations where an entry recorded >5 % improvement over the best standard: Co 13034 (1) and CoS 13231 (1).

Performance of the entries across locations: CoJ 64 was the best among the standards for CCS % (12.87). Two test entries namely, CoS 13231 (13.23) and Co 13034 (13.13) recorded numerically higher CCS % than the best standard but their per cent improvement was less than 5.

Table 4.2.4 Sucrose % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean	Rank
1	Co 13034	18.98	18.34	19.87	17.52	18.48	19.27	19.08	16.92	18.61	2
2	CoPb 13181	17.25	17.39	17.23	17.11	17.72	17.76	16.54	17.65	17.30	
3	CoS 13231	18.36	19.44	20.76	18.11	18.91	18.72	18.97	16.06	18.75	1
	Standards										
1	CoJ 64	17.68	18.20	19.87	19.08	18.43	18.44	18.06	16.69	18.16	3
2	Co 0238	16.80	17.71	19.86	17.35	18.69	18.71	18.61	17.00	18.11	
3	Co 05009	17.12	18.01	17.99	16.31	18.49	*	17.89	16.10	17.60	
	Mean	17.63	18.18	19.26	17.58	18.45	18.58	18.19	16.74	18.08	
	SE (m)	0.17		0.21	0.73	0.20	0.31	0.25	0.21		
	CD at 5%	0.51	0.69	0.63	1.55	0.42	0.67	0.54	0.46		
	CV	1.94	2.54	2.16	5.84	1.50	2.33	3.36	3.66		
Top three entries recorded >5 % improvement over the best standard at each location											
Rank 1		Co 13034	CoS 13231								
Rank 2											
Rank 3											

Note: * Due to low yield, data from Lucknow and Pantnagar centres were not considered for calculating mean.

No. of locations where an entry recorded >5 % improvement over the best standard: Co 13034 (1) and CoS 13231 (1).

Performance of the entries across locations: CoJ 64 was the best among the standards for sucrose % (18.16). Two test entries namely, CoS 13231 (18.75) and Co 13034 (18.61) recorded higher sucrose % than the best standard but their per cent improvement was less than 5.

Table 4.2.5 Brix % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean
1	Co 13034	20.68	20.23	21.65	20.23	21.19	21.88	21.53	20.14	20.90
2	CoPb 13181	18.80	19.43	19.57	20.37	20.31	20.35	19.12	19.83	19.51
3	CoS 13231	20.53	21.48	22.72	20.81	21.49	21.33	21.50	19.26	21.16
	Standards									
1	CoJ 64	19.35	20.38	21.59	21.82	21.14	21.10	20.52	18.96	20.32
2	Co 0238	18.53	19.88	21.90	20.45	21.14	21.38	21.05	19.52	20.34
3	Co 05009	18.80	19.98	20.02	19.28	20.96		20.37	18.67	19.80
	Mean	19.39	20.23	21.24	20.49	21.01	21.21	20.68	18.90	20.24
	SE (m)	0.20		0.28	0.62	0.23	0.34	0.23	0.45	
	CD at 5%	0.59	0.58	0.86	1.33	0.50	0.74	0.48	0.96	
	CV	2.05	1.92	2.67	4.30	1.57	2.24	2.19	6.73	

Note: * Due to low yield, data from Lucknow and Pantnagar centres were not considered for calculating mean.

Table 4.2.6 Purity % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean
1	Co 13034	91.82	90.68	91.79	86.17	87.24	88.09	88.52	84.54	89.10
2	CoPb 13181	91.73	89.53	88.14	83.52	87.14	87.29	86.50	89.29	88.72
3	CoS 13231	89.45	90.53	91.40	86.99	88.02	87.75	88.62	83.71	88.62
	Standards									
1	CoJ 64	91.36	89.33	92.03	87.49	87.21	87.41	88.00	88.43	89.39
2	Co 0238	90.69	89.12	90.69	84.89	88.43	87.52	88.41	86.84	89.03
3	Co 05009	91.06	90.14	89.90	84.59	87.79		87.81	86.79	88.92
	Mean	90.96	89.89	90.66	85.61	87.64	87.61	87.97	86.60	88.95
	SE (m)	0.45		0.65	1.25	0.72	0.43	0.23	1.53	
	CD at 5%	1.33	NS	1.97	2.67	NS	0.94	0.50	3.25	
	CV	0.99	1.29	1.43	2.07	1.17	0.69	0.53	4.98	

Note: * Due to low yield, data from Lucknow and Pantnagar centres were not considered for calculating mean.

Table 4.1.7 Pol % in cane and Fibre % at harvest

Sl No	Entries	Pol % in cane						Fibre % at harvest					
		Kapurthala	Karnal	Lucknow	Muzaffarnagar	Shahjahanpur	Mean	Kapurthala	Karnal	Lucknow	Muzaffarnagar	Shahjahanpur	Mean
1	Co 13034	14.64	15.29	13.46	13.42	13.72	14.11	14.85	13.06	13.15	13.19	13.63	13.58
2	CoPb 13181	13.01	12.81	13.19	12.95	12.35	12.86	13.72	15.67	12.93	13.52	13.38	13.84
3	CoS 13231	14.28	15.25	13.91	13.78	13.81	14.21	15.28	16.53	13.21	13.70	13.61	14.47
	Standards												
1	CoJ 64	13.69	15.45	14.69	13.40	13.41	14.13	11.77	12.22	13.03	13.27	13.41	12.74
2	Co 0238	15.13	15.21	13.30	13.61	13.82	14.21	13.76	13.41	13.37	13.26	13.49	13.46
3	Co 05009	13.42	13.54	12.47	13.45	13.32	13.24	14.58	14.74	13.56	13.36	13.38	13.92
	Mean	14.03	14.59	13.50	13.44	13.41	13.79	13.99	14.27	13.21	13.38	13.48	13.67
	SE (m)		0.17	0.60					0.16	0.72			
	CD at 5%	0.38	0.52	1.27				1.10	0.48	NS			
	CV	1.81	2.35	6.26				5.20	2.20	7.70			

Table 4.2.8 Juice extraction % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow	Muzaffar nagar	Pantnagar	Shahjahan pur	Sriganga nagar	Mean
1	Co 13034	56.97	52.07	47.35	47.32	49.50		54.65	43.47	50.19
2	CoPb 13181	57.39	51.00	43.67	48.19	44.86		53.47	51.29	49.98
3	CoS 13231	50.80	49.07	38.22	48.42	45.48		56.05	47.68	47.96
	Standards									
1	CoJ 64	56.17	48.95	47.90	44.91	47.83		56.16	47.71	49.95
2	Co 0238	59.21	54.15	51.42	49.96	53.11		54.71	48.56	53.02
3	Co 05009	57.44	54.43	44.47	47.95	45.54		54.80	45.48	50.02
	Mean	55.86	51.61	45.50	47.79	47.72		54.97	47.37	50.12
	SE (m)	0.86		1.77	1.76			0.56	1.06	
	CD at 5%	2.57	3.47	5.40	ns			1.19	2.27	
	CV	3.09	4.46	7.80	5.21			2.03	6.35	

Table 4.2.9 Number of millable canes (NMC) at harvest ('000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean
1	Co 13034	69.72	77.80	79.80	75.05	75.83	20.69	81.67	65.76	75.10
2	CoPb 13181	135.83	99.17	66.72	78.52	94.62	37.64	72.04	97.28	94.28
3	CoS 13231	113.19	81.38	102.49	82.77	110.46	54.31	93.89	85.41	97.80
	Standards									
1	CoJ 64	114.72	87.79	78.76	94.65	96.85	48.34	87.96	80.55	91.11
2	Co 0238	98.33	78.79	79.92	88.45	72.87	29.45	86.11	71.83	81.31
3	Co 05009	76.67	89.59	86.17	79.58	71.66		77.87	89.27	81.87
	Mean	104.92	85.75	82.31	83.17	87.05	38.09	83.26	81.68	87.50
	SE (m)	3.61		2.62	5.23	5.09	1.26	2.78	2.08	
	CD at 5%	10.72	7.81	7.96	11.15	10.83	2.76	5.92	4.44	
	CV	6.88	6.04	6.36	8.90	8.26	4.66	6.68	7.22	

Note: * Due to low values, data from Lucknow and Pantnagar centres were not considered for calculating mean

Table 4.2.10 Stalk length (cm)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean
1	Co 13034	209.17	243.75	211.00	150.00	201.00	153.00	177.25	165.73	201.32
2	CoPb 13181	212.83	241.88	233.00	156.00	209.00	195.00	191.00	189.28	212.83
3	CoS 13231	243.00	156.88	239.00	185.00	199.00	178.00	210.00	176.55	204.07
	Standards									
1	CoJ 64	182.75	188.13	211.00	123.00	150.00	149.00	184.75	149.64	177.71
2	Co 0238	184.83	232.50	239.00	168.50	210.00	175.00	202.75	161.87	205.16
3	Co 05009	227.66	239.38	280.00	118.75	204.00		182.25	165.26	216.43
	Mean	213.85	217.09	235.00	150.21	195.00	170.00	191.33	168.06	203.39
	SE (m)	4.62		7.00	7.52	8.00	13.00	5.65	4.02	
	CD at 5%	13.73	31.54	22.00	16.00	11.70	28.00	12.04	8.57	
	CV	4.32	9.64	6.17	7.08	5.61	10.79	5.90	6.77	

Note: * Due to low values, data from Lucknow and Pantnagar centres were not considered for calculating mean

Table 4.2.11 Stalk diameter (cm)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean
1	Co 13034	3.01	2.40	2.48	2.26	2.33	2.37	2.42	2.29	2.49
2	CoPb 13181	2.35	2.26	2.16	1.98	1.79	2.05	2.24	2.31	2.19
3	CoS 13231	2.26	2.10	1.84	1.97	1.91	2.00	2.17	2.28	2.09
	Standards									
1	CoJ 64	2.51	2.43	2.33	2.13	2.16	2.15	2.21	2.26	2.32
2	Co 0238	2.75	2.63	2.57	2.34	2.20	2.55	2.62	2.51	2.55
3	Co 05009	2.55	2.29	2.19	2.20	2.12		2.40	2.29	2.31
	Mean	2.54	2.35	2.26	2.15	2.08	2.22	2.34	2.32	2.32
	SE (m)	0.06		0.08	0.10	0.05	0.12	0.05	0.06	
	CD at 5%	0.18	0.29	0.26	0.21	0.10	0.26	0.11	0.12	
	CV	4.76	8.18	7.46	6.46	3.25	7.64	4.51	6.84	

Note: * Due to low values, data from Pantnagar centre were not considered for calculating mean

Table 4.2.12 Single cane weight (kg)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar *	Shahjahan pur	Sriganga nagar	Mean
1	Co 13034	1.38	1.25	1.20	0.48	0.80	0.92	0.96	0.81	1.07
2	CoPb 13181	0.88	1.05	0.96	0.56	0.56	0.87	0.77	0.92	0.86
3	CoS 13231	0.85	0.76	0.76	0.64	0.56	0.79	0.81	0.89	0.77
	Standards									
1	CoJ 64	0.87	0.78	0.94	0.55	0.48	0.70	0.77	0.74	0.76
2	Co 0238	1.03	1.10	1.26	0.84	0.87	1.18	1.07	0.82	1.03
3	Co 05009	1.16	0.92	1.14	0.46	0.72		0.86	0.69	0.92
	Mean	1.03	0.98	1.04	0.59	0.67	0.89	0.87	0.81	0.90
	SE (m)	0.04		0.02	0.04	0.01	0.02	0.04	0.02	
	CD at 5%	0.11	0.17	0.06	0.09	0.02	0.05	0.09	0.04	
	CV	7.07	11.22	3.55	9.89	2.74	3.77	9.89	6.84	

Note: * Due to low values, data from Lucknow and Pantnagar centres were not considered for calculating mean

Table 4.2.13 Number of tillers at 90 days before earthing up ('000/ha)

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Lucknow *	Muzaffar nagar	Pantnagar	Shahjahan pur	Sriganga nagar	Mean
1	Co 13034	95.42		119.16	97.23	157.96		161.30	103.41	106.21
2	CoPb 13181	206.11		124.25	95.85	180.83		154.02	139.29	134.08
3	CoS 13231	194.17		100.12	115.66	190.92		191.02	127.73	133.99
	Standards									
1	CoJ 64	157.50		131.19	117.05	172.77		182.59	119.26	127.22
2	Co 0238	156.11		124.77	121.35	179.90		175.46	107.55	123.97
3	Co 05009	139.03		117.53	95.97	156.57		158.61	129.47	116.87
	Mean	166.17		119.50	107.18	173.16		170.65	121.12	125.10
	SE (m)	5.14		3.87	5.00	11.30		5.46	2.91	
	CD at 5%	15.28		11.77	10.65	24.08		11.64	6.19	
	CV	6.19		6.48	6.59	9.92		6.40	6.79	

Note: * Due to low values, data from Lucknow and Pantnagar centres were not considered for calculating mean

Table 4.2.14 Assessment of performance of entries by monitoring team constituted by AICRP(S)

Entries	Lucknow	Shahja hanpur	Pantnag ar	Muzaffar nagar	Karnal	Kapurthala	Faridkot	Sriganga nagar	Kota
Co 13034	Trial is to be abandoned due to poor population	Trial is to be abandoned due to poor population	The trial was not proper is to be abandoned.	The trial was abandoned at this center	Good	Good	On Par	Good	Not Conducted
CoPb 13181					Poor	Good	On Par	On Par	
CoS 13231					Good	Good	On Par	On Par	
Standards									
CoJ 64									
Co 0238					Best	Best	Best		
Co05009								Best	

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 (3)	Co 13034, CoPb 13181 and CoS 13231
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	February / March, 2018

* Kota centre did not conduct AVT (E) ratoon trial.

Three early maturing clones were evaluated along with three standards during 2017-18 in AVT-I Plant and during 2018-19 in AVT-II Plant as well as in AVT-Ratoon 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 11.26 t/ha (Table 4.8.1 & Fig. 4.8.1). No test entry was superior to the standard, although the clone CoPb 13181 recorded >10% improvement for CCS yield over the best standard at two locations (Faridkot, Sriganaganagar), Co 13034 at two locations (Faridkot, Kota) and CoS 13231 at one location (Kota).

Cane yield (t/ha): Co 0238 was the best standard in the zone for cane yield (88.68 t/ha). None of the test entries in the zone recorded higher cane yield than Co 0238 (Table 4.3.2 & Fig. 4. 3.2), although the clone CoPb 13181 recorded >10% improvement for cane yield over the best standard at two locations (Faridkot, Sriganaganagar) and Co 13034, CoS 13231 each at one location *i.e.* Faridkot and Sriganaganagar, respectively.

CCS % at harvest: Co 0238 was the best standard for CCS % (Table 4.3.3 & Fig. 4.3.3). Its zonal mean was 12.67 %. Two test entries recorded numerically higher CCS % than Co 0238. They were CoS 13231 (13.04) and Co 13034 (13.03). But they did not show >5 % improvement over the best standard except at Kota centre.

Sucrose % at harvest: Co 0238 was the best standard for sucrose % (Table 4.3.4 & Fig. 4.3.4). Its zonal mean was 18.18. Two test entries recorded numerically higher sucrose % than CoJ 64. They were CoS 13231 (18.72) and Co 13034 (18.66). But they did not show >5 % improvement over the best standard except at Kota centre.

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

Varietal Improvement Programme-AICRP (Sugarcane)
 Principal Investigator's Report (2018-19)
 North West Zone: AVT (Early)
 Pooled Mean of 2 Plant +1 Ratoon trials

Table 4.3.1 CCS yield (t/ha) at harvest

SI No.	Entries	Faridkot	Kapur thala	Karnal	Kota*	Lucknow #	Muzaffar nagar	Pant nagar#	Shahja hanpur	Sriganga nagar	Wt. Mean	Rank
1	Co 13034	13.10	10.16	15.67	12.60	4.96	9.32	8.83	10.15	9.34	11.20	2
2	CoPb 13181	14.77	10.89	10.53	11.17	5.27	9.38	7.96	8.16	11.72	10.58	3
3	CoS 13231	11.33	10.37	10.29	12.78	6.94	9.22	7.62	10.42	9.81	10.27	4
	Standards											
1	CoJ 64	10.71	9.28	12.30	9.66	6.75	7.63	8.01	8.98	8.54	9.53	6
2	Co 0238	10.74	11.42	15.18	11.20	9.36	9.96	10.27	10.40	8.76	11.26	1
3	Co 05009**	10.06	10.62	13.59	10.37	4.05	7.94	11.31#	8.51	8.24	9.73	5
	Mean	11.88	10.46	12.93	11.29	6.22	8.91	8.54	8.95	9.40	10.38	
Top three entries showing >10 % improvement over the best standard at each location												
Rank 1		CoPb 13181			CoS 13231					CoPb 13181		
Rank 2		Co 13034			Co 13034							
Rank 3												

Note : * Kota centre did not conduct AVT (E) Ratoon trial hence the value given here are the mean of 2 plant crops alone

Due to low yields in plant and ratoon trials, data from Lucknow and Pantnagar centres did not consider for calculating weighted zonal mean.

Varietal Improvement Programme-AICRP (Sugarcane)
 Principal Investigator's Report (2018-19)
 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	Wt. Mean	Rank
1	Co 13034	104.72	77.92	113.47	91.87	40.70	73.21	63.77	78.43	77.34	85.76	3
2	CoPb 13181	122.94	87.00	84.52	89.22	46.53	76.91	62.97	68.24	98.61	86.59	2
3	CoS 13231	90.13	76.39	73.51	94.02	54.62	72.33	56.39	81.91	85.03	79.04	4
	Standards											
1	CoJ 64	87.58	71.25	90.31	81.87	51.95	60.06	61.18	73.39	71.37	75.38	6
2	Co 0238	92.40	91.99	111.76	87.14	75.95	78.21	76.52	82.78	73.02	88.68	1
3	Co 05009**	87.03	79.75	104.18	83.27	34.67	63.18	86.68	68.45	73.30	78.31	5
	Mean	98.43	80.71	96.29	87.90	50.74	70.65	64.22	71.38	79.78	81.81	
Top three entries showing >10 % improvement over the best standard at each location												
Rank 1		CoPb 13181								CoPb 13181		
Rank 2		Co 13034								CoS 13231		
Rank 3												

Note : * Kota centre did not conduct AVT (E) Ratoon trial hence the value given here are the mean of 2 plant crops alone

Due to low yields in plant and ratoon trials, data from Lucknow and Pantnagar centres did not consider for calculating weighted zonal mean.

Varietal Improvement Programme-AICRP (Sugarcane)
 Principal Investigator's Report (2018-19)
 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	Wt. Mean	Rank
1	Co 13034	12.56	13.10	13.82	13.73	12.21	12.75	13.72	12.91	11.99	13.03	2
2	CoPb 13181	12.02	12.54	12.37	12.51	11.35	12.19	12.57	11.89	11.90	12.20	6
3	CoS 13231	12.58	13.66	13.98	13.59	12.61	12.76	13.45	12.86	11.44	13.04	1
	Standards											
1	CoJ 64	12.24	13.07	13.66	11.79	12.96	12.70	13.03	12.20	11.92	12.64	4
2	Co 0238	11.63	12.44	13.59	12.86	12.29	12.75	13.33	12.56	12.00	12.67	3
3	Co 05009**	11.57	13.29	13.03	12.46	11.68	12.60	13.05	11.87	11.23	12.32	5
	Mean	12.08	13.02	13.41	12.82	12.18	12.62	13.22	12.38	11.75	12.66	
Top three entries showing >5 % improvement over the best standard at each location												
Rank 1					Co 13034							
Rank 2					CoS 13231							
Rank 3												

Note : * Kota centre did not conduct AVT (E) Ratoon trial hence the value given here are the mean of 2 plant crops alone

Due to low yields in plant and ratoon trials, data from Lucknow and Pantnagar centres did not consider for calculating weighted zonal mean.

Varietal Improvement Programme-AICRP (Sugarcane)
 Principal Investigator's Report (2018-19)
 North West Zone: AVT (Early)
 Pooled Mean of 2 Plant +1 Ratoon trials

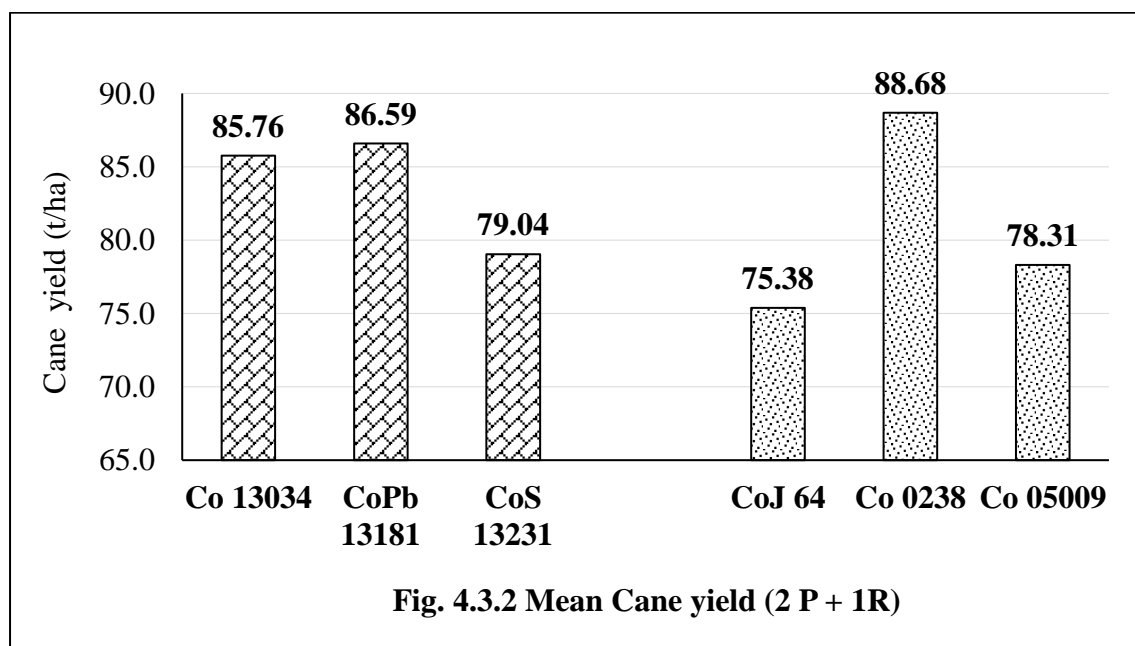
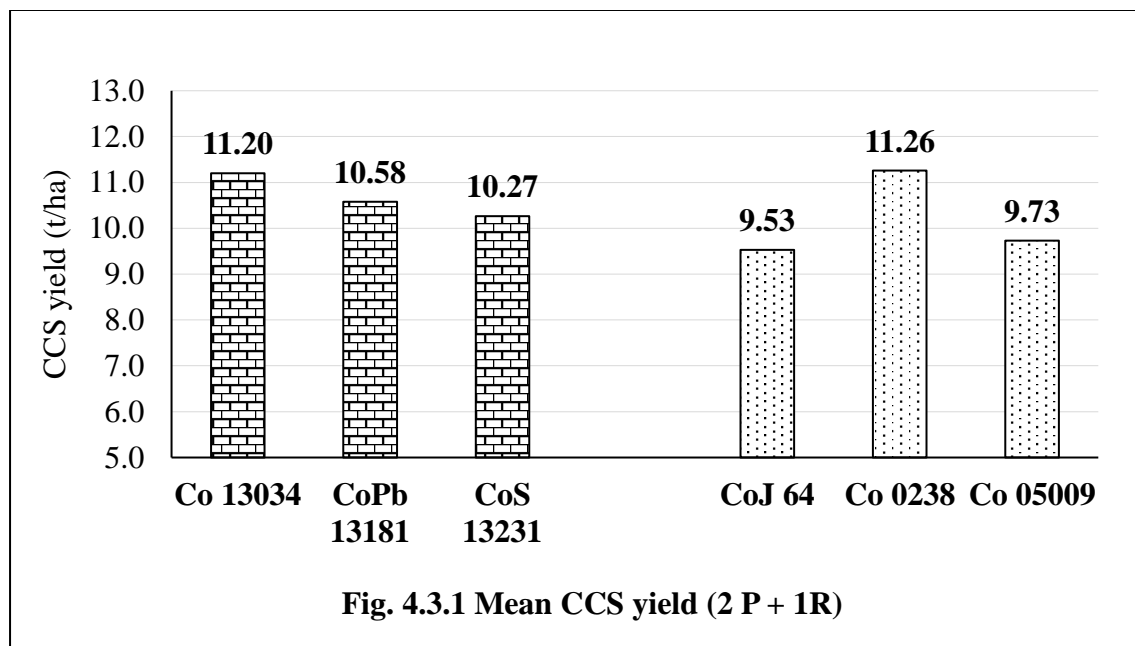
Table 4.3.4 Sucrose % at harvest

Sl No.	Entries	Faridkot	Kapur thala	Karnal	Kota*	Lucknow #	Muzaffar nagar	Pant nagar#	Shahja hanpur	Sriganga nagar	Wt. Mean	Rank
1	Co 13034	17.97	18.12	19.63	19.66	17.75	18.49	19.86	18.66	17.47	18.66	2
2	CoPb 13181	17.20	17.34	17.73	18.07	16.74	17.69	18.20	17.18	17.28	17.50	6
3	CoS 13231	18.12	18.89	19.86	19.53	18.36	18.52	19.48	18.60	16.75	18.72	1
	Standards											
1	CoJ 64	17.52	17.95	19.46	17.10	18.75	18.43	18.88	17.91	17.24	18.14	4
2	Co 0238	16.70	17.17	19.45	18.39	17.97	18.44	19.32	18.38	17.43	18.18	3
3	Co 05009**	16.61	18.15	18.55	17.96	17.13	18.26	18.88	17.85	16.39	17.73	5
	Mean	17.34	17.93	19.11	18.45	17.78	18.31	19.14	18.10	17.10	18.17	
Top three entries showing >5% improvement over the best standard at each location												
Rank 1					Co 13034							
Rank 2					CoS 13231							
Rank 3												

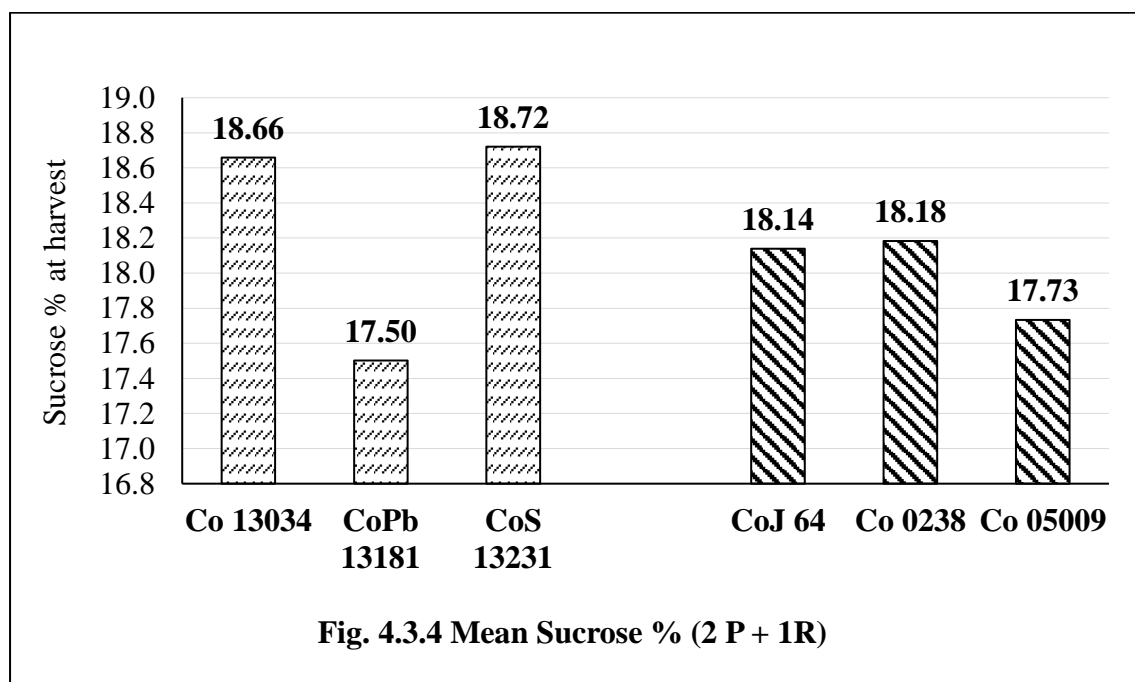
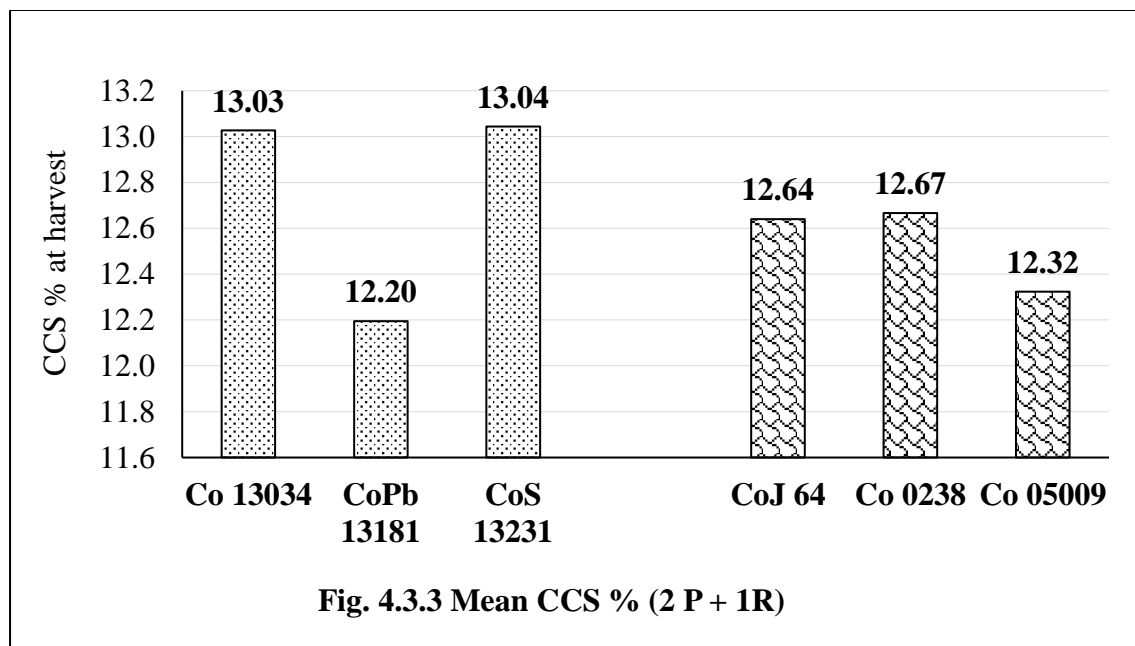
Note : * Kota centre did not conduct AVT (E) Ratoon trial hence the value given here are the mean of 2 plant crops alone

Due to low yields in plant and ratoon trials, data from Lucknow and Pantnagar centres did not consider for calculating weighted zonal mean.

Pooled mean of 2 plant crop and 1 ratoon trials conducted for early entries in NWZ



Pooled mean of 2 plant crop and 1 ratoon trials conducted for 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 (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, 2018
Crop duration	10 months

Results of the previous year

In the IVT (Early) trials, Co 0238 was the best standard in the zone for CCS yield (10.97 t/ha) as well as cane yield (90.50 t/ha). Among the test entries, Co 14034 alone recorded higher CCS yield (11.49 t/ha) than Co 0238. Four test entries *viz.* Co 14034 (95.20 t/ha), CoLk 14201 (93.41 t/ha), CoPb 14211 (92.21 t/ha) and CoPb 14181 (91.84 t/ha) recorded higher cane yield than Co 0238. They were: For CCS %, the standards Co 0238 and CoJ 64 performed equally (12.05). No test entry recorded higher value than the standards across the zone, although Co 14034 and CoPb 14181 recorded > 5 % improvement over the standards at Kota centre. With regard to sucrose content, Co 0238 was the best standard with zonal mean of 17.48 %. No test entries recorded higher sucrose % than the standards, although Co 14034 exhibited >5 % improvement over the standard at Kota centre. Based on overall mean, none of the entries were chosen as qualifying entry.

Results of the current year

Co 0238 was identified as the best among the standards 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 less than 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). Co 14034 (13.04), CoPb 14181 (12.77), CoPb 14211 (12.69) and CoLk 14201 (12.37) were the test entries that 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%. Based on the performance of the entries for both cane yield and juice quality, no entry in this trial could be identified as qualifying entry. Further details are presented in Tables 4.4.1 to 4.4.18.

Table 4.4.1 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	12.99	10.56	15.68	12.50	9.12	11.36	12.49	9.96	10.75	11.71	1
2	CoLk 14201	9.03	9.58	12.30	10.64	11.95	13.51	10.20	9.82	12.00	11.00	
3	CoPb 14181	12.78	10.73	12.44	11.00	10.04	12.18	11.70	9.90	10.37	11.24	3
4	CoPb 14211	11.85	12.41	11.76	10.55	10.89	12.98	12.25	9.24	12.72	11.63	2
Standards												
1	CoJ 64	10.45	9.51	12.24	9.63	7.61	8.75	9.47	8.76	10.18	9.62	
2	Co 0238	10.29	11.75	13.75	10.07	10.62	10.87	10.75	10.52	7.92	10.73	
3	Co 05009	11.27	10.49	12.50	9.69	5.32	9.11	11.63	8.32	8.47	9.64	
	Mean	11.64	10.72	12.95	10.58	10.55	11.25	11.21	9.55	10.34	10.98	
	SE (m)	0.65		0.66	0.59	0.65	0.55	0.57	0.36	0.23		
	CD at 5%	1.96	1.20	2.05	1.43	1.43	1.21	1.26	0.79	0.50		
	CV	9.73	6.30	8.82	9.76	7.60	6.03	6.25	6.57	6.32		
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank 1	Co 14034		Co 14034	Co 14034	CoLk 14201	CoLk 14201			CoPb 14211		
	Rank 2	CoPb 14181					CoPb 14211					
	Rank 3	CoPb 14211										

No. of locations where an entry recorded >10 % improvement over the best standard: Co 14034 (3), CoPb 14211 (3), CoLk 14201 (2), CoPb 14181 (1).

Performance across locations: Among the standards Co 0238 was the best (10.73 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).

Table 4.4.2 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	99.45	86.34	111.00	88.17	66.71	86.17	95.24	81.23	92.96	89.70	2
2	CoLk 14201	76.13	90.82	110.10	77.16	87.69	101.48	76.72	80.74	104.37	89.47	3
3	CoPb 14181	103.57	84.95	93.30	80.59	75.34	93.83	90.15	83.58	88.24	88.17	
4	CoPb 14211	98.08	97.69	89.70	78.11	81.40	98.15	96.56	79.51	107.30	91.83	1
	Standards											
1	CoJ 64	84.36	76.55	90.50	74.50	58.40	66.30	75.98	76.05	81.27	75.99	
2	Co 0238	86.08	99.25	103.60	76.87	79.07	81.23	84.31	86.05	66.52	84.78	
3	Co 05009	92.25	88.49	98.00	75.23	41.61	69.75	90.69	69.63	76.19	77.98	
	Mean	94.84	89.16	99.47	78.66	70.03	85.27	87.09	79.96	88.12	85.84	
	SE (m)	4.96		4.72	4.65	4.98	4.43	3.22	2.52	1.92		
	CD at 5%	14.88	7.22	14.72	11.16	10.86	9.65	7.10	5.50	4.19		
	CV	9.06	4.55	8.23	10.25	8.71	6.36	4.53	5.57	6.17		
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank 1	CoPb 14181			Co 14034	CoLk 14201	CoLk 14201			CoPb 14211		
	Rank 2						CoPb 14211			CoLk 14201		
	Rank 3						CoPb 14181			Co 14034		

No. of locations where an entry recorded >10 % improvement over the best standard: CoLk 14201 (3), Co 14034 (2), CoPb 14211 (2), CoPb 14181 (2).

Performance across locations: Among the standards Co 0238 was the best (84.78 t/ha). Test entries that recorded higher cane yield than Co 0238 were: 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).

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 14034	13.06	12.21	14.12	14.17	13.67	13.21	13.12	12.26	11.56	13.04	1
2	CoLk 14201	11.85	10.60	11.17	13.78	13.63	13.32	13.29	12.16	11.50	12.37	
3	CoPb 14181	12.34	12.63	13.40	13.62	13.34	12.99	12.98	11.85	11.76	12.77	2
4	CoPb 14211	12.07	12.70	13.10	13.54	13.37	13.23	12.69	11.62	11.85	12.69	3
Standards												
1	CoJ 64	12.40	12.44	13.54	12.89	13.04	13.17	12.43	11.52	12.53	12.66	
2	Co 0238	11.96	11.84	13.23	13.11	13.43	13.38	12.76	12.21	11.90	12.65	
3	Co 05009	12.23	11.86	12.75	12.84	12.76	13.06	12.82	11.97	11.11	12.38	
	Mean	12.26	12.04	13.04	13.42	13.32	13.19	12.87	12.00	11.74	12.65	
	SE (m)	0.13		0.32	0.28	0.46	0.28	0.34	0.22	0.29		
	CD at 5%	0.39	0.86	1.00	0.67	NS	NS	0.74	NS	0.63		
	CV	1.86	4.01	4.24	3.63	4.19	2.60	3.19	3.16	6.98		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1	Co 14034			Co 14034							
	Rank 2				CoLk 14201							
	Rank 3											

No. of locations where an entry recorded >5 % improvement over the best standard: Co 14034 (2) and CoLk 14201 (1).

Performance across locations: Among the standards CoJ 64 was the best for CCS % with zonal mean of 12.66. Test entries that recorded higher CCS % than CoJ 64 were: Co 14034 (13.04), CoPb 14181 (12.77) and CoPb 14211 (12.69).

Table 4.4.4 Sucrose % at harvest

SI No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 14034	18.75	17.46	20.02	20.40	19.44	19.08	18.96	17.79	16.95	18.76	1
2	CoLk 14201	17.00	15.20	16.08	19.87	19.43	19.26	19.19	17.66	16.60	17.81	
3	CoPb 14181	17.74	18.12	19.19	19.66	19.23	18.85	18.75	17.24	17.13	18.43	2
4	CoPb 14211	17.27	18.21	18.75	19.55	19.10	19.18	18.44	16.94	17.09	18.28	
	Standards											
1	CoJ 64	17.80	17.76	19.37	18.66	18.63	19.41	18.00	16.73	18.21	18.29	
2	Co 0238	17.22	17.07	19.02	18.97	19.18	19.37	18.44	18.23	17.35	18.32	3
3	Co 05009	17.49	17.14	18.18	18.60	18.34	18.92	18.53	16.94	16.18	17.81	
	Mean	17.58	17.28	18.66	19.38	19.05	19.15	18.62	17.43	17.07	18.25	
	SE (m)	0.18		0.41	0.38	0.61	0.39	0.40	0.11	0.22		
	CD at 5%	0.53	1.01	1.27	0.91	NS	NS	0.88	0.25	0.48		
	CV	1.74	3.27	3.77	3.40	3.92	2.51	2.64	1.12	3.62		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank 1	Co 14034			Co 14034							
	Rank 2											
	Rank 3											

No. of locations where an entry recorded >5 % improvement over the best standard: Co 14034 (2).

Performance across locations: Among the standards Co 0238 was the best in the zone for sucrose % (18.32). Test entries that recorded higher sucrose % than Co 0238 were: Co 14034 (18.76) and CoPb 14181 (18.43).

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 14034	20.90	19.27	21.74	22.85	21.23	21.54	21.43	20.27	19.71	20.99
2	CoLk 14201	18.90	16.90	18.00	22.34	21.35	21.80	21.67	20.16	18.72	19.98
3	CoPb 14181	19.83	20.17	21.25	22.14	21.65	21.50	21.17	19.77	19.69	20.80
4	CoPb 14211	19.13	20.23	20.75	22.03	21.08	21.80	21.07	19.48	19.21	20.53
	Standards										
1	CoJ 64	19.83	19.57	21.42	21.17	20.56	21.37	20.43	19.30	20.81	20.50
2	Co 0238	19.33	19.20	21.25	21.47	21.11	21.90	20.87	20.68	19.95	20.64
3	Co 05009	19.33	19.37	19.98	21.11	20.46	21.50	20.97	19.82	18.56	20.12
	Mean	19.54	19.24	20.63	21.87	21.06	21.63	21.09	20.00	19.52	20.51
	SE (m)	0.18		0.34	0.38	0.67	0.45	0.29	0.17	0.23	
	CD at 5%	0.54	0.76	1.06	0.88	NS	NS	0.63	0.37	0.51	
	CV	1.60	2.21	2.85	2.92	3.87	2.52	1.66	1.46	3.37	

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 14034	89.70	90.59	92.12	89.24	91.31	88.60	88.47	87.75	86.23	89.33
2	CoLk 14201	89.93	89.90	89.27	88.92	91.04	88.33	88.56	87.61	88.71	89.14
3	CoPb 14181	89.47	89.83	90.24	88.79	88.88	87.67	88.58	87.20	87.56	88.69
4	CoPb 14211	90.28	89.99	90.37	88.67	90.61	87.97	87.53	86.95	89.42	89.09
	Standards										
1	CoJ 64	89.73	90.76	90.42	88.12	90.61	88.88	88.06	86.72	88.75	89.12
2	Co 0238	89.09	88.91	89.47	88.35	89.40	88.44	88.39	88.14	87.98	88.69
3	Co 05009	90.45	88.47	91.00	88.08	89.65	87.98	88.39	86.90	87.14	88.67
	Mean	89.95	89.78	90.41	88.59	90.21	88.27	88.28	87.39	87.97	88.98
	SE (m)	0.28		NS	0.24	0.74	0.33	0.95	0.10	0.52	
	CD at 5%	0.83	NS		0.59	NS	0.72	2.08	0.21	1.14	
	CV	0.53	2.19		0.48	1.01	0.46	1.31	0.19	1.69	

Table 4.4.7 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	14.47	15.30	14.71	13.62	13.67	14.35	14.28	13.21	14.30	13.09	14.66	13.91
2	CoLk 14201	12.15	12.33	14.93	13.78	13.63	13.36	14.40	14.19	13.19	13.37	14.61	13.95
3	CoPb 14181	14.64	14.49	14.76	13.21	13.41	14.10	13.92	14.98	13.26	13.44	14.64	14.05
4	CoPb 14211	14.53	14.63	14.73	13.70	13.09	14.14	12.93	11.40	12.81	13.26	14.69	13.02
	Standards												
1	CoJ 64	13.62	14.98	14.27	13.80	13.37	14.01	11.77	12.23	13.37	13.30	14.56	13.05
2	Co 0238	14.46	14.60	14.73	13.78	13.94	14.30	14.30	12.86	13.18	13.35	14.41	13.62
3	Co 05009	13.74	13.86	14.00	13.52	13.11	13.65	13.37	14.26	13.65	13.39	14.71	13.88
	Mean	13.94	14.31	14.59	13.63	13.46	13.99	13.57	13.30	13.39	13.31	14.61	13.64
	SE (m)		0.27	0.39					0.20	0.80			
	CD at 5%	0.61	0.85	0.85				0.75	0.62	NS			
	CV	2.46	3.30	3.27				3.10	2.59	7.14			

Table 4.4.8 Juice extraction % at harvest

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	52.36	55.37	51.74	54.79	55.56	46.15		51.59	47.78	51.92
2	CoLk 14201	56.74	54.99	46.08	55.33	56.55	51.00		54.19	52.21	53.39
3	CoPb 14181	48.08	53.59	44.00	53.15	50.18	46.26		52.02	49.49	49.60
4	CoPb 14211	51.10	53.82	47.88	53.18	54.13	48.52		53.69	46.66	51.12
	Standards										
1	CoJ 64	53.82	50.97	48.86	46.55	51.07	50.00		55.40	52.16	51.10
2	Co 0238	57.53	55.31	50.83	49.67	57.68	51.67		54.07	51.26	53.50
3	Co 05009	54.53	55.44	47.36	46.02	52.88	52.38		53.58	49.35	51.44
	Mean	53.10	54.21	48.11	51.24	54.01	49.43		53.48	49.35	51.62
	SE (m)	0.90		1.03	0.45	1.51	-		0.72	0.40	
	CD at 5%	2.68	2.47	3.20	1.10	3.30	-		1.56	0.88	
	CV	2.92	2.56	3.70	1.55	3.43	-		2.32	2.28	

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 14034	16.87	17.30	20.91	19.03	19.48	20.88	19.33	19.09	17.98	18.99
2	CoLk 14201	16.53	15.13	15.95	18.25	20.26	21.11	21.23	19.61	16.89	18.33
3	CoPb 14181	17.73	17.70	20.60	19.00	19.91	21.75	20.67	19.40	17.73	19.39
4	CoPb 14211	16.83	19.37	20.69	19.25	18.94	22.28	20.77	19.29	17.46	19.43
	Standards										
1	CoJ 64	17.90	18.20	19.79	18.19	20.56	22.18	19.60	18.89	18.53	19.32
2	Co 0238	16.63	16.93	21.13	17.95	20.04	21.35	19.77	19.81	18.04	19.07
3	Co 05009	16.63	17.47	19.70	18.29	19.06	20.31	20.00	18.36	17.49	18.59
	Mean	17.01	17.44	19.82	18.56	19.75	21.41	20.20	19.19	17.67	19.01
	SE (m)	0.28		0.38	0.30	0.23	0.34	0.37	0.17	0.24	
	CD at 5%	0.84	1.78	1.20	0.74	0.51	0.75	0.82	0.37	0.53	
	CV	2.85	5.74	3.36	2.88	1.45	1.97	2.24	1.53	3.86	

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 14034	14.41	14.86	19.17	16.45	16.78	18.45	16.32	16.39	14.92	16.42
2	CoLk 14201	14.39	12.45	13.66	15.65	17.61	18.56	18.03	17.03	14.18	15.73
3	CoPb 14181	15.72	15.38	18.69	16.42	17.13	18.68	17.51	16.81	15.08	16.82
4	CoPb 14211	14.91	17.30	18.99	16.68	16.12	18.76	17.66	16.63	14.66	16.86
	Standards										
1	CoJ 64	15.83	15.59	17.70	15.59	17.94	19.01	16.54	16.28	15.75	16.69
2	Co 0238	14.39	14.10	18.87	15.34	17.01	18.35	16.85	17.27	15.33	16.39
3	Co 05009	14.83	15.32	18.11	15.69	16.92	17.69	16.92	15.74	15.04	16.25
	Mean	14.98	15.00	17.88	15.97	17.07	18.50	17.12	16.59	14.99	16.46
	SE (m)	0.23		0.39	0.31	0.26	0.23	0.43	0.15	0.23	
	CD at 5%	0.69	2.17	1.22	0.46	0.57	0.50	0.95	0.32	0.51	
	CV	2.67	8.12	3.80	3.45	1.88	1.50	3.09	1.53	4.39	

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 14034	85.48	85.69	91.70	86.44	86.12	88.36	84.38	86.31	83.47	86.44
2	CoLk 14201	87.05	82.28	85.59	85.75	86.93	87.90	84.91	86.87	84.29	85.73
3	CoPb 14181	88.63	86.89	90.73	86.43	86.04	85.93	84.70	86.61	85.09	86.78
4	CoPb 14211	88.60	89.27	91.79	86.64	85.03	84.22	85.04	86.49	84.61	86.85
	Standards										
1	CoJ 64	88.42	85.65	89.45	85.67	87.26	85.74	84.38	86.18	85.78	86.50
2	Co 0238	86.52	83.27	89.32	85.46	85.68	85.98	85.23	87.11	85.55	86.01
3	Co 05009	89.18	87.64	91.94	85.78	88.81	87.07	84.58	85.71	86.64	87.48
	Mean	88.07	85.81	90.07	86.02	86.55	86.46	84.75	86.47	85.06	86.58
	SE (m)	0.51		0.81	0.27	0.86	0.99	0.68	0.13	0.39	
	CD at 5%	1.54	NS	2.51	0.66	1.88	2.15	1.50	0.28	0.85	
	CV	1.01	3.15	1.55	0.55	1.22	1.40	0.99	0.25	1.30	

Table 4.4.12 CCS % at 10th month

Sl No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	9.81	10.14	13.49	11.26	11.46	12.76	11.03	11.21	10.00	11.24
2	CoLk 14201	9.88	8.30	9.30	10.67	12.08	12.80	12.23	11.68	9.56	10.72
3	CoPb 14181	10.88	10.55	13.09	11.23	11.69	12.75	11.86	11.51	10.23	11.53
4	CoPb 14211	10.33	12.03	13.37	11.43	10.95	12.67	11.99	11.36	9.88	11.56
	Standards										
1	CoJ 64	10.95	10.62	12.31	10.62	12.33	12.95	11.18	11.12	10.69	11.42
2	Co 0238	9.85	9.47	13.12	10.44	11.53	12.52	11.45	11.94	10.40	11.19
3	Co 05009	10.30	10.55	12.76	10.70	11.73	12.14	11.45	10.73	10.26	11.18
	Mean	10.34	10.24	12.49	10.90	11.68	12.65	11.60	11.36	10.15	11.27
	SE (m)	0.16		0.30	0.23	0.23	0.18	0.33	0.11	0.25	
	CD at 5%	0.49	1.73	0.94	0.56	0.50	0.39	0.74	0.24	0.54	
	CV	2.72	9.47	4.17	3.73	2.40	1.71	3.53	1.67	6.85	

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 14034	85.39	65.86	83.49	93.60	72.53	90.24	58.43	86.79	96.52	81.43
2	CoLk 14201	91.22	80.63	105.02	92.71	100.01	115.92	59.91	95.93	110.38	94.64
3	CoPb 14181	92.25	72.84	85.11	87.37	101.77	105.55	68.61	97.28	92.56	89.26
4	CoPb 14211	87.96	71.30	82.02	87.97	94.41	111.97	67.32	89.14	116.30	89.82
	Standards										
1	CoJ 64	88.82	79.94	86.11	87.51	109.95	108.64	67.87	92.59	93.63	90.56
2	Co 0238	88.48	72.28	86.34	83.44	87.72	90.86	59.07	84.81	89.29	82.48
3	Co 05009	88.13	65.41	82.48	82.70	68.48	101.60	70.55	79.88	94.54	81.53
	Mean	92.10	72.61	87.22	87.89	90.70	103.54	64.54	89.55	99.03	87.46
	SE (m)	3.31		3.64	2.70	3.82	4.73	1.15	3.58	2.77	
	CD at 5%	9.92	5.81	11.34	6.47	8.33	10.32	2.53	7.81	6.03	
	CV	6.22	4.50	7.23	5.32	5.16	5.60	2.18	6.94	7.90	

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 14034	249.66	250.00	268.00	207.00	193.33	214.00	263.00	223.00	188.22	228.47
2	CoLk 14201	163.22	245.33	228.00	168.00	182.67	205.00	196.00	215.67	195.71	199.96
3	CoPb 14181	244.22	256.33	255.00	207.00	188.33	211.00	252.00	240.00	182.65	226.28
4	CoPb 14211	242.77	249.00	233.00	214.00	173.67	188.00	243.00	199.33	198.48	215.69
	Standards										
1	CoJ 64	210.44	229.67	220.00	215.00	143.60	166.00	220.00	212.00	171.33	198.67
2	Co 0238	219.77	246.33	232.00	228.00	194.33	220.00	249.00	241.33	184.64	223.93
3	Co 05009	266.22	242.33	270.00	195.00	150.00	194.00	249.00	203.00	198.59	218.68
	Mean	235.50	245.57	244.00	205.00	192.88	200.00	238.86	222.50	188.52	219.20
	SE (m)	4.43		11.00	11.00	9.17	6.00	13.00	6.49	2.90	
	CD at 5%	13.29	14.23	34.00	27.00	19.99	13.00	28.00	14.14	6.32	
	CV	3.26	3.26	7.67	9.53	5.82	0.37	6.54	5.13	4.35	

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 14034	2.81	2.55	2.60	2.37	2.22	2.23	2.45	2.38	2.51	2.46
2	CoLk 14201	2.93	2.37	2.40	2.40	2.36	2.29	2.46	2.30	2.44	2.44
3	CoPb 14181	2.75	2.10	2.60	2.17	2.18	2.16	2.29	2.35	2.29	2.32
4	CoPb 14211	2.82	2.27	2.40	2.03	2.36	2.26	2.43	2.24	2.46	2.36
	Standards										
1	CoJ 64	2.82	2.07	2.40	2.27	1.93	2.06	2.17	2.25	2.40	2.26
2	Co 0238	3.06	2.36	2.80	2.23	2.37	2.44	2.47	2.68	2.64	2.56
3	Co 05009	2.80	2.05	2.20	2.04	2.20	2.27	2.25	2.30	2.39	2.28
	Mean	2.78	2.25	2.50	2.21	2.30	2.24	2.36	2.38	2.45	2.39
	SE (m)	0.04		0.08	0.10	0.13	0.05	0.12	0.04	0.03	
	CD at 5%	0.13	0.15	0.24	0.24	0.28	0.10	0.27	0.08	0.07	
	CV	2.79	3.68	5.34	2.83	6.74	2.60	6.39	2.60	3.78	

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 14034	1.34	1.66	1.33	0.94	0.92	0.98	1.63	1.07	0.86	1.19
2	CoLk 14201	0.86	1.49	1.05	0.83	0.88	0.89	1.28	0.94	1.05	1.03
3	CoPb 14181	1.17	1.55	1.10	0.92	0.74	0.92	1.31	0.99	0.82	1.06
4	CoPb 14211	1.27	1.49	1.09	0.89	0.86	0.87	1.43	0.79	0.98	1.07
	Standards										
1	CoJ 64	0.98	1.31	1.05	0.86	0.53	0.63	1.12	0.82	0.80	0.90
2	Co 0238	1.17	1.54	1.20	0.92	0.90	1.10	1.43	1.14	0.92	1.15
3	Co 05009	1.20	1.38	1.19	0.91	0.61	0.81	1.29	0.93	0.84	1.02
	Mean	1.12	1.49	1.14	0.89	0.78	0.89	1.36	0.98	0.90	1.06
	SE (m)	0.04		0.04	0.04	0.05	0.06	0.08	0.06	0.02	
	CD at 5%	0.12	0.12	0.13	0.10	0.11	0.12	0.17	0.13	0.05	
	CV	6.18	4.69	6.32	8.49	7.63	7.68	7.09	10.73	7.74	

Table 4.4.17 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	116.26	102.94	108.72	123.33	134.34	179.25	75.56	180.25	145.56	129.58
2	CoLk 14201	111.45	124.41	175.46	117.33	139.31	188.51	74.44	203.95	160.29	143.91
3	CoPb 14181	115.91	126.92	111.11	119.67	148.92	165.92	90.92	190.86	138.34	134.29
4	CoPb 14211	109.40	130.53	109.18	111.33	137.72	194.93	106.57	189.26	168.66	139.73
	Standards										
1	CoJ 64	99.45	100.25	119.60	106.00	148.21	172.71	97.96	186.30	138.52	129.89
2	Co 0238	114.54	94.31	114.12	102.67	160.80	170.36	103.80	183.21	143.76	131.95
3	Co 05009	129.63	112.19	108.49	104.67	136.53	154.32	89.35	168.15	139.56	126.99
	Mean	125.19	113.08	120.95	112.14	143.69	175.14	91.23	185.45	147.81	134.96
	SE (m)	4.12		6.73	1.45	7.12	7.26	7.02	6.18	4.08	
	CD at 5%	12.36	12.52	20.98	3.48	15.52	15.83	15.47	13.46	8.90	
	CV	5.70	6.22	9.64	2.24	6.07	5.04	9.43	5.75	7.82	

Table 4.4.18 Germination % at 45 days

I No.	Entries	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pantnagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 14034	32.58	55.09	60.42	42.55	37.91	47.31	33.75	41.02	35.28	42.88
2	CoLk 14201	32.67	49.34	59.38	42.90	56.48	52.12	30.90	53.24	42.45	46.61
3	CoPb 14181	38.20	53.01	56.08	43.10	54.92	49.62	40.49	51.48	36.55	47.05
4	CoPb 14211	41.06	58.62	46.35	44.33	41.61	44.07	42.22	50.93	39.67	45.43
	Standards										
1	CoJ 64	36.10	52.23	68.33	41.94	57.01	47.22	36.67	49.35	40.22	47.67
2	Co 0238	37.72	50.94	57.35	43.82	50.70	40.46	40.35	46.39	38.53	45.14
3	Co 05009	43.44	54.94	48.61	41.51	39.53	36.57	35.49	40.46	37.48	42.00
	Mean	38.27	53.45	55.34	42.87	48.31	45.34	37.12	46.99	38.60	45.14
	SE (m)	1.29		3.04	0.71	3.55	2.88	1.01	1.49	0.67	
	CD at 5%	3.86	NS	9.49	1.71	7.73	6.28	2.22	3.25	1.46	
	CV	5.83	7.87	9.27	2.89	8.99	7.78	3.32	5.44	4.89	

Table 4.4.19 Assessment of performance of entries by monitoring team constituted by AICRP(S)

Entries	Lucknow	Shahja hanpur	Pantnagar	Muzaffar nagar	Karnal	Kapurthala	Faridkot	Sriganganagar	Kota
Co 14034	Damaged	Good	On Par	Good	Better	On Par	Good	Better	On par
CoLk 14201	Poor	Good	Poor	Good	Better	Good	Poor	Better	Good
CoPb 14181	Good	Good	Poor	Good	On Par	Good	Good	Good	Good
CoPb 14211	Damaged	Poor	Poor	Good	On Par	Good	Good	On Par	At Par
Standards									
CoJ 64									
Co 0238	Best	Best	Best	Best	Best	Best	Best	Best	Best
Co 05009									

4.5 INITIAL VARIETAL TRIAL (EARLY)

Centres (9)	Faridkot, Kapurthala, Karnal, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur and Sriganaganagar
Entries (9)	1. Co 15023 (Co 0241 x Co 8347) 2. Co 15024 (Co 0124 x Co 94008) 3. Co 15027 (Co 0331 x Co 0218) 4. CoLk 15201 (CoS 8436 GC) 5. CoLk 15203 (Co 0238 GC) 6. CoLk 15204 (CoPant 97222 GC) 7. CoLk 15205 (CoS 96268 GC) 8. CoPb 15211 (Co 89003 GC) 9. CoPb 15212 (Co 89003 GC)
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, 2018
Crop Duration	10 month

Results of the previous year:

The entries were in multiplication in the respective centres

Results of the current years:

In the IVT (Early) trial, Co 0238 was identified as the best standard for CCS yield with zonal mean of 10.98 t/ha. Among the test entries, Co 15027 (11.54 t/ha), Co 15023 (11.08 t/ha) and CoLk 15201 (10.97 t/ha) recorded higher CCS yield than Co 0238 and occupied first 3 ranks, respectively. However, the per cent improvement of these entries over Co 0238 for CCS yield were lesser than 10 %. 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). The per cent improvement in cane yield of these entries over Co 0238 were lesser than 10 %. 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 %. On the basis of overall mean and the criteria set for identifying qualifying entry, no entry could be selected as qualifying entry. Further details are presented in Tables 4.5.1 to 4.5.18.

Table 4.5.1. CCS (t/ha) at harvest

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 15023	7.07	9.88	16.70	14.13	8.82	9.31	14.54	9.94	9.31	11.08	2
2	Co 15024	12.06	8.57	12.71	12.23	6.38	9.53	9.10	10.01	7.53	9.79	
3	Co 15027	13.16	10.50	16.08	12.77	7.48	10.22	11.19	10.24	12.24	11.54	1
4	CoLk 15201	10.44	9.42	12.53	10.27	11.31	11.69	11.67	9.87	11.55	10.97	
5	CoLk 15203	9.90	9.91	10.84	13.29	10.11	10.05	11.01	9.88	11.71	10.74	
6	CoLk 15204	8.37	8.21	7.11	8.74	5.54	10.85	7.19	9.24	13.82	8.79	
7	CoLk 15205	9.17	9.19	8.85	10.08	11.27	9.40	11.04	9.86	9.73	9.84	
8	CoPb 15211	9.17	9.32	9.55	9.82	7.77	10.51	7.73	9.13	8.23	9.03	
9	CoPb 15212	10.00	9.14	10.24	10.37	9.76	9.85	9.33	9.45	10.01	9.79	
	Standards											
1	CoJ 64	10.56	9.22	11.35	9.97	8.53	8.21	9.46	9.11	10.79	9.69	
2	Co 0238	10.03	10.66	14.42	10.55	10.10	10.05	14.68	10.53	7.83	10.98	3
3	Co 05009	10.66	10.32	11.59	10.43	5.43	8.75	14.39	8.31	8.54	9.82	
	Mean	10.05	9.53	11.83	11.05	8.54	9.86	10.94	9.58	10.11	10.17	
	SE (m)	0.65		0.66	0.82	0.85	0.84	0.37	0.33	0.68		
	CD at 5%	1.89	0.71	1.95	1.96	1.76	1.75	0.76	0.69	1.40		
	CV	11.12	4.41	9.69	12.98	12.20	10.45	4.10	6.00	14.21		
Top three entries recorded >10% improvement over the best standard at each location												
	Rank-1	Co 15027		Co 15023	Co 15023	CoLk 15201	CoLk 15201			CoLk 15204		
	Rank-2	Co 15024		Co 15027	CoLk 15203	CoLk 15205				Co 15027		
	Rank-3				Co 15027							

Number of locations where an entry recorded >10% improvement over the best standard: Co 15027 (4), Co 15023 (2), CoLk 15201 (2), Co 15204 (1), CoLk 15203 (1), CoLk 15204 (1) and CoLk 15205 (1).

Performance of the entries across locations: Co 0238 was the best standard 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 3 ranks, respectively.

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

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 15023	50.41	74.71	111.96	97.02	62.12	71.30	106.50	80.74	72.96	80.86	
2	Co 15024	99.11	70.71	94.73	88.04	47.76	73.33	73.28	86.33	65.18	77.61	
3	Co 15027	108.71	89.41	120.00	105.68	60.60	84.81	87.85	86.30	107.40	94.53	1
4	CoLk 15201	88.48	81.26	106.86	81.56	83.64	98.70	97.12	86.85	105.18	92.18	2
5	CoLk 15203	88.13	81.23	83.95	94.10	72.32	69.44	82.60	78.89	102.22	83.65	
6	CoLk 15204	77.16	75.83	63.06	74.00	47.47	89.63	61.49	82.96	114.07	76.19	
7	CoLk 15205	77.50	72.05	67.33	73.69	82.68	75.18	81.30	80.93	79.25	76.66	
8	CoPb 15211	74.07	72.41	70.56	82.15	57.45	82.41	59.44	75.19	72.96	71.85	
9	CoPb 15212	88.48	74.50	80.30	79.26	73.02	78.89	75.14	80.74	88.89	79.91	
	Standards											
1	CoJ 64	90.53	71.34	84.65	75.68	61.97	63.70	73.86	74.44	83.70	75.54	
2	Co 0238	89.51	88.37	108.41	76.82	76.17	81.48	116.72	85.93	64.81	87.58	3
3	Co 05009	93.62	82.03	90.94	81.65	43.25	68.89	106.38	72.96	72.59	79.15	
	Mean	85.48	77.82	90.23	84.13	64.04	79.65	85.14	80.77	85.77	81.45	
	SE (m)	5.58		5.42	4.92	5.77	5.38	1.71	2.48	4.51		
	CD at 5%	16.37	6.97	15.99	11.65	11.96	11.15	3.58	5.14	9.33		
	CV	11.31	5.29	10.40	10.14	11.03	8.42	2.46	5.31	11.15		
Top three entries recorded >10 % improvement over the best standard at each location												
	Rank-1	Co 15027		Co 15027	Co 15027		CoLk 15201			CoLk 15204		
	Rank-2				Co 15023		CoLk 15204			Co 15027		
	Rank-3				CoLk 15203					CoLk 15201		

Number of locations where an entry recorded >10% improvement over the best standard: Co 15027 (4), CoLk 15201 (2), CoLk 15204 (2), Co 15023 (1) and CoLk 15203 (1).

Performance of the entries across locations: Co 0238 was 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).

Table 4.5.3. CCS (%) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 15023	14.02	13.22	14.92	14.53	14.19	13.05	13.64	12.31	12.77	13.63	1
2	Co 15024	12.18	12.11	13.41	13.85	13.29	13.01	12.41	12.01	11.55	12.65	
3	Co 15027	12.10	11.74	13.41	12.09	12.32	12.05	12.74	11.82	11.39	12.18	
4	CoLk 15201	11.81	11.60	11.72	12.59	13.52	11.84	12.02	11.22	10.99	11.92	
5	CoLk 15203	11.24	12.21	12.92	14.10	13.99	12.96	13.33	12.53	11.45	12.75	
6	CoLk 15204	10.85	10.86	11.27	11.81	11.68	12.10	11.69	11.14	12.12	11.50	
7	CoLk 15205	11.84	12.75	13.15	13.68	13.62	12.45	13.59	12.18	12.28	12.84	3
8	CoPb 15211	12.39	12.87	13.50	11.96	13.50	12.79	13.00	12.18	11.27	12.61	
9	CoPb 15212	11.29	12.27	12.76	13.02	13.35	12.48	12.41	11.71	11.27	12.28	
	Standards											
1	CoJ 64	11.70	12.93	13.42	13.17	13.75	12.90	12.81	12.23	12.90	12.87	2
2	Co 0238	11.20	12.06	13.32	13.73	13.26	12.32	12.57	12.25	12.09	12.53	
3	Co 05009	11.39	12.59	12.77	12.77	12.56	12.71	13.52	11.39	11.77	12.39	
	Mean	11.83	12.27	13.05	13.10	13.25	12.55	12.81	11.92	11.82	12.51	
	SE (m)	0.13		0.31	0.39	0.41	0.25	0.25	0.07	0.58		
	CD at 5%	0.39	0.47	0.64	0.94	0.84	0.52	0.53	0.15	1.20		
	CV	1.96	2.81	0.22	5.27	3.75	2.45	2.43	1.07	10.48		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank-1	Co 15023		Co 15023	Co 15023						Co 15023	
	Rank-2	CoLk 15201										
	Rank-3											

Number of locations where an entry recorded 5 % improvement over the best standard: Co 15023 (3) and CoLk 15201 (1).

Performance of the entries across locations: CoJ 64 was identified as the best standard for CCS % with zonal mean of 12.87. Among the test entries, Co 15023 ranked first (13.63) for CCS %. It recorded 5.91 per cent improvement over the standard CoJ 64 for CCS %.

Table 4.5.4. Sucrose (%) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean	Rank
1	Co 15023	19.90	18.75	21.02	20.93	20.29	18.87	19.76	17.86	18.51	19.54	1
2	Co 15024	17.40	17.37	19.25	20.01	19.03	18.85	18.07	17.46	16.84	18.25	
3	Co 15027	17.23	16.85	19.06	17.62	17.69	17.56	18.51	17.20	16.42	17.57	
4	CoLk 15201	16.93	16.55	16.94	18.30	19.38	17.24	17.53	16.41	16.10	17.26	
5	CoLk 15203	16.06	17.52	18.54	20.35	20.04	18.85	19.32	18.15	16.51	18.37	
6	CoLk 15204	15.48	15.72	16.35	17.24	16.87	17.60	17.09	16.29	17.38	16.67	
7	CoLk 15205	17.34	18.21	18.76	19.77	19.55	18.07	19.69	17.68	17.90	18.55	3
8	CoPb 15211	17.68	18.51	19.20	17.45	19.27	18.56	18.86	17.68	16.52	18.19	
9	CoPb 15212	16.16	17.55	18.27	18.88	19.09	18.08	18.12	17.06	16.33	17.73	
	Standards											
1	CoJ 64	16.92	18.52	19.08	19.09	19.71	18.76	18.69	17.74	18.49	18.56	2
2	Co 0238	16.22	17.38	19.01	19.84	19.10	17.89	18.35	17.77	17.61	18.13	
3	Co 05009	16.36	17.98	18.16	18.54	17.95	18.35	19.55	16.63	17.06	17.84	
	Mean	16.97	17.58	18.64	19.00	19.00	18.18	18.63	17.33	17.14	18.05	
	SE (m)	0.19	-	0.28	0.54	0.53	0.26	0.34	0.10	0.71		
	CD at 5%	0.56	0.61	0.83	1.28	1.10	0.74	0.70	0.20	1.47		
	CV	1.93	2.05	2.63	4.93	3.42	2.40	2.22	0.98	8.81		
Top three entries recorded >5 % improvement over the best standard at each location												
	Rank-1	Co 15023		Co 15023	Co 15023						Co 15023	
	Rank-2											
	Rank-3											

Number of locations where an entry showing 5 % improvement over the best standard: Co 15023 (3).

Performance of the entries across locations: CoJ 64 was identified as the best standard for sucrose % with zonal mean of 18.56. Among the test entries, Co 15023 ranked first (19.54) for sucrose % and it was 5.28 % improvement over CoJ 64.

Table 4.5.5. Brix (%) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	21.63	20.37	22.50	23.50	22.40	21.36	22.43	20.34	21.04	21.73
2	Co 15024	19.20	19.30	21.44	22.60	21.11	21.43	20.73	19.97	19.36	20.57
3	Co 15027	18.87	18.77	20.80	20.30	19.74	20.16	21.17	19.73	18.45	19.78
4	CoLk 15201	18.80	18.20	19.17	20.90	21.55	18.88	20.20	19.00	18.73	19.49
5	CoLk 15203	17.70	19.50	20.65	22.90	22.23	21.56	22.00	20.61	18.56	20.63
6	CoLk 15204	17.00	17.83	18.60	19.90	19.04	20.14	19.77	18.88	19.32	18.94
7	CoLk 15205	20.17	20.07	20.64	22.40	21.77	20.66	22.40	20.16	20.58	20.98
8	CoPb 15211	19.43	20.70	20.96	20.10	21.22	21.20	21.47	20.16	19.21	20.49
9	CoPb 15212	17.90	19.40	20.25	21.50	21.10	20.53	20.93	19.59	18.56	19.97
	Standards										
1	CoJ 64	19.13	20.57	20.80	21.70	21.89	21.50	21.53	20.22	20.55	20.88
2	Co 0238	18.40	19.50	20.91	22.40	21.43	20.43	21.17	20.24	20.24	20.52
3	Co 05009	18.27	19.83	19.83	21.20	19.80	20.70	22.10	19.20	19.39	20.04
	Mean	18.88	19.50	20.55	21.61	21.11	20.71	21.33	19.84	19.50	20.34
	SE (m)	0.22		0.26	0.52	0.53	0.44	0.34	0.09	0.83	
	CD at 5%	0.66	0.64	0.75	1.25	1.10	0.91	0.71	0.19	1.72	
	CV	2.06	1.95	2.15	4.23	3.09	2.57	1.96	0.79	9.02	

Table 4.5.6. Purity (%) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	91.97	92.09	93.44	89.05	90.56	88.35	88.08	87.82	88.43	89.98
2	Co 15024	90.63	89.99	89.77	88.54	90.03	87.98	87.15	87.45	87.29	88.76
3	Co 15027	91.34	89.82	91.66	86.94	89.59	87.05	87.45	87.19	89.16	88.91
4	CoLk 15201	90.06	90.93	88.37	87.39	90.00	87.07	86.79	86.38	86.43	88.16
5	CoLk 15203	90.74	89.84	89.78	88.74	90.16	87.62	87.82	88.08	89.53	89.15
6	CoLk 15204	91.03	88.15	87.87	86.62	88.74	87.38	86.46	86.30	90.61	88.13
7	CoLk 15205	86.00	90.74	90.92	88.38	89.81	87.70	87.92	87.69	87.42	88.51
8	CoPb 15211	90.98	89.41	91.58	86.80	90.81	87.70	87.84	87.67	86.73	88.84
9	CoPb 15212	90.28	90.49	90.25	87.79	90.50	88.06	86.55	87.08	88.42	88.82
	Standards										
1	CoJ 64	88.43	90.06	91.72	87.95	90.04	87.31	86.79	87.67	90.68	88.96
2	Co 0238	88.15	89.10	90.93	88.43	89.11	87.54	86.69	87.81	87.24	88.34
3	Co 05009	89.57	90.67	91.57	87.59	90.67	88.65	88.45	86.62	88.11	89.10
	Mean	89.93	90.11	90.66	87.85	90.00	87.70	87.33	87.31	87.96	88.76
	SE (m)	0.39		0.41	0.35	1.02	0.49	0.59	0.10	0.54	
	CD at 5%	1.14	1.68	1.21	0.83	NS	NS	1.24	0.22	1.12	
	CV	0.75	1.10	0.78	0.69	1.38	0.69	0.83	0.21	1.31	

Table 4.5.7. Extraction (%) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	54.11	53.97	55.57	50.51	59.11	51.61		59.83	52.24	54.62
2	Co 15024	53.78	52.15	52.44	49.66	55.62	48.65		55.76	48.73	52.10
3	Co 15027	57.30	55.36	54.54	51.39	60.64	51.55		57.32	51.45	54.94
4	CoLk 15201	51.30	53.66	50.44	49.81	59.17	49.82		53.15	44.33	51.46
5	CoLk 15203	52.51	54.09	44.47	50.58	54.98	48.71		54.85	44.28	50.56
6	CoLk 15204	49.58	54.16	43.74	51.12	46.28	44.57		54.14	45.18	48.60
7	CoLk 15205	51.42	51.83	38.73	54.72	49.52	47.98		57.12	51.20	50.31
8	CoPb 15211	47.48	52.38	42.17	52.72	49.58	45.86		54.03	50.57	49.35
9	CoPb 15212	50.94	50.96	44.87	53.94	52.82	50.28		55.79	49.93	51.19
	Standards										
1	CoJ 64	51.25	51.00	47.06	51.13	47.69	52.46		55.57	52.24	51.05
2	Co 0238	54.58	54.90	52.07	52.57	56.07	51.92		53.58	50.46	53.27
3	Co 05009	58.34	54.33	43.96	52.00	54.94	47.63		54.01	49.78	51.87
	Mean	52.72	53.23	47.50	51.67	53.87	49.25		55.43	49.20	51.61
	SE (m)	0.67		1.41	0.60	2.74			1.16	2.83	
	CD at 5%	1.95	2.81	4.16	1.44	5.69			2.41	5.85	
	CV	2.19	3.11	5.14	2.04	6.24			3.62	12.19	

Table 4.5.8. Pol% cane and Fibre (%) content at 10th month

Sl. No.	Entry	Pol % in cane					Fibre %				
		Karnal	Lucknow	Muzafar nagar	Shahjah anpur	Mean	Karnal	Lucknow	Muzafar nagar	Shahjah anpur	Mean
1	Co 15023	16.33	15.74	13.58	13.94	14.90	12.31	12.41	13.05	14.17	12.98
2	Co 15024	14.93	14.54	13.41	13.57	14.11	12.40	13.60	13.42	14.27	13.42
3	Co 15027	14.79	13.86	12.77	13.14	13.64	12.43	11.64	13.34	14.32	12.93
4	CoLk 15201	13.13	14.95	12.68	13.04	13.45	12.53	12.88	13.21	14.36	13.24
5	CoLk 15203	14.36	15.40	13.56	13.95	14.32	12.51	13.18	13.38	14.23	13.32
6	CoLk 15204	12.66	12.88	12.80	13.02	12.84	12.57	13.66	13.80	14.19	13.56
7	CoLk 15205	14.45	15.08	13.10	13.80	14.11	12.99	12.86	13.36	14.18	13.35
8	CoPb 15211	14.82	14.67	13.42	13.50	14.10	12.80	13.89	13.64	14.26	13.65
9	CoPb 15212	14.07	14.54	13.08	13.52	13.80	13.00	13.83	13.11	14.29	13.56
	Standards										
1	CoJ 64	14.82	15.27	13.53	13.90	14.38	12.31	12.52	13.21	14.20	13.06
2	Co 0238	14.76	14.64	13.05	13.92	14.09	12.39	13.36	13.36	14.21	13.33
3	Co 05009	13.82	13.85	13.17	13.05	13.47	13.90	12.82	13.38	14.24	13.59
	Mean	14.47	14.62	13.18	13.53	13.95	12.87	13.05	13.36	14.24	13.38
	SE (m)	0.22	0.44				0.08	0.59			
	CD at 5%	0.63	0.91				0.21	1.23			
	CV	2.58	3.67				1.14	5.57			

Table 4.5.9. Number of millable canes at 10th month ('000/ha)

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	57.44	77.18	84.41	94.85	65.27	85.74	63.70	82.78	96.72	78.68
2	Co 15024	93.45	65.35	87.19	91.20	66.56	91.85	57.22	90.00	80.63	80.38
3	Co 15027	79.39	82.87	74.85	93.39	75.60	94.07	51.30	88.33	114.18	83.78
4	CoLk 15201	78.36	84.28	89.97	91.68	100.22	88.70	69.81	89.81	108.56	89.04
5	CoLk 15203	109.74	93.04	92.13	91.20	98.72	86.29	77.22	90.19	94.26	92.53
6	CoLk 15204	83.16	88.37	84.41	89.25	81.71	114.62	65.93	89.44	113.44	90.04
7	CoLk 15205	115.23	91.36	93.52	86.08	119.48	112.96	72.22	97.78	96.53	98.35
8	CoPb 15211	96.02	85.91	78.55	96.07	93.10	115.74	49.26	82.59	86.29	87.06
9	CoPb 15212	89.51	77.03	91.05	88.03	120.30	112.59	59.82	90.93	102.84	92.46
	Standards										
1	CoJ 64	100.99	85.91	92.90	88.27	91.15	90.55	67.04	102.00	98.56	90.82
2	Co 0238	87.96	83.02	82.72	85.35	86.25	84.99	73.52	92.04	79.59	83.94
3	Co 05009	90.71	74.79	90.12	93.15	74.05	94.81	70.93	77.04	88.48	83.79
	Mean	90.16	82.43	86.82	90.70	89.37	97.75	64.83	89.43	96.67	87.57
	SE (m)	2.87		2.74	1.58	4.23	8.02	4.29	4.34	4.63	
	CD at 5%	8.41	7.62	8.08	3.75	8.77	16.63	8.94	9.00	9.58	
	CV	5.51	5.46	5.46	3.03	5.80	10.05	8.10	8.40	10.15	

Table 4.5.10 Stalk length at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	217.66	238.33	230.00	195.00	141.00	197.00	239.00	208.00	188.10	206.01
2	Co 15024	222.11	234.67	213.00	184.00	113.33	204.00	232.00	214.67	197.21	201.67
3	Co 15027	234.33	240.00	220.00	227.00	141.20	170.00	216.00	210.00	171.72	203.36
4	CoLk 15201	238.55	281.67	258.00	190.00	186.08	252.00	286.00	217.67	215.56	236.17
5	CoLk 15203	211.00	253.33	230.00	219.00	163.33	198.00	238.00	207.33	200.29	213.36
6	CoLk 15204	256.89	258.33	207.00	212.00	144.00	232.00	216.00	211.67	207.36	216.14
7	CoLk 15205	224.77	260.00	220.00	181.00	185.67	176.00	243.00	222.33	180.16	210.33
8	CoPb 15211	242.78	278.33	233.00	207.00	151.67	210.00	235.00	168.33	182.52	212.07
9	CoPb 15212	247.22	266.67	240.00	169.00	172.00	177.00	240.00	202.00	169.16	209.23
	Standards										
1	CoJ 64	230.00	235.00	220.00	221.00	138.33	166.00	220.00	198.33	178.73	200.82
2	Co 0238	224.33	251.67	250.00	214.00	174.00	250.00	257.00	223.00	185.26	225.47
3	Co 05009	257.55	270.00	272.00	198.00	118.87	176.00	276.00	201.00	184.19	217.07
	Mean	233.93	255.67	233.00	201.00	152.46	201.00	241.50	207.06	188.36	212.66
	SE (m)	5.28		7.00	7.56	7.21	7.00	14.00	6.58	10.45	
	CD at 5%	15.49	31.44	21.00	17.90	14.95	16.00	30.00	13.65	21.64	
	CV	3.91	7.26	5.38	6.50	5.79	4.57	7.30	5.51	11.77	

Table 4.5.11 Stalk diameter (cm) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	2.99	2.60	2.70	2.53	2.57	2.74	2.63	2.51	2.41	2.63
2	Co 15024	2.97	2.69	2.80	2.63	2.44	2.22	2.35	2.67	2.34	2.57
3	Co 15027	3.12	2.65	2.90	2.90	2.37	2.86	2.82	2.70	2.93	2.81
4	CoLk 15201	3.03	2.37	2.50	2.47	2.49	2.74	2.29	2.61	2.82	2.59
5	CoLk 15203	2.70	2.62	2.30	2.07	2.25	2.32	2.21	2.25	2.46	2.35
6	CoLk 15204	2.63	2.10	2.10	2.13	2.15	2.18	1.98	2.26	2.39	2.21
7	CoLk 15205	2.31	2.09	1.90	1.87	2.01	2.12	2.05	2.29	2.43	2.12
8	CoPb 15211	2.45	2.24	2.20	1.80	2.23	2.04	2.27	2.23	2.40	2.21
9	CoPb 15212	2.92	2.37	2.20	2.33	2.51	2.10	2.31	2.30	2.48	2.39
	Standards										
1	CoJ 64	2.73	2.25	2.40	2.07	2.27	2.24	2.23	2.14	2.31	2.29
2	Co 0238	2.99	2.67	2.50	2.70	2.48	2.52	2.51	2.67	2.64	2.63
3	Co 05009	2.85	2.20	1.90	2.23	2.05	2.28	2.21	2.29	2.39	2.27
	Mean	2.81	2.40	2.38	2.32	2.32	2.36	2.32	2.41	2.50	2.42
	SE (m)	0.06		0.09	0.12	0.09	0.08	0.10	0.05	0.14	
	CD at 5%	0.18	0.37	0.26	0.29	0.19	0.16	0.21	0.10	0.29	
	CV	3.74	9.11	6.39	9.43	4.83	3.97	5.34	3.59	12.07	

Table 4.5.12 Single cane weight (kg) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	1.08	1.35	1.33	1.02	0.95	1.12	1.65	1.03	0.76	1.14
2	Co 15024	1.23	1.36	1.09	0.96	0.70	0.85	1.27	1.12	0.84	1.05
3	Co 15027	1.50	1.59	1.60	1.13	0.80	1.05	1.71	1.21	0.92	1.28
4	CoLk 15201	1.39	1.47	1.19	0.89	0.84	1.21	1.39	0.95	1.04	1.15
5	CoLk 15203	0.82	1.04	0.91	1.03	0.73	0.84	1.07	0.93	1.10	0.94
6	CoLk 15204	1.04	1.28	0.75	0.83	0.58	0.91	0.93	0.82	1.02	0.91
7	CoLk 15205	0.70	1.31	0.72	0.86	0.69	0.71	1.13	0.95	0.78	0.87
8	CoPb 15211	0.79	1.25	0.90	0.86	0.62	0.77	1.21	0.85	0.84	0.90
9	CoPb 15212	1.16	1.26	0.88	0.90	0.61	0.76	1.25	0.86	0.79	0.94
	Standards										
1	CoJ 64	0.89	1.08	0.91	0.86	0.68	0.70	1.09	0.80	0.80	0.87
2	Co 0238	1.14	1.33	1.32	0.90	0.88	1.11	1.59	1.09	0.84	1.13
3	Co 05009	1.19	1.15	1.00	0.88	0.59	0.80	1.50	0.91	0.82	0.98
	Mean	1.08	1.29	1.05	0.92	0.72	0.82	1.32	0.96	0.88	1.00
	SE (m)	0.05		0.06	0.04	0.06	0.05	0.13	0.06	0.05	
	CD at 5%	0.16	0.21	0.19	0.11	0.12	0.10	0.26	0.13	0.10	
	CV	8.78	9.41	10.52	8.70	9.50	6.74	11.64	11.01	11.33	

Table 4.5.13 CCS (%) at 8th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	12.36	12.40	14.82	13.05	13.19	11.65	12.35	12.03	11.46	12.59
2	Co 15024	10.39	11.29	13.09	12.35	12.03	11.58	11.18	11.21	9.90	11.45
3	Co 15027	9.23	10.91	12.15	10.66	10.48	11.72	10.70	10.83	10.19	10.76
4	CoLk 15201	10.67	10.84	11.33	11.54	11.35	11.11	10.24	11.11	9.82	10.89
5	CoLk 15203	10.18	11.53	12.25	12.68	11.73	11.38	12.25	11.76	10.10	11.54
6	CoLk 15204	8.84	9.77	10.70	11.06	10.18	10.99	9.90	11.13	10.93	10.39
7	CoLk 15205	10.66	12.04	12.87	12.12	11.88	10.62	12.59	11.74	10.92	11.72
8	CoPb 15211	10.64	11.91	13.14	10.54	12.20	11.87	12.42	11.40	9.72	11.54
9	CoPb 15212	10.31	11.38	12.57	11.59	11.74	11.00	11.49	11.60	9.71	11.27
	Standards										
1	CoJ 64	10.90	12.36	12.47	11.74	12.61	11.27	11.76	11.94	11.31	11.79
2	Co 0238	9.71	11.05	13.00	12.30	11.68	12.16	11.07	10.51	10.38	11.48
3	Co 05009	10.11	11.98	12.25	11.34	11.03	11.61	11.08	11.72	10.53	11.16
	Mean	10.33	11.46	12.55	11.74	11.67	11.41	11.42	11.42	10.41	11.38
	SE (m)	0.14		0.15	0.35	0.43	0.30	0.36	0.16	0.57	
	CD at 5%	0.42	0.86	0.45	0.85	0.90	0.61	0.75	0.33	1.19	
	CV	2.39	4.45	2.10	5.29	4.53	3.18	3.85	2.41	11.69	

Table 4.5.14 Sucrose (%) at 8th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	17.73	19.80	20.86	18.92	19.01	16.90	18.25	17.49	16.80	18.42
2	Co 15024	15.19	18.20	18.71	17.97	17.58	16.81	16.55	16.41	14.59	16.89
3	Co 15027	13.53	17.53	17.48	15.68	15.55	17.12	15.80	15.89	14.85	15.94
4	CoLk 15201	15.43	17.07	16.43	16.88	16.71	16.30	15.24	16.27	14.56	16.10
5	CoLk 15203	14.77	18.47	17.52	18.42	17.21	16.63	18.15	17.11	14.73	17.00
6	CoLk 15204	13.26	17.20	15.78	16.22	15.17	16.24	14.73	15.98	15.84	15.60
7	CoLk 15205	15.81	19.07	18.46	17.66	17.45	15.58	18.54	17.10	16.09	17.31
8	CoPb 15211	15.52	19.23	18.69	15.51	17.77	17.26	18.26	16.67	14.41	17.04
9	CoPb 15212	15.15	18.17	18.08	16.95	17.22	16.01	16.99	16.91	14.24	16.64
	Standards										
1	CoJ 64	15.79	19.73	17.92	17.15	18.38	16.45	17.49	17.08	16.40	17.38
2	Co 0238	14.23	17.93	18.64	17.90	17.14	17.75	16.38	17.37	15.31	16.96
3	Co 05009	14.53	19.43	17.49	16.61	16.11	16.90	16.39	15.46	15.44	16.48
	Mean	15.08	18.49	18.01	17.15	17.11	16.66	16.90	16.64	15.27	16.81
	SE (m)	0.29	0.00	0.20	0.48	0.55	0.40	0.47	0.17	0.65	
	CD at 5%	0.84	0.97	0.59	1.15	1.14	0.82	0.98	0.35	1.34	
	CV	3.31	3.10	1.94	4.92	3.93	2.92	3.41	1.76	8.98	

Table 4.5.15 Brix (%) at 8th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	19.73	19.80	22.28	21.50	21.38	19.24	21.57	20.02	19.54	20.56
2	Co 15024	17.60	18.20	20.68	20.60	20.32	19.18	19.63	19.02	17.16	19.15
3	Co 15027	15.77	17.53	19.56	18.40	18.56	19.81	18.67	18.52	17.08	18.21
4	CoLk 15201	17.47	17.07	18.71	19.50	19.62	19.00	18.30	18.88	17.34	18.43
5	CoLk 15203	16.83	18.47	19.34	21.00	20.06	19.21	21.60	19.66	16.94	19.23
6	CoLk 15204	16.13	17.20	18.57	18.90	18.24	19.21	17.67	18.62	18.01	18.06
7	CoLk 15205	18.83	19.07	20.53	20.30	20.39	18.16	21.77	19.65	18.93	19.74
8	CoPb 15211	17.90	19.23	20.42	18.20	20.42	19.84	21.40	19.27	17.16	19.32
9	CoPb 15212	17.70	18.17	20.22	19.60	20.08	18.38	20.10	19.46	16.56	18.92
	Standards										
1	CoJ 64	17.93	19.73	20.02	19.80	21.13	18.98	20.93	19.62	18.64	19.64
2	Co 0238	16.57	17.93	20.74	20.50	19.97	20.48	19.43	19.90	18.02	19.28
3	Co 05009	16.23	19.43	19.27	19.30	18.60	19.42	19.43	18.12	17.96	18.64
	Mean	17.39	18.49	20.03	19.81	19.90	19.32	20.04	19.23	17.78	19.11
	SE (m)	0.34		0.29	0.47	0.49	0.40	0.42	0.17	0.94	
	CD at 5%	0.99	0.87	0.85	1.12	1.01	0.84	0.88	0.35	1.94	
	CV	3.35	2.78	2.48	4.15	3.00	2.57	2.58	1.50	11.16	

Table 4.5.16 Purity (%) at 8th month

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	89.87	89.88	93.64	87.83	88.58	87.82	84.59	87.37	86.03	88.40
2	Co 15024	86.36	89.24	90.48	87.19	86.42	87.65	84.28	86.27	85.40	87.03
3	Co 15027	85.84	89.41	89.41	85.34	83.76	86.43	84.60	85.80	87.21	86.42
4	CoLk 15201	88.33	90.73	87.81	86.33	85.15	85.76	83.29	86.16	84.73	86.48
5	CoLk 15203	87.76	89.65	90.56	87.51	85.83	86.55	84.07	87.04	87.14	87.35
6	CoLk 15204	82.16	84.13	84.96	85.80	83.22	84.52	83.37	85.85	88.76	84.75
7	CoLk 15205	83.95	90.32	89.92	86.96	85.62	85.79	85.17	87.02	85.23	86.66
8	CoPb 15211	86.71	89.15	91.54	85.17	87.05	87.08	85.34	86.64	84.98	87.07
9	CoPb 15212	85.59	89.86	89.41	86.37	85.79	87.09	84.50	86.86	86.72	86.91
	Standards										
1	CoJ 64	88.06	88.87	89.59	86.56	87.01	86.68	83.53	87.02	88.13	87.27
2	Co 0238	85.90	89.89	89.95	87.13	85.81	86.77	84.28	87.29	85.64	86.96
3	Co 05009	89.53	88.83	90.77	86.13	86.60	86.99	84.33	85.35	86.29	87.20
	Mean	86.67	89.16	89.84	86.52	85.90	86.61	84.28	86.56	86.35	86.88
	SE (m)	0.44		0.83	0.39	1.15	0.64	0.63	0.16	1.28	
	CD at 5%	1.29	2.62	2.45	0.89	2.39	1.34	1.31	0.34	2.65	
	CV	0.88	1.74	1.60	0.75	1.64	0.91	0.91	0.33	3.14	

Table 4.5.17 Number of tillers at 120th days ('000 /ha)

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	98.77	110.39	107.10	141.33	109.67	190.37	73.52	179.26	144.27	128.30
2	Co 15024	162.55	139.81	126.70	136.33	89.51	203.70	85.19	186.67	116.63	138.57
3	Co 15027	151.06	125.62	100.62	139.33	114.61	207.96	71.29	189.26	182.72	142.50
4	CoLk 15201	121.06	130.51	103.24	137.00	119.24	174.99	99.63	188.33	167.56	137.95
5	CoLk 15203	149.35	141.16	120.06	136.33	117.08	172.77	96.85	193.15	148.16	141.66
6	CoLk 15204	106.48	133.68	102.62	133.67	98.56	210.74	84.82	189.07	180.29	137.77
7	CoLk 15205	136.49	123.00	101.39	129.33	144.65	189.62	85.56	182.04	144.31	137.38
8	CoPb 15211	125.17	142.90	107.72	143.00	116.26	199.44	61.30	165.74	120.55	131.34
9	CoPb 15212	125.69	102.48	113.58	132.00	141.15	171.29	67.41	190.56	153.28	133.05
	Standards										
1	CoJ 64	118.31	123.89	121.91	132.33	120.06	202.96	88.33	187.04	142.76	137.51
2	Co 0238	158.09	116.81	112.35	128.33	131.69	192.96	101.67	182.59	111.52	137.33
3	Co 05009	144.72	134.01	110.19	139.00	106.57	154.62	82.22	161.67	132.54	129.50
	Mean	133.14	127.02	110.62	135.66	117.42	189.29	83.15	182.95	145.38	136.07
	SE (m)	4.61		5.19	2.17	9.51	11.87	4.20	6.01	6.56	
	CD at 5%	13.53	11.57	15.32	5.13	19.73	24.62	8.76	12.46	13.58	
	CV	6.00	5.38	8.13	2.77	9.92	7.60	6.18	5.69	9.57	

Table 4.5.18 Germination (%) at 45th days

Sl. No.	Entry	Faridkot	Kapurthala	Karnal	Kota	Lucknow	Muzaffar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Mean
1	Co 15023	30.58	52.55	54.21	41.38	40.74	40.28	34.66	43.19	40.56	42.02
2	Co 15024	30.44	58.18	59.61	40.24	31.57	43.63	42.67	46.81	34.29	43.05
3	Co 15027	35.58	51.05	52.78	39.71	39.98	51.39	33.83	47.78	37.73	43.31
4	CoLk 15201	35.01	66.08	57.99	39.33	42.90	39.18	45.50	50.28	40.16	46.27
5	CoLk 15203	35.44	67.21	54.63	40.44	31.10	42.80	37.84	49.31	35.89	43.85
6	CoLk 15204	31.86	65.82	59.49	40.34	43.75	34.44	26.33	51.67	38.52	43.58
7	CoLk 15205	33.29	52.70	52.31	40.87	44.13	36.41	30.67	51.25	34.84	41.83
8	CoPb 15211	31.01	52.08	53.47	42.21	28.24	37.52	25.34	40.28	38.73	38.76
9	CoPb 15212	38.01	57.85	61.69	40.20	48.84	49.19	30.67	44.58	38.99	45.56
	Standards										
1	CoJ 64	36.44	60.42	65.16	41.58	53.94	44.05	35.16	46.25	37.84	47.76
2	Co 0238	32.44	57.98	56.94	40.66	45.76	43.08	37.17	47.92	38.75	44.52
3	Co 05009	34.87	55.90	50.93	41.05	41.59	39.74	34.00	41.94	36.69	41.86
	Mean	33.75	58.15	58.68	40.66	41.04	41.81	34.49	46.77	37.74	43.68
	SE (m)	1.15		2.05	0.62	2.80	3.35	2.47	2.10	1.74	
	CD at 5%	3.37	10.28	6.04	1.48	5.81	6.95	5.16	4.36	3.60	
	CV	5.90	10.44	6.32	2.67	8.37	9.82	8.79	7.78	9.79	

Table 4.5.19 Assessment of performance of entries by monitoring team constituted by AICRP(S)

Entries	Lucknow	Shahjahan pur	Pantnagar	Muzaffar nagar	Karnal	Kapurthala	Faridkot	Sriganga nagar	Kota
Co 15023	Damaged & gaps	Good	Good	Damaged	On par	On par	Good	Good	On par
Co 15024		Good	Good	Good	Good	Good	On par	Good	On par
Co 15027		Better	On par	Good	On par	Better	On par	Better	On par
CoLk 15201		Good	Good	Good	On par	Better	On par	Better	Better
CoLk 15203		Poor	Good	Poor	Good	Good	On par	Better	On par
CoLk 15204		Good	Good	Good	Poor	Good	Good	Better	On par
CoLk 15205		Good	Good	Good	Poor	Good	Good	Better	On par
CoPb 15211		Poor	Poor	Poor	Good	Good	Good	Good	On par
CoPb 15212		Good	Good	Good	Good	Good	Good	Good	On par
Standards									
CoJ 64									
Co 0238		Best	Best	Best	Best	Best	Best	Best	Best
Co 05009							Best		

4.6 Advanced Varietal Trial- II Plant-Midlate

Centres (9)	Faridkot, Kapurthala, Kota, Lucknow, Muzafarnagar, Pantnagar, Shahjahanpur, Sriganganagar, Uchani
Entries (5)	Co 13035, CoH 13263, CoPant 13224, CoPb 13182, CoLk 13204
Standards (3)	CoS 767, CoS 8436, 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
Seed rate	12 buds/metre
Planting time	February/March, 2018
Crop Duration	12 months

Results of the previous year:

In the previous year, five test entries and three standards were evaluated in AVT-I Plant Trial in RCBD with three replications. Among the test entries, CoPant 97222 was the best standard in the zone and its mean cane yield was 82.97 t/ha. Two test entries namely, CoPant 13224 (94.74 t/ha) and CoH 13263 (94.04 t/ha) recorded >10% higher cane yield than CoPant 97222. These test entries also showed > 10 % improvement for CCS yield over the best standard CoPant 97222 (10.61 t/ha). The CCS yield of CoPant 13224 and CoH 13263 were 12.03 t/ha and 12.26 t/ha, respectively. CoS 8436 was the best standard in the zone for sucrose % in juice and CCS %. Although no test entries showed >5 % improvement for these quality traits than CoS 8436 than that of CoS 8436 (sucrose %: 18.69 and CCS %: 12.97). On the basis of results of this trial, CoH 13263 was chosen as qualifying entry as it recorded >10 % improvement for cane yield and numerically higher sucrose % than the best standard in the zone.

Results of the current years:

Five test entries and four standards (CoS 767, CoS 8436, CoPant 97222, Co 05011) were evaluated with RCBD design with three replications in nine locations across the North West Zone. Co 05011 was the better standard for CCS yield (t/ha) and recorded the highest CCS yield of 11.20 t/ha. Test entries CoPant 13224 (13.29 t/ha), CoH 13263 (12.70 t/ha) and CoPb 13182 (12.45 t/ha) recorded the highest CCS yield with 18.66, 13.39 and 11.16 percent improvement over the better standard Co 05011. For cane yield, CoPant 13224 recorded the highest cane yield (101.87 t/ha) in the zone with 16.90 percent improvement over the best standard Co 05011 (97.71 t/ha). Other two entries viz., CoH 13263 (98.51 t/ha) and CoPb 13182 (97.71 t/ha) recorded 13.03 and 12.13 percent improvement over the best standard Co 05011 respectively. None of the entries showed five percent improvement for CCS(%) over the better standard Co 05011. Co 13035 (12.96%) and CoPant 13224 (12.96%) recorded numerically superior value for CCS (%) as compared to the better standard Co 05011 (12.88%). Test entries Co 13035 and CoPant 13224 recorded the numerically superior values of 18.70 and 18.68 percent sucrose content as compared to the better standard Co 05011 (18.58%). However, none of the test entries recorded five percent improvement for sucrose content over the better standard Co 05011.

Qualifying entries identified:

Sl No	Entries	Percent improvement of best standard of CCS yield	Percent improvement of best standard of Cane yield	Percent improvement of best standard of Sucrose
1	CoPant 13224	18.66	16.90	0.54

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 13035	13.55	10.41	11.89	8.57	12.03	14.84	11.60	10.28	12.39	12.12	4
2	CoH 13263	15.49	10.67	10.37	11.34	11.04	20.12	10.12	11.17	12.59	12.70	2
3	CoPant 13224	16.50	10.11	9.76	10.16	13.76	18.61	12.17	12.80	12.62	13.29	1
4	CoPb 13182	16.41	11.76	9.89	10.41	10.06	20.29	11.01	10.39	9.78	12.45	3
5	CoLk 13204	12.34	9.83	8.88	10.99	13.25	9.46	10.86	9.40	10.15	10.52	
	Standards											
1	CoS 767	11.85	10.43	9.52	9.04	9.53	8.94	9.64	10.97	11.11	10.13	
2	CoS 8436	11.46	9.25	8.64	9.32	9.25	9.37	9.57	9.63	9.74	9.61	
3	CoPant 97222	12.77	10.96	8.97	10.75	8.09	13.93	9.83	11.74	8.69	10.62	
4	Co 05011	13.97	10.03	10.22	9.58	10.25	13.13	9.90	10.35	11.76	11.20	5
	Mean	13.82	10.38	9.79	10.02	10.81	14.30	10.52	10.75	10.98		
	SE(m)	0.60		0.78	0.80	0.68	1.09	0.31	0.33	0.46		
	CD	1.75	0.99	1.90	1.71	1.45	2.32	0.66	0.72	1.40		
	CV	7.19	5.49	13.92	9.84	7.76	9.31	5.16	8.92	7.31		
Top three qualifying entries at each centre												
	Rank-1	CoPant 13224		Co 13035		CoPant 13224	CoPb 13182	CoPant 13224			CoPant 13224	
	Rank-2	CoPb 13182				CoLk 13204	CoH 13263	Co 13035			CoH 13263	
	Rank-3	CoH 13263				Co 13035	CoPant 13224	CoPb 13182			CoPb 13182	

* The sugarcane yield of Trial at Lucknow centre is lower than the state average of cane yield of Uttar Pradesh. Hence, Lucknow centre data are not considered for estimation of mean.

Qualifying entries: Co 13035 (4), CoPant 13224 (4), CoPb 13182 (3), CoH 13263 (2), CoLk 13204 (1)

Performance of the entries across locations: Among the standards, Co 05011 was the best standard and recorded the highest CCS yield (11.20 t/ha). Test entries CoPant 13224 (13.29 t/ha), CoH 13263 (12.70 t/ha) and CoPb 13182 (12.45 t/ha) recorded the highest CCS yield with 18.66, 13.39 and 11.16 percent improvement for CCS yield 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 13035	107.34	77.57	91.88	63.55	90.36	106.2	87.9	90.13	94.31	93.21	4
2	CoH 13263	120.71	83.02	90.08	82.20	83.7	138.23	80.37	95.76	96.2	98.51	2
3	CoPant 13224	123.11	78.83	85.63	78.78	104.44	125.71	91.85	107.3	98.06	101.87	1
4	CoPb 13182	127.57	92.56	83.86	82.36	77.65	143.1	82.59	92.46	81.87	97.71	3
5	CoLk 13204	96.71	85.34	82.46	87.94	100.61	65.22	84.32	82.29	84.21	85.15	
	Standards											
1	CoS 767	93.96	80.88	81.32	70.76	73.95	66.8	77.65	91.7	90.55	80.89	
2	CoS 8436	86.76	72.95	73.4	70.33	70.61	66.15	71.6	82.32	77.45	75.16	
3	CoPant 97222	101.17	81.65	74.15	78.55	64.19	97.08	75.19	95.55	80.04	83.63	
4	Co 05011	112.48	74.77	80.85	71.00	79.25	93.05	75.06	88.72	92.90	87.14	5
	Mean	107.76	80.84	82.63	76.16	82.75	100.17	80.73	91.80	88.40		
	SE(m)	4.35		5.57	6.60	4.68	7.49	2.32	2.45	3.19		
	CD	12.76	6.05	13.47	13.99	9.93	16.01	4.92	5.2	9.64		
	CV	6.76	4.61	11.67	10.61	6.94	9.16	4.98	7.55	6.24		
Top three qualifying entries at each centre												
	Rank-1	CoPb 13182	CoPb 13182	Co 13035	CoLk 13204	CoPant 13224	CoPb 13182	CoPant 13224	CoPant 13224		CoPant 13224	
	Rank-2			CoH 13263		CoLk 13204	CoH 13263	Co 13035			CoH 13263	
	Rank-3					Co 13035	CoPant 13224				CoPb 13182	

* The sugarcane yield of Trial at Lucknow centre is lower than the state average of cane yield of Uttar Pradesh. Hence, Lucknow centre data are not considered for estimation of mean

Qualifying entries: CoPant 13224 (4), Co 13035 (3), CoPb 13182 (3), CoH 13263 (2), CoLk 13204 (2).

Performance of the entries across locations: Among the test entries, CoPant 13224 recorded the highest yield (101.87 t/ha) across the zone with 16.90 percent improvement over the best standard Co 05011 (87.14 t/ha). Other two entries viz., CoH 13263 (98.51 t/ha) and CoPb 13182 (97.71 t/ha) recorded 13.03 and 12.13 percent improvement over the best standard Co 05011 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 13035	12.62	13.42	12.91	13.45	13.04	13.96	13.20	11.40	13.13	12.96	1
2	CoH 13263	12.83	12.86	11.52	13.84	13.20	14.56	12.59	11.67	13.08	12.79	
3	CoPant 13224	13.40	12.83	11.41	12.90	13.19	14.81	13.25	11.93	12.86	12.96	2
4	CoPb 13182	12.86	12.68	11.77	12.61	12.95	14.17	13.33	11.24	11.93	12.62	
5	CoLk 13204	12.76	11.52	10.75	12.55	13.16	14.49	12.87	11.43	12.10	12.39	
	Standards											
1	CoS 767	12.61	12.89	11.69	12.82	12.89	13.38	12.41	11.97	12.29	12.55	
2	CoS 8436	13.19	12.69	11.77	13.26	13.18	14.18	13.37	11.70	12.56	12.83	
3	CoPant 97222	12.61	13.43	12.10	13.68	12.71	14.34	13.08	12.29	10.85	12.68	
4	Co 05011	12.42	13.42	12.61	13.49	12.94	14.12	13.19	11.66	12.66	12.88	3
	Mean	12.81	12.86	11.84	13.18	13.03	14.22	13.03	11.70	12.38		
	SE(m)	0.12		0.21	0.47	0.24	0.30	0.09	0.49	0.30		
	CD	0.35	0.52	0.53	ns	NS	0.64	0.19	1.05	0.91		
	CV	1.59	2.01	3.21	4.40	1.92	2.58	1.21	11.94	4.21		
	None of the test entries recorded 5percent improvement for CCS (%) over the best standard in all the centres											

Number of locations where an entry showing more than five percent improvement over the best standards: None

Performance of the entries across locations: The better standard Co 05011 recorded 12.88% CCS in the zone and none of the test entries showed five percent improvement of the best standard. However, Co 13035 (12.96%) and CoPant 13224 (12.96%) recorded the numerically superior value for CCS% as compared to 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 13035	18.18	19.18	18.69	19.22	18.90	20.32	19.00	16.53	18.83	18.70	1
2	CoH 13263	18.31	18.62	16.80	19.75	19.18	21.15	18.31	17.01	18.80	18.52	
3	CoPant 13224	18.98	18.52	16.66	18.49	19.16	21.48	19.09	17.11	18.45	18.68	2
4	CoPb 13182	18.29	18.18	17.14	18.05	18.85	20.68	19.20	16.47	17.20	18.25	
5	CoLk 13204	18.15	16.74	15.77	17.98	19.16	20.83	18.59	16.48	17.36	17.89	
	Standards											
1	CoS 767	17.99	18.46	17.04	18.36	18.81	19.33	17.99	17.25	17.60	18.12	
2	CoS 8436	18.89	18.19	17.14	18.98	19.14	20.49	19.20	16.96	18.30	18.54	
3	CoPant 97222	17.98	19.17	17.59	19.55	18.61	20.94	18.87	17.81	15.87	18.36	
4	Co 05011	17.75	19.17	18.28	19.33	18.86	20.61	19.01	16.81	18.16	18.58	3
	Mean	18.28	18.47	17.23	18.86	18.96	20.65	18.81	16.94	17.84		
	SE(m)	0.18		0.29	0.64	0.59	0.37	0.12	0.45	0.38		
	CD	0.52	0.67	0.71	ns	NS	0.79	0.25	0.95	1.14		
	CV	1.67	2.08	2.99	4.16	3.83	2.18	1.08	7.48	3.65		
	None of the test entries recorded 5 percent improvement for sucrose (%) over the best standard in all centres											

Number of locations where an entry showing more than five percent improvement over the best standards: None

Performance of the entries across locations: Test entries Co 13035 and CoPant 13224 recorded the numerically superior value for 18.70 and 18.68 percent sucrose content as compared to the better standard Co 05011 (18.58%). 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 13035	20.40	21.18	21.20	21.20	21.50	23.30	21.36	18.78	20.97	21.10
2	CoH 13263	20.13	21.14	19.37	21.71	21.93	24.17	20.74	19.56	21.00	21.08
3	CoPant 13224	20.53	20.87	19.23	20.55	21.60	23.27	21.44	19.02	20.53	20.78
4	CoPb 13182	20.00	20.21	19.70	19.97	21.97	24.47	21.55	19.16	19.33	20.71
5	CoLk 13204	19.83	19.14	18.37	19.96	21.90	23.83	20.99	18.52	19.33	20.21
	Standards										
1	CoS 767	19.77	20.46	19.60	20.34	21.66	21.83	20.45	19.39	19.53	20.44
2	CoS 8436	20.93	20.23	19.70	21.01	21.83	23.17	21.54	19.28	21.03	20.97
3	CoPant 97222	19.77	21.10	20.13	21.57	21.56	24.17	21.23	20.24	18.37	20.90
4	Co 05011	19.57	21.14	20.80	21.48	21.70	23.77	21.37	18.89	20.20	20.99
	Mean	20.10	20.61	19.79	20.87	21.74	23.55	21.19	19.20	20.03	20.79
	SE(m)	0.23		0.28	0.63	0.29	0.44	0.11	0.41	0.37	
	CD	0.68	0.97	0.69	ns	NS	0.95	0.23	0.87	1.11	
	CV	1.99	2.73	2.52	3.70	1.67	2.31	0.89	6.01	3.17	

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 13035	89.12	90.55	88.16	90.67	87.91	87.22	88.94	88.24	89.85	88.96
2	CoH 13263	90.95	88.08	86.75	90.95	87.47	87.52	88.28	87.65	89.53	88.58
3	CoPant 13224	92.44	88.80	86.61	90.02	87.51	87.80	89.03	90.41	89.86	89.16
4	CoPb 13182	91.47	89.98	87.02	90.40	87.28	86.76	89.10	86.29	88.96	88.58
5	CoLk 13204	91.54	87.49	85.85	89.35	87.19	89.57	88.56	89.35	89.74	88.74
	Standards										
1	CoS 767	91.01	90.23	86.94	90.30	86.81	88.55	87.98	88.92	90.11	88.84
2	CoS 8436	90.25	89.95	87.02	90.34	87.68	88.48	89.14	88.16	87.03	88.67
3	CoPant 97222	91.00	90.83	87.37	90.74	86.28	86.64	88.87	88.29	86.37	88.49
4	Co 05011	90.70	90.69	87.87	90.04	86.94	86.72	88.97	89.65	89.91	89.05
	Mean	90.94	89.62	87.07	90.31	87.23	87.70	88.76	88.55	89.04	88.80
	SE(m)	0.35		0.24	0.35	0.57	1.27	0.11	1.57	1.05	
	CD	1.04	NS	0.37	0.75	NS	2.93	0.23	3.32	N.S.	
	CV	0.68	4.21	0.47	0.48	0.80	1.77	0.21	5.00	2.04	

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 13035	57.16	52.76	49.12	58.59	49.61		52.29	51.29	62.73	54.19
2	CoH 13263	60.81	53.46	51.06	58.95	47.34		51.58	47.78	62.74	54.21
3	CoPant 13224	55.85	50.72	48.27	57.74	44.53		51.48	43.74	59.82	51.52
4	CoPb 13182	57.60	53.07	54.26	56.48	48.73		55.52	44.94	63.75	54.29
5	CoLk 13204	56.26	49.36	49.88	51.60	42.22		54.74	48.84	54.48	50.92
	Standards										
1	CoS 767	60.28	50.79	42.43	57.24	45.97		51.43	52.21	56.90	51.48
2	CoS 8436	55.38	50.18	46.08	57.40	54.41		54.93	47.59	61.66	53.45
3	CoPant 97222	60.52	51.39	45.45	57.69	46.45		53.23	51.61	56.26	52.82
4	Co 05011	60.57	49.78	47.69	56.47	45.18		51.90	50.32	61.34	52.91
	Mean	58.27	51.28	48.25	56.91	47.16		53.01	48.70	59.96	52.94
	SE(m)	0.80		0.50	1.69	-		0.89	1.48	1.68	
	CD	2.34	NS	1.21	3.59	-		1.88	3.14	5.06	
	CV	2.38	4.21	1.80	3.65	-		2.89	8.59	4.84	

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 13035	12.28	12.75	14.08	14.96	13.52	15.78	14.85	13.81	14.11	14.64
2	CoH 13263	12.10	13.37	14.22	14.95	13.66	15.09	15.13	13.98	13.53	14.43
3	CoPant 13224	14.78	13.65	14.55	14.89	14.47	14.81	14.12	13.96	13.95	14.21
4	CoPb 13182	14.08	14.21	13.98	14.73	14.25	15.6	13.68	13.77	14.2	14.31
5	CoLk 13204	14.18	14.48	14.11	14.93	14.42	13.1	13.58	14.04	13.55	13.57
	Standards										
1	CoS 767	14.76	13.41	13.65	15.03	14.21	14.28	14.06	13.71	13.15	13.80
2	CoS 8436	14.95	13.32	13.44	14.84	14.14	14.36	14.55	13.92	14.16	14.25
3	CoPant 97222	15.56	12.37	14.24	14.9	14.27	15.28	15.18	13.53	13.72	14.43
4	Co 05011	15.07	13.15	14.08	14.97	14.32	15.14	14.86	13.88	13.68	14.39
	Mean	14.20	13.41	14.04	14.91		14.83	14.44	13.84	13.78	
	SE(m)		0.63	-	-			0.50	-	-	
	CD		1.14		NS	-	0.52	1.05	-	-	
	CV		4.64		5.77	-	2.01	4.21	-	-	

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 13035	100.82	70.15	82.93	70.91	101.23	62.5	98.77	98.56	78.41	84.92
2	CoH 13263	121.06	85.51	86.45	103.55	112.84	98.24	102.35	94.72	91.29	99.56
3	CoPant 13224	106.48	92.04	79.06	79.78	109.13	81.85	105.68	115.84	88.74	95.40
4	CoPb 13182	85.73	82.1	75.44	80.09	98.15	66.39	89.75	103.76	70.15	83.51
5	CoLk 13204	115.05	66.13	84.69	129.78	112.47	78.24	107.65	97.53	101.23	99.20
	Standards										
1	CoS 767	106.48	76.76	80.73	96.60	114.2	63.52	100.62	104.26	99.36	92.90
2	CoS 8436	89.68	78.88	76.32	91.51	105.18	69.82	96.05	94.18	85.28	87.43
3	CoPant 97222	97.74	60.03	76.76	104.94	98.02	85.65	83.95	96.57	96.66	88.92
4	Co 05011	104.25	73.69	81.17	110.57	109.01	82.87	99.98	89.63	89.45	93.40
	Mean	103.03	76.14	80.39	96.42	106.69	76.56	98.31	99.45	88.95	91.77
	SE(m)	3.53		3.16	5.07	4.28	1.92	3.55	2.6	3.57	
	CD	10.36	10.47	7.65	10.75	9.07	4.1	7.53	5.51	10.81	
	CV	5.92	7.95	6.82	6.44	4.91	3.07	6.26	7.4	6.96	

Table 4.6.10 Millable 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 13035	238.3	225.0	247.0	182.7	271.0	256.0	223.0	191.2	261.4	232.9
2	CoH 13263	263.2	194.0	236.0	164.7	226.0	221.0	207.0	202.4	243.2	217.5
3	CoPant 13224	298.0	198.3	257.0	191.0	239.0	263.0	243.7	211.6	274.7	241.8
4	CoPb 13182	286.0	243.3	247.0	196.3	234.0	271.0	242.0	188.6	226.1	237.1
5	CoLk 13204	248.6	255.0	208.0	164.0	222.0	193.0	212.3	176.1	232.6	212.4
	Standards										
1	CoS 767	253.1	221.7	214.0	189.0	240.0	219.0	221.7	202.3	245.5	220.1
2	CoS 8436	211.8	175.0	213.0	157.7	174.0	166.0	180.0	186.6	190.5	183.8
3	CoPant 97222	257.6	200.0	181.0	177.0	228.0	229.0	198.0	205.7	222.9	211.0
4	Co 05011	240.9	188.3	182.0	159.7	213.0	213.0	203.7	185.2	235.4	202.4
	Mean	255.3	211.2	220.6	175.8	227.4	225.7	214.6	194.4	236.9	218.0
	SE(m)	4.5						5.7	4.3	4.3	
	CD	13.2	31.5					12.0	9.1	13.0	
	CV	3.0	8.6		6.8	3.7	7.8	4.6	6.2	3.2	

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 13035	2.59	2.81	2.4	2.46	2.69	2.48	2.37	2.51	2.62	2.55
2	CoH 13263	2.85	2.56	2.3	2.44	2.51	2.46	2.31	2.72	2.37	2.50
3	CoPant 13224	2.77	2.11	3.03	2.25	2.53	2.29	2.3	2.63	2.32	2.47
4	CoPb 13182	3.02	2.29	2.67	2.52	3.04	2.87	2.47	2.53	2.76	2.69
5	CoLk 13204	2.54	2.59	2.17	2.25	2.21	2.05	2.17	2.21	2.14	2.26
	Standards										
1	CoS 767	2.39	2.22	2.37	2.41	2.29	2.14	2.26	2.43	2.34	2.31
2	CoS 8436	3.01	2.2	2.17	2.59	2.77	2.52	2.43	2.51	2.56	2.53
3	CoPant 97222	2.58	2.15	2.03	2.25	2.33	2.24	2.35	2.58	2.27	2.31
4	Co 05011	2.57	2.63	2.33	2.29	2.57	2.27	2.19	2.39	2.49	2.41
	Mean	2.70	2.40	2.39	2.39	2.55	2.37	2.32	2.50	2.43	2.45
	SE(m)	0.06		0.14	0.13	0.07	0.13	0.06	0.05	0.07	
	CD	0.16	0.45	0.34	ns	0.16	0.28	0.13	0.12	0.2	
	CV	3.54	10.89	10.45	6.63	3.58	6.79	4.63	6.19	4.64	

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 13035	1.20	1.58	1.10	0.90	1.05	1.70	0.95	0.87	1.26	1.18
2	CoH 13263	1.07	1.34	1.04	0.79	0.82	1.41	0.74	1.00	1.11	1.04
3	CoPant 13224	1.27	0.98	1.08	0.99	1.00	1.53	0.95	1.10	1.16	1.12
4	CoPb 13182	1.61	1.22	1.11	1.03	0.91	2.15	0.96	0.91	1.24	1.24
5	CoLk 13204	0.87	1.45	0.97	0.68	0.95	0.83	0.81	0.76	0.88	0.91
	Standards										
1	CoS 767	0.91	1.07	1.00	0.73	0.69	1.05	0.80	0.82	0.97	0.88
2	CoS 8436	1.01	0.93	0.96	0.77	0.76	0.95	0.87	0.78	0.95	0.89
3	CoPant 97222	1.14	1.05	0.97	0.75	0.71	1.13	0.88	1.08	0.87	0.95
4	Co 05011	1.11	1.27	0.99	0.64	0.88	1.12	0.90	0.91	1.09	0.99
	Mean	1.13	1.21	1.02	0.81	0.86	1.32	0.87	0.91	1.06	1.02
	SE(m)	0.04		0.04	0.05	0.03	0.07	0.04	0.02	0.03	
	CD	0.12	0.26	0.10	0.10	0.07	0.16	0.08	0.04	0.09	
	CV	5.93	12.54	7.20	7.37	4.87	6.89	7.61	6.19	4.71	

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 13035	10.83	12.06	10.37	12.61	11.42	12.05	12.25	9.69	12.46	11.53
2	CoH 13263	10.92	11.30	9.71	13.01	11.22	11.14	11.42	10.60	12.29	11.29
3	CoPant 13224	10.17	11.37	9.51	12.46	11.15	11.73	11.97	10.71	10.98	11.12
4	CoPb 13182	11.35	11.52	9.87	12.62	10.84	11.00	12.33	10.33	11.17	11.23
5	CoLk 13204	7.63	9.95	9.21	10.84	11.02	11.86	10.93	10.14	9.75	10.15
	Standards										
1	CoS 767	10.83	12.06	9.79	12.38	11.14	11.90	11.57	10.79	10.66	11.31
2	CoS 8436	10.37	11.82	9.87	12.17	11.74	11.90	12.07	10.80	11.68	11.38
3	CoPant 97222	11.00	12.02	10.12	12.73	11.36	11.72	12.15	11.16	10.55	11.42
4	Co 05011	10.65	11.93	10.32	12.05	11.37	11.47	11.71	9.90	12.21	11.29
	Mean	10.42	11.56	9.86	12.32	11.25	11.64	11.82	10.46	11.31	11.18
	SE(m)	0.12		0.17	0.42	0.30	0.42	0.13	0.15	0.28	
	CD	0.35	0.90	0.43	0.89	NS	0.97	0.27	0.32	0.84	
	CV	1.96	4.52	3.15	4.16	3.28	4.42	1.89	4.03	4.25	

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 13035	15.67	17.24	15.25	17.96	16.73	17.81	17.82	14.12	17.89	16.72
2	CoH 13263	15.66	16.32	14.36	18.60	16.44	16.47	16.67	15.55	17.77	16.43
3	CoPant 13224	14.61	16.34	14.09	17.95	16.31	17.31	17.40	15.48	16.06	16.17
4	CoPb 13182	16.26	16.62	14.57	18.09	16.01	16.39	17.89	15.15	16.20	16.35
5	CoLk 13204	11.57	14.45	13.67	15.79	16.22	17.58	16.03	14.78	14.37	14.94
	Standards										
1	CoS 767	15.61	17.24	14.46	17.74	16.22	17.59	16.86	15.74	15.43	16.43
2	CoS 8436	15.25	16.86	14.57	17.46	17.12	17.58	17.61	15.68	17.04	16.57
3	CoPant 97222	15.80	17.29	14.91	18.25	16.61	17.27	17.65	16.27	15.35	16.60
4	Co 05011	15.33	17.02	15.19	17.25	16.63	17.04	17.06	14.39	17.56	16.39
	Mean	15.08	16.60	14.56	17.68	16.48	17.23	17.22	15.24	16.41	16.28
	SE(m)	0.17		0.24	0.54	0.41	0.48	0.16	0.24	0.31	
	CD	0.49	1.16	0.58	1.14	NS	1.12	0.33	0.50	0.95	
	CV	1.90	4.02	2.88	3.74	3.07	3.44	1.57	4.39	3.31	

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 13035	17.77	19.03	17.87	19.70	19.45	21.07	20.31	16.24	19.93	19.04
2	CoH 13263	17.40	18.43	17.00	20.54	19.11	19.50	19.24	18.13	20.10	18.83
3	CoPant 13224	16.30	18.27	16.73	20.15	18.88	20.43	19.92	17.49	18.63	18.53
4	CoPb 13182	18.03	18.73	17.20	20.09	18.84	19.67	20.38	17.64	18.45	18.78
5	CoLk 13204	14.37	16.50	16.33	18.13	19.35	20.90	18.64	16.99	16.90	17.57
	Standards										
1	CoS 767	17.53	19.03	17.10	19.68	18.61	20.8	19.41	18.12	17.52	18.78
2	CoS 8436	17.87	18.53	17.20	19.43	19.68	20.77	20.30	17.93	19.62	19.04
3	CoPant 97222	17.63	19.33	17.53	20.27	19.21	20.33	20.15	18.72	17.58	18.97
4	Co 05011	17.20	18.70	17.80	19.14	19.24	20.37	19.59	16.45	19.63	18.68
	Mean	17.12	18.51	17.20	19.68	19.15	20.43	19.77	17.52	18.71	18.68
	SE(m)	0.20		0.23	0.47	0.43	0.45	0.13	0.25	0.24	
	CD	0.58	1.02	0.57	0.99	NS	0.96	0.27	0.53	0.71	
	CV	1.97	3.17	2.37	2.90	2.74	2.69	1.12	4.04	2.18	

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 13035	88.21	90.59	85.38	91.02	86.00	84.60	87.76	86.94	89.72	87.80
2	CoH 13263	89.98	88.54	84.47	90.57	86.03	84.44	86.64	85.78	88.39	87.20
3	CoPant 13224	89.62	89.46	84.13	89.12	86.34	84.70	87.61	88.55	86.17	87.30
4	CoPb 13182	90.16	88.70	84.68	90.02	84.74	83.47	87.56	85.95	87.83	87.01
5	CoLk 13204	80.50	87.43	83.71	87.10	85.28	84.12	85.96	87.71	85.03	85.20
	Standards										
1	CoS 767	89.03	90.57	84.58	90.16	87.17	84.53	86.87	86.96	88.08	87.48
2	CoS 8436	85.39	90.99	84.68	89.86	86.97	84.64	87.75	87.56	86.83	87.19
3	CoPant 97222	89.61	89.41	85.04	90.06	86.45	84.95	87.59	86.89	87.24	87.47
4	Co 05011	89.15	90.99	85.31	90.12	86.41	83.68	87.05	87.54	89.43	87.74
	Mean	87.96	89.63	84.66	89.78	86.15	84.35	87.20	87.10	87.64	87.16
	SE(m)	0.39		0.25	0.77	0.50	1.76	0.15	0.83	1.23	
	CD	1.14	NS	0.62	1.63	1.06	4.08	0.31	1.76	NS	
	CV	0.76	1.56	0.33	1.05	0.71	2.56	0.29	2.70	2.42	

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 13035	110.94	97.01	155.07	91.59					108.97	112.72
2	CoH 13263	140.09	105.24	158.59	142.36					126.69	134.59
3	CoPant 13224	117.97	104.43	152.86	116.36					100.73	118.47
4	CoPb 13182	89.68	103.09	147.58	122.76					96.61	111.94
5	CoLk 13204	118.83	95.05	156.83	201.78					148.94	144.29
	Standards										
1	CoS 767	113.17	92.04	138.33	137.89					104.03	120.36
2	CoS 8436	95.34	94.97	133.92	118.83					98.06	108.22
3	CoPant 97222	101.51	76.11	134.36	140.51					108.56	112.21
4	Co 05011	105.97	84.29	138.77	143.36					118.86	118.25
	Mean	110.39	94.69	146.26	135.05					112.38	
	SE(m)	3.84		3.3	10.76					4.5	
	CD	11.28	13.5	7.98	22.81					13.62	
	CV	5.98	8.24	3.91	9.76					6.94	

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 13035	137.52	105.56	117.33	121.14	213.82	71.29	179.75	151.34	115.77	134.84
2	CoH 13263	181.76	122.55	120.00	179.78	190.24	122.96	194.20	161.71	142.97	157.35
3	CoPant 13224	158.44	115.69	115.67	169.52	181.48	87.50	186.42	184.29	110.83	145.54
4	CoPb 13182	114.20	112.14	111.67	169.60	168.27	70.37	170.99	159.84	104.24	131.26
5	CoLk 13204	168.21	101.23	118.67	246.14	179.13	86.02	208.52	147.54	160.88	157.37
	Standards										
1	CoS 767	146.95	105.18	104.67	173.22	167.90	85.19	195.80	157.32	108.97	142.03
2	CoS 8436	118.48	106.45	101.33	145.22	159.50	80.09	190.12	143.55	104.44	127.69
3	CoPant 97222	136.83	85.04	101.67	161.96	145.92	89.07	184.94	142.16	111.65	128.80
4	Co 05011	119.86	90.11	105.00	150.85	168.15	109.17	184.44	135.78	117.01	131.15
	Mean	142.47	104.88	110.67	168.60	174.93	89.07	188.35	153.73	119.64	139.15
	SE(m)	4.05		2.49	12.94	8.91	4.54	5.26	3.42	5.42	
	CD	11.87	16.96	6.04	27.43	18.89	9.70	11.16	7.24	16.38	
	CV	4.83	9.35	3.91	9.40	6.24	6.24	4.84	6.29	7.84	

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 13035	28.58	61.67	50.24	49.31	52.87	29.66	48.52	37.48	50.00	45.37
2	CoH 13263	34.39	60.87	50.38	53.88	52.22	37.67	47.87	39.29	61.25	48.65
3	CoPant 13224	34.48	54.62	48.98	39.81	51.20	34.75	48.70	40.71	57.90	45.68
4	CoPb 13182	32.96	57.55	51.11	47.57	41.57	32.33	41.94	33.64	48.79	43.05
5	CoLk 13204	29.91	55.81	48.94	60.13	51.94	34.33	53.06	37.55	61.45	48.12
	Standards										
1	CoS 767	35.44	57.31	46.92	50.46	39.90	31.75	48.06	39.63	37.91	43.68
2	CoS 8436	31.05	52.28	46.88	43.63	35.37	32.25	43.33	37.91	44.39	40.79
3	CoPant 97222	30.67	53.21	46.44	37.96	30.64	33.42	46.85	38.84	53.35	41.26
4	Co 05011	28.20	56.14	45.60	38.72	43.70	33.25	44.81	35.58	51.19	41.91
	Mean	31.74	56.61	48.39	46.83	44.38	33.27	47.02	37.85	51.80	44.21
	SE(m)	1.59		0.66	2.81	4.41	1.45	1.64	0.71	1.33	
	CD	4.66	NS	1.61	5.95	9.36	3.10	3.49	1.50	4.03	
	CV	8.57	6.43	2.39	7.34	12.18	5.33	6.06	5.29	4.46	

Table 4.6.20 Assessment of performance of entries by monitoring team constituted by AICRP(S)

Entries	Lucknow	Shahja hanpur	Pantnagar	Muzaffar nagar	Uchani	Kapur thala	Farid kot	Sriganga nagar	Kota
Co 13035	Good	Good	On par	Better	Better	Good	Better	Good	Better
CoH 13263	Good	Good	On par	Better	Better	Good	Better	Good	Better
CoPant 13224	Good	Good	Better	Better	Better	Better	Better	Better	Good
CoPb 13182	Good	Good	Poor	Poor	Good	Good	On par	Good	Poor
CoLk 13204	Good	Good	Good	Better	On par	Good	On par	Good	Better
Standards									
CoS 767		Best		Best					
CoPant 97222	Best							Best	
Co 05011			Best		Best	Best	Best		Best
CoS 8436									

4.7 Advanced Varietal Trial - Ratoon -Midlate (2018-19)

Centres (8)	Faridkot, Kapurthala, Lucknow, Muzafarnagar, Pantnagar, Shahjahanpur, Sriganganagar, Uchani
Entries (5)	Co 13035, CoH 13263, CoLk 13204, CoPant 13224, CoPb 13182,
Standards (3)	CoS 767, CoS 8436, 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
Seed rate	12 buds/metre
Planting time	February/March, 2018
Crop Duration	11 months

Results of the previous year:

In the previous year, five test entries and three standards were evaluated in AVT-I Plant Trial in RCBD with three replications. Among the test entries, CoPant 97222 was the best standard in the zone and its mean cane yield was 82.97 t/ha. Two test entries namely, CoPant 13224 (94.74 t/ha) and CoH 13263 (94.04 t/ha) recorded >10% higher cane yield than CoPant 97222. These test entries also showed > 10 % improvement for CCS yield over the best standard CoPant 97222 (10.61 t/ha). The CCS yield of CoPant 13224 and CoH 13263 were 12.03 t/ha and 12.26 t/ha, respectively. CoS 8436 was the best standard in the zone for sucrose % in juice and CCS %. Although no test entries showed >5 % improvement for these quality traits than CoS 8436 than that of CoS 8436 (sucrose %: 18.69 and CCS %: 12.97). On the basis of results of this trial, CoH 13263 was chosen as qualifying entry as it recorded >10 % improvement for cane yield and numerically higher sucrose % than the best standard in the zone.

Results of the current years:

Five test entries and four standards were evaluated in RBD in three replications at eight centres across North-West Zone. Kota centre did not conducted the ratoon trial. For CCS yield (t/ha), Co 05011 is the better standard and recorded 8.96 t/ha of CCS yield. Among the test entries, CoPant 13224 recorded the highest CCS yield of 10.32 t/ha with 15.17% improvement over the best standard Co 05011. Similarly, Co 05011 was the better standard for cane yield and recorded the highest cane yield of 74.75 t/ha. Entry CoPant 13224 recorded the highest cane yield of 86.20 t/ha with 15.32% improvement over the best standard Co 05011. For juice quality parameters CCS(%), Co 05011 was the best standard and recorded the 12.02% of CCS. Two test entries, Co 13035 (12.19%) and CoH 13263 (12.02%) recorded numerically superior CCS% over the best standard Co 05011. Similarly, Co 05011 was the best standard for sucrose content and recorded the highest sucrose content of 17.29%. Two test entries viz., Co 13035 (17.53%) and CoH 13263 (17.35%) recorded 1.34 and 0.35% improvement over the best standard Co 05011.

Qualifying entries: As per the criteria, no qualifying entries were identified.

Table 4.7.1. CCS (t/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck now*	Muzafar nagar	Pant nagar*	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 13035	12.20	9.10	4.89	8.09	6.29	8.87	8.70	9.62	9.43	2
2	CoH 13263	11.34	9.47	6.38	7.36	8.18	8.59	7.48	10.06	9.05	3
3	CoLk 13204	8.65	7.97	7.69	7.84	8.74	8.26	8.97	7.60	8.22	
4	CoPant 13224	13.20	8.43	6.63	9.95	10.05	9.20	11.57	9.57	10.32	1
5	CoPb 13182	12.23	10.40	6.45	7.38	4.06	8.59	7.63	7.52	8.96	
	Standards										
1	CoS 767	8.54	8.82	6.94	6.34	6.97	7.90	9.25	8.70	8.26	
2	CoS 8436	7.05	7.63	4.65	5.62	6.23	7.97	6.86	8.30	7.24	
3	CoPant 97222	10.82	8.62	6.04	5.85	8.57	7.26	7.78	7.67	8.00	
4	Co 05011	11.31	8.88	6.74	8.00	9.94	7.65	8.90	9.04	8.96	4
	Mean	10.50	8.81	6.21	7.30	7.46	8.33	8.53	8.63		
	SE(m)	0.75		0.54	0.50	0.65	0.33	0.28	0.35		
	CD	2.21	0.93	1.14	1.07	1.40	0.71	0.59	1.06		
	CV	12.16	6.09	10.51	8.37	10.43	7.01	9.11	7.01		
	Top three qualifying entries at each centre										
	Rank-1	CoPant 13224	CoPb 13182	CoLk 13204	CoPant 13224		CoPant 13224	CoPant 13224	CoH 13263	CoPant 13224	
	Rank-2						Co 13035				

* Cane yield of ratoon trial at Pantnagar and Lucknow centres were lower than the state average of cane yield of Uttarkhand (60.01 t/ha) and Uttar Pradesh (68.43 t/ha) respectively. Hence, these locations data were not considered for estimation of mean.

Number of locations where an entry showing more than 10% improvement: CoPant 13224 (4), Co 13035 (1), CoLk 13204 (1), CoPb 13182 (1), CoH 13263 (1).

Performance of the entries across locations: Among the standards, Co 05011 was the best standard and recorded 8.96 t/ha of CCS yield. Among the test entries, CoPant 13224 recorded the highest zonal CCS yield of 10.32 t/ha with 15.17% improvement over the best standard Co 05011. Other test entries CoPb 13182 (8.96 t/ha) and CoH 13263 (9.05 t/ha) recorded the numerically superior cane yield over the best standard Co 05011.

Table 4.7.2. Cane yield (t/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck now*	Muzafar nagar	Pant nagar*	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 13035	104.07	70.14	43.07	70.37	46.66	72.47	72.57	75.60	77.54	2
2	CoH 13263	95.56	78.07	53.91	61.97	59.06	70.74	68.29	76.75	75.23	4
3	CoLk 13204	80.00	73.30	69.78	69.63	66.55	72.72	73.60	65.66	72.49	
4	CoPant 13224	110.74	71.86	56.20	80.49	75.49	75.31	99.48	79.34	86.20	1
5	CoPb 13182	103.70	85.19	53.00	59.63	30.69	71.73	69.23	67.68	76.19	3
	Standards										
1	CoS 767	71.11	73.44	60.90	56.17	57.29	69.75	77.59	74.08	70.36	
2	CoS 8436	58.89	66.85	40.96	50.37	46.3	63.09	58.64	65.74	60.60	
3	CoPant 97222	90.00	67.11	55.52	52.84	63.83	61.98	70.67	66.61	68.20	
4	Co 05011	92.96	67.72	55.36	68.89	77.26	64.69	81.55	72.71	74.75	5
	Mean	89.67	72.63	54.30	63.37	58.13	69.16	74.62	71.57		
	SE(m)	6.50		3.61	4.61	4.40	2.92	1.96	2.54		
	CD	19.06	5.98	7.65	9.77	9.23	6.19	4.16	7.69		
	CV	12.33	4.77	8.14	8.91	9.26	7.32	7.46	6.16		
Top three qualifying entries at each centre											
	Rank-1	CoPant 13224	CoPb 13182	CoLk 13204				CoPant 13224		CoPant 13224	
	Rank-2	Co 13035									
	Rank-3	CoPb 13182									

* Cane yield of ratoon trial at Pantnagar and Lucknow centres were lower than the state average of cane yield of Uttarkhand (60.01 t/ha) and Uttar Pradesh (68.43 t/ha) respectively. Hence, these locations data were not considered for estimation of mean.

Number of locations where an entry showing more than 10% improvement over the best standards: CoPant 13224 (2), CoPb 13182 (2), Co 13035 (1), CoLk 13204 (1)

Performance of the entries across locations: For cane yield, Co 05011 was the best standard and recorded the highest cane yield of 74.75 t/ha. Among the test entries, CoPant 13224 recorded the highest cane yield of 86.20 t/ha with 15.32% improvement over the best standard Co 05011. Other entries viz., Co 13035 (77.54 t/ha), CoPb 13182 (76.19 t/ha) and CoH 13263 (75.23 t/ha) recorded numerically superior CCS yield (t/ha) over the best standard Co 05011.

Table 4.7.3. CCS (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 13035	11.72	12.97	11.37	11.48	13.48	12.25	11.99	12.75	12.19	1
2	CoH 13263	11.87	12.14	11.82	11.91	13.84	12.15	10.95	13.09	12.02	2
3	CoLk 13204	10.83	10.87	11.02	11.28	13.1	11.35	12.18	11.54	11.34	
4	CoPant 13224	11.91	11.73	11.79	12.37	13.31	12.23	11.63	12.05	11.99	
5	CoPb 13182	11.79	12.2	12.20	12.39	13.23	11.97	11.02	11.11	11.75	
	Standards										
1	CoS 767	12.01	12.01	11.36	11.28	12.16	11.33	11.92	11.75	11.72	
2	CoS 8436	11.95	11.42	11.43	11.2	13.44	12.62	11.7	12.64	11.92	
3	CoPant 97222	12.02	12.83	10.89	11.07	13.42	11.71	11.01	11.52	11.69	
4	Co 05011	12.16	13.11	12.20	11.62	12.88	11.85	10.91	12.44	12.02	2
	Mean	11.81	12.14	11.57	11.62	13.21	11.94	11.48	12.10		
	SE(m)	0.12		0.70	0.23	0.32	0.08	0.19	0.26		
	CD	0.34	0.71	ns	0.49	0.67	0.16	0.39	0.78		
	CV	1.7	3.39	7.38	2.45	2.97	1.1	4.57	3.68		
Top three qualifying entries at each centre											
	Rank-1				CoPb 13182						
	Rank-2				CoPant 13224						

* Cane yield of ratoon trial at Pantnagar and Lucknow centres were lower than the state average of cane yield of Uttarkhand (60.01 t/ha) and Uttar Pradesh (68.43 t/ha) respectively. Hence, these locations data were not considered for estimation of mean.

Number of locations where an entry showing more than five percent improvement over the best standards: CoPb 13182 (1), CoPant 13224 (1)
Performance of the entries across locations: For CCS(%), Co 05011 was the best standard and recorded the 12.02% of CCS. Among the test entries, Co 13035 (12.19%) and CoH 13263 (12.02%) recorded numerically superior CCS% over the best standard Co 05011.

Table 4.7.4. Sucrose (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean	Rank
1	Co 13035	16.72	18.38	16.70	16.74	19.55	17.77	17.31	18.27	17.53	1
2	CoH 13263	16.94	17.33	17.31	17.31	20.05	17.64	15.98	18.89	17.35	2
3	CoLk 13204	15.50	15.64	16.28	16.46	18.96	16.58	17.37	16.85	16.40	
4	CoPant 13224	17.02	16.65	17.23	18.03	19.37	17.74	16.60	17.56	17.27	
5	CoPb 13182	16.82	17.24	17.66	18.01	19.05	17.40	16.08	16.29	16.97	
	Standards										
1	CoS 767	17.14	17.17	16.74	16.44	17.69	16.55	17.14	17.07	16.92	
2	CoS 8436	17.00	16.27	16.74	16.39	19.35	18.27	17.03	18.21	17.20	
3	CoPant 97222	17.05	18.29	16.38	16.18	19.40	16.97	16.08	16.49	16.84	
4	Co 05011	17.31	18.54	17.68	16.90	18.66	17.24	15.84	17.92	17.29	3
	Mean	16.77	17.12	16.88	16.95	19.40	17.37	16.70	17.45		
	SE(m)	0.17		0.67	0.31	0.41	0.11	0.18	0.34		
	CD	0.49	0.97	ns	0.66	0.86	0.23	0.37	1.02		
	CV	1.71	3.23	4.82	2.26	2.62	1.11	2.99	3.34		
	Top three qualifying entries at each centre										
	Rank-1				CoPant 13224						
	Rank-2				CoPb 13182						

* Cane yield of ratoon trial at Pantnagar and Lucknow centres were lower than the state average of cane yield of Uttarkhand (60.01 t/ha) and Uttar Pradesh (68.43 t/ha) respectively. Hence, these locations data were not considered for estimation of mean.

Number of locations where an entry showing more than five percent improvement over the best standards: CoPb 13182 (1), CoPant 13224 (1)

Performance of the entries across locations: For juice sucrose content, Co 05011 recorded the highest sucrose content of 17.29%. Among the test entries, Co 13035 (17.53%) and CoH 13263 (17.35%) recorded 1.34 and 0.35% improvement over the best standard Co 05011.

Table 4.7.5. Brix (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 13035	18.40	20.03	19.50	19.26	22.23	20.26	19.54	20.30	19.94
2	CoH 13263	18.63	19.07	20.09	19.80	22.77	20.13	18.43	21.30	20.03
3	CoLk 13204	17.13	17.53	19.21	18.96	21.50	19.16	19.07	19.47	19.00
4	CoPant 13224	18.77	18.10	19.92	20.73	22.23	20.21	18.28	20.20	19.81
5	CoPb 13182	18.47	18.53	20.02	20.56	21.40	19.92	18.55	18.97	19.55
	Standards									
1	CoS 767	18.87	18.97	19.67	18.90	20.27	19.12	19.16	19.50	19.31
2	CoS 8436	18.57	17.83	19.44	19.00	21.67	20.70	19.54	20.43	19.65
3	CoPant 97222	18.50	20.07	20.02	18.69	21.93	19.50	18.56	18.27	19.44
4	Co 05011	18.93	20.00	20.09	19.36	21.2	19.76	18.07	20.13	19.69
	Mean	18.47	18.90	19.77	19.47	21.69	19.86	18.80	19.84	
	SE(m)	0.22		0.39	0.35	0.39	0.10	0.16	0.35	
	CD	0.63	1.72	ns	0.74	0.83	0.22	0.34	1.05	
	CV	2.03	5.30	2.40	2.19	2.22	0.89	2.41	3.02	

Table 4.7.6. Purity (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 13035	90.86	92.36	85.71	86.91	87.92	87.72	88.56	89.97	88.75
2	CoH 13263	90.92	90.92	86.23	87.45	88.07	87.61	86.73	88.76	88.34
3	CoLk 13204	90.45	89.2	84.72	86.82	88.18	86.53	91.76	86.54	88.02
4	CoPant 13224	90.7	91.99	86.48	86.95	87.12	87.76	90.84	87	88.61
5	CoPb 13182	91.07	93.14	88.17	87.56	89.04	87.37	86.29	85.87	88.56
	Standards									
1	CoS 767	90.87	90.52	85.27	86.97	87.3	86.53	89.55	87.52	88.07
2	CoS 8436	91.55	91.23	86.08	86.24	89.3	88.24	87.18	89.12	88.62
3	CoPant 97222	92.15	91.13	81.80	86.9	88.44	86.92	86.55	90.27	88.02
4	Co 05011	91.43	92.71	88.00	87.28	88	87.23	86.71	89.07	88.80
	Mean	91.11	91.47	85.83	87.01	88.15	87.32	88.24	88.24	
	SE(m)	0.47		3.82	0.59	0.83	0.11	0.76	0.71	
	CD	1.39	NS	ns	NS	1.74	0.23	1.63	2.14	
	CV	0.9	2.06	5.46	0.83	1.15	0.22	2.46	1.39	

Table 4.7.7. Extraction (%) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 13035	59.11	55.92	54.77	48.97		58.87	50.24	58.58	55.21
2	CoH 13263	58.44	54.27	58.07	47.05		57.54	44.89	65.18	55.06
3	CoLk 13204	52.41	52.16	51.11	46.42		56.48	43.75	53.82	50.88
4	CoPant 13224	54.12	54.29	61.06	46.29		58.17	42.77	61.96	54.09
5	CoPb 13182	57.51	54.7	59.73	52.54		60.07	40.93	62.99	55.50
	Standards									
1	CoS 767	57.79	53.13	59.61	42.85		52.04	48.53	62.55	53.79
2	CoS 8436	56.45	54.37	54.83	49.27		59.52	50.84	64.85	55.10
3	CoPant 97222	58.67	52.85	60.87	47.82		58.88	52.94	60.71	56.11
4	Co 05011	60.1	54.49	57.48	48.57		57.87	47.99	65.91	56.06
	Mean	57.18	54.02	57.50	47.75		57.49	46.99	61.84	
	SE(m)	0.75		2.48	-		1.39	1.42	1.25	
	CD	2.19	NS	5.26	-		2.95	3.01	3.77	
	CV	2.27	4.03	5.28	-		4.17	8.55	3.49	

Table 4.7.8. Pol%canne and Fibre(%) content at harvest

S. No.	Entry	Pol%canne					Fibre (%)				
		Kapur thala	Luck now	Muzafar nagar	Shahja hanpur	Mean	Kapur thala	Luck now	Muzafar nagar	Shahja hanpur	Mean
1	Co 13035	14.80	12.86	12.24	13.88	13.44	13.22	13.00	13.82	15.69	13.93
2	CoH 13263	14.50	13.31	12.55	13.66	13.50	11.89	13.11	14.10	15.72	13.70
3	CoLk 13204	12.01	12.27	12.05	13.22	12.39	12.44	14.64	14.07	15.79	14.23
4	CoPant 13224	12.72	13.12	13.11	13.61	13.14	12.80	13.81	13.9	15.78	14.07
5	CoPb 13182	14.16	13.38	13.09	13.64	13.57	12.68	14.27	14.21	15.68	14.21
	Standards										
1	CoS 767	13.96	12.77	11.96	13.13	12.96	13.12	13.74	13.82	15.74	14.11
2	CoS 8436	13.79	12.80	11.90	13.99	13.12	13.69	13.50	13.61	15.52	14.08
3	CoPant 97222	15.32	12.57	11.82	13.53	13.31	15.09	13.24	13.96	15.75	14.51
4	Co 05011	14.55	13.62	12.14	13.43	13.43	13.65	12.97	14.02	15.77	14.10
	Mean	13.98	12.97	12.32	13.57		13.18	13.59	13.95	15.72	
	SE(m)		0.53	-	-			0.60	-	-	
	CD	0.57	ns	-	-		1.05				
	CV	2.36	5.03	-	-		4.61				

Table 4.7.9. Number of millable canes (‘000/ha) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck Now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 13035	104.07	89.12	67.14	82.46	37.69	95.19	92.57	89.55	82.22
2	CoH 13263	118.70	83.26	91.18	97.53	54.17	91.11	84.28	85.55	88.22
3	CoLk 13204	125.93	77.69	118.91	110.49	70.09	103.58	89.41	105.05	100.14
4	CoPant 13224	112.04	88.01	88.28	112.96	62.69	103.46	107.36	84.36	94.90
5	CoPb 13182	71.30	87.80	74.77	77.90	32.22	87.41	87.55	72.71	73.96
	Standards									
1	CoS 767	95.37	77.94	84.47	108.27	53.43	102.59	97.39	87.92	88.42
2	CoS 8436	76.30	81.06	75.52	76.29	44.63	89.75	82.47	83.35	76.17
3	CoPant 97222	108.15	70.74	87.86	101.97	56.11	92.47	90.29	103.56	88.89
4	Co 05011	104.81	88.78	103.16	105.43	71.39	97.28	84.58	80.32	91.97
	Mean	101.85	82.71	87.92	97.03	53.60	95.87	90.66	88.04	
	SE(m)	7.04		5.76	6.41	2.14	3.50	2.72	3.44	
	CD	20.66	7.81	12.21	13.60	4.50	7.41	5.77	10.40	
	CV	12.11	6.04	8.02	8.10	4.90	6.31	8.49	6.77	

Table 4.7.10 Cane height (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck Now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 13035	220.4	216.7	125.4	186.0	170.0	212.0	165.7	188.2	185.6
2	CoH 13263	190.7	240.0	118.4	169.0	147.0	190.3	182.3	230.5	183.5
3	CoLk 13204	212.0	225.8	137.8	162.0	154.0	187.0	175.4	201.0	181.9
4	CoPant 13224	211.5	240.8	137.1	175.0	205.0	206.0	190.8	235.3	200.2
5	CoPb 13182	229.8	240.0	156.9	222.0	150.0	217.3	169.6	226.5	201.5
	Standards									
1	CoS 767	196.7	222.5	154.3	157.0	1.81	213.0	185.3	230.8	170.2
2	CoS 8436	156.6	215.0	107.4	127.0	1.13	175.7	171.2	159.4	139.2
3	CoPant 97222	201.0	251.7	144.9	159.0	1.65	185.0	183.6	192.4	164.9
4	Co 05011	203.4	224.2	128.7	171.0	1.51	213.7	149.8	201.3	161.7
	Mean	202.3	231.6	135.3	169.6	165.2	198.3	178.0	208.0	
	SE(m)	4.8					6.2	3.7	5.0	
	CD	14.0	31.3				13.2	7.9	15.0	
	CV	4.1	9.6	10.4	3.4	9.0	5.4	6.0	4.1	

Table 4.7.11 Cane diameter (cm) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 13035	2.62	2.53	2.18	2.62	2.39	2.34	2.43	2.37	2.44
2	CoH 13263	2.66	2.72	2.18	2.48	2.35	2.28	2.64	2.34	2.46
3	CoLk 13204	2.23	2.90	1.89	1.91	2.19	2.21	2.16	2.17	2.21
4	CoPant 13224	2.62	2.32	2.12	1.98	2.25	2.22	2.56	2.58	2.33
5	CoPb 13182	2.92	2.70	2.25	2.72	2.17	2.55	2.43	2.44	2.52
	Standards									
1	CoS 767	2.62	2.32	2.23	2.28	2.13	2.17	2.33	2.22	2.29
2	CoS 8436	2.67	2.42	2.29	2.62	2.33	2.41	2.44	2.57	2.47
3	CoPant 97222	2.67	2.43	2.31	1.94	2.29	2.6	2.42	2.14	2.35
4	Co 05011	2.52	2.45	2.29	2.06	2.4	2.36	2.27	2.55	2.36
	Mean	2.61	2.53	2.19	2.29	2.28	2.35	2.41	2.38	
	SE(m)	0.07		0.11	0.08	0.11	0.05	0.05	0.06	
	CD	0.2	0.29	0.24	0.16	0.23	0.1	0.11	0.17	
	CV	4.54	8.18	6.20	4.19	5.87	3.4	6.19	4.18	

Table 4.7.12 Single cane weight (kg) at harvest

S. No.	Entry	Farid kot	Kapur thala	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 13035	1.09	1.10	0.64	0.98	1.24	0.94	0.72	0.87	0.95
2	CoH 13263	0.93	1.27	0.59	0.68	1.09	0.81	0.69	0.95	0.88
3	CoLk 13204	0.70	1.38	0.59	0.67	0.95	0.79	0.66	0.65	0.80
4	CoPant 13224	1.03	1.01	0.64	0.75	1.21	0.86	0.81	0.98	0.91
5	CoPb 13182	1.48	1.26	0.71	0.86	0.96	0.98	0.70	0.99	0.99
	Standards									
1	CoS 767	0.87	0.98	0.72	0.58	1.07	0.79	0.83	0.87	0.84
2	CoS 8436	0.81	0.85	0.54	0.69	1.04	0.77	0.64	0.86	0.78
3	CoPant 97222	0.94	1.15	0.63	0.57	1.14	0.85	0.86	0.67	0.85
4	Co 05011	0.95	1.10	0.54	0.71	1.09	0.89	0.75	0.96	0.87
	Mean	0.98	1.12	0.62	0.72	1.09	0.85	0.74	0.87	
	SE(m)	0.03		0.04	0.01	0.10	0.04	0.02	0.01	
	CD	0.10	0.17	0.08	0.02	0.21	0.08	0.04	0.03	
	CV	5.95	11.22	7.31	1.56	11.41	7.55	6.45	2.13	

Table 4.7.17 Number of shoots ($\times 1000$ /ha) at 180days

S. No.	Entry	Farid kot	Kapur thala	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 13035	123.89		78.54					111.32	104.58
2	CoH 13263	136.48		98.85					138.31	124.55
3	CoLk 13204	152.78		134.78					146.85	144.80
4	CoPant 13224	123.15		106.95					112.37	114.16
5	CoPb 13182	87.04		86.23					102.28	91.85
	Standards									
1	CoS 767	120.19		89.27					109.6	106.35
2	CoS 8436	96.11		91.48					114.53	100.71
3	CoPant 97222	112.78		74.23					118.12	101.71
4	Co 05011	117.22		124.92					98.43	113.52
	Mean	118.85		98.36					116.87	
	SE(m)	8.04		7.66					4.47	
	CD	23.59		16.24					13.53	
	CV	11.93		9.54					6.63	

Table 4.7.18 Number of tillers ($\times 1000$ /ha) at 90 days

S. No.	Entry	Farid kot	Kapur thala	Luck now	Muzafar nagar	Pant nagar	Shahja hanpur	Sriganga nagar	Uchani	Mean
1	Co 13035	217.22		105.77	180.61		190.37	142.54	174.32	168.47
2	CoH 13263	208.33		110.65	197.03		178.52	133.76	201.31	171.60
3	CoLk 13204	297.78		147.03	191.60		208.64	139.58	205.19	198.30
4	CoPant 13224	170.00		130.03	189.62		201.60	154.28	146.70	165.37
5	CoPb 13182	103.89		96.95	176.78		173.83	141.47	115.94	134.81
	Standards									
1	CoS 767	180.00		154.68	173.82		182.84	140.67	178.26	168.38
2	CoS 8436	122.04		147.62	134.32		166.17	132.44	129.86	138.74
3	CoPant 97222	153.52		83.93	143.70		170.25	137.29	146.79	139.25
4	Co 05011	176.48		138.08	184.67		173.09	129.7	150.10	158.69
	Mean	181.03		123.86	174.68		182.81	139.08	160.94	
	SE(m)	16.81		4.96	7.98		6.39	2.63	5.63	
	CD	49.29		10.51	16.92		13.54	5.57	17.02	
	CV	16.21		4.90	5.60		6.05	5.34	6.06	

Table 4.7.19 Assessment of performance of entries by monitoring team constituted by AICRP(S)

Entries	Luck now	Shahja hanpur	Pant nagar	Muzaffar nagar	Uchan i	Kapur thala	Farid kot	Sriganga nagar	Kota	
Co 13035	The trial is to be abandoned on account of very poor population	Good	Good	The trial is to be abandoned on account of very poor population	On par	On par	On par	At par	Not conducted	
CoH 13263		Good	Good		Good	Good	Good	Good		
CoPant 13224		On par	Good		On Par	Better	On Par	Better		
CoPb 13182		Good	Poor		Poor	Poor	Good	Poor		
CoLk 13204		On par	Good		Poor	On par	On par	Good		
Standard										
CoS 767		Best				Best				
CoPant 97222										
Co 05011			Best				Best	Best		Better
CoS 8436										

4.8 ADVANCED VARIETAL TRIAL (MIDLATE)

Pooled data of 2 Plant crops + 1 Ratoon

Centres (9)	Faridkot, Kapurthala, Kota*, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur, Sriganaganagar and Uchani.
Entries (5)	Co 13035, CoH 13263, CoLk 13204, CoPant 13224 and CoPb 13182
Standards (3)	CoS 767, CoS 8436, 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

* Kota centre did not conduct AVT (ML) ratoon trial.

Five midlate clones were evaluated along with four standards during 2017-18 in AVT-I Plant and during 2018-19 in AVT-II Plant as well as AVT-Ratoon 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 4.8.4.

Commercial cane sugar yield (CCS yield): The mean CCS yield of the best standard, Co 05011 in the zone was 10.28 t/ha (Table 4.8.1 & Fig 4.8.1). Two test entries namely, CoPant 13224 (12.26 t/ha) and CoH 13263 (11.54 t/ha) recorded >10% improvement for CCS yield over the best standard in the zone. Entry Co 13035 recorded 11.17 t/ha of CCS yield with 8.61 percent improvement over the best standard.

Cane yield: The best standard Co 05011 recorded 81.79 t/ha of cane yield in the zone. Two test entries namely, CoPant 13224 (96.95 t/ha) and CoH 13263 (90.68 t/ha) recorded >10% improvement for cane yield over the best standard Co 05011 (Table 4.8.1& Fig 4.8.1). The entries CoPb 13182 (88.55 t/ha) and Co 13035 (87.93 t/ha) recorded 8.27% and 7.42% improvement over the best standard.

CCS % at harvest: CoS 8436 was the best standard for CCS % with zonal mean of 12.61% (Table 4.8.1& Fig 4.8.1). None of the test entries recorded >5 % improvement in CCS % over CoS 8436. However, entries Co 13035 and CoH 13263 recorded numerically superior CCS(%) across the zone with 0.65 and 0.40 percent improvement over the best standard.

Sucrose % at harvest: The standard CoS 8436 was the best in the zone for sucrose % (18.19). None of the test entries recorded >5% improvement for sucrose % over the best standard (Table 4.8.1 & Fig 4.8.1). However, Co 13035 and CoH 13263 recorded numerically superior sucrose content (%) across the zone with 0.60 and 0.56 percent improvement over the best standard.

As per the criteria, the test entry CoH13263 was chosen as qualifying entry as it recorded >10 % improvement in cane yield and numerically higher sucrose % than that of the best standard in the zone.

Qualifying entries:

Sl No	Entries	Percent improvement over the best standard		
		CCS yield	Cane yield	Sucrose
1.	CoH 13263	12.27	10.87	0.56

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	Mean	I	II	R	Mean	I	II	R	Mean
1	Co 13035	12.63	13.55	12.20	12.79	10.68	10.41	9.10	10.06	11.20	11.89	11.55	9.41	8.57	4.89	7.62	12.74	12.03	8.09	10.95
2	CoH 13263	15.62	15.49	11.34	14.15	11.61	10.67	9.47	10.58	11.06	10.37	10.72	12.33	11.34	6.38	10.02	10.85	11.04	7.36	9.75
3	CoLk 13204	11.53	12.34	8.65	10.84	10.52	9.83	7.97	9.44	9.58	8.88	9.23	11.55	10.99	7.69	10.08	11.25	13.25	7.84	10.78
4	CoPant 13224	17.06	16.50	13.20	15.59	11.21	10.11	8.43	9.92	9.96	9.76	9.86	6.79	10.16	6.63	7.86	13.11	13.76	9.95	12.27
5	CoPb 13182	16.76	16.41	12.23	15.13	10.35	11.76	10.40	10.84	9.93	9.89	9.91	7.37	10.41	6.45	8.08	10.14	10.06	7.38	9.19
Standards																				
1	CoS 767	10.73	11.85	8.54	10.37	10.95	10.43	8.82	10.07	9.56	9.52	9.54	7.88	9.04	6.94	7.95	8.79	9.53	6.34	8.22
2	CoS 8436	11.81	11.46	7.05	10.11	8.62	9.25	7.63	8.50	8.79	8.64	8.72	6.86	9.32	4.65	6.94	9.08	9.25	5.62	7.98
3	CoPant 97222	15.68	12.77	10.82	13.09	10.86	10.96	8.62	10.15	9.08	8.97	9.03	8.42	10.75	6.04	8.40	8.52	8.09	5.85	7.49
4	Co 05011	12.63	13.97	11.31	12.64	9.23	10.03	8.88	9.38	9.75	10.22	9.99	10.23	9.58	6.74	8.85	10.47	10.25	8.00	9.57
	Mean	13.83	13.82	10.59		10.45	10.38	8.81		9.88	9.79		8.98	10.02	6.27		10.55	10.81	7.38	

SI No	Entries	Pantnagar				Shahjahanpur				Sriganganagar				Uchani				Weighted Mean	% impr. over best the standard	Rank
		I	II	R*	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean			
1	Co 13035	9.42	14.84	6.29	10.18	11.75	11.60	8.87	10.74	10.33	10.28	8.70	9.77	13.31	12.39	9.62	11.77	11.17	8.61	3
2	CoH 13263	13.61	20.12	8.18	13.97	11.18	10.12	8.59	9.96	10.53	11.17	7.48	9.73	13.58	12.59	10.06	12.08	11.54	12.27	2
3	CoLk 13204	9.48	9.46	8.74	9.23	11.03	10.86	8.26	10.05	9.88	9.40	8.97	9.42	11.35	10.15	7.60	9.70	9.91	-3.57	
4	CoPant 13224	13.59	18.61	10.05	14.08	12.19	12.17	9.20	11.19	11.45	12.80	11.57	11.94	12.91	12.62	9.57	11.70	12.26	19.27	1
5	CoPb 13182	9.13	20.29	4.06	11.16	10.52	11.01	8.59	10.04	10.15	10.39	7.63	9.39	10.99	9.78	7.52	9.43	10.97	6.70	4
Standards																				
1	CoS 767	9.20	8.94	6.97	8.37	9.78	9.64	7.90	9.11	10.37	10.97	9.25	10.20	10.57	11.11	8.70	10.13	9.61		
2	CoS 8436	8.44	9.37	6.23	8.01	9.26	9.57	7.97	8.93	8.58	9.63	6.86	8.36	9.92	9.74	8.30	9.32	8.86		
3	CoPant 97222	11.55	13.93	8.57	11.35	9.72	9.83	7.26	8.94	10.16	11.74	7.78	9.89	11.47	8.69	7.67	9.28	10.00		
4	Co 05011	10.09	13.13	9.94	11.05	9.46	9.90	7.65	9.00	9.32	10.35	8.90	9.52	11.86	11.76	9.04	10.89	10.28		5
	Mean	10.50	14.30	7.67		10.54	10.52	8.25		10.09	10.75	8.57		11.77	10.98	8.68				

* Average cane yield in Plant-I, Plant-II and ratoon trial at Lucknow centre was lower than average sugarcane yield of Uttar Pradesh (80.50 t/ha) and, the sugarcane yield of Ratoon Trial at Pantnagar was lower than the state average of cane yield of Uttarkhand. Hence, these locations data are not considered for estimation of weighted mean.

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	Mean	I	II	R	Mean	I	II	R	Mean
1	Co 13035	108.33	107.34	104.07	106.58	83.47	77.57	70.14	77.06	92.10	91.88	91.99	74.68	63.55	43.07	60.43	96.67	90.36	70.37	85.80
2	CoH 13263	126.23	120.71	95.56	114.17	90.90	83.02	78.07	84.00	92.30	90.08	91.19	90.81	82.20	53.91	75.64	80.49	83.70	61.97	75.39
3	CoLk 13204	99.38	96.71	80.00	92.03	88.18	85.34	73.30	82.27	84.60	82.46	83.53	92.36	87.94	69.78	83.36	85.80	100.61	69.63	85.35
4	CoPant 13224	133.64	123.11	110.74	122.50	90.36	78.83	71.86	80.35	86.40	85.63	86.02	51.94	78.78	56.20	62.31	100.62	104.44	80.49	95.18
5	CoPb 13182	133.33	127.57	103.70	121.53	87.52	92.56	85.19	88.42	86.30	83.86	85.08	58.12	82.36	53.00	64.49	78.76	77.65	59.63	72.01
	Standards																			
1	CoS 767	88.27	93.96	71.11	84.45	87.85	80.88	73.44	80.72	82.30	81.32	81.81	65.20	70.76	60.90	65.62	71.85	73.95	56.17	67.32
2	CoS 8436	91.67	86.76	58.89	79.11	71.45	72.95	66.85	70.42	73.00	73.40	73.20	50.82	70.33	40.96	54.04	68.39	70.61	50.37	63.12
3	CoPant 97222	124.69	101.17	90.00	105.29	87.11	81.65	67.11	78.62	78.50	74.15	76.33	62.59	78.55	55.52	65.55	63.95	64.19	52.84	60.33
4	Co 05011	106.17	112.48	92.96	103.87	73.87	74.77	67.72	72.12	81.00	80.85	80.93	78.09	71.00	55.36	68.15	76.42	79.25	68.89	74.85
	Mean	112.41	107.76	89.67		84.52	80.84	72.63		84.06	82.63		69.40	76.16	54.30		80.33	82.75	63.37	

SI No	Entries	Pantnagar				Shahjahanpur				Sriganganagar				Uchani				Weighted Mean	% impr. over best the standard	Rank
		I	II	R*	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean			
1	Co 13035	67.87	106.2	46.66	73.58	90.37	87.9	72.47	83.58	89.24	90.13	72.57	89.69	93.89	94.31	75.6	87.93	87.86	7.42	4
2	CoH 13263	98.24	138.23	59.06	98.51	81.36	80.37	70.74	77.49	91.78	95.76	68.29	93.77	94.24	96.2	76.75	89.06	90.68	10.87	2
3	CoLk 13204	68.52	65.22	66.55	66.76	84.57	84.32	72.72	80.54	84.65	82.29	73.6	83.47	86.59	84.21	65.66	78.82	81.74	-0.06	
4	CoPant 13224	101.57	125.71	75.49	100.92	90.49	91.85	75.31	85.88	102.63	107.3	99.48	104.97	95	98.06	79.34	90.80	96.95	18.53	1
5	CoPb 13182	68.24	143.1	30.69	80.68	80.86	82.59	71.73	78.39	92.71	92.46	69.23	92.59	81.57	81.87	67.68	77.04	88.55	8.27	3
	Standards																			
1	CoS 767	70.56	66.8	57.29	64.88	76.05	77.65	69.75	74.48	89.29	91.7	77.59	90.50	80.66	90.55	74.08	81.76	78.44		
2	CoS 8436	60.19	66.15	46.3	57.55	67.78	71.6	63.09	67.49	76.13	82.32	58.64	79.23	70.98	77.45	65.74	71.39	70.20		
3	CoPant 97222	82.32	97.08	63.83	81.08	73.83	75.19	61.98	70.33	87.7	95.55	70.67	91.63	86.07	80.04	66.61	77.57	80.11		
4	Co 05011	73.15	93.05	77.26	81.15	72.59	75.06	64.69	70.78	85.55	88.72	81.55	87.14	85.01	92.9	72.71	83.54	81.79		5
	Mean	76.74	100.17	58.13		79.77	80.73	69.16		88.85	91.80	74.62		86.00	88.40	71.57				

* Average cane yield in Plant-I, Plant-II and ratoon trial at Lucknow centre was lower than average sugarcane yield of Uttar Pradesh (80.50 t/ha) and, the sugarcane yield of Ratoon Trial at Pantnagar was lower than the state average of cane yield of Uttarkhand. Hence, these locations data are not considered for estimation of weighted mean.

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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	Mean	I	II	R	Mean	I	II	R	Mean
1	Co 13035	11.65	12.62	11.72	12.00	12.79	13.42	12.97	13.06	12.15	12.91	12.53	12.65	13.45	11.37	12.49	13.16	13.04	11.48	12.56
2	CoH 13263	12.37	12.83	11.87	12.36	12.76	12.86	12.14	12.59	12.01	11.52	11.77	13.61	13.84	11.82	13.09	13.47	13.20	11.91	12.86
3	CoLk 13204	11.61	12.76	10.83	11.73	11.92	11.52	10.87	11.44	11.32	10.75	11.04	12.52	12.55	11.02	12.03	13.11	13.16	11.28	12.52
4	CoPant 13224	12.77	13.40	11.91	12.69	12.41	12.83	11.73	12.32	11.54	11.41	11.48	13.07	12.90	11.79	12.59	13.03	13.19	12.37	12.86
5	CoPb 13182	12.55	12.86	11.79	12.40	11.83	12.68	12.20	12.24	11.52	11.77	11.65	12.66	12.61	12.20	12.49	12.88	12.95	12.39	12.74
	Standards																			
1	CoS 767	12.15	12.61	12.01	12.26	12.46	12.89	12.01	12.45	11.62	11.69	11.66	12.09	12.82	11.36	12.09	12.75	12.89	11.28	12.31
2	CoS 8436	12.89	13.19	11.95	12.68	12.07	12.69	11.42	12.06	12.06	11.77	11.92	13.51	13.26	11.43	12.73	13.27	13.18	11.20	12.55
3	CoPant 97222	12.58	12.61	12.02	12.40	12.46	13.43	12.83	12.91	11.57	12.10	11.84	13.43	13.68	10.89	12.67	13.32	12.71	11.07	12.37
4	Co 05011	11.89	12.42	12.16	12.16	12.50	13.42	13.11	13.01	12.05	12.61	12.33	13.11	13.49	12.20	12.93	13.70	12.94	11.62	12.75
	Mean	12.27	12.81	11.81		12.36	12.86	12.14		11.76	11.84		12.96	13.18	11.56		13.19	13.03	11.62	
None of the entries recorded five percent improvement for CCS (%) over the best standard																				

SI No	Entries	Pantnagar				Shahjahanpur				Sriganganagar				Uchani				Weighted Mean	% impr. over best the standard	Rank
		I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean			
1	Co 13035	13.89	13.96	13.48	13.78	13.00	13.20	12.25	12.82	11.58	11.40	11.99	11.66	14.17	13.13	12.75	13.35	12.69	0.65	1
2	CoH 13263	13.86	14.56	13.84	14.09	13.75	12.59	12.15	12.83	11.47	11.67	10.95	11.36	14.41	13.08	13.09	13.53	12.66	0.40	2
3	CoLk 13204	13.82	14.49	13.10	13.80	13.04	12.87	11.35	12.42	11.67	11.43	12.18	11.76	13.11	12.10	11.54	12.25	12.12	-3.85	
4	CoPant 13224	13.78	14.81	13.31	13.97	13.47	13.25	12.23	12.98	11.16	11.93	11.63	11.57	13.57	12.86	12.05	12.83	12.61	-0.03	
5	CoPb 13182	13.55	14.17	13.23	13.65	13.03	13.33	11.97	12.78	10.95	11.24	11.02	11.07	13.48	11.93	11.11	12.17	12.33	-2.24	
	Standards																			
1	CoS 767	13.03	13.38	12.16	12.86	12.86	12.41	11.33	12.20	11.61	11.97	11.92	11.83	13.12	12.29	11.75	12.39	12.27		
2	CoS 8436	14.02	14.18	13.44	13.88	13.65	13.37	12.62	13.21	11.27	11.70	11.70	11.56	13.97	12.56	12.64	13.06	12.61		3
3	CoPant 97222	14.04	14.34	13.42	13.93	13.18	13.08	11.71	12.66	11.59	12.29	11.01	11.63	13.35	10.85	11.52	11.91	12.44		
4	Co 05011	13.79	14.12	12.88	13.60	13.03	13.19	11.85	12.69	10.89	11.66	10.91	11.15	13.95	12.66	12.44	13.02	12.59		
	Mean	13.75	14.22	13.21		13.22	13.03	11.94		11.35	11.70	11.48		13.68	12.38	12.10				
None of the entries recorded five percent improvement for CCS (%) over the best standard																				

* Average cane yield in Plant-I, Plant-II and ratoon trial at Lucknow centre was lower than average sugarcane yield of Uttar Pradesh (80.50 t/ha) and, the sugarcane yield of Ratoon Trial at Pantnagar was lower than the state average of cane yield of Uttarkhand. Hence, these locations data are not considered for estimation of weighted mean.

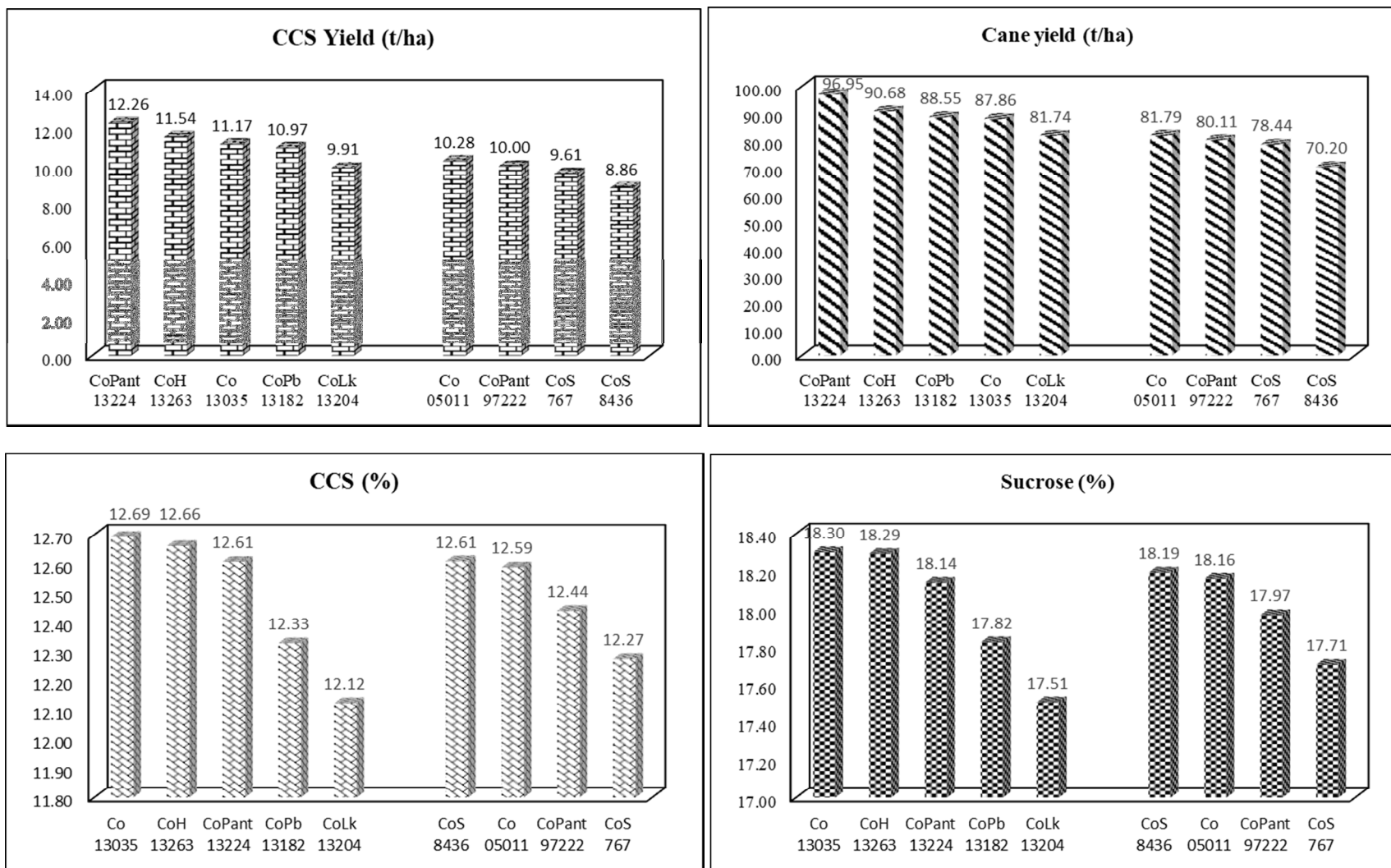
Table 4.8.4. Sucrose (%) at harvest

SI No	Entries	Faridkot				Kapurthala				Kota			Lucknow				Muzaffarnagar			
		I	II	R	Mean	I	II	R	Mean	I	II	Mean	I	II	R	Mean	I	II	R	Mean
1	Co 13035	16.64	18.18	16.72	17.18	18.5	19.18	18.38	18.69	17.5	18.69	18.10	18.24	19.22	16.7	18.05	19.18	18.9	16.74	18.27
2	CoH 13263	17.96	18.31	16.94	17.74	18.46	18.62	17.33	18.14	17.2	16.8	17.00	19.63	19.75	17.31	18.90	19.49	19.18	17.31	18.66
3	CoLk 13204	16.98	18.15	15.5	16.88	16.94	16.74	15.64	16.44	16.2	15.77	15.99	18.15	17.98	16.28	17.47	19	19.16	16.46	18.21
4	CoPant 13224	18.21	18.98	17.02	18.07	17.94	18.52	16.65	17.70	16.6	16.66	16.63	18.71	18.49	17.23	18.14	19.05	19.16	18.03	18.75
5	CoPb 13182	17.9	18.29	16.82	17.67	17	18.18	17.24	17.47	16.9	17.14	17.02	18.3	18.05	17.66	18.00	19.18	18.85	18.01	18.68
	Standards																			
1	CoS 767	17.46	17.99	17.14	17.53	17.82	18.46	17.17	17.82	16.9	17.04	16.97	17.4	18.36	16.74	17.50	18.51	18.81	16.44	17.92
2	CoS 8436	18.42	18.89	17	18.10	17.35	18.19	16.27	17.27	17.3	17.14	17.22	19.47	18.98	16.74	18.40	19.24	19.14	16.39	18.26
3	CoPant 97222	17.95	17.98	17.05	17.66	18.22	19.17	18.29	18.56	16.6	17.59	17.10	19.18	19.55	16.38	18.37	19.37	18.61	16.18	18.05
4	Co 05011	17.3	17.75	17.31	17.45	18.06	19.17	18.54	18.59	17.2	18.28	17.74	18.98	19.33	17.68	18.66	19.87	18.86	16.9	18.54
	Mean	17.65	18.28	16.83		17.81	18.47	17.28		16.93	17.23		18.67	18.86	16.97		19.21	18.96	16.94	18.27

SI No	Entries	Pantnagar				Shahjahanpur				Sriganganagar				Uchani				Weigh ted Mean	% impr. over best the standard	Rank
		I	II	R	Mean	I	II	R	Mean	I	II	R	Mean	I	II	R	Mean			
1	Co 13035	20.06	20.32	19.55	19.98	18.73	19	17.77	18.50	16.78	16.53	17.31	16.66	20.37	18.83	18.27	19.16	18.30	0.60	1
2	CoH 13263	20.11	21.15	20.05	20.44	19.69	18.31	17.64	18.55	16.8	17.01	15.98	16.91	20.43	18.8	18.89	19.37	18.29	0.56	2
3	CoLk 13204	19.98	20.83	18.96	19.92	18.81	18.59	16.58	17.99	16.82	16.48	17.37	16.65	18.96	17.36	16.85	17.72	17.51	-3.75	
4	CoPant 13224	19.33	21.48	19.37	20.06	19.37	19.09	17.74	18.73	16.27	17.11	16.6	16.69	19.26	18.45	17.56	18.42	18.14	-0.27	
5	CoPb 13182	19.33	20.68	19.05	19.69	18.79	19.2	17.4	18.46	16.35	16.47	16.08	16.41	18.84	17.2	16.29	17.44	17.82	-2.01	
	Standards																			
1	CoS 767	18.89	19.33	17.69	18.64	18.57	17.99	16.55	17.70	16.82	17.25	17.14	17.04	18.58	17.6	17.07	17.75	17.71		
2	CoS 8436	20.33	20.49	19.35	20.06	19.61	19.2	18.27	19.03	16.51	16.96	17.03	16.74	20	18.3	18.21	18.84	18.19		
3	CoPant 97222	20.34	20.94	19.4	20.23	18.99	18.87	16.97	18.28	17.09	17.81	16.08	17.45	18.88	15.87	16.49	17.08	17.97		
4	Co 05011	19.98	20.61	18.66	19.75	18.8	19.01	17.24	18.35	16.05	16.81	15.84	16.43	19.88	18.16	17.92	18.65	18.16		
	Mean	19.82	20.65	19.12		19.04	18.81	17.35		16.61	16.94	16.60		19.47	17.84	17.51				

* Average cane yield in Plant-I, Plant-II and ratoon trial at Lucknow centre was lower than average sugarcane yield of Uttar Pradesh (80.50 t/ha) and, the sugarcane yield of Ratoon Trial at Pantnagar was lower than the state average of cane yield of Uttarkhand. Hence, these locations data are not considered for estimation of weighted mean.

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, Sriganaganagar and 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
Planting time	February/March, 2018
Crop Duration	12 months

Results of the previous year:

Previous year, these entries were evaluated in IVT trial in North-West Zone. Entry CoPant 97222 was the best among the standards in the zone for cane yield (85.46 t/ha). Only one test entry, CoS 14232 recorded >10 % improvement for cane yield (96.35 t/ha) over the best standard. The entries which recorded numerically higher cane yield than CoPant 97222 were CoS 14233 (90.59 t/ha), CoLk 14203 (90.43 t/ha), CoPb 14183 (90.37 t/ha), CoS 14231 (89.96 t/ha), CoPb 14184 (89.42 t/ha) and CoPb 14185 (88.81 t/ha). The CCS yield of the best standard, Co 05011 was 10.87 t/ha and no test entries recorded >10 % improvement for CCS yield over the best standard although CoS 14232 (11.93 t/ha), CoS 14231 (11.29 t/ha), CoS 14233 (11.20 t/ha), CoPb 14185 (11.19 t/ha), CoLk 14203 (11.11 t/ha) and CoPb 14183 (11.11 t/ha) recorded numerically higher CCS yield than Co 05011. Among the standards, the highest sucrose % at harvest was recorded by Co 05011 (18.43). No test entries recorded > 5% improvement for sucrose % over the best standard although clones such as CoH 14261 (18.76) and CoLk 14204 (18.53) recorded numerically higher sucrose % than Co 05011. As regard to CCS % at harvest, among the standards Co 05011 recorded the highest CCS % (12.80). No test entries recorded > 5% improvement for CCS % over the best standard. However, entries such as CoH 14261 (13.04) and CoLk 14204 (12.79) recorded numerically higher CCS % than Co 05011.

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 located 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 11.22 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 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 better standard CoPant 97222 in the zone. None of the test entries recorded five percent improvement for CCS(%) and sucrose (%) over the better 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.

Qualifying entries:

Sl No	Entries	Percent improvement of best standard of CCS yield	Percent improvement of best standard of Cane yield	Percent improvement of best standard of Sucrose
1	CoPb 14185	13.81	11.46	1.70
2.	CoS 14233	11.05	10.82	0.27
3.	CoLk 14204	10.51	10.40	0.05

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 14035	10.33	11.17	10.71	8.55	10.96	6.06	11.30	9.38	12.27	10.08	
2	CoH 14261	14.16	9.88	9.07	9.46	9.31	12.26	11.46	11.43	12.63	11.07	
3	CoLk 14203	12.43	11.42	9.82	15.08	13.39	10.41	11.64	12.38	11.51	12.01	4
4	CoLk 14204	10.67	11.80	10.10	13.96	12.44	17.81	11.22	11.17	-	12.40	3
5	CoPb 14184	13.78	10.19	10.81	10.64	11.44	10.86	10.48	11.68	11.41	11.25	5
6	CoPb 14185	16.87	12.41	11.52	9.13	14.11	16.71	10.60	10.97	12.64	12.77	1
7	CoS 14233	10.66	11.57	10.03	13.60	12.90	16.13	12.12	12.27	12.86	12.46	2
	Standards											
1	CoS 767	10.95	11.20	8.46	10.25	9.91	13.32	9.48	11.34	11.12	10.67	
2	CoPant 97222	14.20	11.53	9.32	10.36	9.32	14.26	9.88	11.96	10.17	11.22	6
3	Co 05011	11.71	10.86	9.88	9.85	10.67	11.44	9.96	10.70	11.87	10.77	
	Mean	12.58	11.20	9.97	11.09	11.45	12.93	10.81	11.33	11.83		
	SE(m)	0.64		0.44	0.86	0.76	0.61	0.38	0.28	0.42		
	CD	1.86	0.83	1.07	1.80	1.60	1.30	0.80	0.58	1.25		
	CV	8.65	4.44	7.79	9.47	8.11	5.81	6.06	5.16	6.07		
	Top three qualifying entries											
	Rank-1	CoPb 14185		CoPb 14185	CoLk 14203	CoLk 14203	CoLk 14204	CoS 14233			CoPb 14185	
	Rank-2				CoLk 14204	CoS 14233	CoPb 14185	CoLk 14203			CoS 14233	
	Rank-3				CoS 14233	CoLk 14204	CoS 14233	CoH 14261			CoLk 14204	

Number of locations where an entry showing more than 10% improvement: CoS 14233 (4), CoLk 14204 (4), CoPb 14185 (3), CoLk 14203 (3), CoH 14261 (1), Co 14035 (1).

Performance of the entries across locations: Among the standards, CoPant 97222 identified as the best standards 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 across the North West Zone.

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 14035	83.68	86.69	80.37	68.19	80.86	43.52	85.43	83.27	95.25	78.58	
2	CoH 14261	114.20	80.82	72.60	68.11	68.15	86.69	81.85	97.36	94.53	84.92	
3	CoLk 14203	100.48	90.50	79.67	113.09	100.74	75.41	86.79	104.41	88.53	93.29	4
4	CoLk 14204	79.22	92.50	83.00	109.29	91.97	131.15	81.73	88.53		94.67	3
5	CoPb 14184	109.74	88.02	81.84	86.55	85.18	78.27	78.89	96.70	92.50	88.63	5
6	CoPb 14185	122.77	96.12	86.52	74.74	102.71	119.41	76.79	87.82	93.36	95.58	1
7	CoS 14233	85.05	91.64	79.16	101.72	94.81	114.74	91.11	99.18	97.90	95.03	2
	Standards											
1	CoS 767	88.48	89.59	75.65	82.96	73.21	98.50	76.67	94.16	90.34	85.51	
2	CoPant 97222	112.48	85.85	74.12	78.35	69.26	98.14	73.21	96.07	84.30	85.75	6
3	Co 05011	97.39	80.65	78.36	73.82	81.73	80.53	75.68	91.53	91.13	83.42	
	Mean	99.35	88.24	79.13	85.68	84.86	92.64	80.82	93.90	91.98		
	SE(m)	5.30		3.23	5.24	5.55	4.77	2.42	2.31	2.26		
	CD	15.34	4.64	7.76	11.01	11.70	10.12	5.13	4.86	6.85		
	CV	9.05	3.07	7.09	7.49	8.03	6.31	5.19	5.23	4.26		
	Top three qualifying entries											
	Rank-1			CoPb 14185	CoLk 14203	CoPb 14185	CoLk 14204	CoS 14233			CoPb 14185	
	Rank-2				CoLk 14204	CoLk 14203	CoPb 14185	CoLk 14203			CoS 14233	
	Rank-3				CoS 14233	CoS 14233	CoS 14233	Co 14035			CoLk 14204	

Number of locations where an entry showing more than 10% improvement over the best standards: CoS 14233 (4), CoPb 14185 (3), CoLk 14203 (3), CoLk 14204 (3), Co 14035 (1)

Performance of the entries across locations: Among the standards, CoPant 97222 recorded the highest zonal mean cane yield of 85.75 t/ha. Among the test entries, CoPb 14185 recorded the highest zonal mean for cane yield 95.58 t/ha with 11.46 percent improvement over the best standard CoPant 97222. Entries CoS 14233 (95.03 t/ha) and CoLk 14204 (94.67 t/ha) also recorded the better cane yield with 10.82 and 10.40 percent improvement respectively for cane yield over the best standard CoPant 97222 across the North-West Zone.

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 14035	12.33	12.89	13.29	12.48	13.53	13.89	13.22	11.27	12.9	12.87	
2	CoH 14261	12.39	12.23	12.48	13.90	13.66	14.13	13.99	11.74	13.37	13.10	2
3	CoLk 14203	12.37	12.62	12.33	13.35	13.29	13.8	13.41	11.86	12.91	12.88	
4	CoLk 14204	13.47	12.76	12.18	12.77	13.52	13.6	13.72	12.61	-	13.08	4
5	CoPb 14184	12.56	11.57	13.22	12.27	13.44	13.88	13.27	12.08	12.35	12.74	
6	CoPb 14185	13.74	12.92	13.32	12.15	13.58	14	13.8	12.49	13.55	13.28	1
7	CoS 14233	12.53	12.63	12.66	13.39	13.62	14.07	13.3	12.37	13.17	13.08	3
	Standards											
1	CoS 767	12.37	12.5	11.19	12.38	13.58	13.52	12.37	12.05	12.3	12.47	
2	CoPant 97222	12.64	13.43	12.58	13.22	13.46	14.53	13.49	12.45	11.77	13.06	5
3	Co 05011	12.02	13.46	12.63	13.33	13.07	14.21	13.17	11.69	13.01	12.95	
	Mean	12.64	12.70	12.59	12.92	13.48	13.96	13.37	12.06	12.81		
	SE(m)	0.16		0.14	0.48	0.09	0.28	0.14	0.53	0.3		
	CD	0.45	0.72	0.34	1.01	0.19	0.6	0.29	1.11	0.91		
	CV	2.13	3.29	1.99	4.54	0.83	2.49	1.76	9.26	4.04		
None of the test entries recorded five percent improvement for CCS (%) over the best standard in any of the centre												

Number of locations where an entry showing more than five percent improvement over the best standards: None

Performance of the entries across locations: Entry CoPb 14185 recorded the highest CCS(%) across the zone with 13.28 % CCS followed by CoH 14261 (13.10%) and CoS 14233 (13.08%). None of the test entries recorded five percent improvement for CCS (%) as compared to the best standard CoPant 97222 (13.06%).

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 14035	17.73	18.73	19.21	17.97	19.55	20.18	19.05	16.33	18.51	18.58	
2	CoH 14261	17.84	17.67	18.11	19.95	19.70	20.54	19.82	16.84	19.16	18.85	3
3	CoLk 14203	17.82	18.13	17.9	19.12	19.24	20.05	19.31	16.98	18.61	18.57	
4	CoLk 14204	19.13	18.48	17.69	18.31	19.53	19.71	19.72	18.18	-	18.84	4
5	CoPb 14184	17.91	16.89	19.1	17.76	19.44	20.13	19.04	17.51	18.00	18.42	
6	CoPb 14185	19.57	18.51	19.24	17.51	19.64	20.34	19.79	18.21	19.51	19.15	1
7	CoS 14233	17.97	18.51	18.35	19.13	19.66	20.46	19.16	17.74	18.95	18.88	2
	Standards											
1	CoS 767	17.81	18.12	16.35	17.76	19.59	19.61	17.92	17.28	17.62	18.01	
2	CoPant 97222	17.86	19.18	18.24	18.96	19.42	21.07	19.42	18.04	17.25	18.83	5
3	Co 05011	17.29	19.25	18.31	19.05	18.90	20.69	19.01	16.85	18.63	18.66	
	Mean	18.09	18.35	18.25	18.55	19.47	20.28	19.22	17.40	18.47		
	SE(m)	0.22		0.19	0.61	0.11	0.4	0.15	0.32	0.34		
	CD	0.64	0.83	0.47	1.29	0.23	0.85	0.33	0.66	1.03		
	CV	2.12	3.07	1.86	4.05	0.68	2.41	1.38	3.86	3.2		
	None of the test entries recorded five percent improvement for sucrose (%) over the best standard in any of the centre											

Number of locations where an entry showing more than five percent improvement over the best standards: None

Performance of the entries across locations: None of the test entries recorded the five percent improvement over the better standard CoPant 97222 (18.83%) for sucrose content. However, four test entries viz., CoPb 14185 (19.15%), CoS 14233 (18.88%), CoH 14261 (18.85%) and CoLk 14204 (18.84%) recorded the numerically superior as compared the best standard CoPant 97222 for sucrose content. .

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 14035	19.83	21.43	21.70	20.14	22.07	23.07	21.40	18.56	20.60	20.98
2	CoH 14261	20.00	19.93	20.60	22.23	22.20	23.50	21.44	18.72	21.30	21.10
3	CoLk 14203	20.00	20.23	20.40	21.19	21.84	22.90	21.65	18.81	20.93	20.88
4	CoLk 14204	20.80	20.97	20.20	20.34	22.04	22.40	22.02	20.43		21.15
5	CoPb 14184	19.67	19.27	21.60	20.11	22.00	22.90	21.21	19.90	20.70	20.82
6	CoPb 14185	21.43	20.57	21.70	19.68	22.24	23.23	22.09	20.94	21.90	21.53
7	CoS 14233	20.00	21.53	20.90	21.11	22.17	23.43	21.50	19.72	21.23	21.29
	Standards										
1	CoS 767	19.97	20.60	18.90	19.76	22.04	22.33	20.39	19.21	19.63	20.31
2	CoPant 97222	19.23	21.13	20.80	21.09	21.87	23.97	21.75	20.50	19.00	21.04
3	Co 05011	19.33	21.27	20.80	21.03	21.40	23.73	21.44	18.94	20.67	20.96
	Mean	20.03	20.69	20.76	20.67	21.99	23.15	21.49	19.57	20.66	
	SE(m)	0.26		0.19	0.56	0.09	0.48	0.25	0.38	0.32	
	CD	0.76		0.45	1.17	0.21	1.02	0.54	0.75	0.96	
	CV	2.28		1.58	3.31	0.55	2.54	2.04	3.87	2.65	

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 14035	89.41	87.46	88.50	89.13	88.58	87.52	89.02	88.41	89.82	88.65
2	CoH 14261	89.18	88.58	87.75	89.74	88.74	87.42	89.64	90.29	89.96	89.03
3	CoLk 14203	89.1	89.59	87.6	90.23	88.09	87.54	89.18	90.64	88.98	88.99
4	CoLk 14204	91.96	88.13	87.44	89.84	88.61	87.97	89.54	89.28		89.10
5	CoPb 14184	91.05	86.73	88.44	88.29	88.33	87.90	88.82	88.16	86.94	88.30
6	CoPb 14185	91.33	90.03	88.53	88.98	88.34	87.55	89.56	87.51	89.1	88.99
7	CoS 14233	89.86	85.96	87.92	90.62	88.68	87.33	89.11	90.23	89.28	88.78
	Standards										
1	CoS 767	89.21	87.96	86.37	89.86	88.88	87.82	88.58	90.54	89.71	88.77
2	CoPant 97222	92.86	90.76	87.85	90.20	88.81	87.89	89.27	88.16	90.79	89.62
3	Co 05011	89.41	90.52	87.9	90.59	88.32	87.16	88.96	89.7	90.13	89.19
	Mean	90.51	88.57	87.82	89.75	88.54	87.61	89.17	89.29	89.41	
	SE(m)	0.36		0.14	1.17	0.3	0.7	-	2.77	0.95	
	CD	1.04		0.34	2.46	NS	1.48	NS	5.82	N.S.	
	CV	0.69		0.28	1.60	0.41	0.98	-	6.58	1.84	

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 14035	57.94	52.02	49.21	56.68	42.54		53.50	48.64	64.70	53.15
2	CoH 14261	59.10	53.60	55.97	48.44	46.41		55.40	52.83	66.07	54.73
3	CoLk 14203	55.11	51.11	50.96	55.67	45.20		53.96	45.48	60.29	52.22
4	CoLk 14204	60.94	52.78	51.37	55.00	43.81		57.70	50.04	-	53.09
5	CoPb 14184	55.97	52.25	45.10	51.69	45.38		51.99	44.35	64.88	51.45
6	CoPb 14185	61.09	53.81	42.52	61.82	45.17		53.63	48.56	63.89	53.81
7	CoS 14233	57.09	51.28	42.28	53.05	46.98		55.41	52.19	59.92	52.28
	Standards										
1	CoS 767	58.79	51.59	43.89	53.23	48.46		51.71	52.71	61.10	52.68
2	CoPant 97222	61.35	51.71	41.03	56.51	47.73		52.57	50.29	62.52	52.96
3	Co 05011	61.95	54.00	42.31	57.16	45.83		53.79	51.46	65.63	54.02
	Mean	58.93	52.42	46.46	54.93	45.75		53.97	49.66	63.22	
	SE(m)	0.73		0.72	2.09	-		0.86	0.90	1.37	
	CD	2.11	NS	1.73	4.39	-		1.82	1.88	4.15	
	CV	2.16	4.18	2.69	4.66	-		2.76	3.83	3.76	

Table 4.9.8. 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	14.39	12.93	13.88	14.48	13.92	15.36	13.85	14.31	13.61	14.28
2	CoH 14261	14.85	14.39	14.04	14.49	14.44	14.76	15.09	14.38	13.74	14.49
3	CoLk 14203	14.67	13.47	14.21	14.76	14.28	14.49	14.63	13.78	13.68	14.15
4	CoLk 14204	13.22	14.44	13.92	14.47	14.01	15.14	13.83	14.21	13.82	14.25
5	CoPb 14184	15.28	14.78	14.38	15	14.86	14.06	13.36	14.18	13.35	13.74
6	CoPb 14185	12.93	12.46	13.76	14.56	13.43	15.2	13.58	14.27	13.73	14.20
7	CoS 14233	13.64	14.30	13.85	14.52	14.08	14.17	14.48	14.34	13.72	14.18
	Standards										
1	CoS 767	15.49	13.76	14.32	15.12	14.67	14.91	13.54	14.18	13.17	13.95
2	CoPant 97222	15.45	12.69	13.69	14.62	14.11	15.89	14.65	14.13	13.71	14.60
3	Co 05011	13.8	12.82	14.18	14.91	13.93	16.13	14.71	13.84	13.32	14.50
	Mean	14.37	13.60	14.02	14.69		15.01	14.17	14.16	13.59	
	SE(m)		0.33	-	-			0.48	-	-	
	CD	1.1	0.70	-	-		0.46	1.01	-	-	
	CV	4.46	2.99	-	-		1.1	4.15	-	-	

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 14035	84.02	78.24	85.00	92.93	86.04	39.91	102.59	93.41	83.16	82.81
2	CoH 14261	97.74	87.59	83.70	103.32	95.30	61.94	99.26	102.56	89.48	91.21
3	CoLk 14203	82.82	84.58	91.20	118.53	116.04	60.00	102.22	112.84	90.92	95.46
4	CoLk 14204	86.93	89.27	92.30	134.57	108.02	88.52	90.37	90.29	-	97.53
5	CoPb 14184	97.74	89.97	91.90	109.49	104.44	66.85	89.01	92.76	88.31	92.27
6	CoPb 14185	91.22	86.95	90.20	89.74	107.40	66.48	87.04	87.54	97.01	89.29
7	CoS 14233	104.42	78.73	85.40	132.79	112.83	86.58	103.95	104.35	111.79	102.32
	Standards										
1	CoS 767	107.34	88.07	84.40	112.04	118.02	81.20	102.10	108.44	94.10	99.52
2	CoPant 97222	100.48	76.40	81.40	118.43	97.90	73.70	99.14	92.29	93.60	92.59
3	Co 05011	90.88	80.07	89.20	119.52	101.23	75.09	97.90	89.73	87.05	92.30
	Mean	94.36	83.99	87.47	113.14	104.72	70.03	97.36	97.42	92.82	
	SE(m)	3.54		1.98	6.18	8.29	2.37	3.24	1.90	2.59	
	CD	10.24	3.46	4.75	12.99	17.43	5.03	6.87	3.98	7.83	
	CV	6.66	2.41	3.92	6.69	9.70	4.15	5.77	4.13	4.83	

Table 4.9.10 Millable 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	230.6	223.7	215.0	221.0	247.0	222.0	227.3	178.4	302.7	229.7
2	CoH 14261	228.1	246.7	166.0	153.4	152.0	208.0	209.0	196.5	249.0	201.0
3	CoLk 14203	268.2	240.7	263.0	242.3	213.0	257.0	234.7	189.5	264.7	241.5
4	CoLk 14204	209.8	227.0	260.0	226.7	221.0	246.0	214.0	204.2	-	226.1
5	CoPb 14184	236.9	214.0	207.0	197.0	245.0	200.0	199.7	182.8	245.0	214.2
6	CoPb 14185	255.1	232.3	214.0	191.0	217.0	253.0	194.0	191.6	225.5	219.3
7	CoS 14233	209.4	233.3	217.0	212.3	251.0	247.0	228.7	192.3	245.7	226.3
	Standards										
1	CoS 767	218.2	185.0	233.0	212.7	219.0	236.0	217.0	188.4	273.7	220.3
2	CoPant 97222	227.6	212.3	192.0	199.0	221.0	233.0	186.0	218.5	241.6	214.6
3	Co 05011	230.2	210.7	178.0	167.3	218.0	194.0	195.0	196.4	247.8	204.2
	Mean	231.4	222.6	214.5	202.3	220.4	229.6	210.5	193.9	255.1	
	SE(m)	4.48						7.25	3.80	5.29	
	CD	12.99	0.36					15.37	7.98	15.99	
	CV	3.32	8.43	5.58	7.37	3.90	6.95	5.96	4.16	3.59	

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 14035	2.56	2.38	2.17	2.18	2.42	2.24	2.37	2.49	2.36	2.35
2	CoH 14261	2.73	2.9	2.1	2.36	2.43	2.62	2.21	2.53	2.73	2.51
3	CoLk 14203	2.59	2.53	1.93	2.37	2.2	2.22	2.31	2.28	2.25	2.30
4	CoLk 14204	2.57	2.22	2.27	2.39	2.38	2.43	2.41	2.43	-	2.39
5	CoPb 14184	2.85	2.48	2.33	2.45	2.42	2.59	2.28	2.59	2.64	2.51
6	CoPb 14185	2.75	2.63	2.67	2.53	2.49	2.65	2.25	2.53	2.39	2.54
7	CoS 14233	2.5	2.47	1.93	2.17	2.29	2.31	2.33	2.48	2.23	2.30
	Standards										
1	CoS 767	2.39	2.27	2.07	2.25	2.15	2.25	2.27	2.38	2.15	2.24
2	CoPant 97222	2.62	2.22	2.27	2.15	2.09	2.42	2.39	2.49	2.29	2.33
3	Co 05011	2.56	2.62	2.27	2.25	2.28	2.41	2.33	2.37	2.48	2.40
	Mean	2.61	2.47	2.20	2.31	2.32	2.41	2.32	2.46	2.39	
	SE(m)	0.04		0.07	0.14	0.06	0.12	0.04	0.05	0.05	
	CD	0.13	0.35	0.17	0.30	0.12	0.25	0.09	0.11	0.16	
	CV	2.88	8.43	5.8	7.50	2.93	5.91	3.03	4.67	3.88	

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 14035	1.08	1.46	0.94	0.73	1.00	1.09	1.04	0.89	1.20	1.05
2	CoH 14261	1.23	1.71	0.87	0.66	0.74	1.40	0.87	0.91	1.15	1.06
3	CoLk 14203	1.32	1.52	0.87	0.96	0.91	1.26	0.85	0.84	1.06	1.06
4	CoLk 14204	1.07	1.38	0.90	0.81	0.86	1.48	0.97	0.98	-	1.06
5	CoPb 14184	1.26	1.30	0.89	0.79	0.82	1.17	0.87	1.04	1.11	1.03
6	CoPb 14185	1.49	1.50	0.96	0.83	0.98	1.80	0.94	0.99	1.04	1.17
7	CoS 14233	0.90	1.37	0.93	0.77	0.84	1.33	0.88	0.95	0.95	0.99
	Standards										
1	CoS 767	0.88	1.16	0.90	0.75	0.72	1.21	0.86	0.84	1.06	0.93
2	CoPant 97222	1.14	1.27	0.91	0.66	0.71	1.33	0.87	1.16	0.95	1.00
3	Co 05011	1.15	1.19	0.88	0.62	0.85	1.07	0.95	0.96	1.11	0.98
	Mean	1.15	1.39	0.91	0.76	0.84	1.31	0.91	0.96	1.07	
	SE(m)	0.05		0.02	0.04	0.03	0.08	0.04	0.02	0.03	
	CD	0.14	0.23	0.06	0.08	0.06	0.16	0.04	0.05	0.09	
	CV	6.90	9.84	5.56	6.17	4.29	6.99	7.38	4.78	4.60	

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 14035	10.68	11.43	10.73	12.07	11.43	12.61	11.85	9.81	11.64	11.36
2	CoH 14261	11.20	11.69	9.92	13.36	11.85	12.11	12.28	10.54	12.99	11.77
3	CoLk 14203	11.35	11.48	9.77	12.30	11.67	11.54	11.69	10.25	12.83	11.43
4	CoLk 14204	11.71	12.31	9.62	11.42	11.83	10.83	11.63	11.19	-	11.32
5	CoPb 14184	11.18	10.10	10.66	12.10	11.21	11.35	11.54	10.88	12.20	11.25
6	CoPb 14185	11.29	11.63	10.76	12.02	11.77	11.35	11.70	10.35	12.54	11.49
7	CoS 14233	11.30	11.17	10.10	11.98	11.66	11.65	11.71	10.45	11.29	11.26
	Standards										
1	CoS 767	10.74	11.95	9.05	11.40	11.79	10.93	11.45	10.65	10.27	10.91
2	CoPant 97222	10.94	11.08	9.75	12.65	11.79	11.38	11.71	10.90	11.33	11.28
3	Co 05011	9.71	10.94	9.91	11.96	11.31	11.67	11.78	10.71	12.26	11.14
	Mean	11.01	11.38	10.03	12.13	11.63	11.54	11.73	10.57	11.93	
	SE(m)	0.08		0.15	0.43	0.17	0.36	-	0.23	0.32	
	CD	0.22		0.35	0.91	0.37	0.76	NS	0.49	0.95	
	CV	1.18		0.55	4.39	1.84	3.80	-	4.70	4.58	

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 14035	15.62	16.38	15.74	17.47	16.62	18.61	17.27	14.3	16.88	16.54
2	CoH 14261	16.33	16.79	14.64	19.12	17.24	17.87	17.81	15.27	18.72	17.09
3	CoLk 14203	16.52	16.49	14.44	17.70	17.03	17.07	17.03	14.85	18.49	16.62
4	CoLk 14204	16.96	17.82	14.23	16.62	17.23	16.09	17.03	16.3	-	16.54
5	CoPb 14184	16.24	14.7	15.64	17.54	16.39	16.77	16.74	15.94	17.45	16.38
6	CoPb 14185	16.32	16.72	15.78	17.26	17.09	16.83	17.05	15.26	18.15	16.72
7	CoS 14233	16.52	16.04	14.88	17.54	16.97	17.21	17.07	15.17	16.36	16.42
	Standards										
1	CoS 767	15.62	17.16	13.47	16.41	17.12	16.24	16.71	15.43	14.93	15.90
2	CoPant 97222	15.8	15.75	14.41	18.16	17.13	17.44	17.06	15.88	16.47	16.46
3	Co 05011	14.31	15.86	14.63	17.30	16.44	17.28	16.77	15.6	17.51	16.19
	Mean	16.05		14.78	17.51	16.93	17.141	17.06	15.4	17.22	
	SE(m)	0.1		0.2	0.54	0.23	0.37	0.15	0.25	0.39	
	CD	0.3		0.48	1.14	0.49	0.78	0.31	0.53	1.17	
	CV	1.13		2.34	3.79	1.7	2.64	1.47	3.5	3.9	

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 14035	18.10	18.20	18.34	19.83	19.04	21.93	19.82	16.44	19.22	18.99
2	CoH 14261	18.80	18.73	17.27	21.19	19.75	21.10	20.30	17.36	21.02	19.50
3	CoLk 14203	18.93	18.40	17.07	19.83	19.65	20.23	19.58	16.88	20.75	19.04
4	CoLk 14204	19.27	20.20	16.87	19.06	19.84	19.23	19.77	18.74	-	19.12
5	CoPb 14184	18.57	16.97	18.24	19.93	18.95	19.83	19.09	18.54	19.28	18.82
6	CoPb 14185	18.47	18.70	18.37	19.25	19.51	20.03	19.60	17.96	20.58	19.16
7	CoS 14233	19.13	17.90	17.51	20.35	19.45	20.33	19.63	17.24	18.62	18.91
	Standards										
1	CoS 767	17.90	19.13	16.13	18.38	19.55	19.40	19.28	17.54	17.08	18.27
2	CoPant 97222	17.83	17.17	17.05	20.26	19.55	22.07	19.60	18.26	18.82	18.96
3	Co 05011	16.83	18.03	17.26	19.62	18.81	20.50	19.33	17.91	19.32	18.62
	Mean	18.38	18.34	17.41	19.77	19.41	20.47	19.60	17.69	19.41	
	SE(m)	0.17		0.19	0.49	0.23	0.68	0.08	0.29	0.33	
	CD	0.51	0.99	0.46	1.03	0.50	1.45	0.16	0.62	1.00	
	CV	1.66	3.16	1.93	3.04	1.50	4.09	0.69	3.52	2.96	

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 14035	86.30	90.00	85.82	88.09	87.28	84.83	87.16	87.29	87.84	87.18
2	CoH 14261	86.89	89.64	84.77	90.47	87.30	84.73	87.75	88.16	89.07	87.64
3	CoLk 14203	87.26	89.58	84.55	89.28	86.68	84.33	86.98	88.63	89.09	87.38
4	CoLk 14204	88.03	88.15	84.32	85.23	86.81	83.67	86.99	87.42	-	86.33
5	CoPb 14184	87.48	87.15	85.74	88.01	86.48	84.54	86.71	86.56	90.47	87.02
6	CoPb 14185	88.39	89.42	85.86	89.70	87.53	83.99	86.99	85.37	88.16	87.27
7	CoS 14233	86.35	89.65	85.01	86.24	87.26	84.65	86.94	88.26	87.89	86.92
	Standards										
1	CoS 767	87.28	89.67	83.47	89.25	87.58	83.72	86.69	88.22	87.41	87.03
2	CoPant 97222	88.62	91.72	84.52	89.62	87.62	79.66	87.01	87.50	87.50	87.09
3	Co 05011	85.03	87.89	84.75	86.57	87.40	84.27	86.74	87.61	90.61	86.76
	Mean	87.16	89.29	84.88	88.25	87.19	83.84	87.00	87.50	88.67	
	SE(m)	0.55		0.20	1.61	0.32	2.31	0.15	2.49	1.01	
	CD	1.60	NS	0.48	ns	0.68	4.89	0.31	5.23	N.S.	
	CV	1.09	2.63	0.41	2.24	0.45	3.37	0.29	6.04	1.97	

Table 4.9.17 Number of shoots (ˆ000/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	87.11	88.49	137.30	100.89					104.27	103.61
2	CoH 14261	106.14	104.87	139.34	114.51					118.86	116.74
3	CoLk 14203	87.11	98.21	146.84	124.28					100.94	111.48
4	CoLk 14204	92.25	104.26	147.86	143.36					-	121.93
5	CoPb 14184	113.85	113.58	147.52	116.04					115.15	121.23
6	CoPb 14185	96.02	119.66	145.82	113.39					124.87	119.95
7	CoS 14233	108.88	103.71	141.05	147.82					120.88	124.47
	Standards										
1	CoS 767	115.91	99.00	140.02	124.55					108.15	117.53
2	CoPant 97222	105.62	88.13	136.96	137.69					111.92	116.06
3	Co 05011	98.42	91.64	144.79	137.04					119.48	118.27
	Mean	101.13	101.16	142.75	125.96					113.84	
	SE(m)	4.81		1.81	6.66					4.10	
	CD	13.94	12.53	4.35	13.99					12.41	
	CV	8.36	7.23	2.20	6.48					6.24	

Table 4.9.18 Number of tillers (ˆ000/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	111.97	100.29	102.67	136.12	180.24	42.04	179.14	156.56	118.60	125.29
2	CoH 14261	160.67	122.90	104.67	165.51	173.33	63.52	200.12	151.29	128.39	141.16
3	CoLk 14203	109.57	109.44	112.00	165.89	176.91	70.00	201.48	162.73	122.25	136.70
4	CoLk 14204	114.20	120.62	113.00	210.72	201.23	134.63	189.63	146.45	-	153.81
5	CoPb 14184	170.27	122.46	112.67	191.28	191.97	77.31	181.85	142.58	130.80	146.80
6	CoPb 14185	132.37	128.89	111.00	180.55	161.11	72.69	182.47	139.66	129.19	137.55
7	CoS 14233	159.29	120.96	106.33	208.95	198.27	127.69	209.51	156.29	144.82	159.12
	Standards										
1	CoS 767	141.98	111.79	105.33	195.60	204.69	94.81	199.01	162.51	123.57	148.81
2	CoPant 97222	131.00	98.92	102.33	178.55	159.87	86.20	186.91	139.55	118.02	133.48
3	Co 05011	136.32	104.83	110.00	180.71	187.90	88.52	190.37	137.48	133.14	141.03
	Mean	136.76	114.11	108.00	181.39	183.55	85.74	192.05	149.51	127.64	
	SE(m)	6.20		1.77	10.42	9.70	3.46	5.55	2.82	4.28	
	CD	17.95	15.84	4.25	21.89	20.38	7.33	11.76	5.93	12.95	
	CV	7.75	8.10	2.84	7.03	6.47	4.94	5.00	4.01	5.81	

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 14035	29.63	49.80	50.67	32.32	49.81	29.52	48.33	31.26	39.18	40.06
2	CoH 14261	36.29	56.03	48.56	48.44	52.31	36.49	49.17	40.24	58.18	47.30
3	CoLk 14203	33.82	57.18	49.53	50.81	48.51	32.09	49.07	42.51	59.94	47.05
4	CoLk 14204	32.01	54.57	49.51	51.45	47.87	42.07	45.00	40.43	-	45.36
5	CoPb 14184	33.91	58.72	51.93	54.46	56.29	33.64	48.52	41.22	63.29	49.11
6	CoPb 14185	34.10	60.84	51.78	55.15	44.53	33.37	40.74	41.63	61.05	47.02
7	CoS 14233	31.15	63.66	48.11	71.53	51.20	39.15	51.67	44.54	58.93	51.10
	Standards										
1	CoS 767	33.72	54.79	48.69	53.70	53.70	37.40	46.39	41.26	38.70	45.37
2	CoPant 97222	32.20	50.02	48.63	51.68	41.57	32.82	43.33	43.32	57.44	44.56
3	Co 05011	27.24	54.59	49.56	41.55	47.50	33.55	44.72	44.45	49.69	43.65
	Mean	32.41	56.02	49.70	51.11	49.33	35.01	46.69	41.09	54.04	
	SE(m)	1.14		0.56	4.17	3.03	1.32	1.76	0.79	1.92	
	CD	3.29	NS	1.34	8.76	6.37	2.80	3.72	1.66	5.81	
	CV	6.07	11.40	1.94	9.99	7.53	4.62	6.51	4.09	6.16	

Table 4.9.20 Assessment of performance of entries by monitoring team constituted by AICRP(S)

Entries	Luck now	Shahja hanpur	Pant nagar	Muzaffar nagar	Uchani	Kapur thala	Farid kot	Sriganga nagar	Kota
Co 14035	Good	Good	Good	On par	On par	Good	On par	Poor	At par
CoH 14261	Poor	Good	Poor	Poor	Good	At par	Good	Good	Good
CoLk 14203	Better	Good	On par	Better	Good	Better	Good	Good	Good
CoLk 14204	Better	Good	On par	Poor	Not planted	At par	Good	Good	Good
CoPb 14184	Good	Good	Good	On par	On par	At par	Better	Good	Good
CoPb 14185	Good	Poor	Good	On par	Good	At par	On par	Good	At par
CoS 14233	On par	Good	Good	On par	Good	Better	On par	Good	At par
Standards									
CoS 767		Best	Best	Best					
CoPant 97222	Best							Best	
Co 05011					Best	Best	Best		Best

4.10 Initial Varietal Trial (Midlate)

Centres (9)	Faridkot, Kapurthala, Kota, Lucknow, Muzaffarnagar, Pantnagar, Shahjahanpur, Sriganaganagar and Uchani
Entries (11)	1. Co 15026 (Co 0124 x Co 8347) 2. CoLk 15206 (LG 95053 GC) 3. CoLk 15207 (Co 88039 GC) 4. CoLk 15208 (BO 91 x CoH 56) 5. CoLk 15209 (CoS 96268 GC) 6. CoPb 15213 (Co 1148 GC) 7. CoPb 15214 (Co 1148 GC) 8. CoS 15231 (CoLk 97050 x Co 775) 9. CoS 15232 (Miamoi x CoS 90265) 10. CoS 15233 (CoH 56 GC) 11. CoS 15234 (Co 0239 GC)
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, 2018
Crop Duration	10 months

Results of the previous year:

The entries were under multiplication in the respective centres

Results of the current years:

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%).

Qualifying entries:

Sl No	Entries	Percent improvement of best standard of CCS yield	Percent improvement of best standard of Cane yield	Percent improvement of best standard of Sucrose
1.	CoLk 15206	10.76	10.28	+1.08

Table 4.10.1. 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	13.45	10.99	11.30	7.60	10.69	14.25	10.96	11.45	12.05	11.42	3
2	CoLk 15206	13.29	11.17	14.81	11.32	13.79	7.92	10.47	10.25	11.66	11.63	2
3	CoLk 15207	8.91	11.78	10.23	11.61	8.73	8.13	11.63	13.84	9.79	10.52	6
4	CoLk 15208	9.83	10.69	11.08	9.07	10.42	5.50	9.59	11.27	10.21	9.74	
5	CoLk 15209	10.54	10.34	12.29	9.51	9.94	8.10	10.13	10.24	9.25	10.04	
6	CoPb 15213	12.32	11.80	9.80	7.97	9.98	7.48	10.13	11.77	9.57	10.09	
7	CoPb 15214	14.15	12.36	8.48	4.87	10.72	14.44	10.89	10.90	8.90	10.63	5
8	CoS 15231	10.73	11.99	8.27	4.80	6.48	4.88	9.59	11.86	9.49	8.68	
9	CoS 15232	12.65	10.08	8.22	9.15	12.28	12.44	10.11	12.89	8.25	10.67	4
10	CoS 15233	11.52	12.85	13.89	8.79	13.37	12.92	10.84	12.66	10.79	11.96	1
11	CoS 15234	13.96	11.90	11.69	6.11	10.74	8.91	10.89	9.37	10.21	10.42	
	Standards											
1	CoS 767	11.05	10.92	10.52	8.92	8.58	11.52	8.89	11.29	8.93	10.07	
2	CoPant 97222	13.81	11.37	10.83	10.31	8.62	9.54	9.47	12.00	8.56	10.50	7
3	Co 05011	10.56	9.00	9.59	7.83	10.11	8.70	9.93	10.40	11.10	9.69	
	Mean	11.91	11.23	10.79	8.42	10.32	9.62	10.25	11.44	9.91		
	SE(m)	0.74		0.13	0.80	0.71	0.31	0.35	0.37	0.34		
	CD	2.25	1.08	0.34	1.64	1.55	0.64	0.75	0.76	1.03		
	CV	8.73	4.44	1.74	11.61	6.94	3.93	4.79	6.82	4.78		
Top three qualifying entries												
	Rank-1		CoS 15233	CoLk 15206	CoLk 15207	CoLk 15206	CoPb 15214	CoLk 15207	CoLk 15207		CoS 15233	
	Rank-2			CoS 15233		CoS 15233	Co 15026	Co 15026			CoLk 15206	
	Rank-3			CoLk 15209		CoS 15232	CoS 15233					

Number of locations where an entry showing more than 10% improvement: CoS 15233 (4), CoLk 15207 (3), Co 15026 (2), CoLk 15206 (2), CoPb 15214 (1), CoS 15232 (1), CoLk 15209 (1).

Performance of the entries across locations: Entry CoS 15233 ranked first among the test entries with mean CCS yield of 11.96 t/ha 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.

Table 4.10.2. 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	114.20	84.06	85.31	57.45	82.77	103.65	86.39	96.29	87.35	88.61	3
2	CoLk 15206	109.05	86.75	106.54	86.09	103.61	60.92	82.78	90.74	85.68	90.24	2
3	CoLk 15207	72.02	91.40	79.33	82.41	70.83	60.32	87.50	114.07	69.96	80.87	
4	CoLk 15208	88.99	81.21	86.43	70.68	85.55	42.18	78.61	97.40	80.49	79.06	
5	CoLk 15209	84.36	80.19	92.23	73.20	79.72	60.45	84.72	83.70	70.81	78.82	
6	CoPb 15213	105.97	93.27	80.06	65.53	78.05	56.31	76.94	99.99	75.78	81.32	
7	CoPb 15214	115.23	94.55	68.70	38.86	86.38	104.93	82.78	91.85	71.19	83.83	5
8	CoS 15231	91.05	91.14	67.07	40.81	52.22	37.22	77.50	98.14	68.30	69.27	
9	CoS 15232	111.63	78.06	68.63	68.56	90.83	89.93	81.11	107.40	66.07	84.69	4
10	CoS 15233	96.19	98.52	102.45	71.26	102.77	97.24	85.83	99.27	88.26	93.53	1
11	CoS 15234	115.23	91.14	99.73	47.38	88.05	64.23	83.33	73.33	74.00	81.82	7
	Standards											
1	CoS 767	90.53	85.09	81.63	71.50	69.44	85.37	73.33	93.43	75.42	80.64	
2	CoPant 97222	113.17	83.42	80.82	76.44	67.22	69.56	74.44	97.10	74.29	81.83	6
3	Co 05011	89.51	70.64	81.81	58.61	80.27	64.09	78.89	89.26	82.68	77.31	
	Mean	99.80	86.39	84.34	64.91	81.27	71.17	81.01	95.14	76.45		
	SE(m)	6.08		6.07	5.66	6.28	1.84	2.72	3.16	2.81		
	CD	18.57	8.11	14.96	11.63	13.57	3.78	5.87	6.51	8.66		
	CV	8.61	4.35	10.26	10.67	7.72	3.16	4.75	7.05	5.19		
	Top three qualifying entries											
	Rank-1		CoS 15233	CoLk 15206	CoLk 15206	CoLk 15206	CoPb 15214	CoLk 15207	CoLk 15207		CoS 15233	
	Rank-2		CoPb 15214	CoS 15233		CoS 15233	Co 15026				CoLk 15206	
	Rank-3			CoS 15234		CoS 15232						

Number of locations where an entry showing more than 10% improvement over the best standards: CoS 15233 (3), CoLk 15206 (3), CoPb 15214 (2), CoLk 15207 (2), Co 15026 (1), CoS 15234 (1), CoS 15232 (1), CoLk 15209 (1).

Performance of the entries across locations: Among the test entries, 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). Entry CoLk 15206 recorded 90.24 t/ha of cane yield with 10.28 percent improvement over the best standard.

Table 4.10.3. 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	11.78	13.07	13.25	13.22	12.92	13.76	12.69	11.89	13.79	12.93	2
2	CoLk 15206	12.18	12.89	13.86	13.13	13.33	13.00	12.65	11.30	13.60	12.88	3
3	CoLk 15207	12.36	12.89	12.91	14.09	12.34	13.48	13.30	12.14	13.98	13.05	1
4	CoLk 15208	11.04	13.16	12.84	12.84	12.19	13.04	12.20	11.57	12.69	12.40	
5	CoLk 15209	12.49	12.89	13.29	12.99	12.48	13.40	11.96	12.22	13.09	12.76	
6	CoPb 15213	11.63	12.66	12.23	12.13	12.79	13.28	13.17	11.77	12.64	12.48	
7	CoPb 15214	12.28	13.08	12.30	12.58	12.40	13.77	13.16	11.87	12.50	12.66	
8	CoS 15231	11.78	13.16	12.26	11.78	12.41	13.12	12.38	12.08	13.88	12.54	
9	CoS 15232	11.32	12.91	11.96	13.33	13.52	13.84	12.46	12.00	12.50	12.65	
10	CoS 15233	11.98	13.04	13.56	12.28	13.02	13.28	12.63	12.76	12.22	12.75	
11	CoS 15234	12.11	13.05	11.73	12.85	12.20	13.87	13.07	12.77	13.82	12.83	
	Standards											
1	CoS 767	12.21	12.82	12.80	12.45	12.34	13.50	12.13	12.08	11.85	12.46	
2	CoPant 97222	12.20	13.63	13.37	13.51	12.84	13.74	12.73	12.36	11.52	12.88	3
3	Co 05011	11.81	12.75	11.73	13.41	12.60	13.58	12.59	11.62	13.44	12.61	
	Mean	11.94	13.00	12.72	12.90	12.67	13.48	12.65	12.03	12.97		
	SE(m)	0.17		0.82	0.41	0.29	0.35	0.05	0.38	0.35		
	CD	0.53	NS	2.03	0.84	0.62	0.73	0.12	0.79	1.07		
	CV	2.06	1.82	9.12	3.86	2.28	3.21	0.61	6.76	3.77		
	None of the test entries recorded 5 percent improvement for CCS(%) over the best standards in any of the centre											

Number of locations where an entry showing more than five percent improvement over the best standards: None

Performance of the entries across locations: Among the test entries, CoLk 15207 recorded the highest CCS(%) of 13.05 followed by Ci 15026 (12.93%) and CoLk 15206 (12.88%). Among the standards, CoPant 97222 recorded the zonal mean CCS (%) of 12.88. None of the test entries showed the five percent improvement over the best standard CoPant 97222.

Table 4.10.4. 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	16.77	18.73	19.15	18.92	18.64	19.90	18.34	17.23	19.53	18.58	2
2	CoLk 15206	17.34	18.65	19.98	19.06	19.28	18.87	18.31	16.20	19.25	18.55	3
3	CoLk 15207	17.61	18.50	18.69	20.20	17.83	19.54	19.17	17.69	19.74	18.77	1
4	CoLk 15208	15.90	19.11	18.59	18.44	17.72	18.95	17.69	16.58	18.24	17.91	
5	CoLk 15209	17.94	18.53	19.21	18.64	18.08	19.40	17.39	17.18	18.53	18.32	
6	CoPb 15213	16.71	18.15	17.76	17.65	18.54	19.25	18.79	16.96	18.44	18.03	
7	CoPb 15214	17.61	18.75	17.87	18.13	18.05	19.85	18.97	17.20	18.01	18.27	
8	CoS 15231	16.93	18.97	17.81	17.17	17.98	19.03	17.94	17.52	19.67	18.11	
9	CoS 15232	16.29	18.53	17.40	19.09	19.52	20.05	18.05	17.31	18.00	18.25	
10	CoS 15233	17.04	18.69	19.57	17.61	18.78	19.25	18.22	18.39	17.66	18.36	
11	CoS 15234	17.28	18.57	17.09	18.43	17.67	20.06	18.87	18.32	19.46	18.42	
	Standards											
1	CoS 767	17.49	18.48	18.54	17.83	17.84	19.41	17.61	17.31	16.98	17.94	
2	CoPant 97222	17.31	19.58	19.31	19.36	18.55	19.90	18.40	17.79	16.56	18.53	4
3	Co 05011	16.93	18.24	17.09	19.25	18.19	19.62	18.22	16.75	19.09	18.15	
	Mean	17.08	18.68	18.43	18.56	18.33	19.51	18.28	17.32	18.51		
	SE(m)	0.26		0.10	0.50	0.39	0.47	0.06	0.33	0.42		
	CD	0.80	NS	0.26	1.04	0.84	0.96	0.13	0.68	1.29		
	CV	2.17	1.75	0.81	3.32	2.13	2.93	0.45	4.05	3.19		
	None of the test entries recorded 5 percent improvement for sucrose (%) over the best standards in any of the centre											

Number of locations where an entry showing more than five percent improvement over the best standards: None

Performance of the entries across locations: Among the standards, CoPant 97222 recorded the highest sucrose content of 18.53% followed by Co 05011 (18.15%) and CoS 767 (17.94%). Among the test entries, CoLk 15207 recorded the highest sucrose content of 18.77% followed by Co 15026 (18.58%) and CoLk 15206 (18.55%).

Table 4.10.5. Brix (%) at harvest

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	18.35	20.78	21.65	20.94	20.96	22.53	20.76	19.58	21.15	20.74
2	CoLk 15206	18.95	21.15	22.45	21.75	21.86	21.53	20.74	18.01	20.80	20.80
3	CoLk 15207	19.30	20.60	21.20	22.45	20.16	22.23	21.54	20.34	21.20	21.00
4	CoLk 15208	17.85	21.79	21.10	20.54	20.26	21.67	20.18	18.42	20.40	20.25
5	CoLk 15209	20.00	20.70	21.70	20.75	20.56	22.00	19.91	19.75	20.05	20.60
6	CoPb 15213	18.65	20.16	20.30	20.22	21.06	21.90	20.67	19.06	21.25	20.36
7	CoPb 15214	19.55	20.82	20.40	20.39	20.71	22.33	21.34	19.55	20.20	20.59
8	CoS 15231	18.90	21.32	20.35	19.76	20.41	21.67	20.40	19.92	21.30	20.45
9	CoS 15232	18.25	20.63	19.95	21.15	22.01	22.77	20.50	19.46	20.20	20.55
10	CoS 15233	18.60	20.74	22.05	19.56	21.12	21.90	20.65	20.67	19.95	20.58
11	CoS 15234	19.00	20.27	19.65	20.51	20.06	22.73	21.24	20.38	20.80	20.52
	Standards										
1	CoS 767	19.40	20.76	21.05	19.78	20.16	21.70	20.11	19.21	18.85	20.11
2	CoPant 97222	18.80	21.86	21.80	21.49	20.96	22.60	20.82	19.94	18.50	20.75
3	Co 05011	18.80	20.17	19.65	21.47	20.51	22.17	20.66	18.84	20.80	20.34
	Mean	18.89	20.84	20.95	20.77	20.77	22.12	20.68	19.51	20.39	
	SE(m)	0.34		0.15	0.45	0.38	0.45	0.15	0.42	0.36	
	CD	1.03	0.88	0.37	0.93	0.83	0.92	0.33	0.87	1.11	
	CV	2.53	1.96	1.02	2.66	1.84	2.46	1.04	4.59	2.49	

Table 4.10.6. Purity (%) at harvest

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	91.36	90.14	88.47	90.36	88.93	88.32	88.34	88.16	92.34	89.60
2	CoLk 15206	91.48	88.19	88.98	87.64	88.21	87.63	88.28	90.21	92.56	89.24
3	CoLk 15207	91.25	89.81	88.16	89.98	88.46	87.89	88.98	87.42	93.13	89.45
4	CoLk 15208	89.06	87.69	88.08	89.76	87.46	87.46	87.68	90.55	89.42	88.57
5	CoLk 15209	89.70	89.53	88.50	89.79	87.96	88.18	87.35	87.38	92.44	88.98
6	CoPb 15213	89.60	90.02	87.49	87.28	88.03	87.90	88.76	89.13	86.77	88.33
7	CoPb 15214	90.06	90.06	87.55	88.92	87.15	88.88	84.89	88.46	89.13	88.34
8	CoS 15231	89.57	88.94	87.53	87.74	88.10	87.82	87.92	88.29	92.34	88.69
9	CoS 15232	89.27	89.81	87.22	90.25	88.69	88.05	88.05	89.45	89.13	88.88
10	CoS 15233	91.61	90.09	88.74	90.00	88.95	87.90	88.21	89.16	88.5	89.24
11	CoS 15234	90.92	91.57	86.98	89.87	88.11	88.24	88.82	89.92	93.52	89.77
	Standards										
1	CoS 767	90.16	89.01	88.05	90.17	88.48	89.46	87.57	90.14	90.08	89.24
2	CoPant 97222	92.08	89.59	88.57	90.07	88.51	88.02	88.40	89.24	89.5	89.33
3	Co 05011	90.05	90.43	86.98	89.63	88.78	88.52	88.21	88.90	91.77	89.25
	Mean	90.44	89.63	87.95	89.39	88.27	88.16	87.96	89.03	90.76	
	SE(m)	0.45		0.11	1.17	0.31	0.63	-	0.71	1.14	
	CD	1.37	1.74	0.27	2.40	0.68	1.3	NS	1.47	3.52	
	CV	0.70	0.90	0.17	1.60	0.35	0.88	-	1.70	1.78	

Table 4.10.7. Extraction (%) at harvest

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	61.66	51.3	51.99	58.92	50.84		52.13	52.24	66.35	55.68
2	CoLk 15206	57.05	51.72	50.07	41.23	45.5		51.58	51.36	65.85	51.79
3	CoLk 15207	56.93	53.87	46.795	51.09	48.74		54.06	50.71	60.4	52.82
4	CoLk 15208	55.36	52.86	48.45	43.41	42.98		52.51	50.32	65.1	51.37
5	CoLk 15209	56.03	51.39	46.515	49.98	43.21		51.11	45.59	58.9	50.34
6	CoPb 15213	58.46	55.86	50.73	52.97	55.13		50.06	51.26	61.2	54.46
7	CoPb 15214	61.23	53	52.575	51.98	51.89		54.18	49.18	63.3	54.67
8	CoS 15231	57.81	53.39	46.36	48.94	43.17		50.86	51.59	62.7	51.85
9	CoS 15232	54.85	54.13	45.545	47.16	43.15		51.55	49.45	55.05	50.11
10	CoS 15233	56.05	52.84	43.265	50.10	49.58		54.7	53.36	63.15	52.88
11	CoS 15234	55.89	50.81	47.615	51.06	47.6		52.21	49.74	63.45	52.30
	Standards										
1	CoS 767	58.13	51.24	47.37	50.67	47.15		52.02	51.66	60.2	52.30
2	CoPant 97222	59.16	51.59	48.485	55.97	45.03		54.67	51.57	60.85	53.42
3	Co 05011	58.87	50.05	49.675	49.81	58.66		52.08	48.89	64.5	54.07
	Mean	57.68	52.43	48.25	50.24	48.05		52.41	50.49	62.21	
	SE(m)	0.82		0.65	2.80	-		0.66	0.97	1.55	
	CD	2.5	NS	1.62	5.75	-		1.42	2	4.79	
	CV	2	3.47	1.93	6.81	-		1.78	4.08	3.52	

Table 4.10.8. Pol% cane and Fibre(%) content at harvest

Sl. No.	Entry	Fibre (%)				Pol% cane			
		Lucknow	Muzafarnagar	Sriganganagar	Mean	Lucknow	Muzafarnagar	Sriganganagar	Mean
1	Co 15026	13.39	13.86	15.07	14.11	14.50	13.68	13.24	13.81
2	CoLk 15206	13.17	13.92	15.14	14.08	14.64	14.05	13.13	13.94
3	CoLk 15207	12.45	14.36	15.00	13.94	15.66	13.16	13.58	14.13
4	CoLk 15208	14.65	14.08	14.97	14.57	13.89	12.88	13.08	13.28
5	CoLk 15209	13.33	14.18	15.11	14.21	14.29	13.25	13.02	13.52
6	CoPb 15213	14.20	14.62	15.19	14.67	13.38	13.52	13.38	13.43
7	CoPb 15214	12.64	13.98	15.06	13.89	14.02	13.16	13.66	13.61
8	CoS 15231	13.74	14.21	15.04	14.33	13.09	13.04	13.10	13.08
9	CoS 15232	14.10	14.16	15.13	14.46	14.49	14.19	13.11	13.93
10	CoS 15233	12.60	13.98	14.90	13.83	13.63	13.74	13.22	13.53
11	CoS 15234	12.72	13.77	15.08	13.86	14.25	12.85	13.64	13.58
	Standards								
1	CoS 767	13.78	14.29	15.17	14.41	13.59	12.25	13.06	12.97
2	CoPant 97222	12.66	14.1	15.02	13.93	14.97	13.53	13.51	14.00
3	Co 05011	12.93	14.15	15.10	14.06	14.83	13.30	13.20	13.78
	Mean	13.31	14.12	15.07		14.23	13.40	13.28	
	SE(m)	0.55	-	-		0.36	-	-	
	CD	1.13	-	-		0.74	-	-	
	CV	5.06	-	-		3.11	-	-	

Table 4.10.9. Number of millable canes (‘000/ha) at harvest

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	101.34	77.69	94.53	60.85	106.94	63.33	94.44	113.24	82.36	88.30
2	CoLk 15206	99.54	100.25	95.7	99.16	114.16	47.04	98.89	110.63	97.91	95.92
3	CoLk 15207	77.67	78.33	89.82	94.68	125.55	50.55	95.28	120.19	92.45	91.61
4	CoLk 15208	73.56	85.74	87.47	71.67	91.11	30.56	85.28	95.96	75.92	77.47
5	CoLk 15209	103.91	94.54	122.35	99.90	113.61	56.67	100.28	112.12	88.14	99.06
6	CoPb 15213	127.31	80.03	89.23	96.52	120.27	68.33	105.56	127.34	101.96	101.84
7	CoPb 15214	127.31	96.27	83.94	64.83	95.27	84.26	93.89	99.83	83.93	92.17
8	CoS 15231	83.59	100.66	91.01	55.34	99.71	34.81	98.61	94.56	81.28	82.17
9	CoS 15232	126.03	76.2	89.82	100.62	106.11	77.78	88.89	104.34	83.83	94.85
10	CoS 15233	87.71	97.01	92.76	85.89	100.83	60.55	102.78	102.41	88.22	90.91
11	CoS 15234	81.79	73.55	88.64	54.62	88.88	37.78	83.89	80.92	67.63	73.08
	Standards										
1	CoS 767	101.08	90.83	88.06	92.71	102.21	63.89	103.61	92.56	95.21	92.24
2	CoPant 97222	92.08	77.88	88.06	89.79	99.44	53.33	96.67	99.59	108.78	89.51
3	Co 05011	111.37	88.52	88.06	90.87	110.55	58.33	93.06	89.83	86.24	90.76
	Mean	99.59	86.96	92.10	82.67	105.33	56.23	95.80	103.11	88.13	
	SE(m)	3.42		0.04	5.00	8.63	2.72	3.81	2.58	3.49	
	CD	10.46	11.15	0.11	10.29	18.65	5.6	8.22	5.32	10.77	
	CV	4.86	5.93	0.07	7.41	8.18	5.92	5.62	5.39	5.6	

Table 4.10.10 Millable cane height (cm) at harvest

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	237.2	208.5	157.0	134.3	188.0	202.0	232.0	192.2	252.0	200.4
2	CoLk 15206	228.2	216.0	222.0	172.0	206.0	198.0	223.0	173.5	254.0	210.3
3	CoLk 15207	252.7	252.5	169.0	196.7	189.0	188.0	218.0	201.5	225.0	210.3
4	CoLk 15208	273.8	292.5	220.0	210.0	226.0	208.0	249.0	209.2	249.0	237.5
5	CoLk 15209	207.2	200.0	168.0	163.7	191.0	242.0	196.5	170.2	218.0	195.2
6	CoPb 15213	217.7	243.5	146.0	158.0	172.0	214.0	205.0	168.6	247.5	196.9
7	CoPb 15214	232.7	238.5	131.0	141.0	241.0	180.0	214.5	180.6	253.5	201.4
8	CoS 15231	258.8	238.5	185.0	186.0	167.0	163.0	205.0	201.3	256.5	206.8
9	CoS 15232	256.8	223.5	190.0	174.3	238.0	230.0	211.0	208.6	260.5	221.4
10	CoS 15233	221.8	237.0	232.0	173.0	233.0	206.0	227.5	182.6	277.0	221.1
11	CoS 15234	263.7	277.5	233.0	166.7	226.0	204.0	203.0	190.3	270.5	226.1
	Standards			0.0	0.0	0.0	0.0				
1	CoS 767	235.0	219.5	147.0	184.7	211.0	236.0	205.0	205.2	252.5	210.7
2	CoPant 97222	226.7	240.0	133.0	173.0	192.0	241.0	192.5	214.2	207.0	202.1
3	Co 05011	182.0	242.5	155.0	143.7	154.0	238.0	213.5	192.3	243.5	196.0
	Mean	235.3	237.9	165.9	158.5	188.9	196.7	214.0	192.2	247.6	
	SE(m)	3.6			0.1				4.5	7.8	
	CD	10.9	19.6		0.2				9.2	24.1	
	CV	2.1	3.8	10.5	6.5	2.5	7.0	5.5	5.0	4.5	

Table 4.10.11 Cane diameter (cm) at harvest

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	2.92	3.53	3.20	3.03	2.40	2.92	2.31	2.81	2.61	2.86
2	CoLk 15206	2.62	2.40	2.70	2.11	2.32	2.31	2.24	2.74	2.26	2.41
3	CoLk 15207	2.50	2.75	2.40	2.23	1.96	2.12	2.38	2.56	2.11	2.33
4	CoLk 15208	2.72	2.65	2.30	2.21	2.44	2.45	2.52	2.44	2.39	2.46
5	CoLk 15209	2.45	2.58	2.00	2.25	2.39	2.29	2.35	2.68	2.26	2.36
6	CoPb 15213	2.28	2.78	1.80	2.21	2.19	2.15	2.16	2.75	2.24	2.28
7	CoPb 15214	2.58	2.48	1.70	2.17	2.28	2.30	2.34	2.63	2.28	2.31
8	CoS 15231	2.48	2.35	2.00	2.08	1.92	2.25	2.27	2.52	2.33	2.24
9	CoS 15232	2.28	2.38	2.20	2.19	2.28	2.16	2.40	2.49	1.95	2.26
10	CoS 15233	2.58	2.50	2.60	2.29	2.60	2.45	2.35	2.63	2.48	2.50
11	CoS 15234	2.83	2.93	2.70	2.50	2.78	2.59	2.58	2.54	2.54	2.67
	Standards										
1	CoS 767	2.50	2.50	1.90	2.13	2.12	2.20	2.29	2.41	2.25	2.26
2	CoPant 97222	2.65	2.58	2.20	2.40	2.34	2.54	2.39	2.56	2.02	2.41
3	Co 05011	2.57	2.70	2.50	2.21	2.37	2.59	2.40	2.43	2.39	2.46
	Mean	2.57	2.65	2.30	2.28	2.31	2.38	2.36	2.59	2.29	
	SE(m)	0.03		0.14	0.11	0.05	0.14	0.05	0.06	0.06	
	CD	0.10	0.30	0.36	0.23	0.11	0.29	0.10	0.12	0.19	
	CV	1.76	5.30	9.29	5.93	2.26	7.21	2.78	5.12	3.84	

Table 4.10.12 Single cane weight (kg) at harvest

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	1.26	1.53	0.91	0.95	0.79	1.63	0.85	0.78	1.12	1.09
2	CoLk 15206	1.15	1.40	1.12	0.87	0.91	1.29	0.80	0.75	0.93	1.02
3	CoLk 15207	1.13	1.42	0.89	0.87	0.66	1.18	0.88	0.96	0.79	0.98
4	CoLk 15208	1.34	1.50	0.99	0.99	0.98	1.37	1.14	1.02	1.13	1.16
5	CoLk 15209	0.92	1.09	0.94	0.73	0.72	1.12	0.92	0.68	0.83	0.88
6	CoPb 15213	0.86	1.42	0.90	0.68	0.69	0.82	0.78	0.72	0.77	0.85
7	CoPb 15214	1.06	1.05	0.82	0.60	0.95	1.26	0.92	0.83	0.91	0.93
8	CoS 15231	1.23	1.27	0.74	0.74	0.53	1.06	0.75	1.04	0.89	0.92
9	CoS 15232	0.94	1.22	0.77	0.68	0.90	1.16	0.93	1.01	0.83	0.94
10	CoS 15233	1.14	1.18	1.11	0.83	1.05	1.61	0.94	0.96	1.04	1.10
11	CoS 15234	1.45	1.61	1.13	0.87	1.01	1.70	0.99	0.94	1.16	1.21
	Standards										
1	CoS 767	1.03	1.13	0.83	0.77	0.78	1.33	0.81	1.03	0.82	0.95
2	CoPant 97222	1.28	1.25	0.81	0.85	0.68	1.30	0.88	1.12	0.72	0.99
3	Co 05011	0.84	1.07	0.84	0.65	0.80	1.09	0.89	0.93	1.02	0.90
	Mean	1.12	1.30	0.91	0.79	0.82	1.28	0.89	0.91	0.93	
	SE(m)	0.05		6.07	0.06	0.04	0.12	0.05	0.02	0.02	
	CD	0.15	0.23	14.96	0.13	0.10	0.25	0.11	0.04	0.06	
	CV	6.23	8.30	9.42	9.92	5.52	11.80	7.96	5.02	2.99	

Table 4.10.13 CCS (%) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	9.95	11.26	11.63	11.52	12.06	11.64	11.08	10.01	12.40	11.28
2	CoLk 15206	11.05	11.56	12.24	12.15	11.26	11.51	10.91	9.87	12.18	11.41
3	CoLk 15207	10.90	12.04	11.29	13.11	11.94	11.84	11.76	10.86	12.11	11.76
4	CoLk 15208	9.63	10.10	11.21	11.50	10.54	11.14	10.51	10.46	10.88	10.66
5	CoLk 15209	11.18	11.46	11.67	11.88	11.67	11.31	10.39	10.70	11.25	11.28
6	CoPb 15213	9.89	12.08	10.60	11.12	11.57	11.90	11.07	9.62	11.41	11.03
7	CoPb 15214	10.43	11.74	10.68	11.39	11.51	12.00	10.88	10.77	11.27	11.19
8	CoS 15231	10.75	11.55	10.64	10.47	11.46	11.12	10.71	10.14	12.03	10.99
9	CoS 15232	8.39	11.46	10.34	12.30	11.10	11.69	10.84	10.73	11.14	10.89
10	CoS 15233	9.21	11.47	11.94	11.53	11.03	12.02	11.09	11.08	11.50	11.21
11	CoS 15234	9.93	11.77	10.11	11.81	11.11	12.05	11.49	11.10	12.89	11.36
	Standards										
1	CoS 767	10.84	11.69	11.18	11.23	11.56	11.29	10.79	10.34	11.59	11.17
2	CoPant 97222	10.13	11.73	11.75	11.78	11.18	12.02	11.42	10.84	11.25	11.34
3	Co 05011	9.72	11.57	10.11	11.26	11.60	11.99	11.24	10.27	11.88	11.07
	Mean	10.14	11.53	11.10	11.65	11.40	11.68	11.01	10.49	11.70	
	SE(m)	0.18		0.65	0.48	0.47	0.37	0.14	0.22	0.35	
	CD	0.56	0.77	1.62	0.99	NS	0.75	0.30	0.47	1.07	
	CV	2.57	3.10	8.40	5.06	4.16	3.83	1.79	4.63	4.19	

Table 4.10.14 Sucrose (%) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	14.34	16.15	16.96	16.61	17.39	17.34	16.21	14.68	17.92	16.40
2	CoLk 15206	15.81	16.68	17.78	17.74	16.44	17.11	15.98	14.3	17.75	16.62
3	CoLk 15207	15.78	17.28	16.49	18.87	17.56	17.64	17.13	16.01	17.59	17.15
4	CoLk 15208	14.04	14.61	16.39	16.70	15.48	16.54	15.45	15.1	16.23	15.62
5	CoLk 15209	16.17	16.40	17.01	17.16	16.74	16.83	15.47	15.68	16.47	16.44
6	CoPb 15213	14.22	17.28	15.57	16.37	16.71	17.58	16.20	14.4	16.87	16.13
7	CoPb 15214	14.98	16.71	15.67	16.58	16.78	17.8	15.95	15.69	16.22	16.26
8	CoS 15231	15.57	16.67	15.62	15.48	16.74	16.65	15.72	14.86	17.44	16.08
9	CoS 15232	12.51	16.38	15.21	17.83	16.21	17.28	15.89	15.64	16.16	15.90
10	CoS 15233	13.67	16.21	17.37	16.76	15.9	17.74	16.23	16.15	16.32	16.26
11	CoS 15234	14.52	16.89	14.9	17.01	16.08	17.75	16.77	16.09	18.43	16.49
	Standards										
1	CoS 767	15.57	16.68	14.9	16.47	16.88	16.76	15.82	14.99	16.87	16.10
2	CoPant 97222	14.59	16.83	17.11	17.10	16.33	17.73	16.67	15.79	16.13	16.48
3	Co 05011	14.16	16.70	16.34	16.38	16.85	17.78	16.44	14.97	17.13	16.31
	Mean	14.71	16.53	16.23	16.93	16.58	17.32	16.14	15.31	16.97	
	SE(m)	0.25		0.15	0.60	0.61	0.44	0.18	0.31	0.41	
	CD	0.78	1.01	0.37	1.22	NS	0.90	0.39	0.64	1.28	
	CV	2.45	2.83	1.31	4.31	3.65	3.1	1.59	4.29	3.45	

Table 4.10.15 Brix (%) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	16.10	17.95	19.52	18.68	19.58	20.80	18.34	17.08	20.25	18.70
2	CoLk 15206	17.50	18.80	20.32	20.47	18.98	20.47	18.59	16.26	20.40	19.09
3	CoLk 15207	17.90	19.25	19.07	21.16	20.58	21.17	19.67	18.84	20.10	19.75
4	CoLk 15208	16.15	16.55	18.97	19.07	18.08	19.73	18.09	17.02	19.55	18.13
5	CoLk 15209	18.30	18.15	19.57	19.37	18.63	20.17	18.40	18.24	19.10	18.88
6	CoPb 15213	15.90	19.10	18.17	19.21	18.88	20.77	18.79	16.56	19.95	18.59
7	CoPb 15214	16.70	18.25	18.27	19.03	19.28	21.20	18.56	18.04	18.15	18.61
8	CoS 15231	17.65	18.80	18.22	18.35	19.33	20.20	18.33	17.29	19.85	18.67
9	CoS 15232	15.05	18.10	17.82	20.28	18.43	20.43	18.50	17.98	18.40	18.33
10	CoS 15233	16.30	17.45	19.92	19.18	18.23	20.90	18.82	18.57	17.75	18.57
11	CoS 15234	16.80	18.80	17.52	19.09	18.23	20.87	19.34	18.29	20.35	18.81
	Standards										
1	CoS 767	17.35	18.40	18.92	19.20	19.50	20.00	18.43	17.04	19.35	18.69
2	CoPant 97222	16.35	18.75	19.67	19.50	18.88	20.87	19.24	18.15	17.90	18.81
3	Co 05011	16.25	18.75	17.52	18.78	19.23	21.20	19.03	17.21	19.25	18.58
	Mean	16.74	18.36	18.82	19.38	18.99	20.63	18.72	17.61	19.31	
	SE(m)	0.27		0.15	0.49	0.61	0.33	0.17	0.37	0.37	
	CD	0.84	0.93	0.37	1.01	NS	0.68	0.37	0.75	1.13	
	CV	2.31	2.34	1.13	3.12	3.22	1.96	1.28	4.41	2.68	

Table 4.10.16 Purity (%) at 10th month

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	89.04	89.97	86.87	88.55	88.84	83.33	86.23	86.56	88.50	87.54
2	CoLk 15206	90.35	88.73	87.50	86.61	86.63	83.60	85.98	88.28	86.99	87.19
3	CoLk 15207	88.15	89.74	86.49	88.22	85.35	83.31	87.09	85.34	87.51	86.80
4	CoLk 15208	86.88	88.29	86.40	84.53	86.54	83.81	85.43	88.22	83.00	85.90
5	CoLk 15209	88.33	90.35	86.91	88.56	87.52	83.43	85.73	86.51	86.21	87.06
6	CoPb 15213	89.43	90.44	85.66	85.18	88.52	84.65	86.21	87.34	84.50	86.88
7	CoPb 15214	89.70	91.53	85.74	87.16	87.00	83.95	85.93	87.29	89.34	87.52
8	CoS 15231	88.20	88.67	85.71	84.36	86.60	82.41	85.76	86.71	87.89	86.26
9	CoS 15232	83.08	90.50	85.32	87.96	86.57	84.54	85.89	87.53	87.82	86.58
10	CoS 15233	83.86	92.87	87.20	87.39	87.21	84.85	86.26	87.21	91.92	87.64
11	CoS 15234	86.43	89.82	85.02	88.62	88.21	85.04	86.74	88.36	90.56	87.64
	Standards										
1	CoS 767	89.71	90.76	86.35	85.63	86.56	83.80	85.84	88.48	87.17	87.14
2	CoPant 97222	89.21	89.76	86.99	87.61	86.52	84.95	86.66	87.25	90.08	87.67
3	Co 05011	87.11	88.96	85.02	87.18	87.60	83.87	86.39	87.61	88.95	86.97
	Mean	87.82	90.11	86.23	86.97	87.12	83.97	86.15	87.34	87.89	
	SE(m)	0.44		0.11	1.57	0.80	1.12	0.02	0.48	1.35	
	CD	1.36	1.61	0.27	ns	1.74	2.30	0.36	0.98	4.17	
	CV	0.72	0.83	0.18	2.22	0.92	1.63	0.27	1.15	2.17	

Table 4.10.17 Number of shoots (`000/ha) at 8th month

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	113.94	81.58	118.24	70.83					100.94	97.11
2	CoLk 15206	101.59	106.50	119.41	130.14					116.68	114.86
3	CoLk 15207	100.82	92.18	113.53	100.74					111.43	103.74
4	CoLk 15208	74.85	97.50	111.18	89.92					96.00	93.89
5	CoLk 15209	113.43	102.58	120.00	125.82					106.80	113.73
6	CoPb 15213	142.49	96.98	112.94	125.98					124.71	120.62
7	CoPb 15214	142.75	108.58	107.65	73.87					133.04	113.18
8	CoS 15231	86.16	122.98	121.18	64.19					100.94	99.09
9	CoS 15232	132.20	95.50	113.53	130.76					128.41	120.08
10	CoS 15233	90.79	108.61	116.47	116.67					108.34	108.18
11	CoS 15234	87.96	83.41	112.35	62.08					75.62	84.28
	Standards										
1	CoS 767	117.54	103.86	96.47	105.45					109.58	106.58
2	CoPant 97222	110.60	88.82	102.35	100.21					113.64	103.12
3	Co 05011	123.46	96.11	103.53	109.26					114.52	109.38
	Mean	109.90	98.94	112.06	100.42					110.05	
	SE(m)	3.92		3.01	6.91					4.98	
	CD	11.98	15.51	7.44	14.20					15.38	
	CV	5.05	7.25	3.80	8.42					6.40	

Table 4.10.18 Number of tillers (‘000/ha) at 120th days

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	129.37	91.98	100.50	82.51	211.93	69.63	185.83	164.46	106.96	127.02
2	CoLk 15206	124.49	121.91	101.50	147.74	189.99	65.56	192.50	157.29	120.38	135.71
3	CoLk 15207	116.77	101.85	96.50	124.69	178.88	55.74	181.67	174.34	113.90	127.15
4	CoLk 15208	123.97	108.02	94.50	98.91	186.10	40.93	169.44	136.65	101.86	117.82
5	CoLk 15209	156.89	127.16	102.00	156.79	173.32	74.07	201.67	178.28	119.92	143.34
6	CoPb 15213	184.93	107.56	96.00	136.00	205.54	76.30	194.44	183.77	128.25	145.87
7	CoPb 15214	173.61	128.78	91.50	82.28	194.16	106.85	197.22	149.56	147.24	141.24
8	CoS 15231	100.57	131.79	103.00	76.49	153.05	45.19	196.39	141.28	97.70	116.16
9	CoS 15232	193.93	103.40	96.50	166.36	179.43	89.81	193.06	154.26	136.59	145.93
10	CoS 15233	155.35	120.37	99.00	135.22	189.16	87.96	208.89	155.54	117.68	141.02
11	CoS 15234	106.74	89.84	95.50	85.80	166.10	49.44	183.33	128.50	81.03	109.59
	Standards										
1	CoS 767	161.78	114.13	82.00	135.90	190.27	81.30	205.28	138.44	118.07	136.35
2	CoPant 97222	174.64	96.68	87.00	110.53	169.71	60.93	190.56	143.39	111.12	127.17
3	Co 05011	131.69	104.28	88.00	115.38	183.05	63.15	172.50	140.25	109.27	123.06
	Mean	145.34	110.55	95.25	118.19	183.62	69.06	190.91	153.29	115.00	
	SE(m)	4.22		1.50	9.98	10.18	2.76	7.05	3.33	6.15	
	CD	12.89	16.13	3.72	20.52	22.00	5.68	15.22	6.85	18.99	
	CV	4.11	6.75	2.24	10.34	5.55	4.89	5.22	4.60	7.56	

Table 4.10.19 Germination (%) at 45th days

Sl. No.	Entry	Faridkot	Kapurthala	Kota	Lucknow	Muzafarnagar	Pantnagar	Shahjahanpur	Sriganganagar	Uchani	Mean
1	Co 15026	37.08	40.51	54.9	39.8	28.76	38.12	33.73	46.46	44.28	40.40
2	CoLk 15206	36.01	44.21	61.9	40.85	52.93	53.75	31.35	50.21	49.48	46.74
3	CoLk 15207	31.29	45.38	54.75	39.47	41.82	45.41	32.27	41.88	41.32	41.51
4	CoLk 15208	22.29	37.29	61.78	39.27	31.03	34.58	25.48	43.54	40.11	37.26
5	CoLk 15209	38.37	43.54	68.17	40.85	47.76	51.45	27.5	45.63	54.86	46.46
6	CoPb 15213	34.72	39.38	53.96	41.29	42.13	47.08	29.7	50.42	47.74	42.94
7	CoPb 15214	39.22	38.44	65.86	39.91	23.35	43.33	32.82	51.04	54	43.11
8	CoS 15231	29.79	39.54	58.56	42.12	30.32	29.79	25.3	45	43.41	38.20
9	CoS 15232	34.29	45.13	58.91	40.77	43.06	43.54	29.88	48.54	43.41	43.06
10	CoS 15233	34.29	44.45	57.41	42.84	37.42	49.37	33.91	49.38	47.75	44.09
11	CoS 15234	30.86	40.43	52.33	40.7	40.35	45.83	28.42	41.04	35.89	39.54
	Standards										
1	CoS 767	34.29	39.89	52.9	41.74	45.83	50.41	31.9	55.21	35.42	43.07
2	CoPant 97222	37.72	43.73	50.65	40.07	37.81	40.83	28.96	50.21	34.86	40.54
3	Co 05011	31.94	45.62	57.6	41.81	30.09	46.04	29.88	49.17	38.75	41.21
	Mean	33.73	41.97	57.83	40.82	38.05	44.25	30.08	47.70	43.66	
	SE(m)	1.83	0.9		2.56	3.24	2.69	1.5	2.36	1.58	
	CD	5.59	1.85	NS	6.32	6.65	5.82	3.09	5.09	4.88	
	CV	7.67	4.56	9.34	8.89	10.42	6.09	6.1	6.99	5.12	

Table 4.10.19 Assessment of performance of entries by monitoring team constituted by AICRP(S)

Entries	Luck now	Shahjahanpur	Pantnagar	Muzaffarnagar	Uchani	Kapurthala	Faridkot	Sriganganagar	Kota
Co 15026	Gaps	On par	Better	Better	On Par	At Par	Better	On Par	Good
CoLk 15206	Good	On par	On par	On par	Good	At par	On par	Good	On par
CoLk 15207	Good	Good	Poor	On par	Good	At par	Good	Good	Good
CoLk 15208	Good	Good	Poor	Better	Good	Better	Better	Good	On par
CoLk 15209	Good	Good	Good	On par	Good	Good	On par	Good	Good
CoPb 15213	Good	Poor	Poor	On par	Good	Good	On par	Good	Good
CoPb 15214	Poor	Good	On par	Better	Good	Better	On par	Good	Good
CoS 15231	Poor	Poor	Good	Not germinated	Good	Good	Good	Good	Good
CoS 15232	Good	Good	Good	On par	Good	Better	On par	Better	On par
CoS 15233	Good	Good	On par	Better	On par	At par	On par	Good	Good
CoS 15234	Poor	Poor	Poor	Good	Good	Good	On par	Good	Good
Standards									
CoS 767				Best		Best			
CoPant97222	Best		Best				Best	Best	
Co 05011		Best			Best				Best

5. NORTH CENTRAL ZONE

North Central and North East zones comprises of the states of Assam, Bihar, Central & Eastern Uttar Pradesh and West Bengal.

State	Centres
Assam	Buralikson
Bihar	Motipur & Pusa
Uttar Pradesh	Seorahi & Gorakhpur
West Bengal	Bethuadahari

Trials conducted during 2018-19:

S. 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	NA	NA	C	C
2	Buralikson	C	C	C	NC	NA	NA	NC	NC
3	Gorakhpur	NC	NC	NC	NC	NA	NA	NC	NC
4	Motipur	C	C	C	C	NA	NA	C	C
5	Pusa	C	C	C	C	NA	NA	C	C
6	Seorahi	C	C	C	C	NA	NA	C	C

NA – Trial not Allotted, C – Trial Conducted, NC– Not Conducted

5.1. ADVANCED VARIETAL TRIAL (EARLY) - II PLANT CROP

Centers (6)	Bethuadahari, Buralikson, Gorakhpur, Motipur, Pusa and Seorahi
Entries (3)	CoP 13437, CoSe 13451 and CoSe 13452
Standards (3)	CoLk 94184, CoSe 95422 and CoSe 01421
Design	RBD
Replications	Four
Plot size	Gross : 6m x 8r x 0.90m Net : 5m x 6r x 0.90m
Seed rate	12 buds per meter
Date of planting	February - March, 2018
Crop duration	10 months

Results of the previous year:

The AVT (Early) I Plant trial was conducted with three test entries and three standards in five centres except Gorakhpur. CoLk 94184 was the better standard for commercial cane sugar yield (8.73 t/ha) and cane yield (74.34 t/ha). CoSe 13451 (9.24 t/ha) ranked top for CCS yield and recorded >10% improvement over best standard for CCS yield at four locations followed by CoSe 13452 (2) and CoP 13437 (1). All the test entries showed >10% improvement over better standard at Seorahi and Pusa centers. CoSe 13451 (77.19 t/ha) ranked top for cane yield across locations followed by CoSe 13452 (75.14 t/ha). CoSe 13451 recorded >10% improvement and significantly higher yield over better standard at three locations followed by CoSe 13452 (2) and CoP 13437 (1). CoSe 13452 (12.13%) ranked top based on mean CCS % across locations. CoSe 13451 (12.00%) and CoP 13437 (11.95%) ranked second and third position respectively. For sucrose %, none of the test entries recorded >5% improvement over best standard in the zone. CoSe 13452 (17.47%) ranked top position based on mean sucrose % across locations followed by CoP 13437 (17.21%) and CoSe 13451 (17.20%).

Results of the current year:

The data on cane yield and juice quality of three test entries and three standards are presented in tables 5.1.1 to 5.1.20. Gorakhpur centre did not conduct the trial. CoLk 94184 was the best standard for commercial cane sugar yield (10.05 t/ha), cane yield (78.09 t/ha), CCS % (13.01) and juice sucrose % (18.71). CoSe 13451 (10.18 t/ha) ranked first for CCS (t/ha) followed by CoP 13437 (9.53 t/ha) in the zone and were significantly superior over the best standard at Seorahi (CoLk 94184). CoSe 13451 (81.04 t/ha) was the top yielder and recorded 10 per cent improvement in yield over the best standard at Buralikson (CoSe 95422) only. CoSe 13452 recorded 10 per cent improvement over best standard at Seorahi (CoLk 94184). However, none of the entries recorded more than 10 per cent improvement over the best standard across locations for both CCS (t/ha) and cane yield. CoLk 94184 (13.01 %) was the best standard for CCS % and none of the test entries was found to be better than this standard. CoLk 94184 (18.71 %) was the best standard for juice sucrose % in the zone. None of the test entries was found to be better than this standard. Among the test entries, CoSe 13451 performed better for commercial cane sugar yield and cane yield. Overall, none of the test entries was identified as qualifying entry across the locations in the zone.

Table 5.1.1. CCS at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuadahari	Buralikson	Mean	Overall rank
1	CoP 13437	11.28*	9.23	8.71	8.86	9.55	9.53	3
2	CoSe 13451	11.70*	9.54	8.98	8.81	11.85	10.18	1
3	CoSe 13452	12.33*	7.06	8.41	8.33	8.93	9.01	
	Standards							
1	CoLk 94184	10.97	10.50	8.28	9.57	10.91	10.05	2
2	CoSe 95422	9.74	6.30	8.07	7.07	11.24	8.48	
3	CoSe 01421	9.89	8.02	8.65	7.65	-	8.55	
	GM	10.99	8.44	8.52	8.38	10.50		
	SE	0.03	0.31	0.12	0.25	1.01		
	CD	0.08	0.94	0.39	0.76	2.11		
	CV	5.28	7.36	3.04	6.00	13.42		
	Qualifying entries at each location							
	1	CoSe 13452	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

No. of locations where an entry recorded >10% improvement: CoSe 13452 (1)

Performance across the locations:

CoLk 94184 (10.05 t/ha) was the best standard for commercial cane sugar yield (t/ha). CoSe 13451 (10.18 t/ha) ranked first followed by CoP 13437 (9.53 t/ha) in the zone as well as was significantly superior over the best standard at Seorahi (CoLk 94184). None of the entries recorded more than 10 per cent improvement over the best standard for CCS (t/ha) across locations.

Table 5.1.2. Cane Yield at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralikson	Mean	Overall rank
1	CoP 13437	86.67*	78.08	73.80	70.95	71.22	76.14	3
2	CoSe 13451	88.00*	76.35	75.71	72.02	93.11	81.04	1
3	CoSe 13452	91.78*	67.93	71.54	71.72	71.23	74.84	
	Standards							
1	CoLk 94184	81.67	83.06	70.82	75.01	79.89	78.09	2
2	CoSe 95422	74.33	56.46	69.78	61.77	84.05	69.28	
3	CoSe 01421	75.88	64.15	73.20	62.34	-	68.89	
	GM	83.06	71.01	72.48	68.97	79.90		
	SE	1.60	1.90	1.05	2.05	7.23		
	CD	4.83	5.79	3.16	6.17	15.05		
	CV	3.88	5.36	2.89	5.94	12.50		
Qualifying entries at each location								
	1	CoSe 13452	-	-	-	CoSe 13451	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

No. of locations where an entry recorded >10% improvement: CoSe 13452 (1), CoSe 13451 (1)

Performance across the locations:

CoLk 94184 (78.09 t/ha) was the best standard for cane yield in the zone. CoSe 13451 (81.04 t/ha) was the top yielder and recorded 10 per cent improvement in yield over the best standard at Buralikson (CoSe 95422) as well as was significantly superior to the best standard at Seorahi (CoLk 94184). CoP 13437 (76.14 t/ha) ranked third in the zone and recorded significantly superior performance over the best standard (CoLk 94184) at Seorahi. CoSe 13452 recorded 10 per cent improvement over best standard at Seorahi (CoLk 94184). None of the entries recorded more than 10 per cent improvement over the best standard across locations.

Table 5.1.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuadahari	Buralikson	Mean	Overall rank
1	CoP 13437	13.00	12.17	11.81	12.50	13.37	12.57	3
2	CoSe 13451	13.30	12.50	11.86	12.24	12.73	12.53	
3	CoSe 13452	13.43	12.48	11.76	11.62	12.52	12.36	
	Standards							
1	CoLk 94184	13.43	13.50	11.70	12.76	13.64	13.01	1
2	CoSe 95422	13.11	12.23	11.57	11.46	13.32	12.34	
3	CoSe 01421	13.04	13.83	11.82	12.28	-	12.74	2
	GM	13.22	12.79	11.75	12.14	13.12		
	SE	0.14	0.17	0.07	-	0.33		
	CD	0.42	0.53	-	NS	0.70		
	CV	2.13	2.71	1.25	5.87	3.62		
	Qualifying entries at each location							
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations:

CoLk 94184 (13.01 %) was the best standard for CCS and none of the test entries was found to be better than this standard. Among the test entries, CoP 13437 (12.57 %) recorded highest CCS across the locations.

Table 5.1.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuadahari	Buralikson	Mean	Overall rank
1	CoP 13437	18.82	17.51	17.23	18.03	18.56	18.03	
2	CoSe 13451	19.19	17.99	17.64	17.64	17.90	18.07	3
3	CoSe 13452	19.43	18.09	17.70	16.75	17.69	17.93	
	Standards							
1	CoLk 94184	19.37	19.53	17.59	18.33	18.75	18.71	1
2	CoSe 95422	18.88	17.75	16.81	16.57	18.40	17.68	
3	CoSe 01421	18.78	19.93	17.46	17.75	-	18.48	2
	GM	19.08	18.47	17.41	17.51	18.26		
	SE	0.19	0.20	0.15	0.51	0.39		
	CD	0.56	0.61	0.46	1.55	0.82		
	CV	1.96	2.18	1.79	5.88	3.04		
	Qualifying entries at each locations							
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations:

CoLk 94184 (18.71 %) was the best standard for juice sucrose in the zone. None of the test entries was found to be better than this standard. Among the test entries, CoSe 13451 (18.07 %) recorded the highest juice sucrose across the locations.

Table 5.1.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	21.32	19.63	19.86	20.27	20.59	20.33
2	CoSe 13451	21.61	20.18	21.11	19.82	20.42	20.63
3	CoSe 13452	22.00	20.55	21.67	18.83	19.94	20.60
	Standards						
1	CoLk 94184	21.80	22.13	21.51	20.45	20.19	21.22
2	CoSe 95422	21.20	20.25	19.21	18.72	20.47	19.97
3	CoSe 01421	21.10	22.40	20.61	20.06	-	21.04
	GM	21.51	20.86	20.66	19.69	20.32	
	SE	0.18	0.19	0.38	0.58	0.49	
	CD	0.55	0.58	1.16	1.74	1.02	
	CV	1.70	1.84	6.48	5.87	3.41	

Table 5.1.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	88.18	89.25	86.80	88.94	92.02	89.04
2	CoSe 13451	88.79	89.15	83.65	89.00	89.18	87.95
3	CoSe 13452	88.32	87.98	81.67	88.95	88.40	87.06
	Standards						
1	CoLk 94184	88.84	88.43	81.94	89.63	94.43	88.65
2	CoSe 95422	89.05	88.88	87.55	88.51	89.50	88.70
3	CoSe 01421	89.02	88.90	84.72	88.48		87.78
	GM	88.70	88.77	84.39	88.92	90.71	
	SE	0.28	0.44	0.93	-	1.85	
	CD	0.83	1.34	2.82	NS	3.86	
	CV	0.62	1.00	2.22	6.19	2.91	

Table 5.1.7. Pol % cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	13.95	14.09	15.11	-	-	14.38
2	CoSe 13451	14.21	14.24	15.67	-	-	14.71
3	CoSe 13452	14.42	12.35	15.52	-	-	14.10
	Standards				-	-	
1	CoLk 94184	14.35	14.86	15.28	-	-	14.83
2	CoSe 95422	14.02	13.18	15.23	-	-	14.14
3	CoSe 01421	13.94	14.93	14.86	-	-	14.58
	GM	14.15	13.94	15.28	-	-	
	SE	-	0.40	0.18	-	-	
	CD	-	1.20	0.55	-	-	
	CV	-	5.68	1.98	-	-	

Table 5.1.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	56.94	58.30	62.33	-	-	59.19
2	CoSe 13451	59.03	58.50	65.65	-	-	61.06
3	CoSe 13452	59.85	57.50	65.04	-	-	60.80
	Standards				-	-	
1	CoLk 94184	56.86	56.60	59.85	-	-	57.77
2	CoSe 95422	56.58	57.30	65.70	-	-	59.86
3	CoSe 01421	58.27	59.05	64.71	-	-	60.68
	GM	57.92	57.88	63.88	-	-	
	SE	-	1.49	1.01	-	-	
	CD	-	4.50	3.07	-	-	
	CV	-	5.16	3.19	-	-	

Table 5.1.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	13.52	12.49	12.35	-	-	12.79
2	CoSe 13451	13.15	12.97	11.96	-	-	12.69
3	CoSe 13452	13.05	13.55	12.28	-	-	12.96
	Standards				-	-	
1	CoLk 94184	13.08	14.97	12.93	-	-	13.66
2	CoSe 95422	12.94	13.52	12.22	-	-	12.89
3	CoSe 01421	13.02	12.21	12.36	-	-	12.53
	GM	13.13	13.29	12.35	-	-	
	SE	-	0.23	0.20	-	-	
	CD	-	0.69	-	-	-	
	CV	-	3.47	3.38	-	-	

Table 5.1.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	134.00	115.20	125.30	134.88	132.89	128.45
2	CoSe 13451	128.00	105.70	114.33	130.35	92.22	114.12
3	CoSe 13452	138.00	101.23	94.47	133.75	91.00	111.69
	Standards						
1	CoLk 94184	135.00	112.93	112.23	136.42	129.06	125.13
2	CoSe 95422	116.00	103.10	93.85	110.91	140.00	112.77
3	CoSe 01421	111.00	98.63	133.69	116.59	-	114.98
	GM	127.00	106.13	112.31	127.15	117.03	
	SE	1.78	3.05	16.16	3.85	10.52	
	CD	5.39	9.29	-	11.59	21.87	
	CV	2.81	5.76	24.92	6.05	12.36	

Table 5.1.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	217.00	281.75	237.50	231.60	232.30	240.03
2	CoSe 13451	221.00	233.33	260.00	262.85	226.05	240.65
3	CoSe 13452	225.00	198.92	275.00	269.32	217.40	237.13
	Standards						
1	CoLk 94184	213.00	228.42	305.00	279.20	250.50	255.22
2	CoSe 95422	211.00	182.42	245.00	214.92	231.75	217.02
3	CoSe 01421	206.00	192.00	280.00	234.82	-	228.21
	GM	215.50	219.47	267.08	248.79	231.60	
	SE	0.03	3.29	13.53	7.12	7.31	
	CD	0.09	10.01	40.80	21.45	15.20	
	CV	2.86	3.00	10.13	5.72	4.43	

Table 5.1.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	2.20	2.23	2.15	2.00	2.38	2.19
2	CoSe 13451	2.20	2.81	2.32	2.20	2.51	2.41
3	CoSe 13452	2.30	2.78	2.67	2.28	2.63	2.53
	Standards						
1	CoLk 94184	2.10	2.38	2.12	2.25	2.55	2.28
2	CoSe 95422	2.10	1.97	2.25	1.97	2.51	2.16
3	CoSe 01421	2.00	2.10	2.30	2.20	-	2.15
	GM	2.15	2.38	2.30	2.15	2.52	
	SE	0.05	0.06	0.07	0.06	0.08	
	CD	0.14	0.18	0.22	0.18	0.17	
	CV	4.47	5.06	6.48	5.69	4.68	

Table 5.1.13. Single Cane Weight (kg.) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	0.76	0.68	0.67	0.53	1.19	0.77
2	CoSe 13451	0.80	0.72	0.97	0.87	1.14	0.90
3	CoSe 13452	0.82	0.67	1.30	0.93	1.24	0.99
	Standards						
1	CoLk 94184	0.68	0.74	0.95	0.87	1.08	0.86
2	CoSe 95422	0.66	0.55	0.96	0.67	1.04	0.77
3	CoSe 01421	0.64	0.65	1.09	0.78	-	0.79
	GM	0.72	0.67	0.99	0.77	1.14	
	SE	0.01	0.03	0.10	0.02	0.10	
	CD	0.04	0.09	0.32	0.06	0.20	
	CV	3.34	8.79	21.55	5.21	11.62	

Table 5.1.14. CCS (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	11.64	11.79	11.49	10.53	11.16	11.32
2	CoSe 13451	11.22	11.87	11.64	10.64	9.00	10.87
3	CoSe 13452	11.89	10.44	10.24	10.57	11.29	10.89
	Standards						
1	CoLk 94184	12.04	12.63	11.65	11.09	11.60	11.80
2	CoSe 95422	11.98	11.15	11.47	10.46	12.00	11.41
3	CoSe 01421	11.84	12.49	11.74	10.74	-	11.70
	GM	11.77	11.73	11.37	10.67	11.01	
	SE	0.08	0.37	0.23	-	0.49	
	CD	0.25	1.11	0.69	NS	1.01	
	CV	1.39	6.24	4.07	6.25	6.10	

Table 5.1.15. Sucrose (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	16.99	17.08	16.63	15.53	15.63	16.37
2	CoSe 13451	16.38	17.36	16.84	15.70	14.10	16.08
3	CoSe 13452	17.30	15.16	17.47	15.56	15.39	16.18
	Standards						
1	CoLk 94184	17.47	18.34	17.01	16.37	16.24	17.09
2	CoSe 95422	17.43	16.17	16.53	15.48	16.71	16.46
3	CoSe 01421	17.19	18.05	17.15	15.86	-	17.06
	GM	17.13	17.03	16.94	15.75	15.61	
	SE	0.11	0.47	0.36	-	0.55	
	CD	0.34	1.42	1.10	NS	1.15	
	CV	1.33	5.47	4.43	5.37	4.96	

Table 5.1.16. Brix (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	19.64	19.38	18.87	18.26	17.50	18.73
2	CoSe 13451	18.90	20.10	19.07	18.50	16.68	18.65
3	CoSe 13452	19.84	17.30	16.53	18.25	16.25	17.63
	Standards						
1	CoLk 94184	19.91	20.93	19.62	19.29	18.17	19.58
2	CoSe 95422	19.98	18.43	18.57	18.35	18.22	18.71
3	CoSe 01421	19.59	20.40	19.82	18.72	-	19.63
	GM	19.64	19.42	18.75	18.56	17.36	
	SE	0.15	0.46	0.52	-	0.53	
	CD	0.45	1.40	1.57	NS	1.09	
	CV	1.50	4.75	5.57	5.95	4.24	

Table 5.1.17. Purity (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	86.75	88.13	88.27	85.04	89.29	87.50
2	CoSe 13451	86.68	88.55	88.36	84.86	84.81	86.65
3	CoSe 13452	87.22	86.13	89.34	85.26	94.73	88.54
	Standards						
1	CoLk 94184	87.69	87.60	86.80	84.86	89.36	87.26
2	CoSe 95422	87.20	87.70	89.10	84.35	91.78	88.03
3	CoSe 01421	87.72	88.53	86.60	84.72	-	86.89
	GM	87.21	87.77	88.08	84.85	89.99	
	SE	0.30	0.80	0.82	-	2.25	
	CD	0.90	2.41	-	NS	4.69	
	CV	0.69	1.82	1.88	6.11	3.54	

Table 5.1.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	-	155.70	161.69	147.88	141.50	151.69
2	CoSe 13451	-	148.30	127.16	142.11	102.76	130.08
3	CoSe 13452	-	142.46	109.64	146.62	83.00	120.43
	Standards	-					
1	CoLk 94184	-	148.23	162.43	146.27	137.00	148.48
2	CoSe 95422	-	137.71	103.23	123.74	149.75	128.61
3	CoSe 01421	-	125.65	161.57	127.06	-	138.09
	GM	-	143.01	137.62	138.95	122.80	
	SE	-	2.44	13.31	4.21	9.18	
	CD	-	7.41	41.95	12.68	19.10	
	CV	-	3.41	16.75	6.06	10.06	

Table 5.1.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	185.00	125.10	206.58	139.22	139.00	158.98
2	CoSe 13451	180.00	115.23	178.71	133.96	100.00	141.58
3	CoSe 13452	188.00	119.50	141.83	137.87	109.75	139.39
	Standards						
1	CoLk 94184	187.00	120.60	184.75	137.72	134.25	152.86
2	CoSe 95422	170.00	118.18	124.69	118.71	145.75	135.47
3	CoSe 01421	165.00	102.78	207.32	120.77	-	148.97
	GM	179.17	116.90	173.98	131.38	125.75	
	SE	1.82	1.72	12.48	3.96	10.51	
	CD	5.51	5.22	39.33	11.95	21.86	
	CV	2.04	2.94	12.43	6.04	11.85	

Table 5.1.20. Germination (%) at 45 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralikson	Mean
1	CoP 13437	42.22	39.15	34.67	33.62	57.25	41.38
2	CoSe 13451	43.68	35.60	34.21	32.08	47.75	38.66
3	CoSe 13452	48.89	34.30	32.02	37.04	47.00	39.85
	Standards						
1	CoLk 94184	46.11	38.70	43.64	40.08	53.75	44.46
2	CoSe 95422	40.83	35.50	49.16	38.31	59.75	44.71
3	CoSe 01421	39.03	31.15	52.55	34.45	-	39.30
	GM	43.46	35.73	41.04	35.93	53.10	
	SE	1.09	1.10	2.24	1.03	2.73	
	CD	3.29	3.35	6.75	3.09	5.69	
	CV	5.03	6.16	10.91	5.71	7.19	

Table 5.1.21 Assessment of performance of entries by monitoring team

Entry	Seorahi	Pusa	Motipur	Bethuadhari	Buralikson
CoP 13437	Average	Very good	Average	Average	Very good
CoSe 13451	Very good	Very good	Very good	Very good	Good
CoSe 13452	Excellent	Good	Very good	Excellent	Average
Standards					
CoLk 94184	Good	Good	Excellent	Very good	Not Planted
CoSe 95422	Average	Very good	Excellent	Very good	Very good
CoSe 01421	Poor	Very good	Good	Good	Not Planted

5.2. ADVANCED VARIETAL TRIAL (EARLY) - RATOON

Centers (6)	Bethuadahari, Buralikson, Gorakhpur, Motipur, Pusa and Seorahi
Entries (3)	CoP 13437, CoSe 13451 and CoSe 13452
Standards (3)	CoLk 94184, CoSe 95422 and CoSe 01421
Design	RBD
Replications	Four
Plot size	Gross : 6m x 8r x 0.90m Net : 5m x 6r x 0.90m
Crop duration	9 months

Results of the previous year:

The AVT (Early) I Plant trial was conducted with three test entries and three standards in five centres except Gorakhpur. CoLk 94184 was the better standard for commercial cane sugar yield (8.73 t/ha) and cane yield (74.34 t/ha). CoSe 13451(9.24 t/ha) ranked top for CCS yield and recorded >10% improvement over best standard for CCS yield at four locations followed by CoSe 13452 (2) and CoP 13437 (1). All the test entries showed >10% improvement over better standard at Seorahi and Pusa centers. CoSe 13451(77.19 t/ha) ranked top for cane yield across locations followed by CoSe 13452 (75.14 t/ha). CoSe 13451 recorded >10% improvement and significantly higher yield over better standard at three locations followed by CoSe 13452 (2) and CoP 13437 (1). CoSe13452 (12.13%) ranked top based on mean CCS % across locations. CoSe 13451 (12.00%) and CoP 13437 (11.95%) ranked second and third position respectively. For sucrose %, none of the test entries recorded >5% improvement over best standard in the zone. CoSe 13452 (17.47%) ranked top position based on mean sucrose % across locations followed by CoP 13437 (17.21%) and CoSe 13451 (17.20%).

Results of the current year:

The data on cane yield and juice quality of three test entries and three standards are presented in tables 5.2.1 to 5.2.15. Gorakhpur centre did not conduct the trial. CoLk 94184 was the best standard for commercial cane sugar yield (8.41 t/ha), cane yield (69.89 t/ha), CCS % (12.07) and juice sucrose % (17.78). CoP 13437 (8.78 t/ha) ranked first in the zone with more than 10 per cent improvement in CCS (t/ha) and significantly superior over the respective best standard at both Seorahi (CoLk 94184) and Pusa (CoSe 95422). CoSe 13452 (8.73 t/ha) ranked second with 10 per cent improvement and significantly superior over best standard at Seorahi (CoLk 94184) and Pusa (CoSe 95422). CoSe 13452 (74.53 t/ha) was the top ranking entry for cane yield and recorded 10 per cent improvement as well as significantly superior over the best standard at Seorahi (CoLk 94184). CoSe 13451 (73.35 t/ha) was ranked second in the zone and recorded 10 per cent improvement as well as significantly superior over the best standards at both Seorahi (CoLk 94184) and Pusa (CoSe 95422). None of the test entries recorded more than 10 per cent improvement over the best standard across locations for both CCS (t/ha) and cane yield. Among the test entries, CoP 13437 (12.13 %) was the top ranking entry for CCS and numerically superior over best standard (CoLk 94184) across locations. For sucrose %, CoP 13437 (17.84 %) was the top ranking entry and numerically superior over the best standard (CoLk 94184) across locations as well as significantly superior over the best standard (CoSe 95422) at Seorahi. None of the entries recorded more than 5 per cent improvement over the best standard at individual locations as well as across locations for both CCS % and Sucrose %. Among the test entries, CoP 13437 performed better for commercial cane sugar yield, CCS % and sucrose %. Overall, none of the entries found as qualifying entry across locations in the zone.

Table 5.2.1. CCS at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean	Overall rank
1	CoP 13437	10.11*	11.05*	6.87	8.19	7.70	8.78	1
2	CoSe 13451	9.40*	10.66*	6.53	8.21	8.53	8.67	3
3	CoSe 13452	9.98*	10.27*	7.23	7.91	8.26	8.73	2
	Standards							
1	CoLk 94184	8.88	8.29	6.92	8.90	9.05	8.41	
2	CoSe 95422	8.27	9.14	6.59	6.63	7.92	7.71	
3	CoSe 01421	8.23	7.71	7.20	-	-	7.71	
	GM	9.15	9.52	6.89	7.97	8.29		
	SE	0.02	0.24	0.26	0.44	0.82		
	CD	0.07	0.72	-	1.32	1.71		
	CV	5.04	4.99	7.70	6.39	13.47		
	Qualifying entries at each location							
	1	CoP 13437	CoP 13437	-	-	-	-	
	2	CoSe 13452	CoSe 13451	-	-	-	-	
	3	-	CoSe 13452	-	-	-	-	

No. of locations where an entry recorded >10% improvement: CoSe 12437 (2), CoSe 13452 (2) and CoSe 13451 (1)

Performance across the locations:

CoLk 94184 (8.41 t/ha) was the best standard for commercial cane sugar yield (t/ha). CoP 13437 (8.78 t/ha) ranked first in the zone with more than 10 per cent improvement in CCS (t/ha) and significantly superior over the respective best standard at Seorahi (CoLk 94184) and Pusa (CoSe 95422). CoSe 13452 (8.73 t/ha) ranked second with 10 per cent improvement and significantly superior over the best standard at Seorahi (CoLk 94184) and Pusa (CoSe 95422). None of the test entries recorded more than 10 per cent improvement over the best standard across locations.

Table 5.2.2. Cane Yield at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean	Overall rank
1	CoP 13437	83.99*	88.51*	58.53	63.65	67.75	72.49	3
2	CoSe 13451	86.67*	85.63*	56.31	64.90	73.25	73.35	2
3	CoSe 13452	88.89*	81.52*	61.80	65.45	75.00	74.53	1
	Standards							
1	CoLk 94184	78.00	65.09	58.56	67.80	80.00	69.89	
2	CoSe 95422	70.11	75.68	60.04	56.08	71.25	66.63	
3	CoSe 01421	71.22	63.49	61.95	-	-	65.55	
	GM	79.81	76.65	59.53	63.58	73.45		
	SE	1.59	1.72	1.54	2.15	6.05		
	CD	4.80	5.25	-	6.45	12.59		
	CV	3.93	4.50	5.17	5.44	11.30		
	Qualifying entries at each location							
	1	CoSe 13452	CoP 13437	-	-	-	-	
	2	CoSe 13451	CoSe 13451	-	-	-	-	
	3	-	-	-	-	-	-	

No. of locations where an entry recorded >10% improvement: CoSe 13451 (2), CoSe 13452 (1), and CoSe 12437 (1)

Performance across the locations:

CoLk 94184 (69.89 t/ha) was the best standard for cane yield in the zone. CoSe 13452 (74.53 t/ha) was the top ranking entry for cane yield and recorded 10 per cent improvement as well as significantly superior over the best standard at Seorahi (CoLk 94184). CoSe 13451 (73.35 t/ha) was ranked second in the zone and recorded 10 per cent improvement over the best standard as well as significantly superior at both Seorahi (CoLk 94184) and Pusa (CoSe 95422). None of the test entries recorded more than 10 per cent improvement over the best standard across locations.

Table 5.2.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean	Overall rank
1	CoP 13437	12.04	12.60	11.74	12.88	11.39	12.13	1
2	CoSe 13451	10.85	12.45	11.59	12.66	11.67	11.84	3
3	CoSe 13452	11.23	12.60	11.70	12.10	10.94	11.71	
	Standards							
1	CoLk 94184	11.38	12.74	11.81	13.13	11.30	12.07	2
2	CoSe 95422	11.74	12.09	11.62	11.84	11.05	11.67	
3	CoSe 01421	11.62	12.14	10.98	-	-	11.58	
	GM	11.48	12.44	11.57	12.52	11.27		
	SE	0.16	0.13	0.30	0.37	0.45		
	CD	0.49	0.40	-	1.11	0.94		
	CV	2.82	2.11	5.22	5.25	5.63		
	Qualifying entries at each location							
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations:

CoLk 94184 (12.07 %) was the best standard for CCS % in the zone. Among the test entries, CoP 13437 (12.13 %) was the top ranking entry and numerically superior over the best standard (CoLk 94184) across locations. None of the entries recorded more than 5 per cent improvement over the best standard at individual locations as well as across locations.

Table 5.2.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralik son	Mean	Overall rank
1	CoP 13437	17.67*	18.33	17.41	18.46	17.31	17.84	1
2	CoSe 13451	15.86	17.92	17.40	18.08	17.43	17.34	3
3	CoSe 13452	16.35	18.32	17.76	17.34	16.81	17.32	
	Standards							
1	CoLk 94184	16.56	18.66	17.82	18.72	17.13	17.78	2
2	CoSe 95422	17.02	17.39	17.52	17.03	17.07	17.21	
3	CoSe 01421	16.88	17.48	17.58			17.31	
	GM	16.72	18.02	17.58	17.93	17.15		
	SE	0.21	0.19	0.12	-	0.34		
	CD	0.64	0.57	-	NS	0.70		
	CV	2.54	2.09	1.45	5.64	2.75		
	Qualifying entries at each location							
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations:

CoLk 94184 (17.78 %) was the best standard for juice sucrose in the zone. Among the test entries, CoP 13437 (17.84 %) was the top ranking entry and numerically superior over the best standard (CoLk 94184) across locations as well as significantly superior over the best standard (CoSe 95422) at Seorahi. None of the entries recorded more than 5 per cent improvement over the best standard at individual locations as well as across locations.

Table 5.2.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	20.17	21.00	20.73	20.49	22.02	20.88
2	CoSe 13451	18.36	20.10	21.18	19.90	22.12	20.33
3	CoSe 13452	18.77	20.95	22.06	19.25	22.37	20.68
	Standards						
1	CoLk 94184	18.99	21.68	21.90	20.54	22.27	21.08
2	CoSe 95422	19.39	19.48	23.71	19.03	22.92	20.91
3	CoSe 01421	19.30	19.60	21.75	-	-	20.22
	GM	19.16	20.47	21.89	19.84	22.34	
	SE	0.22	0.26	1.12	-	0.31	
	CD	0.67	0.79	-	NS	0.65	
	CV	2.33	2.53	10.32	6.33	1.99	

Table 5.2.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	87.60	87.25	84.05	90.09	78.68	85.53
2	CoSe 13451	86.39	89.15	82.21	90.85	78.83	85.49
3	CoSe 13452	87.12	87.45	80.52	90.07	75.24	84.08
	Standards						
1	CoLk 94184	87.20	87.10	81.37	91.13	76.92	84.74
2	CoSe 95422	87.81	89.30	76.06	89.49	74.51	83.43
3	CoSe 01421	87.48	89.20	80.86	-	-	85.85
	GM	87.27	88.24	80.85	90.33	76.84	
	SE	0.23	0.45	2.92	-	2.20	
	CD	0.70	1.36	-	NS	4.58	
	CV	0.53	1.01	7.24	5.42	4.01	

Table 5.2.7. Pol % cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	13.10	15.08	15.20	-	-	14.46
2	CoSe 13451	11.78	14.67	15.16	-	-	13.87
3	CoSe 13452	12.12	14.89	15.43	-	-	14.15
	Standards				-	-	
1	CoLk 94184	12.31	15.09	15.27	-	-	14.22
2	CoSe 95422	12.52	14.15	15.56	-	-	14.08
3	CoSe 01421	12.62	14.56	15.30	-	-	14.16
	GM	12.41	14.74	15.32	-	-	
	SE	-	0.16	0.14	-	-	
	CD	-	0.47	0.47	-	-	
	CV	-	2.10	1.69	-	-	

Table 5.2.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	55.19	60.10	46.38	-	-	53.89
2	CoSe 13451	56.00	58.50	58.82	-	-	57.77
3	CoSe 13452	57.96	57.30	59.10	-	-	58.12
	Standards						
1	CoLk 94184	54.98	55.10	52.50	-	-	54.19
2	CoSe 95422	55.04	56.80	56.01	-	-	55.95
3	CoSe 01421	56.17	58.70	48.40	-	-	54.42
	GM	62.56	57.75	53.54	-	-	
	SE	-	1.76	2.52	-	-	
	CD	-	1.05	7.61	-	-	
	CV	-	6.10	9.43	-	-	

Table 5.2.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	13.36	12.73	13.19	-	-	13.09
2	CoSe 13451	13.08	13.15	12.92	-	-	13.05
3	CoSe 13452	13.02	13.70	12.72	-	-	13.15
	Standards						
1	CoLk 94184	13.28	14.15	13.40	-	-	13.61
2	CoSe 95422	13.22	13.65	12.67	-	-	13.18
3	CoSe 01421	13.14	12.30	12.67	-	-	12.70
	GM	13.18	13.28	12.93	-	-	
	SE	-	0.35	0.20	-	-	
	CD	-	1.05	-	-	-	
	CV	13.18	5.21	3.19	-	-	

Table 5.2.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	129.00	105.27	90.77	128.00	62.67	103.14
2	CoSe 13451	124.00	98.23	60.68	126.06	68.33	95.46
3	CoSe 13452	133.00	95.17	71.28	128.31	63.11	98.17
	Standards						
1	CoLk 94184	130.00	98.50	98.05	126.53	70.45	104.71
2	CoSe 95422	107.00	101.10	69.44	107.77	71.67	91.40
3	CoSe 01421	110.00	88.70	157.49	-	-	118.73
	GM	122.17	97.83	91.29	123.33	67.25	
	SE	1.71	2.01	18.48	4.06	6.12	
	CD	5.16	6.12	58.25	12.19	12.73	
	CV	2.80	4.12	35.08	6.55	12.73	

Table 5.2.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	210.00	276.69	158.75	217.25	194.75	211.49
2	CoSe 13451	211.00	227.92	157.50	233.05	212.50	208.39
3	CoSe 13452	212.00	197.17	165.00	246.67	223.00	208.77
	Standards						
1	CoLk 94184	201.00	225.25	182.50	257.47	202.00	213.64
2	CoSe 95422	200.00	166.17	147.50	204.67	204.75	184.62
3	CoSe 01421	204.00	173.75	164.25	-	-	180.67
	GM	206.33	211.16	162.58	231.82	207.40	
	SE	0.04	4.76	9.37	7.12	17.74	
	CD	0.13	14.48	-	21.35	36.91	
	CV	4.22	4.51	11.53	5.63	11.93	

Table 5.2.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	2.20	1.99	1.92	1.93	2.20	2.05
2	CoSe 13451	2.20	2.43	2.32	2.04	2.45	2.29
3	CoSe 13452	2.30	2.55	2.42	2.15	2.43	2.37
	Standards						
1	CoLk 94184	2.10	2.21	2.17	2.16	2.35	2.20
2	CoSe 95422	2.00	2.03	1.97	1.88	2.25	2.03
3	CoSe 01421	2.00	2.06	2.35	-	-	2.14
	GM	2.13	2.21	2.19	2.03	2.34	
	SE	0.04	0.06	0.08	0.25	0.10	
	CD	0.13	0.19	0.24	0.75	0.21	
	CV	4.10	5.61	7.40	5.83	5.84	

Table 5.2.13. Single Cane Weight (kg.) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralik son	Mean
1	CoP 13437	0.75	0.84	0.44	0.45	0.94	0.68
2	CoSe 13451	0.78	0.87	0.67	0.65	1.04	0.80
3	CoSe 13452	0.81	0.86	0.75	0.67	1.15	0.85
	Standards						
1	CoLk 94184	0.67	0.66	0.60	0.63	1.03	0.72
2	CoSe 95422	0.64	0.75	0.46	0.50	1.01	0.67
3	CoSe 01421	0.65	0.72	0.66	-	-	0.68
	GM	0.72	0.78	0.60	0.58	1.03	
	SE	0.01	0.02	0.16	0.04	0.06	
	CD	0.02	0.07	-	0.12	0.13	
	CV	1.88	5.54	18.23	6.54	8.50	

Table 5.2.14. Number of Shoots ('000/ha) at 180 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralikson	Mean
1	CoP 13437	-	125.23	125.43	129.72	64.45	111.21
2	CoSe 13451	-	118.15	73.75	127.72	70.18	97.45
3	CoSe 13452	-	98.47	83.00	130.67	65.13	94.32
	Standards						
1	CoLk 94184	-	102.30	125.92	128.68	73.75	107.66
2	CoSe 95422	-	103.50	87.19	110.65	74.95	94.07
3	CoSe 01421	-	97.60	193.02	-	-	145.31
	GM	-	107.54	114.72	125.49	69.69	
	SE	-	2.23	18.79	3.42	5.76	
	CD	-	6.79	59.20	10.25	11.99	
	CV	-	4.15	28.36	5.32	11.56	

Table 5.2.15. Number of Tillers ('000/ha) at 90 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Buralikson	Mean
1	CoP 13437	176.00	83.12	144.18	131.92	62.68	119.58
2	CoSe 13451	169.00	75.33	70.92	128.46	68.48	102.44
3	CoSe 13452	178.00	65.21	73.87	131.49	63.60	102.43
	Standards						
1	CoLk 94184	176.00	81.25	205.35	130.51	72.20	133.06
2	CoSe 95422	151.00	70.10	120.25	112.70	72.88	105.39
3	CoSe 01421	155.00	63.15	283.17	-	-	167.11
	GM	167.50	73.03	149.62	127.02	67.97	
	SE	7.66	2.04	29.05	8.08	5.69	
	CD	3.02	6.22	91.53	24.25	11.84	
	CV	-	5.60	33.62	5.62	11.68	

Table 5.2.15 Assessment of performance of entries by monitoring team

Entry	Seorahi	Pusa	Motipur	Bethuadhari	Buralikson
CoP 13437	Good	Average	Good	Good	Good
CoSe 13451	Average	Poor	Poor	Very good	Average
CoSe 13452	Good	Poor	Very good	Good	Average
Standards					
CoLk 94184	Excellent	Good	Very good	Excellent	Not Planted
CoSe 95422	Average	Good	Excellent	Very good	Good
CoSe 01421	Poor	Poor	Good	Not Planted	Not Planted

**5.3. ADVANCED VARIETAL TRIAL (EARLY)
Mean of two plant and one ratoon crops (2017-19)**

In the North Central and North East zones, three early clones were evaluated along with three standards during the crop seasons 2017 – 19. The trial was conducted by five centres and Gorakhpur did not conduct the trial. Pooled data of two plant and one ratoon trials of five centres are presented in tables **5.3.1.** to **5.3.4.** and 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):

CoLk 94184 was the best standard for CCS yield (9.06 t/ha). Among the test entries, CoSe 13451 (9.36 t/ha) ranked top in the zone and it performed better in two locations (Seorahi and Pusa). In Seorahi centre, all the three entries viz., CoSe 13452 CoSe 13451 and CoP 13437 performed better over standard CoLk 94184.

Cane Yield (t/ha):

CoLk 94184 was the best standard for cane yield with 74.11 t/ha. CoSe 13451 (77.19 t/ha) was the top yielder followed by CoSe 13452 (74.84 t/ha) in the zone and both the test entries performed better in two locations (Seorahi and Pusa). In both Seorahi and Pusa centres, all the three entries viz., CoSe 13452 CoSe 13451 and CoP 13437 performed better than standard CoLk 94184.

Commercial Cane Sugar (%):

CoLk 94184 was the best standard with a mean CCS % of 12.28 and none of the test entries performed better than this standard.

Sucrose (%):

CoLk 94184 was the best standard with mean juice sucrose of 17.85 % and none of the test entries performed better than this standard in the zone.

Overall performance:

Based on the pooled mean of two plant and one ratoon crop in the zone, CoLk 94184 was the best standard for CCS (t/ha), cane yield (t/ha), CCS (%) and sucrose (%). Among the test entries, CoSe 13451 ranked top in the zone for CCS yield (9.36 t/ha) and for cane yield (77.19 t/ha) but was lower than the 110% of best standard CoLk 94184. For juice quality traits, CoLk 94184 was the best standard with a mean CCS % of 12.28 and juice sucrose of 17.85 % and none of the test entries performed better than this standard in the zone. From this trial, none of the test entries was identified as qualified entry across locations in the zone.

Table 5.3.1. CCS at harvest (t/ha) - Pooled data of two plant and one ratoon crops

S. No.	Entries	Seorahi				Gorakpur*				Pusa				Motipur			
		IP	II P	R	Mean	IP	II P	R	Mean	IP	II P	R	Mean	IP	II P	R	Mean
1	CoP 13437	10.16	11.28	10.11	10.52	-	-	-	-	10.23	9.23	11.05	10.17	8.47	8.71	6.87	8.02
2	CoSe 13451	10.55	11.70	9.40	10.55	-	-	-	-	9.93	9.54	10.66	10.04	9.79	8.98	6.53	8.43
3	CoSe 13452	10.59	12.33	9.98	10.97	-	-	-	-	9.58	7.06	10.27	8.97	9.61	8.41	7.23	8.42
	Standards																
1	CoLk 94184	9.45	10.97	8.88	9.77	-	-	-	-	8.54	10.50	8.29	9.11	8.74	8.28	6.92	7.98
2	CoSe 95422	8.93	9.74	8.27	8.98	-	-	-	-	8.15	6.30	9.14	7.86	8.49	8.07	6.59	7.72
3	CoSe 01421	9.83	9.89	8.23	9.32	-	-	-	-	8.25	8.02	7.71	7.99	6.50	8.65	7.20	7.45
	GM	9.92	10.99	9.15		-	-	-	-	9.11	8.44	9.52		8.60	8.52	6.89	
S. No.	Entries	Bethuadahari				Buralikson				GM (Wt. Aver.)	Rank						
		IP	II P	R	Mean	IP	II P	R	Mean								
1	CoP 13437	6.56	8.86	8.19	7.87	6.01	9.55	7.70	7.75	8.87							
2	CoSe 13451	10.55	8.81	8.21	9.19	5.36	11.85	8.53	8.58	9.36	1						
3	CoSe 13452	8.52	8.33	7.91	8.25	6.96	8.93	8.26	8.05	8.93	3						
	Standards																
1	CoLk 94184	8.20	9.57	8.90	8.89	-	10.91	9.05	9.98	9.06	2						
2	CoSe 95422	6.42	7.07	6.63	6.71	9.59	11.24	7.92	9.58	8.17							
3	CoSe 01421	-	7.65	-	7.65	-	-	-	-	8.15							
	GM	8.05	8.38	7.97		6.98	10.50	8.29									

* Trial not conducted

Table 5.3.2. Cane yield at harvest (t/ha) - Pooled data of two plant and one ratoon crops

S. No.	Entries	Seorahi				Gorakpur*				Pusa				Motipur			
		IP	II P	R	Mean	IP	II P	R	Mean	IP	II P	R	Mean	IP	II P	R	Mean
1	CoP 13437	83.00	86.67	83.99	84.55	-	-	-	-	87.74	78.08	88.51	84.78	74.15	73.80	58.53	68.83
2	CoSe 13451	84.89	88.00	86.67	86.52	-	-	-	-	83.47	76.35	85.63	81.82	82.62	75.71	56.31	71.55
3	CoSe 13452	89.11	91.78	88.89	89.93	-	-	-	-	78.80	67.93	81.52	76.08	82.64	71.54	61.80	71.99
	Standards																
1	CoLk 94184	80.67	81.67	78.00	80.11	-	-	-	-	67.41	83.06	65.09	71.85	74.56	70.82	58.56	67.98
2	CoSe 95422	73.67	74.33	70.11	72.70	-	-	-	-	75.43	56.46	75.68	69.19	73.37	69.78	60.04	67.73
3	CoSe 01421	79.44	75.88	71.22	75.51	-	-	-	-	71.68	64.15	63.49	66.44	54.99	73.20	61.95	63.38
	GM	81.80	83.06	79.81		-	-	-	-	77.42	71.01	76.65		73.72	72.48	59.53	
S. No.	Entries	Bethuadahari				Buralikson				GM (Wt. Aver.)	Rank						
		IP	II P	R	Mean	IP	II P	R	Mean								
1	CoP 13437	54.35	70.95	63.65	62.98	49.27	71.22	67.75	62.75	72.78							
2	CoSe 13451	90.78	72.02	64.90	75.90	44.21	93.11	73.25	70.19	77.19	1						
3	CoSe 13452	71.15	71.72	65.45	69.44	54.00	71.23	75.00	66.74	74.84	2						
	Standards																
1	CoLk 94184	74.71	75.01	67.80	72.51	-	79.89	80.00	79.95	74.11	3						
2	CoSe 95422	66.32	61.77	56.08	61.39	74.06	84.05	71.25	76.45	69.49							
3	CoSe 01421	-	62.34	-	62.34	-	-	-	-	67.72							
	GM	71.46	68.97	63.58		55.39	79.90	73.45									

* Trial not conducted

Table 5.3.3. CCS (%) at harvest - Pooled data of two plant and one ratoon crops

S. No.	Entries	Seorahi				Gorakpur*				Pusa				Motipur			
		IP	II P	R	Mean	IP	II P	R	Mean	IP	II P	R	Mean	IP	II P	R	Mean
1	CoP 13437	12.24	13.00	12.04	12.43	-	-	-	-	11.68	12.17	12.60	12.15	11.52	11.81	11.74	11.69
2	CoSe 13451	12.42	13.30	10.85	12.19	-	-	-	-	11.96	12.50	12.45	12.30	11.86	11.86	11.59	11.77
3	CoSe 13452	11.88	13.43	11.23	12.18	-	-	-	-	12.16	12.48	12.60	12.41	11.71	11.76	11.70	11.72
	Standards																
1	CoLk 94184	11.71	13.43	11.38	12.17	-	-	-	-	12.67	13.50	12.74	12.97	11.73	11.70	11.81	11.75
2	CoSe 95422	12.12	13.11	11.74	12.32	-	-	-	-	11.10	12.23	12.09	11.81	11.49	11.57	11.62	11.56
3	CoSe 01421	12.37	13.04	11.62	12.34	-	-	-	-	11.52	13.83	12.14	12.50	9.10	11.82	10.98	10.63
	GM	12.12	13.22	11.48		-	-	-	-	11.85	12.79	12.44		11.24	11.75	11.57	
S. No.	Entries	Bethuadahari				Buralikson				GM (Wt. Aver.)	Rank						
		IP	II P	R	Mean	IP	II P	R	Mean								
1	CoP 13437	12.12	12.50	12.88	12.50	12.21	13.37	11.39	12.32	12.22	2						
2	CoSe 13451	11.62	12.24	12.66	12.17	12.14	12.73	11.67	12.18	12.12	3						
3	CoSe 13452	12.02	11.62	12.10	11.91	12.90	12.52	10.94	12.12	12.07							
	Standards																
1	CoLk 94184	10.94	12.76	13.13	12.28	-	13.64	11.30	12.47	12.28	1						
2	CoSe 95422	9.66	11.46	11.84	10.99	12.96	13.32	11.05	12.44	11.82							
3	CoSe 01421	-	12.28	-	12.28	-	-	-	-	11.77							
	GM	11.27	12.14	12.52		12.55	13.12	11.27									

* Trial not conducted

Table 5.3.4. Sucrose (%) at harvest - Pooled data of two plant and one ratoon crops

S. No.	Entries	Seorahi				Gorakpur*				Pusa				Motipur			
		I P	II P	R	Mean	I P	II P	R	Mean	I P	II P	R	Mean	I P	II P	R	Mean
1	CoP 13437	17.61	18.82	17.67	18.03	-	-	-	-	16.90	17.51	18.33	17.58	17.16	17.23	17.41	17.27
2	CoSe 13451	17.93	19.19	15.86	17.66	-	-	-	-	17.20	17.99	17.92	17.70	17.34	17.64	17.40	17.46
3	CoSe 13452	17.13	19.43	16.35	17.64	-	-	-	-	17.54	18.09	18.32	17.98	17.36	17.70	17.76	17.61
	Standards																
1	CoLk 94184	16.97	19.37	16.56	17.63	-	-	-	-	18.37	19.53	18.66	18.85	17.28	17.59	17.82	17.56
2	CoSe 95422	17.53	18.88	17.02	17.81	-	-	-	-	16.15	17.75	17.39	17.10	17.06	16.81	17.52	17.13
3	CoSe 01421	17.75	18.78	16.88	17.80	-	-	-	-	16.70	19.93	17.48	18.04	13.01	17.46	17.58	16.02
	GM	17.49	19.08	16.72		-	-	-	-	17.14	18.47	18.02		16.54	17.41	17.58	
S. No.	Entries	Bethuadahari				Buralikson				GM (Wt. Aver.)	Rank						
		I P	II P	R	Mean	I P	II P	R	Mean								
1	CoP 13437	17.39	18.03	18.46	17.96	17.00	18.56	17.31	17.62	17.69	2						
2	CoSe 13451	16.62	17.64	18.08	17.45	16.89	17.90	17.43	17.41	17.54							
3	CoSe 13452	17.25	16.75	17.34	17.11	18.05	17.69	16.81	17.52	17.57	3						
	Standards																
1	CoLk 94184	15.66	18.33	18.72	17.57	-	18.75	17.13	17.94	17.85	1						
2	CoSe 95422	14.00	16.57	17.03	15.87	18.07	18.40	17.07	17.85	17.15							
3	CoSe 01421	-	17.75	-	17.75	-	-	-	-	17.20							
	GM	16.18	17.51	17.93		17.50	18.26	17.15									

* Trial not conducted

Fig: 5.3.1.Mean performance of entries in two plant and one ratoon crops - CCS at harvest (t/ha)

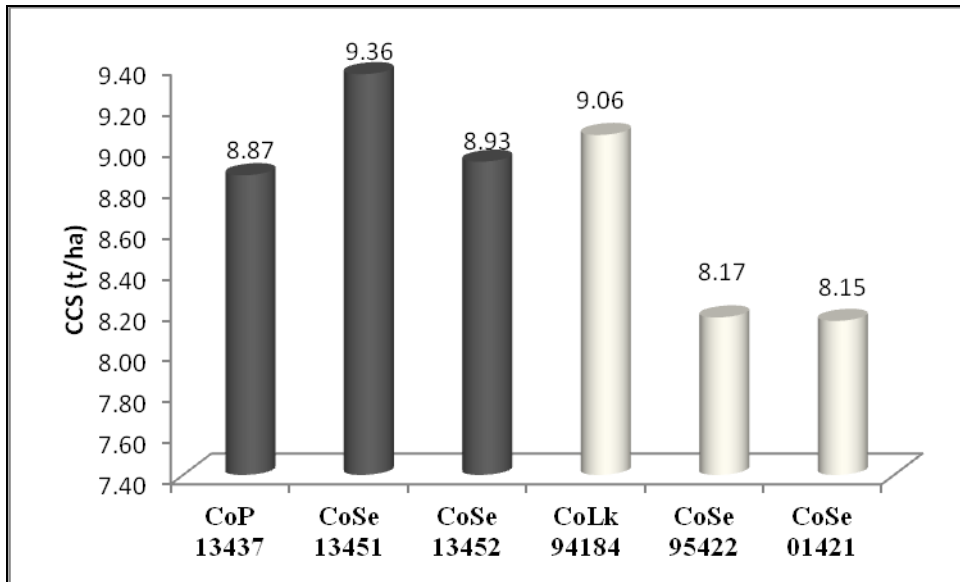


Fig: 5.3.2.Mean performance of entries in two plant and one ratoon crops- Cane yield at harvest(t/ha)

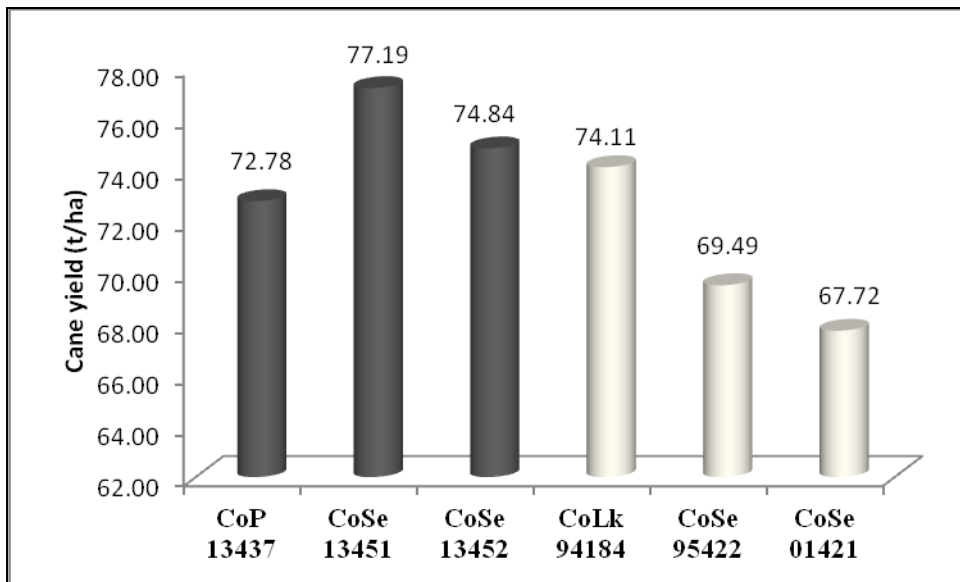


Fig 5.3.3. Mean performance of entries in two plant and one ratoon crops - CCS (%) at harvest

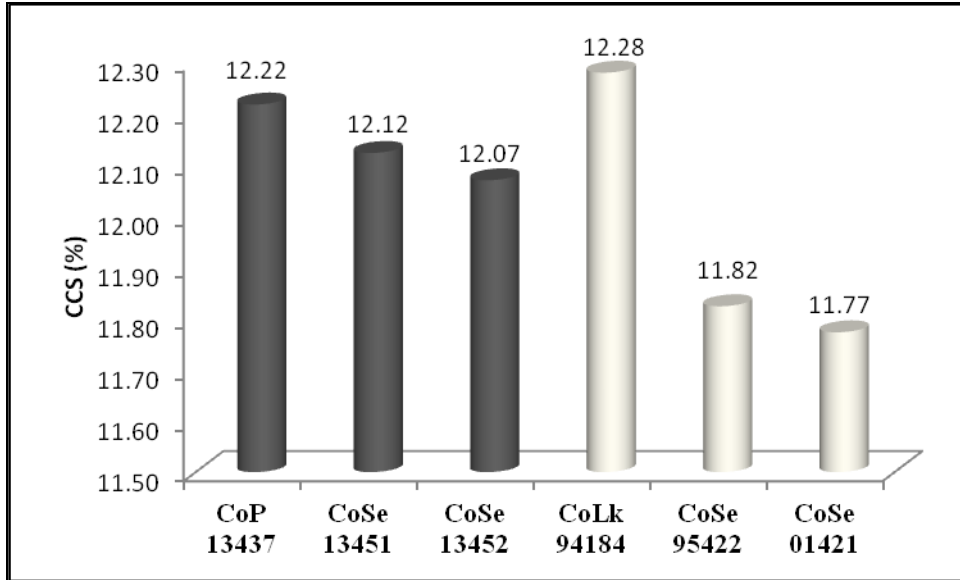
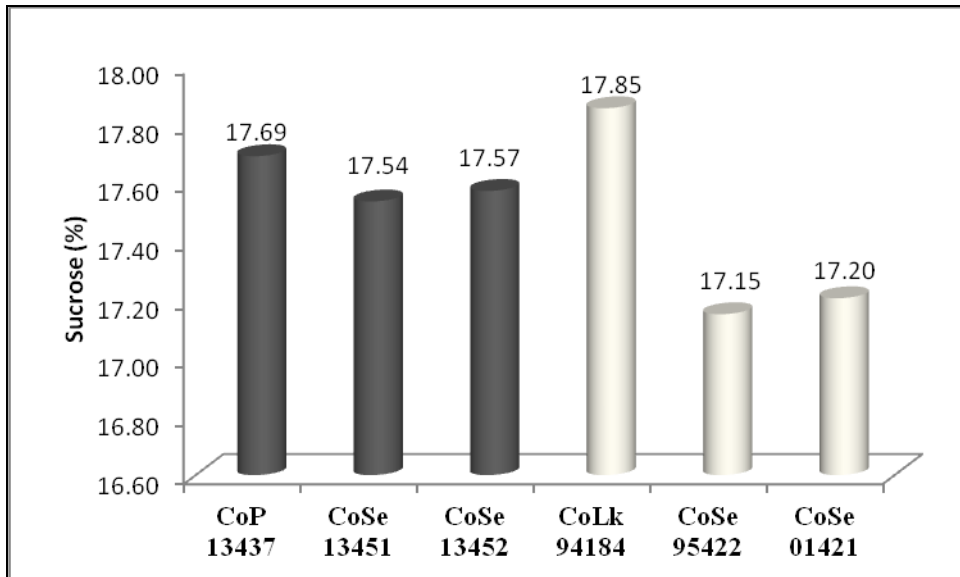


Fig 5.3.4. Mean performance of entries in two plant and one ratoon crops - Sucrose (%) at harvest



5.4. ADVANCED VARIETAL TRIAL (EARLY) – I PLANT

Centers (6)	Bethuadahari, Buralikson, Gorakhpur, 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	Four
Plot size	Gross : 6m x 8r x 0.90m Net : 5m x 6r x 0.90m
Seed rate	12 buds per meter
Date of planting	February - March, 2018
Crop duration	10 months

Results of the previous year:

Eight entries and three standards were evaluated in IVT Early at five locations during 2017-18 for cane and juice parameters. None of the test entries recorded >10% improvement over best standard for CCS yield (10.17 t/ha) across locations. Standard CoLk 94184 ranked top with 10.17 t/ha of CCS yield, followed by the entries CoSe 14453 (10.10 t/ha) and CoP 14437 (9.84 t/ha). All the test entries recorded significantly higher CCS yield than best standard at Seorahi center. For cane yield, none of the test entries recorded >10% improvement over best the standard CoLk 94184 (83.30 t/ha) in the zone. CoSe 14453 (88.41 t/ha) ranked first in the zone, followed by CoSe 14451(86.30 t/ha) and CoSe 14454 (83.40 t/ha). CoSe 14453 recorded 10% improvement over best standard at Seorahi and Motipur. For CCS%, none of the test entries recorded >5% improvement over the best standard CoLk 94184 (12.02%) across locations. CoSe 14454 (12.03%) ranked top in the zone, followed by CoLk 94184 (12.02%) and CoP 14437 (12.00%). For sucrose %, none of the test entries was numerically better than the best standard CoLk 94184 (17.59%) across locations.

Results of the current year:

The data on cane yield and juice quality of four test entries and three standards are presented in tables 5.4.1 to 5.4.20. Gorakhpur centre did not conduct the trial. CoLk 94184 was the best standard for commercial cane sugar yield (9.28 t/ha) and cane yield (75.54 t/ha) while CoSe 01421 was the best standard for CCS % (12.42) and juice sucrose % (18.09). For CCS (t/ha), CoP 14437 (9.72 t/ha) was ranked first in the zone and recorded 10 per cent improvement as well as significantly superior over the best standard (CoLk 94184) both at Pusa and Seorahi. CoSe 14454 (9.44 t/ha) was ranked second and recorded 10 per cent improvement as well as significantly superior over best standard at Seorahi (CoLk 94184). CoP 14437 (79.88 t/ha) was the top yielder and recorded 10 per cent improvement in yield as well as significantly superior over the best standard (CoLk 94184) both at Pusa and Seorahi. CoSe 14451 (79.18 t/ha) ranked second in the zone and recorded significantly superior performance with 10 per cent improvement in cane yield over the best standard (CoLk 94184) both at Pusa and Seorahi. For both CCS (t/ha) and cane yield, none of the test entries recorded more than 10 per cent improvement over the best standard across locations. CoSe 01421 was the best standard for CCS % (12.42) and juice sucrose % (18.09) in the zone. None of the test entries was found to be better than this standard for juice quality traits in the zone. Among the test entries, CoP 14437 performed better for commercial cane sugar yield and cane yield. Overall, none of the entries was identified as qualifying entry across the locations in the zone.

Table 5.4.1. CCS (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoLk 14206	8.92*	11.52*	8.23	8.80	9.00	9.29	
2	CoP 14437	9.96*	13.03*	8.33	8.46	8.83	9.72	1
3	CoSe 14451	9.97*	11.62*	8.42	8.45	8.26	9.34	3
4	CoSe 14454	10.14*	11.02	8.45	8.15	9.45	9.44	2
	Standards							
1	CoLk 94184	8.61	9.71	9.07	9.34	9.65	9.28	
2	CoSe 95422	8.24	8.86	8.03	6.90	9.06	8.22	
3	CoSe 01421	8.21	8.50	9.25	7.79	-	8.44	
	GM	9.15	10.61	8.54	8.27	9.04		
	SE	0.02	0.46	0.23	0.32	1.16		
	CD	0.06	1.45	0.71	0.99	2.42		
	CV	4.10	7.58	4.72	6.72	15.65		
	Top three qualifying entries at each locations							
	1	CoSe 14454	CoP 14437	-	-	-	-	
	2	CoSe 14451	CoSe 14451	-	-	-	-	
	3	CoP 14437	CoLk 14206	-	-	-	-	

No. of locations where an entry recorded >10% improvement: CoP 14437 (2), CoSe 14451 (2), CoSe 14454 (2), CoLk 14206 (1)

Performance across the locations:

CoLk 94184 (9.28 t/ha) was the best standard for commercial cane sugar yield (t/ha). CoP 14437 (9.72 t/ha) ranked first in the zone and recorded 10 per cent improvement as well as significantly superior over the best standard (CoLk 94184) both at Pusa and Seorahi. CoSe 14454 (9.44 t/ha) ranked second and recorded 10 per cent improvement as well as significantly superior over the best standard at Seorahi (CoLk 94184). None of the entries recorded more than 10 per cent improvement over the best standard for CCS (t/ha) across locations.

Table 5.4.2. Cane Yield (t/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoLk 14206	74.37	84.29*	70.91	73.31	72.54	75.08	
2	CoP 14437	84.00*	95.54*	72.01	71.26	76.59	79.88	1
3	CoSe 14451	82.22*	93.28*	73.78	70.33	76.30	79.18	2
4	CoSe 14454	86.22*	83.53*	73.97	69.78	78.07	78.31	3
	Standards							
1	CoLk 94184	70.96	72.84	76.72	75.26	81.93	75.54	
2	CoSe 95422	70.52	69.04	71.21	60.44	77.33	69.71	
3	CoSe 01421	68.74	61.94	79.27	63.04	-	68.25	
	GM	76.72	80.07	73.98	69.06	77.13	75.14	
	SE	1.63	2.51	1.79	2.69	7.76		
	CD	5.04	7.80	5.53	8.28	16.14		
	CV	3.69	5.42	4.20	6.74	12.20		
	Top three qualifying entries at each locations							
	1	CoSe 14454	CoP 14437	-	-	-	-	
	2	CoP 14437	CoSe 14451	-	-	-	-	
	3	CoSe 14451	CoLk 14206	-	-	-	-	

No. of locations where an entry recorded >10% improvement: CoP 14437 (2), CoSe 14451 (2), CoSe 14454 (2), CoLk 14206 (1)

Performance across the locations:

CoLk 94184 (75.54 t/ha) was the best standard for cane yield in the zone. CoP 14437 (79.88 t/ha) was the top yielder and recorded 10 per cent improvement as well as significantly superior over the best standard (CoLk 94184) both at Pusa and Seorahi. CoSe 14451 (79.18 t/ha) ranked second in the zone and recorded significantly superior performance with 10 per cent improvement over the best standard (CoLk 94184) both at Pusa and Seorahi. None of the entries recorded more than 10 per cent improvement over the best standard across locations.

Table 5.4.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoLk 14206	11.99	13.66	11.61	12.01	12.40	12.33	2
2	CoP 14437	11.86	13.63	11.57	11.88	11.55	12.10	
3	CoSe 14451	12.13	12.44	11.42	12.02	10.87	11.78	
4	CoSe 14454	11.76	13.18	11.43	11.69	12.09	12.03	
	Standards							
1	CoLk 94184	12.13	13.34	11.81	12.42	11.65	12.27	3
2	CoSe 95422	11.69	12.84	11.28	11.42	11.71	11.79	
3	CoSe 01421	11.95	13.71	11.67	12.36	-	12.42	1
	GM	11.93	13.26	11.54	11.97	11.71		
	SE	0.16	0.32	0.11	0.45	0.79		
	CD	0.49	0.95	-	1.39	1.66		
	CV	2.33	4.13	1.75	6.51	8.31		
Top three qualifying entries at each locations								
	1	-	-	-	-	CoLk 14206	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

No. of locations where an entry recorded >5% improvement: CoLk 14206 (1)

Performance across the locations:

CoSe 01421 (12.42 %) was the best standard for CCS in the zone. None of the test entries was found to be numerically better than this standard in the zone.

Table 5.4.4. Sucrose (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoLk 14206	17.27	19.70	17.26	17.45	17.68	17.87	3
2	CoP 14437	17.22	19.70	16.98	17.22	16.78	17.58	
3	CoSe 14451	17.65	18.06	16.62	17.32	16.33	17.20	
4	CoSe 14454	17.07	19.07	16.46	16.87	17.15	17.32	
	Standards							
1	CoLk 94184	17.57	19.36	17.63	17.91	16.98	17.89	2
2	CoSe 95422	16.93	18.62	16.21	16.54	16.94	17.05	
3	CoSe 01421	17.37	19.78	17.34	17.88	-	18.09	1
	GM	17.30	19.18	16.93	17.31	16.98		
	SE	0.19	0.42	0.18	-	0.75		
	CD	0.60	0.42	0.58	NS	1.57		
	CV	1.94	3.80	1.92	6.52	5.44		
	Top three qualifying entries at each locations							
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
	3	-	-	-	-	-	-	

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations:

CoSe 01421 (18.09 %) was the best standard for juice sucrose in the zone. None of the test entries was found to be numerically better than this standard in the zone.

Table 5.4.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Bura likson	Mean
1	CoLk 14206	19.75	22.17	20.64	19.93	20.54	20.61
2	CoP 14437	19.65	22.27	19.78	19.56	20.24	20.30
3	CoSe 14451	20.22	20.60	19.04	19.44	20.91	20.04
4	CoSe 14454	19.49	21.60	18.44	18.98	19.71	19.64
	Standards						
1	CoLk 94184	19.95	22.07	21.24	20.13	20.60	20.80
2	CoSe 95422	19.22	21.20	18.11	18.78	20.24	19.51
3	CoSe 01421	19.89	22.27	20.71	20.23	-	20.78
	GM	19.74	21.74	19.71	19.58	20.37	
	SE	0.21	0.42	0.44	-	0.48	
	CD	0.65	0.42	-	NS	0.99	
	CV	1.84	3.34	3.87	6.54	2.87	

Table 5.4.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Bura likson	Mean
1	CoLk 14206	87.41	88.70	83.60	87.55	86.30	86.71
2	CoP 14437	87.60	88.47	85.87	88.03	83.10	86.61
3	CoSe 14451	87.29	87.70	87.36	89.09	78.18	85.92
4	CoSe 14454	87.59	88.23	89.32	88.88	87.00	88.20
	Standards						
1	CoLk 94184	88.05	87.70	82.99	88.97	82.47	86.04
2	CoSe 95422	88.09	87.83	89.70	88.07	83.76	87.49
3	CoSe 01421	87.34	88.80	83.81	88.38	-	87.08
	GM	87.62	88.20	86.09	88.42	83.47	
	SE	0.61	0.59	1.32	-	3.93	
	CD	1.89	0.59	4.09	NS	8.17	
	CV	1.21	1.15	2.67	6.51	5.78	

Table 5.4.7. Pol (%) cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Bura likson	Mean
1	CoLk 14206	12.82	16.10	14.99	-	-	14.64
2	CoP 14437	12.76	16.30	14.65	-	-	14.57
3	CoSe 14451	13.11	14.75	14.62	-	-	14.16
4	CoSe 14454	12.65	15.66	14.29	-	-	14.20
	Standards						
1	CoLk 94184	13.02	15.66	10.34	-	-	13.01
2	CoSe 95422	12.57	15.33	14.69	-	-	14.20
3	CoSe 01421	12.88	16.33	15.33	-	-	14.85
	GM	12.83	15.73	14.13	-	-	
	SE	-	0.37	1.92	-	-	
	CD	-	1.11	5.93	-	-	
	CV	-	4.06	19.59	-	-	

Table 5.4.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Bura likson	Mean
1	CoLk 14206	55.70	57.10	61.33	-	-	58.04
2	CoP 14437	58.00	61.50	54.39	-	-	57.96
3	CoSe 14451	58.39	59.05	56.99	-	-	58.14
4	CoSe 14454	59.06	58.50	58.30	-	-	58.62
	Standards						
1	CoLk 94184	57.65	56.00	58.76	-	-	57.47
2	CoSe 95422	58.03	58.70	59.50	-	-	58.74
3	CoSe 01421	56.88	59.60	62.69	-	-	59.72
	GM	57.67	58.64	58.85	-	-	
	SE	-	1.51	2.37	-	-	
	CD	-	4.55	-	-	-	
	CV	-	4.46	6.98	-	-	

Table 5.4.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Bura likson	Mean
1	CoLk 14206	13.18	13.24	12.81	-	-	13.08
2	CoP 14437	13.15	12.23	12.19	-	-	12.52
3	CoSe 14451	13.02	13.32	12.17	-	-	12.84
4	CoSe 14454	13.15	12.89	12.79	-	-	12.94
	Standards						
1	CoLk 94184	12.89	14.10	12.83	-	-	13.27
2	CoSe 95422	12.93	12.67	12.37	-	-	12.66
3	CoSe 01421	12.82	12.42	12.54	-	-	12.59
	GM	13.02	12.98	12.53	-	-	
	SE	-	0.22	0.25	-	-	
	CD	-	0.68	-	-	-	
	CV	-	2.89	3.47	-	-	

Table 5.4.10. Number of Millable Canes (*000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14206	106.00	102.15	90.03	132.50	103.55	106.85
2	CoP 14437	114.00	118.16	128.51	129.09	117.03	121.36
3	CoSe 14451	109.00	105.46	126.17	119.79	129.78	118.04
4	CoSe 14454	126.00	109.67	110.26	119.39	105.93	114.25
	Standards						
1	CoLk 94184	115.00	105.67	148.37	134.07	131.56	126.93
2	CoSe 95422	104.00	101.70	130.24	110.60	140.30	117.37
3	CoSe 01421	91.00	82.33	153.92	116.43	-	110.92
	GM	109.29	103.59	126.79	123.12	121.36	
	SE	2.09	3.03	7.52	4.77	14.40	
	CD	6.46	9.45	23.18	14.71	29.95	
	CV	3.31	5.07	10.28	6.72	14.38	

Table 5.4.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Bura likson	Mean
1	CoLk 14206	195.00	188.33	270.00	238.90	242.45	226.94
2	CoP 14437	199.00	221.33	290.00	237.83	245.11	238.65
3	CoSe 14451	212.00	225.00	308.33	231.10	227.89	240.86
4	CoSe 14454	216.00	270.15	315.00	284.03	257.11	268.46
	Standards						
1	CoLk 94184	202.00	265.33	290.00	272.16	253.45	256.59
2	CoSe 95422	195.00	231.00	236.66	227.73	238.45	225.77
3	CoSe 01421	173.00	221.67	290.00	215.06	-	224.93
	GM	198.86	231.83	285.71	243.83	244.08	
	SE	0.05	5.33	12.61	9.14	8.35	
	CD	0.17	16.60	38.88	28.19	17.36	
	CV	4.78	3.91	7.65	6.50	4.53	

Table 5.4.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Bura likson	Mean
1	CoLk 14206	2.20	2.49	2.56	1.99	2.47	2.34
2	CoP 14437	2.30	2.19	2.36	1.97	2.49	2.26
3	CoSe 14451	2.20	2.64	2.03	2.11	2.68	2.33
4	CoSe 14454	2.30	2.24	2.23	1.85	2.73	2.27
	Standards						
1	CoLk 94184	2.00	2.44	2.03	2.06	2.69	2.24
2	CoSe 95422	2.00	2.11	2.10	1.96	2.48	2.13
3	CoSe 01421	1.90	1.59	2.06	2.03	-	1.90
	GM	2.13	2.24	2.20	2.00	2.59	
	SE	0.06	0.04	0.12	0.08	0.13	
	CD	0.20	0.13	-	0.23	0.27	
	CV	4.20	3.09	9.61	6.56	6.08	

Table 5.4.13. Single Cane Weight (kg) at harvest

S. No.	Entries	Seorahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14206	0.65	0.83	1.34	0.68	1.23	0.95
2	CoP 14437	0.73	0.82	1.25	0.68	1.28	0.95
3	CoSe 14451	0.73	0.88	0.97	0.72	1.35	0.93
4	CoSe 14454	0.75	0.76	1.25	0.70	1.24	0.94
	Standards						
1	CoLk 94184	0.65	0.69	0.86	0.81	1.47	0.90
2	CoSe 95422	0.64	0.68	0.71	0.66	1.24	0.79
3	CoSe 01421	0.62	0.75	0.87	0.67	-	0.73
	GM	0.68	0.77	1.04	0.70	1.30	
	SE	0.01	0.03	0.07	0.03	0.19	
	CD	0.03	0.10	0.23	0.08	0.40	
	CV	2.56	7.37	12.61	6.46	17.65	

Table 5.4.14. CCS (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson	Mean
1	CoLk 14206	10.91	12.37	11.70	11.14	11.23	11.47
2	CoP 14437	10.73	13.14	11.28	10.70	11.07	11.38
3	CoSe 14451	11.27	12.63	10.39	10.93	10.70	11.18
4	CoSe 14454	11.13	12.52	10.97	10.76	11.20	11.32
	Standards						
1	CoLk 94184	11.10	13.55	11.55	11.38	10.43	11.60
2	CoSe 95422	11.10	12.71	10.78	10.65	10.96	11.24
3	CoSe 01421	10.90	13.06	11.35	11.15	-	11.62
	GM	11.02	12.85	11.15	10.96	10.93	
	SE	0.21	0.28	0.42	-	0.45	
	CD	0.65	0.28	-	NS	0.93	
	CV	3.31	3.77	6.56	7.24	5.04	

Table 5.4.15. Sucrose (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson	Mean
1	CoLk 14206	15.95	17.91	17.04	16.43	15.31	16.53
2	CoP 14437	15.63	19.09	16.30	15.83	15.58	16.49
3	CoSe 14451	16.40	18.49	14.96	16.10	15.15	16.22
4	CoSe 14454	16.21	18.13	14.79	15.84	15.39	16.07
	Standards						
1	CoLk 94184	16.15	19.64	16.75	16.73	14.85	16.82
2	CoSe 95422	16.11	18.58	15.68	15.67	15.06	16.22
3	CoSe 01421	15.92	19.03	16.54	16.38	-	16.97
	GM	16.05	18.70	16.01	16.14	15.22	
	SE	0.30	0.35	0.58	-	0.41	
	CD	0.92	0.35	-	NS	0.84	
	CV	3.21	3.21	6.30	6.55	3.28	

Table 5.4.16. Brix (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson	Mean
1	CoLk 14206	18.46	20.47	19.55	19.33	16.15	18.79
2	CoP 14437	17.96	21.80	18.42	18.73	17.64	18.91
3	CoSe 14451	18.79	21.47	16.79	18.90	17.37	18.66
4	CoSe 14454	18.64	20.57	17.68	18.59	16.57	18.41
	Standards						
1	CoLk 94184	18.48	22.33	19.08	19.55	17.24	19.34
2	CoSe 95422	18.38	21.50	17.96	18.36	16.20	18.48
3	CoSe 01421	18.39	21.87	19.02	19.14	-	19.61
	GM	18.44	21.43	18.36	18.94	16.86	
	SE	0.34	0.31	0.69	-	0.36	
	CD	1.04	0.97	-	NS	0.74	
	CV	3.17	2.51	6.56	7.54	2.58	

Table 5.4.17. Purity (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson	Mean
1	CoLk 14206	86.37	87.53	87.17	84.99	96.30	88.47
2	CoP 14437	87.02	87.57	88.53	84.51	88.36	87.20
3	CoSe 14451	87.27	86.10	88.98	85.18	87.28	86.96
4	CoSe 14454	86.98	88.13	89.34	85.20	92.93	88.52
	Standards						
1	CoLk 94184	87.35	87.87	87.98	85.57	86.19	86.99
2	CoSe 95422	87.66	86.43	87.17	85.34	93.23	87.97
3	CoSe 01421	86.53	87.03	87.01	85.57	-	86.54
	GM	87.03	87.24	88.03	85.19	90.72	
	SE	0.42	0.69	1.32	-	3.20	
	CD	1.30	0.40	-	NS	6.66	
	CV	0.84	1.37	2.61	6.43	4.36	

Table 5.4.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson	Mean
1	CoLk 14206	-	155.07	92.13	147.06	109.33	125.90
2	CoP 14437	-	159.00	151.45	137.02	124.26	142.93
3	CoSe 14451	-	145.62	160.58	128.73	134.26	142.30
4	CoSe 14454	-	138.17	133.82	130.43	113.37	128.95
	Standards						
1	CoLk 94184	-	139.60	158.85	143.91	134.20	144.14
2	CoSe 95422	-	114.26	154.04	123.14	144.23	133.92
3	CoSe 01421	-	115.98	181.30	125.93	-	141.07
	GM		138.24	147.45	133.75	126.61	
	SE	-	3.31	8.44	5.25	13.89	
	CD	-	10.30	26.03	16.18	28.88	
	CV	-	4.14	9.92	6.80	13.30	

Table 5.4.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson	Mean
1	CoLk 14206	174.00	102.14	98.79	149.19	104.97	125.82
2	CoP 14437	183.00	141.04	150.47	134.97	112.67	144.43
3	CoSe 14451	176.00	125.24	180.31	125.60	120.97	145.62
4	CoSe 14454	192.00	118.13	140.11	124.88	106.93	136.41
	Standards						
1	CoLk 94184	178.00	115.17	177.23	138.77	125.37	146.91
2	CoSe 95422	175.00	99.52	156.51	119.16	126.33	135.30
3	CoSe 01421	153.00	92.35	201.89	121.42	-	142.17
	GM	175.86	113.37	157.90	130.57	116.21	
	SE	2.26	3.59	7.70	5.23	10.73	
	CD	6.96	11.18	23.73	16.12	22.31	
	CV	2.22	5.48	8.45	6.93	11.28	

Table 5.4.20. Germination (%) at 45 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethua dahari	Buralikson	Mean
1	CoLk 14206	49.72	31.67	23.00	42.20	62.33	41.78
2	CoP 14437	56.57	39.15	37.26	38.92	62.33	46.85
3	CoSe 14451	54.54	35.33	45.31	36.67	64.67	47.30
4	CoSe 14454	59.99	36.17	35.26	41.31	62.66	47.08
	Standards						
1	CoLk 94184	54.91	35.17	36.87	41.09	64.67	46.54
2	CoSe 95422	47.50	35.33	43.93	40.62	66.00	46.68
3	CoSe 01421	42.87	33.50	52.05	34.69	-	40.78
	GM	52.30	35.19	39.10	39.36	63.78	
	SE	1.27	1.46	2.51	1.53	5.92	
	CD	3.93	1.47	7.73	4.35	12.32	
	CV	4.22	7.14	11.14	6.76	11.39	

Table 5.4.21 Assessment of performance of entries by monitoring team

Entry	Seorahi	Pusa	Motipur	Bethuadhari	Buralikson
CoLk 14206	Very good	Average	Excellent	Very good	Good
CoP 14437	Good	Good	Excellent	Excellent	Very good
CoSe 14451	Very good	Very good	Very good	Very good	Good
CoSe 14454	Excellent	Very good	Excellent	Very good	Very good
Standards					
CoLk 94184	Very good	Poor	Very good	Excellent	Not Planted
CoSe 95422	Very good	Very good	Excellent	Very good	Very good
CoSe 01421	Good	Good	Very good	Good	Not Planted

5.5. INITIAL VARIETAL TRIAL (EARLY)

Centers (6)	Bethuadahari, Buralikson, Gorakhpur, Motipur, Pusa and Seorahi
Entries (9)	1. CoBln 15501 (CoBln 03171 x Co 86249) 2. CoLk 15466 (CoS 8436 GC) 3. CoLk 15467 (CoSe 95422 GC) 4. CoP 15436 (BO 91 GC) 5. CoP 15437 (BO 108 GC) 6. CoSe 15451 (CoS 8432 x Co 89003) 7. CoSe 15452 (BO 91 GC) 8. CoSe 15455 (ISH 229 GC) 9. CoSe 15456 (ISH 229 GC)
Standards (3)	CoLk 94184, CoSe 95422 and CoSe 01421
Design	RBD
Replications	Three
Plot size	Gross : 6m x 6r x 0.90m Net : 5m x 4r x 0.90m
Seed rate	12 buds per meter
Date of planting	February - March, 2018
Crop duration	10 months

Results of the previous year:

Nine test entries viz., CoBln 15501, CoLk 15466, CoLk 15467, CoP 15436, CoP 15437, CoSe 15451, CoSe 15452, CoSe 15455 and CoSe 15456 along with three standards CoLk 94184, CoSe 95422 and CoSe 01421 were under multiplication.

Results of the current year:

Gorakhpur and Buralikson centres did not conducted the trial. The data on cane yield and juice quality of nine test entries and three standards are presented in tables 5.5.1 to 5.5.20. CoLk 94184 was the best standard for commercial cane sugar yield (9.03 t/ha), cane yield (71.70 t/ha), CCS % (12.55) and juice sucrose % (18.36). The entry CoP 15436 (9.37 t/ha) ranked first for CCS (t/ha) and recorded more than 10 per cent improvement and was significantly superior over the best standard at Pusa (CoLk 94184). The test entries CoLk 15467 (9.14 t/ha) ranked second and showed significantly superior over the best standard at Seorahi (CoLk 94184). None of the entries recorded more than 10 per cent improvement over the best standard for CCS (t/ha) across locations. The entry CoP 15436 (79.36 t/ha) top ranked for cane yield (t/ha) and recorded more than 10 per cent improvement as well as significantly superior over the best standard at Pusa (CoLk 94184). The entry CoSe 15455 (75.14 t/ha) ranked second and recorded more than 10 per cent improvement as well as significantly superior over the best standard at Pusa (CoLk 94184). The test entry CoP 15437 (74.54 t/ha) ranked third across the location and recorded more than 10 per cent improvement and significantly superior performance over the best standard at Pusa (CoLk 94184). For CCS (%), among the test entries, CoLk 15467 (12.61 %) was the top ranking entry followed by CoSe 15451 (12.59 %) and both entries were numerically superior over best standard (CoLk 94184) across locations. For juice sucrose %, CoLk 15467 (18.45 %) was the top ranking entry and numerically superior over the best standard (CoLk 94184) across locations. For both CCS (%) and juice sucrose %, none of the test entries recorded more than 5 per cent improvement over the best standard at individual locations as well as across locations. Among the test entries, CoP 15436 performed better for commercial cane sugar yield and cane yield. None of the test entries was identified as a qualifying entry across the locations.

Table 5.5.1. CCS at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuadahari	Mean	Overall rank
1	CoBln 15501	7.49	4.83	5.55	-	5.96	
2	CoLk 15466	10.59	9.64	8.39	7.17	8.95	
3	CoLk 15467	10.87*	9.58	8.59	7.50	9.14	2
4	CoP 15436	9.60	12.18*	7.03	8.65	9.37	1
5	CoP 15437	10.05	10.89*	8.02	6.89	8.96	
6	CoSe 15451	9.89	8.70	7.06	5.00	7.66	
7	CoSe 15452	9.93	8.51	7.84	8.22	8.63	
8	CoSe 15455	10.01	10.07	8.32	6.98	8.85	
9	CoSe 15456	9.52	8.45	7.68	7.50	8.29	
	Standards						
1	CoLk 94184	10.71	9.05	7.87	8.47	9.03	3
2	CoSe 95422	8.48	6.89	8.01	7.02	7.60	
3	CoSe 01421	8.88	8.25	8.19	6.03	7.84	
	GM	9.67	8.92	7.71	7.22		
	SE	0.02	0.45	0.44	0.35		
	CD	0.07	1.32	1.29	1.05		
	CV	4.70	8.70	9.88	5.35		
	Qualifying entries at each location						
	1	-	CoP 15436	-	-	-	
	2	-	CoP 15437	-	-	-	
	3	-	CoSe 15455	-	-	-	

No. of locations where an entry recorded >10% improvement: CoP 15436 (1), CoP 15437 (1) and CoSe 15455 (1)

Performance across the locations:

The best standard CoLk 94184 recorded 9.03 t/ha for commercial cane sugar yield in the zone. The entry CoP 15436 (9.37 t/ha) ranked first for CCS (t/ha) and recorded more than 10 per cent improvement and was significantly superior over the best standard at Pusa (CoLk 94184). The test entries CoLk 15467 (9.14 t/ha) ranked second and showed significantly superior over the best standard at Seorahi (CoLk 94184). None of the entries recorded more than 10 per cent improvement over the best standard for CCS (t/ha) across locations.

Table 5.5.2. Cane Yield at harvest (t/ha)

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean	Overall rank
1	CoBln 15501	66.44	44.01	48.09	-	52.85	
2	CoLk 15466	76.44	76.18	72.54	61.42	71.65	
3	CoLk 15467	78.89	72.55	72.91	64.35	72.18	
4	CoP 15436	76.67	94.47*	73.30	72.98	79.36	1
5	CoP 15437	78.67	91.63*	68.90	58.94	74.54	3
6	CoSe 15451	72.89	65.16	60.30	43.08	60.36	
7	CoSe 15452	73.78	72.59	67.27	68.69	70.58	
8	CoSe 15455	82.67	86.42*	71.93	59.53	75.14	2
9	CoSe 15456	86.44*	72.93	66.50	66.10	72.99	
	Standards						
1	CoLk 94184	78.44	71.07	67.36	69.94	71.70	
2	CoSe 95422	68.89	57.50	68.73	61.09	64.05	
3	CoSe 01421	67.56	61.69	70.73	53.13	63.28	
	GM	75.65	72.18	67.38	61.75		
	SE	2.04	0.63	1.13	2.29		
	CD	6.00	10.06	3.33	6.88		
	CV	4.67	8.10	2.92	5.66		
	Qualifying entries at each location						
	1	CoSe 15456	CoP 15436	-	-	CoP 15436	
	2	-	CoP 15437	-	-	-	
	3	-	CoSe 15455	-	-	-	

No. of locations where an entry recorded >10% improvement: CoP 15436 (1), CoSe 15455 (1), CoP 15437 (1) and CoSe 15456 (1).

Performance across the locations:

The best standard CoLk 94184 recorded 71.70 t/ha for cane yield across the zone. The entry CoP 15436 (79.36 t/ha) top ranked for cane yield (t/ha) and recorded more than 10 per cent improvement with significantly superior performance over the best standard at Pusa (CoLk 94184). The entry CoSe 15455 (75.14 t/ha) ranked second and recorded more than 10 per cent improvement and was significantly superior over the best standard at Pusa (CoLk 94184). The test entry CoP 15437 (74.54 t/ha) ranked third across the location and recorded more than 10 per cent improvement and significantly superior over the best standard at Pusa (CoLk 94184). The entry CoP 15436 recorded more than 10 per cent improvement over the best standard CoLk 94184 for cane yield across locations.

Table 5.5.3. CCS (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuadahari	Mean	Overall rank
1	CoBln 15501	11.63	10.96	11.55	-	11.38	
2	CoLk 15466	13.85	12.66	11.57	11.69	12.44	
3	CoLk 15467	13.78	13.20	11.78	11.67	12.61	1
4	CoP 15436	12.52	12.90	9.64	11.86	11.73	
5	CoP 15437	12.77	11.94	11.63	11.70	12.01	
6	CoSe 15451	13.57	13.45	11.71	11.62	12.59	2
7	CoSe 15452	13.46	11.73	11.66	11.97	12.21	
8	CoSe 15455	12.11	11.65	11.57	11.73	11.77	
9	CoSe 15456	11.01	11.61	11.55	11.36	11.38	
	Standards						
1	CoLk 94184	13.65	12.73	11.69	12.12	12.55	3
2	CoSe 95422	12.31	12.02	11.65	11.50	11.87	
3	CoSe 01421	13.14	13.37	11.65	11.35	12.38	
	GM	12.82	12.35	11.47	11.69		
	SE	0.17	0.28	0.60	-		
	CD	0.49	0.84	-	NS		
	CV	2.27	3.98	9.10	6.33		
	Qualifying entries at each location						
	1	-	-	-	-	-	
	2	-	-	-	-	-	
	3	-	-	-	-	-	

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations:

CoLk 94184 (12.55 %) was the best standard for CCS in the zone. Among the test entries, CoLk 15467 (12.61 %) was the top ranking entry followed by CoSe 15451 (12.59 %) and both entries were numerically superior over best standard (CoLk 94184) across locations. None of the entries recorded more than 5 per cent improvement over the best standard at individual locations as well as across locations.

Table 5.5.4. Sucrose (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean	Overall rank
1	CoBln 15501	16.80	15.63	16.60	-	16.34	
2	CoLk 15466	20.03	18.18	17.50	16.95	18.17	
3	CoLk 15467	20.01	19.21	17.66	16.90	18.45	1
4	CoP 15436	18.06	18.50	15.34	17.12	17.26	
5	CoP 15437	18.39	16.98	17.12	16.84	17.33	
6	CoSe 15451	19.61	19.15	17.70	16.81	18.32	3
7	CoSe 15452	19.44	16.71	17.17	17.16	17.62	
8	CoSe 15455	17.46	17.84	17.17	16.96	17.36	
9	CoSe 15456	15.99	16.70	16.71	16.43	16.46	
	Standards						
1	CoLk 94184	19.74	18.46	17.74	17.48	18.36	2
2	CoSe 95422	17.74	17.32	17.28	16.65	17.25	
3	CoSe 01421	18.93	19.35	17.26	16.39	17.98	
	GM	18.52	17.84	17.10	16.88		
	SE	0.28	0.39	0.59	-		
	CD	0.82	0.83	-	NS		
	CV	2.60	2.73	6.01	5.49		
	Qualifying entries at each location						
	1	-	-	-	-	-	
	2	-	-	-	-	-	
	3	-	-	-	-	-	

No. of locations where an entry recorded >5% improvement: Nil

Performance across the locations:

CoLk 94184 (18.36 %) was the best standard for juice sucrose in the zone. Among the test entries, CoLk 15467 (18.45 %) was the top ranking entry and numerically superior over the best standard (CoLk 94184) across locations. None of the test entries recorded more than 5 per cent improvement over the best standard at individual locations as well as across locations.

Table 5.5.5. Brix (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	18.97	17.17	18.53	-	18.22
2	CoLk 15466	22.67	20.60	21.62	19.27	21.04
3	CoLk 15467	22.84	22.00	21.43	19.16	21.36
4	CoP 15436	20.34	20.55	20.67	19.29	20.21
5	CoP 15437	20.62	18.61	20.07	18.87	19.54
6	CoSe 15451	22.17	20.94	21.83	19.04	21.00
7	CoSe 15452	21.95	18.30	20.19	19.05	19.87
8	CoSe 15455	19.65	20.07	20.47	19.17	19.84
9	CoSe 15456	18.27	18.68	18.93	18.58	18.62
	Standards					
1	CoLk 94184	22.34	21.00	22.05	19.66	21.26
2	CoSe 95422	19.94	19.47	20.57	18.88	19.72
3	CoSe 01421	21.24	21.93	20.70	18.47	20.59
	GM	20.92	19.94	20.59	19.04	
	SE	0.25	1.29	0.49	-	
	CD	0.75	1.66	1.44	NS	
	CV	2.11	4.90	4.16	6.22	

Table 5.5.6. Purity (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	88.55	87.03	89.57	-	88.38
2	CoLk 15466	87.89	88.40	81.04	87.96	86.32
3	CoLk 15467	87.63	87.27	82.47	88.20	86.39
4	CoP 15436	88.80	88.50	74.73	88.75	85.20
5	CoP 15437	89.18	87.83	85.47	89.24	87.93
6	CoSe 15451	88.46	87.33	81.11	88.28	86.30
7	CoSe 15452	88.57	87.17	85.28	90.07	87.77
8	CoSe 15455	88.86	88.93	83.96	88.47	87.56
9	CoSe 15456	87.54	85.77	88.25	88.42	87.50
	Standards					
1	CoLk 94184	88.40	88.13	80.46	88.91	86.48
2	CoSe 95422	89.00	88.97	84.18	88.18	87.58
3	CoSe 01421	89.13	88.23	83.40	88.73	87.37
	GM	88.50	87.80	83.33	88.66	
	SE	0.44	0.78	3.13	-	
	CD	1.30	0.78	-	NS	
	CV	0.87	1.54	6.51	6.71	

Table 5.5.7. Pol % cane at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	12.46	12.94	14.95	-	13.45
2	CoLk 15466	14.79	15.16	15.34	-	15.10
3	CoLk 15467	14.70	15.68	13.63	-	14.67
4	CoP 15436	13.41	15.29	15.00	-	14.57
5	CoP 15437	13.63	13.98	15.29	-	14.30
6	CoSe 15451	14.52	15.60	15.48	-	15.20
7	CoSe 15452	14.43	13.60	14.94	-	14.32
8	CoSe 15455	12.97	14.63	14.94	-	14.18
9	CoSe 15456	11.90	13.72	14.87	-	13.50
	Standards					
1	CoLk 94184	14.63	15.03	10.23	-	13.30
2	CoSe 95422	13.17	14.24	15.25	-	14.22
3	CoSe 01421	14.04	16.05	15.16	-	15.08
	GM	13.72	14.66	14.59	-	
	SE	-	0.28	1.56	-	
	CD	-	0.65	4.58	-	
	CV	-	2.61	18.55	-	

Table 5.5.8. Extraction (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	54.96	56.90	63.45	-	58.44
2	CoLk 15466	56.56	61.83	67.52	-	61.97
3	CoLk 15467	56.97	64.37	65.06	-	62.13
4	CoP 15436	56.33	62.54	64.90	-	61.26
5	CoP 15437	55.48	63.45	67.82	-	62.25
6	CoSe 15451	57.48	57.78	65.61	-	60.29
7	CoSe 15452	58.03	60.46	66.43	-	61.64
8	CoSe 15455	58.86	55.67	65.87	-	60.13
9	CoSe 15456	58.36	59.19	66.51	-	61.35
	Standards					
1	CoLk 94184	58.13	58.71	60.47	-	59.10
2	CoSe 95422	57.16	57.12	66.38	-	60.22
3	CoSe 01421	55.45	59.85	67.45	-	60.92
	GM	56.98	59.82	65.62	-	
	SE	-	0.22	1.26	-	
	CD	-	1.85	3.71	-	
	CV	-	1.82	3.33	-	

Table 5.5.9. Fibre (%) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	13.78	12.18	12.41	-	12.79
2	CoLk 15466	13.72	12.06	12.71	-	12.83
3	CoLk 15467	13.85	13.34	12.91	-	13.37
4	CoP 15436	13.36	12.28	12.46	-	12.70
5	CoP 15437	13.48	12.64	12.81	-	12.98
6	CoSe 15451	13.55	13.49	12.29	-	13.11
7	CoSe 15452	13.62	13.56	13.04	-	13.41
8	CoSe 15455	13.32	12.98	12.54	-	12.95
9	CoSe 15456	13.78	12.85	12.17	-	12.93
	Standards					
1	CoLk 94184	13.60	13.59	13.52	-	13.57
2	CoSe 95422	13.48	13.11	11.94	-	12.84
3	CoSe 01421	13.65	12.01	12.75	-	12.80
	GM	13.60	12.84	12.63	-	
	SE	-	0.78	0.22	-	
	CD	-	0.81	0.64	-	
	CV	-	3.71	3.02	-	

Table 5.5.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	104.00	78.69	60.60	-	81.10
2	CoLk 15466	117.00	97.67	130.29	119.99	116.24
3	CoLk 15467	116.00	96.12	114.16	106.66	108.24
4	CoP 15436	121.00	103.09	152.90	139.44	129.11
5	CoP 15437	116.00	95.77	97.11	84.81	98.42
6	CoSe 15451	121.00	89.50	50.41	74.07	83.75
7	CoSe 15452	120.00	91.54	137.15	120.36	117.26
8	CoSe 15455	127.00	102.07	123.80	94.26	111.78
9	CoSe 15456	123.00	87.53	86.74	109.81	101.77
	Standards					
1	CoLk 94184	117.00	98.72	139.00	114.81	117.38
2	CoSe 95422	112.00	92.16	111.76	110.73	106.66
3	CoSe 01421	107.00	94.84	150.12	91.48	110.86
	GM	116.75	93.98	112.84	106.04	
	SE	2.81	4.22	11.86	3.18	
	CD	8.26	15.18	34.78	9.47	
	CV	4.17	9.64	18.20	6.30	

Table 5.5.11. Stalk Length (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	167.00	224.80	280.00	-	223.93
2	CoLk 15466	165.00	193.20	265.00	258.33	220.38
3	CoLk 15467	159.00	192.66	235.00	219.00	201.42
4	CoP 15436	167.00	237.74	276.66	267.66	237.27
5	CoP 15437	176.00	267.30	266.66	239.00	237.24
6	CoSe 15451	165.00	166.68	186.66	212.66	182.75
7	CoSe 15452	165.00	201.74	246.66	210.67	206.02
8	CoSe 15455	171.00	233.78	248.33	255.00	227.03
9	CoSe 15456	196.00	253.73	280.00	229.66	239.85
	Standards					
1	CoLk 94184	169.00	207.80	270.00	272.66	229.87
2	CoSe 95422	170.00	209.33	213.33	215.00	201.92
3	CoSe 01421	170.00	219.53	285.00	212.66	221.80
	GM	170.00	217.36	254.44	235.66	
	SE	0.04	10.73	15.80	6.45	
	CD	0.13	31.68	46.36	19.36	
	CV	4.48	8.55	10.76	5.66	

Table 5.5.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	2.00	3.19	2.36	-	2.52
2	CoLk 15466	1.90	2.45	2.13	1.75	2.06
3	CoLk 15467	1.90	2.61	2.26	2.10	2.22
4	CoP 15436	2.00	2.63	2.00	1.85	2.12
5	CoP 15437	2.10	2.62	2.73	2.19	2.41
6	CoSe 15451	2.00	2.43	2.16	2.10	2.17
7	CoSe 15452	2.00	3.09	2.26	2.09	2.36
8	CoSe 15455	2.10	2.42	2.06	2.21	2.20
9	CoSe 15456	2.10	2.08	2.30	2.04	2.13
	Standards					
1	CoLk 94184	1.90	2.08	2.00	2.00	2.00
2	CoSe 95422	2.10	2.54	2.13	2.03	2.20
3	CoSe 01421	1.90	2.23	2.13	2.14	2.10
	GM	2.00	2.53	2.21	2.05	
	SE	0.06	0.11	0.49	0.08	
	CD	0.16	0.32	0.23	0.24	
	CV	4.79	7.41	6.35	6.32	

Table 5.5.13. Single Cane Weight (kg.) at harvest

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	0.67	0.56	1.44	-	0.89
2	CoLk 15466	0.67	0.78	0.89	0.57	0.73
3	CoLk 15467	0.69	0.76	0.80	0.68	0.73
4	CoP 15436	0.65	0.92	0.81	0.65	0.76
5	CoP 15437	0.68	0.95	1.39	0.97	1.00
6	CoSe 15451	0.62	0.73	0.78	0.57	0.68
7	CoSe 15452	0.62	0.80	0.94	0.78	0.79
8	CoSe 15455	0.66	0.75	0.86	0.73	0.75
9	CoSe 15456	0.71	0.83	1.15	0.65	0.83
	Standards					
1	CoLk 94184	0.68	0.72	0.78	0.81	0.75
2	CoSe 95422	0.61	0.63	0.75	0.69	0.67
3	CoSe 01421	0.62	0.65	0.99	0.65	0.73
	GM	0.66	0.76	0.97	0.70	
	SE	0.01	0.03	0.09	0.03	
	CD	0.02	0.08	0.26	0.10	
	CV	1.44	6.49	16.29	5.42	

Table 5.5.14. CCS (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	9.79	8.80	8.07	-	8.89
2	CoLk 15466	12.88	10.53	11.68	10.95	11.51
3	CoLk 15467	12.65	12.46	11.68	11.05	11.96
4	CoP 15436	11.95	12.67	11.70	11.11	11.86
5	CoP 15437	12.03	11.45	11.31	10.92	11.43
6	CoSe 15451	12.09	12.42	11.64	11.14	11.82
7	CoSe 15452	12.23	11.52	11.61	11.03	11.60
8	CoSe 15455	10.79	9.69	11.48	11.02	10.75
9	CoSe 15456	9.56	8.56	9.38	10.88	9.60
	Standards					
1	CoLk 94184	12.11	11.95	11.62	11.61	11.82
2	CoSe 95422	11.70	11.28	11.39	10.56	11.23
3	CoSe 01421	11.99	12.40	11.44	10.81	11.66
	GM	11.65	11.14	11.08	11.01	
	SE	0.09	0.41	0.29	-	
	CD	0.26	1.15	0.86	NS	
	CV	1.30	6.07	4.62	6.33	

Table 5.5.15. Sucrose (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	14.38	12.95	11.81	-	13.05
2	CoLk 15466	18.72	15.89	17.03	16.18	16.96
3	CoLk 15467	18.35	18.03	17.31	16.23	17.48
4	CoP 15436	17.37	17.57	17.04	16.26	17.06
5	CoP 15437	17.50	16.66	16.26	16.10	16.63
6	CoSe 15451	17.64	17.89	17.49	16.32	17.34
7	CoSe 15452	17.85	16.70	17.04	16.20	16.95
8	CoSe 15455	15.80	14.29	16.40	16.31	15.70
9	CoSe 15456	14.09	12.75	13.43	16.02	14.07
	Standards					
1	CoLk 94184	17.60	17.35	17.12	17.00	17.27
2	CoSe 95422	17.01	16.35	16.39	15.64	16.35
3	CoSe 01421	17.51	17.96	16.46	15.99	16.98
	GM	16.99	16.20	16.15	16.20	
	SE	0.16	3.42	0.48	0.40	
	CD	0.47	1.19	1.42	1.21	
	CV	1.64	4.32	5.20	5.64	

Table 5.5.16. Brix (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	16.81	15.16	13.71	-	15.23
2	CoLk 15466	21.43	19.53	19.58	19.13	19.92
3	CoLk 15467	20.93	20.40	20.58	18.95	20.22
4	CoP 15436	19.86	20.00	19.55	18.85	19.57
5	CoP 15437	20.06	19.07	18.16	18.92	19.05
6	CoSe 15451	20.33	20.07	21.33	18.96	20.17
7	CoSe 15452	20.61	18.97	19.88	18.91	19.59
8	CoSe 15455	18.36	16.83	18.08	19.32	18.15
9	CoSe 15456	16.57	15.30	14.86	18.80	16.38
	Standards					
1	CoLk 94184	20.26	19.77	20.12	19.72	19.97
2	CoSe 95422	19.45	18.57	18.36	18.55	18.73
3	CoSe 01421	20.23	20.37	18.42	18.92	19.49
	GM	19.58	18.67	18.55	19.00	
	SE	0.21	0.32	0.73	-	
	CD	0.60	1.89	2.15	NS	
	CV	1.82	5.94	6.87	6.55	

Table 5.5.17. Purity (%) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	85.58	85.40	86.35	-	85.78
2	CoLk 15466	87.37	88.40	87.03	84.57	86.84
3	CoLk 15467	87.68	88.37	84.15	85.64	86.46
4	CoP 15436	87.49	87.90	87.15	86.25	87.20
5	CoP 15437	87.25	87.50	89.67	85.09	87.38
6	CoSe 15451	86.80	89.16	81.98	86.07	86.00
7	CoSe 15452	86.63	88.00	85.73	85.66	86.51
8	CoSe 15455	86.07	87.20	90.73	84.42	87.11
9	CoSe 15456	85.36	85.70	90.58	85.21	86.71
	Standards					
1	CoLk 94184	86.86	87.70	85.11	86.20	86.47
2	CoSe 95422	87.47	88.00	89.42	84.31	87.30
3	CoSe 01421	86.57	87.93	89.50	84.51	87.13
	GM	86.76	87.61	87.28	85.27	
	SE	0.37	0.87	1.24	-	
	CD	1.09	0.87	3.64	NS	
	CV	0.74	1.72	2.46	5.32	

Table 5.5.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	-	105.10	107.30	-	106.20
2	CoLk 15466	-	120.15	132.69	123.27	125.37
3	CoLk 15467	-	115.10	129.73	109.85	118.23
4	CoP 15436	-	120.16	167.35	142.38	143.30
5	CoP 15437	-	117.17	140.48	88.41	115.35
6	CoSe 15451	-	113.15	64.68	77.45	85.09
7	CoSe 15452	-	111.81	160.98	124.00	132.26
8	CoSe 15455	-	121.13	148.45	97.72	122.43
9	CoSe 15456	-	109.19	128.99	112.97	117.05
	Standards					
1	CoLk 94184	-	115.10	159.20	118.17	130.82
2	CoSe 95422	-	109.41	156.42	115.17	127.00
3	CoSe 01421	-	105.27	171.06	94.94	123.76
	GM	-	113.56	138.94	109.48	
	SE	-	2.96	16.31	6.78	
	CD	-	8.74	20.26	20.33	
	CV	-	4.51	19.26	6.65	

Table 5.5.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	164.00	110.68	133.62	-	136.10
2	CoLk 15466	180.00	105.28	154.56	118.58	139.61
3	CoLk 15467	181.00	93.67	143.63	105.75	131.01
4	CoP 15436	184.00	99.11	190.70	130.76	151.14
5	CoP 15437	181.00	124.61	127.69	85.93	129.81
6	CoSe 15451	180.00	87.73	82.10	76.71	106.64
7	CoSe 15452	192.00	104.87	172.17	117.28	146.58
8	CoSe 15455	181.00	118.95	161.05	94.66	138.92
9	CoSe 15456	182.00	102.67	145.48	108.89	134.76
	Standards					
1	CoLk 94184	181.00	94.13	154.56	113.07	135.69
2	CoSe 95422	183.00	99.59	146.59	109.60	134.70
3	CoSe 01421	159.00	125.55	178.10	91.90	138.64
	GM	179.00	105.57	149.19	104.83	
	SE	3.41	4.47	9.80	5.22	
	CD	9.99	13.12	28.74	15.66	
	CV	3.29	7.33	11.37	5.89	

Table 5.5.20. Germination (%) at 45 days

S. No.	Entries	Seorahi	Pusa	Motipur	Bethuada hari	Mean
1	CoBln 15501	45.28	29.73	26.95	-	33.99
2	CoLk 15466	49.58	30.73	26.57	31.82	34.68
3	CoLk 15467	50.14	36.67	33.36	32.89	38.27
4	CoP 15436	56.53	44.80	45.26	34.14	45.18
5	CoP 15437	55.28	42.93	42.33	32.69	43.31
6	CoSe 15451	50.00	31.57	39.55	32.74	38.47
7	CoSe 15452	58.19	33.37	46.90	34.54	43.25
8	CoSe 15455	46.11	42.97	45.61	34.68	42.34
9	CoSe 15456	49.17	39.00	32.43	35.85	39.11
	Standards					
1	CoLk 94184	53.75	41.67	34.30	34.78	41.13
2	CoSe 95422	47.36	41.28	38.85	37.76	41.31
3	CoSe 01421	44.17	40.80	46.78	34.52	41.57
	GM	50.46	37.96	38.24	34.22	
	SE	2.04	1.79	4.72	0.85	
	CD	6.00	5.28	13.85	2.55	
	CV	7.02	8.16	21.87	6.54	

Table 5.5.21 Assessment of performance of entries by monitoring team

Entry	Seorahi	Pusa	Motipur	Bethuadhari	Buralikson
CoBln 15501	Poor	Poor	Poor	Not Planted	Not conducted
CoLk 15466	Good	Very good	Very good	Very good	
CoLk 15467	Average	Average	Good	Good	
CoP 15436	Very good	Good	Excellent	Very good	
CoP 15437	Average	Good	Good	Very good	
CoSe 15451	Poor	Average	Poor	Good	
CoSe 15452	Average	Average	Excellent	Very good	
CoSe 15455	Good	Very good	Very good	Very good	
CoSe 15456	Very good	Very good	Very good	Very good	
Standards					
CoLk 94184	Very good	Average	Excellent	Excellent	
CoSe 95422	Average	Very good	Very good	Good	
CoSe 01421	Average	Good	Very good	Average	

5.6. ADVANCED VARIETAL TRIAL (MIDLATE) – I PLANT

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 0.75 m Net : 5 m x 6 rows x 0.75 m
Seed rate	12 buds per meter
Date of planting	February - March, 2018
Crop duration	12 months

Results of the previous year:

Eight test entries and three standards were evaluated in IVT (Early) at five locations of North Central and North East zones during 2017-18 for cane and juice parameters. None of the test entries recorded >10% improvement over best standard for CCS yield across locations. For cane yield, none of the test entries recorded >10% improvement over best the standard in the zone. CoSe 14453 recorded >10% improvement over best standard at Seorahi and Motipur, whereas CoLk 14206, CoP 14436, CoSe 14451 and CoSe 14454 recorded >10% improvement over the standard at one location each. For CCS%, none of the test entries recorded >5% improvement over the best standard across locations. For sucrose%, none of the test entries recorded >5% improvement over the best standards across locations. No qualifying entry was identified from this trial.

Results of the current 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 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 best standards at Pusa and Seorahi centres respectively. For cane yield, none of the test entries recorded >10% improvement over best standard across the zone. CoP 14439 ranked top with 80.67 t/ha of cane yield and recorded 19.13% and 16.36% improvement over best standard at Seorahi and Pusa centers respectively. CoSe 14455 ranked second in the zone with 19.13% and 16.36% improvement for cane yield over CoP 06436 at Seorahi and Pusa centres respectively. For CCS%, none of the test entries recorded >5% improvement over best standard across 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 over best standard across 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 test entries, CoP 14439 and CoSe 14455 recorded more than 10% improvement for cane yield across the zone, for sucrose%, they recorded negative values (-5.38%) and (-2.53%) in the zone. Finally, no qualifying entry was identified 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	Seo Rahi#	Pusa	Moti pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoLk 14208	10.26*	8.61	9.18	8.01	-	9.02	
2	CoLk 14209	9.02	9.00	8.23	8.45	-	8.68	
3	CoP 14438	10.34*	9.65	8.46	8.17	-	9.16	3
4	CoP 14439	10.04	11.94*	8.76	8.22	-	9.74	1
5	CoSe 14455	11.25	10.11	8.46	8.19	-	9.50	2
Standards								
1	BO 91	8.72	9.75	8.34	8.16	-	8.74	
2	CoP 9301	8.53	10.39	7.57	8.16	-	8.66	
3	CoP 06436	9.08	10.31	8.53	8.23	-	9.04	
	Mean	9.66	9.97	8.44	8.20	-		
	SE (m)	0.38	0.31	0.25	-	-		
	CD	1.17	0.94	0.76	NS	-		
	CV	6.92	5.35	5.19	6.06	-		
Top three qualifying entries at each locations								
		CoSe 14455	CoP 14439					
		CoP 14438						
		CoLk 14208						

* Significantly superior over the best standard.

Qualifying entries: CoP 14439(2), CoSe 14455(1), CoP 14438(1) and CoLk 14208(1).

Performance across the locations: None of the test entries recorded >10% improvement over 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 best standards at Pusa and Seorahi centres respectively. Other test entries CoSe 14455, CoP 14438 and CoLk 14208 recorded >10% improvement over best standard CoP 06436 (9.08 t/ha) at Seorahi centre.

Table 5.6.2. Cane yield (t/ha) at harvest

S. No.	Entries	Seo Rahi#	Pusa	Moti pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoLk 14208	80.86*	61.03	78.84*	66.32	-	71.76	
2	CoLk 14209	74.94	64.16	70.10	68.91	-	69.53	
3	CoP 14438	79.63	75.69*	73.27	67.09	-	73.92	
4	CoP 14439	84.56*	95.17	74.34	68.62	-	80.67	1
5	CoSe 14455	88.27*	77.82**	72.54	69.68	-	77.08	2
Standards								
1	BO 91	68.52	79.09	72.90	69.01	-	72.38	
2	CoP 9301	66.05	73.39	70.67	66.14	-	69.06	
3	CoP 06436	70.98	81.79	73.99	72.00	-	74.69	3
	Mean	76.73	76.02	73.33	68.47	-		
	SE (m)	3.07	1.52	1.51	-	-		
	CD	9.33	4.65	4.59	NS	-		
	CV	6.95	3.46	3.57	6.03	-		
Top three qualifying entries at each locations								
		CoSe 14455	CoP 14439					
		CoP 14439						
		CoLk 14208						

* Significantly superior the over best standard.

Qualifying entries: CoSe 14455 (1), CoP 14439 (2), CoLk 14208 (1) and CoP 14438 (1).

Performance across the locations: None of the test entries recorded >10% improvement over best standard across the zone for cane yield. CoP 14439 ranked top with 80.67 t/ha of cane yield across four locations and also recorded 19.13% and 16.36% improvement over best standard at Seorahi and Pusa centres respectively. CoSe 14455 ranked second in the zone with 77.08 t/ha of mean cane yield and recorded 24.36% improvement over best standard CoP 06436 at Seorahi centre. CoLk 14208 and CoP 14438 recorded 13.92% and 12.19% improvement over best standard at Seorahi centre.

Table 5.6.3. CCS (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoLk 14208	12.69	14.01	11.64	12.09	-	12.61	1
2	CoLk 14209	12.03	14.02	11.74	12.27	-	12.52	3
3	CoP 14438	12.99	12.75	11.55	12.18	-	12.37	
4	CoP 14439	11.88	12.55	11.79	11.99	-	12.05	
5	CoSe 14455	13.61*	12.97	11.66	11.76	-	12.50	
Standards								
1	BO 91	12.73	12.33	11.45	11.83	-	12.09	
2	CoP 9301	12.92	14.16	10.74	12.35	-	12.54	2
3	CoP 06436	12.8	12.61	11.52	11.44	-	12.09	
	Mean	12.71	13.18	11.51	11.99	-		
	SE (m)	0.17	0.24	0.34	-	-		
	CD	0.53	0.73	-	NS	-		
	CV	2.36	3.14	5.21	6.16	-		
Top three qualifying entries at each locations								
		CoSe 14455						

Qualifying entry: CoSe 14455 (1)

Performance across the locations: None of the test entries recorded >5% improvement over best standard across the zone for CCS%. The entry CoLk 14208 ranked top in the zone with 12.61% mean CCS% across locations. The entry CoSe 14455 recorded 5.34% improvement over best standard CoP 9301 (12.92%) for CCS% at Seorahi centre.

Table 5.6.4. Sucrose (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoLk 14208	18.47	20.39	17.52	17.53	-	18.48	2
2	CoLk 14209	17.49	20.19	17.44	17.68	-	18.20	3
3	CoP 14438	18.95	18.51	16.90	17.53	-	17.97	
4	CoP 14439	17.33	18.41	17.34	17.32	-	17.60	
5	CoSe 14455	19.67*	18.82	17.04	16.99	-	18.13	
Standards								
1	BO 91	18.58	18.42	16.85	17.06	-	17.73	
2	CoP 9301	18.79	20.39	17.42	17.78	-	18.60	1
3	CoP 06436	18.61	18.29	16.82	16.58	-	17.58	
	Mean	18.49	19.18	17.17	17.31	-		
	SE (m)	0.25	0.28	0.22	-	-		
	CD	0.75	0.86	-	NS	-		
	CV	2.31	2.54	2.26	6.17	-		
Qualifying entries at each locations								

Qualifying entries: Nil.

Performance across the locations: None of the test entries recorded >5% improvement over best standard for sucrose% across the zone. The standard CoP 9301 ranked top in the zone with 18.60% mean sucrose percent. The entries CoLk 14208 and CoLK 14209 ranked second and third respectively in the zone with 18.48% and 18.20% mean sucrose percent respectively.

Table 5.6.5. Brix (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	21.15	22.87	21.44	19.92	-	21.35
2	CoLk 14209	20.03	22.67	20.81	19.85	-	20.84
3	CoP 14438	21.85	21.33	19.58	19.63	-	20.60
4	CoP 14439	19.95	21.13	20.31	19.55	-	20.24
5	CoSe 14455	22.22	21.47	19.71	19.16	-	20.64
Standards							
1	BO 91	21.43	20.93	19.78	19.17	-	20.33
2	CoP 9301	21.51	22.87	24.18	19.93	-	22.12
3	CoP 06436	21.29	20.83	19.38	18.85	-	20.09
	Mean	21.18	21.76	20.65	19.51	-	
	SE (m)	0.29	0.34	1.38	-	-	
	CD	0.88	1.04	-	NS	-	
	CV	2.37	2.71	11.60	5.45	-	

Table 5.6.6. Purity (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	87.32	89.13	81.91	88.00	-	86.59
2	CoLk 14209	87.33	89.03	83.92	89.06	-	87.34
3	CoP 14438	86.72	87.67	86.43	89.3	-	87.53
4	CoP 14439	86.84	87.13	85.37	88.59	-	86.98
5	CoSe 14455	88.52	87.73	86.44	88.67	-	87.84
Standards							
1	BO 91	86.71	87.73	85.22	88.99	-	87.16
2	CoP 9301	87.36	89.13	74.90	89.21	-	85.15
3	CoP 06436	87.42	87.8	86.86	87.95	-	87.51
	Mean	87.28	88.17	83.88	88.72	-	
	SE (m)	0.35	0.51	3.54	-	-	
	CD	1.07	0.52	-	NS	-	
	CV	0.7	1.01	7.32	6.12	-	

Table 5.6.7. Pol (%) cane at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	13.78	16.78	15.30	-	-	15.29
2	CoLk 14209	13.05	17.79	15.15	-	-	15.33
3	CoP 14438	14.12	15.34	15.01	-	-	14.82
4	CoP 14439	12.91	15.33	15.14	-	-	14.46
5	CoSe 14455	14.67	15.41	15.01	-	-	15.03
Standards							
1	BO 91	13.84	15.21	9.95	-	-	13.00
2	CoP 9301	13.99	16.99	15.05	-	-	15.34
3	CoP 06436	13.87	15.16	14.87	-	-	14.63
	Mean	13.78	16.00	14.44	-	-	
	SE (m)	-	0.44	1.74	-	-	
	CD	-	1.34	5.28	-	-	
	CV	-	4.72	19.91	-	-	

Table 5.6.8. Extraction (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	58.60	55.10	57.80	-	-	57.17
2	CoLk 14209	60.15	56.30	60.87	-	-	59.11
3	CoP 14438	58.21	59.35	60.25	-	-	59.27
4	CoP 14439	58.28	59.80	52.99	-	-	57.02
5	CoSe 14455	61.60	61.10	59.88	-	-	60.86
Standards							
1	BO 91	58.59	58.30	59.23	-	-	58.71
2	CoP 9301	57.43	58.70	61.08	-	-	59.07
3	CoP 06436	59.22	59.15	60.62	-	-	59.66
	Mean	59.01	58.48	59.09	-	-	
	SE (m)	-	2.29	1.42	-	-	
	CD	-	2.30	4.32	-	-	
	CV	-	6.78	4.17	-	-	

Table 5.6.9. Fibre (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	13.81	12.70	12.35	-	-	12.95
2	CoLk 14209	13.34	12.81	12.62	-	-	12.92
3	CoP 14438	13.72	12.15	12.30	-	-	12.72
4	CoP 14439	13.68	12.08	12.00	-	-	12.59
5	CoSe 14455	13.25	13.1	12.56	-	-	12.97
Standards							
1	BO 91	13.92	12.45	12.36	-	-	12.91
2	CoP 9301	13.66	11.65	12.43	-	-	12.58
3	CoP 06436	13.75	12.10	12.44	-	-	12.76
	Mean	13.64	12.38	12.38	-	-	
	SE (m)	-	0.27	0.27	-	-	
	CD	-	0.84	-	-	-	
	CV	-	3.83	3.89	-	-	

Table 5.6.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	109.0	94.1	106.81	118.2	-	107.05
2	CoLk 14209	89.0	93.1	195.68	108.1	-	121.48
3	CoP 14438	96.0	105.2	109.8	108.1	-	104.80
4	CoP 14439	94.0	112.1	104.64	112.4	-	105.81
5	CoSe 14455	115.0	108.3	100.01	114.0	-	109.34
Standards							
1	BO 91	101.0	107.2	130.71	124.9	-	115.95
2	CoP 9301	90.0	113.2	97.75	110.0	-	102.75
3	CoP 06436	101.0	109.3	113.4	126.4	-	112.52
	Mean	99.38	105.33	107.35	115.30	-	
	SE (m)	4.10	3.09	5.58	4.13	-	
	CD	12.45	9.46	16.92	12.52	-	
	CV	7.12	5.08	8.99	6.20	-	

Table 5.6.11. Stalk Length (cm) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	210.0	174.0	300.0	230.2	-	228.54
2	CoLk 14209	214.0	158.7	253.3	230.4	-	214.11
3	CoP 14438	212.0	182.2	280.0	238.9	-	228.28
4	CoP 14439	212.0	195.6	305.0	254.6	-	241.78
5	CoSe 14455	218.0	202.4	306.7	268.1	-	248.81
	Standards						
1	BO 91	183.0	198.8	283.3	221.8	-	221.73
2	CoP 9301	165.0	184.9	246.7	242.4	-	209.75
3	CoP 06436	189.0	162.3	283.3	261.0	-	223.90
	Mean	200.38	182.36	282.29	243.42	-	
	SE (m)	3.27	3.88	11.44	8.38	-	
	CD	9.92	11.87	34.70	25.40	-	
	CV	2.82	3.68	6.90	5.96	-	

Table 5.6.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	2.10	2.17	2.33	1.90	-	2.13
2	CoLk 14209	2.10	2.71	2.46	2.16	-	2.36
3	CoP 14438	1.90	2.28	2.36	2.06	-	2.15
4	CoP 14439	2.10	2.94	2.30	2.24	-	2.40
5	CoSe 14455	2.20	2.21	2.40	1.92	-	2.18
	Standards						
1	BO 91	2.00	2.34	2.23	1.95	-	2.13
2	CoP 9301	1.80	2.4	2.40	1.94	-	2.14
3	CoP 06436	2.10	2.29	2.26	2.17	-	2.21
	Mean	2.04	2.42	2.34	2.04	-	
	SE (m)	0.06	0.05	0.10	0.07	-	
	CD	0.17	0.17	-	0.21	-	
	CV	4.83	3.86	7.53	5.96	-	

Table 5.6.13. Single Cane Weight (kg) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	0.74	0.65	0.89	0.58	-	0.72
2	CoLk 14209	0.84	0.69	1.17	0.76	-	0.86
3	CoP 14438	0.82	0.72	1.04	0.63	-	0.80
4	CoP 14439	0.90	0.85	1.02	0.74	-	0.88
5	CoSe 14455	0.77	0.75	1.44	0.76	-	0.93
	Standards						
1	BO 91	0.68	0.74	1.00	0.64	-	0.76
2	CoP 9301	0.73	0.65	0.97	0.61	-	0.74
3	CoP 06436	0.70	0.75	1.24	0.77	-	0.87
	Mean	0.77	0.73	1.10	0.69	-	
	SE (m)	0.01	0.03	0.13	0.02	-	
	CD	0.02	0.09	-	0.07	-	
	CV	1.70	7.28	21.08	5.63	-	

Table 5.6.14. CCS (%) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	12.53	12.86	10.96	10.93	-	11.82
2	CoLk 14209	11.76	11.85	11.45	11.13	-	11.55
3	CoP 14438	11.62	12.11	10.04	11.06	-	11.21
4	CoP 14439	11.77	12.74	11.49	10.86	-	11.72
5	CoSe 14455	11.68	11.75	11.55	10.95	-	11.48
Standards							
1	BO 91	11.38	12.42	11.15	11.00	-	11.49
2	CoP 9301	12.73	12.03	11.62	11.27	-	11.91
3	CoP 06436	12.69	12.04	10.24	10.89	-	11.47
	Mean	12.02	12.23	11.06	11.01	-	
	SE (m)	0.2	0.26	0.53	-	-	
	CD	0.62	0.79	-	NS	-	
	CV	2.93	3.72	8.40	6.22	-	

Table 5.6.15. Sucrose (%) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	18.22	18.77	15.84	16.07	-	17.23
2	CoLk 14209	16.98	17.29	16.44	16.31	-	16.76
3	CoP 14438	16.80	17.60	14.48	16.2	-	16.27
4	CoP 14439	17.04	18.56	16.62	15.95	-	17.04
5	CoSe 14455	16.97	17.00	16.76	16.04	-	16.69
Standards							
1	BO 91	16.44	17.99	15.88	16.15	-	16.62
2	CoP 9301	18.48	17.44	17.06	16.49	-	17.37
3	CoP 06436	18.37	17.42	14.92	15.98	-	16.67
	Mean	17.41	17.76	16.00	16.15	-	
	SE (m)	0.40	0.37	0.76	-	-	
	CD	1.21	1.12	-	NS	-	
	CV	4.00	3.56	8.27	5.64	-	

Table 5.6.16. Brix (%) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	20.82	21.60	17.88	18.78	-	19.77
2	CoLk 14209	19.15	19.93	18.33	18.94	-	19.09
3	CoP 14438	18.98	20.07	16.30	18.79	-	18.54
4	CoP 14439	19.28	21.33	18.82	18.62	-	19.51
5	CoSe 14455	19.36	19.27	19.08	18.63	-	19.09
Standards							
1	BO 91	18.55	20.43	17.40	18.83	-	18.80
2	CoP 9301	21.05	19.80	19.92	19.11	-	19.97
3	CoP 06436	20.81	19.73	17.15	18.62	-	19.08
	Mean	19.75	20.27	18.11	18.79	-	
	SE (m)	0.32	0.40	0.86	-	-	
	CD	0.98	1.24	-	NS	-	
	CV	2.85	3.45	8.31	6.32	-	

Table 5.6.17. Purity (%) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	87.49	86.87	88.73	85.56	-	87.16
2	CoLk 14209	88.68	86.7	89.66	86.11	-	87.79
3	CoP 14438	88.5	87.7	88.84	86.21	-	87.81
4	CoP 14439	88.33	86.97	88.32	85.66	-	87.32
5	CoSe 14455	87.66	88.23	87.81	86.09	-	87.45
Standards							
1	BO 91	88.61	88.07	91.32	85.76	-	88.44
2	CoP 9301	87.77	87.43	85.68	86.28	-	86.79
3	CoP 06436	88.29	88.27	86.62	85.82	-	87.25
	Mean	88.17	87.53	88.37	85.94	-	
	SE (m)	0.38	0.49	1.02	-	-	
	CD	1.16	0.49	3.10	NS	-	
	CV	0.75	0.97	2.00	5.98	-	

Table 5.6.18. Number of Shoots ('000/ha) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	-	135.1	119.99	136.2	-	130.46
2	CoLk 14209	-	127.8	112.16	124.4	-	121.45
3	CoP 14438	-	155.1	128.03	126.5	-	136.53
4	CoP 14439	-	152.2	123.09	130.0	-	135.09
5	CoSe 14455	-	142.1	119.99	131.8	-	131.30
Standards							
1	BO 91	-	145.5	157.69	144.4	-	149.20
2	CoP 9301	-	151.1	110.21	128.4	-	129.92
3	CoP 06436	-	148.4	125.04	145.4	-	139.61
	Mean		144.67	124.53	133.40	-	
	SE (m)	-	3.98	7.69	4.77	-	
	CD	-	12.18	23.33	14.48	-	
	CV	-	4.76	10.70	6.20	-	

Table 5.6.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	150.0	98.1	128.65	131.5	-	127.07
2	CoLk 14209	117.0	87.2	121.02	119.6	-	111.21
3	CoP 14438	133.0	108.1	124.32	120.8	-	121.57
4	CoP 14439	127.0	105.8	118.75	124.9	-	119.12
5	CoSe 14455	154.0	106.1	100.73	125.7	-	121.62
Standards							
1	BO 91	137.0	108.8	165.21	138.4	-	137.37
2	CoP 9301	120.0	104.1	115.15	122.4	-	115.42
3	CoP 06436	143.0	110.8	128.75	139.0	-	130.40
	Mean	135.13	103.66	125.32	127.79	-	
	SE (m)	5.90	2.88	5.88	4.59	-	
	CD	17.90	8.83	17.83	13.92	-	
	CV	7.50	4.82	8.12	6.22	-	

Table 5.6.20. Germination (%) at 45 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoLk 14208	65.09	33.15	40.94	38.33	-	44.38
2	CoLk 14209	35.83	31.10	32.43	38.42	-	34.45
3	CoP 14438	59.72	42.25	31.12	35.13	-	42.06
4	CoP 14439	51.57	41.17	2.21	36.63	-	32.90
5	CoSe 14455	64.07	38.85	36.57	40.19	-	44.92
Standards							
1	BO 91	38.42	39.10	46.84	39.46	-	40.96
2	CoP 9301	43.43	38.70	40.78	35.33	-	39.56
3	CoP 06436	48.42	41.05	52.05	40.17	-	45.42
	Mean	50.82	38.17	35.37	37.96	-	
	SE (m)	2.58	2.09	3.83	1.34	-	
	CD	7.82	6.40	11.64	4.06	-	
	CV	8.50	9.48	15.97	6.11	-	

Table 5.6.21. Assessment of entries by monitoring team constituted by AICRP(S)

Entry	Seorahi	Pusa	Motipur	Bethuadhari	Buralikson
CoLk 14208	Very good	Good	Excellent	Excellent	Not conducted
CoLk 14209	Very good	Good	Excellent	Very good	
CoP 14438	Very good	Good	Excellent	Very good	
CoP 14439	Very good	Average	Excellent	Very good	
CoSe 14455	Excellent	Excellent	Excellent	Excellent	
Standards					
BO 91	Very good	Very good	Excellent	Very good	
CoP 9301	Average	Good	Excellent	Good	
CoP 06436	Excellent	Poor	Excellent	Very good	

5.7. INITIAL VARIETAL TRIAL (MIDLATE)

Centers (4)	Seorahi, Pusa, Motipur and Bethuadahari
Entries (10)	1. CoBIn 15502 (CoS 8119 x CoJ 72) 2. CoLk 15468 (LG 97050 x CoSe 95422) 3. CoLk 15469 (CoPant 9722 GC) 4. CoP 15438(CoSe 02168 GC) 5. CoP 15439 (CoSe 02168 GC) 6. CoP 15440 (CoSe 02168 GC) 7. CoP 15441 (CoS 88216 GC) 8. CoSe 15453 (CoS 87216 GC) 9. CoSe 15454 (CoS 96436 GC) 10. CoSe 15457 (CoS 96269 GC)
Standards (3)	BO 91, CoP 9301and CoP 06436
Design	RBD
Replications	Three
Plot size	Gross : 6 m x 6 rows x 0.75 m Net : 5 m x 4 rows x 0.75 m
Seed rate	12 buds per meter
Date of planting	February - March, 2018
Crop duration	12 months

Results of the previous year:

The entries were under multiplication.

Results of the current year:

Ten test entries and three standards were evaluated in IVT (Midlate) trial at four locations of North Central and North East zones during 2017-18 for cane yield and juice quality parameters. The test entry CoSe 15453 ranked top in the zone with 11.57% improvement over best standard CoP 06436 (9.25 t/ha) for mean CCS yield across locations. The entry CoSe 15454 ranked second with 10.86% of mean CCS yield improvement in the zone. 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 followed by CoSe 15454 (12.08%). For CCS%, none of the test entries recorded >5% improvement over best standard for CCS% across locations. The entry CoLk 15469 (12.84%) ranked top in the zone and recorded 10.51% improvement over best standard CoP 9301 (12.58%) for CCS% at Pusa centre. CoSe 15457 (12.70%) and CoSe 15454 (12.60%) ranked second and third in the zone. For sucrose%, none of the test entries recorded >5% improvement over the best standard for sucrose% across locations. The test entry CoLk 15469 (18.63%) ranked top in the zone for mean sucrose% and recorded 9.63% improvement over best standard BO 91 (18.89%) at Pusa centre. Based on cane yield and juice quality parameters, the entry CoSe 15454 is only qualifying entry which recorded >10% improvement over popular standard CoP 9301 for cane yield across locations and it also recorded on-par values for sucrose% across zone. **The data are presented in table 5.7.1 to 5.7.21.**

Table 5.7.1. CCS (t/ha) at harvest

S. No.	Entries	Seo Rahi #	Pusa	Moti Pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoBln 15502	8.01	3.66	5.61	5.90	-	5.80	
2	CoLk 15468	9.53	9.92	8.11	7.97	-	8.88	
3	CoLk 15469	9.28	12.07	8.59	7.86	-	9.45	5
4	CoP 15438	9.34	9.78	8.78	7.85	-	8.94	
5	CoP 15439	9.87	11.08	8.21	8.08	-	9.31	
6	CoP 15440	10.03	11.22	8.65	8.24	-	9.54	3
7	CoP 15441	9.86	9.65	7.41	8.80	-	8.93	
8	CoSe 15453	13.24*	10.72	8.65	8.67	-	10.32	1
9	CoSe 15454	12.60*	11.15	8.65	8.62	-	10.26	2
10	CoSe15457	12.16*	9.97	7.90	8.07	-	9.53	4
Standards								
1	BO 91	8.49	9.95	7.98	7.92	-	8.59	
2	CoP 9301	8.85	10.29	8.67	8.36	-	9.04	
3	CoP 06436	8.44	12.51	7.68	8.37	-	9.25	
	GM	9.98	10.15	8.07	8.05	-		
	SE(m)	0.44	0.76	-	4.21	-		
	CD	1.29	2.23	-	12.68	-		
	CV	7.68	12.95	-	6.06	-		
Top three qualifying entries at each locations								
		CoSe 15453						
		CoSe 15454						
		CoSe 15457						

* Significantly superior over the best standard.

Qualifying entries: CoSe 15453 (1), CoSe 15454 (1), CoSe15457 (1), CoP 15440 (1), CoP 15439 (1) and CoP 15441(1).

Performance across the locations: The test entry CoSe 15453 ranked top in the zone with 11.57% improvement over best standard CoP 06436 (9.25 t/ha) for mean CCS yield across locations and also recorded 49.60% improvement over best standard CoP 9301 (8.85 t/ha) at Seorahi centre. The test entry CoSe 15454 ranked second with 10.86% of mean CCS yield improvement across locations. The other test entries CoSe 15457, CoP 15440, CoP 15439 and CoP 15441 recorded >10% improvement over best standard at Seorahi centre only.

Table 5.7.2. Cane yield (t/ha) at harvest

S. No.	Entries	Seo Rahi #	Pusa	Moti Pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoBln 15502	67.59	35.96	49.07	52.53	-	51.29	
2	CoLk 15468	74.81	75.93	69.2	69.28	-	72.31	
3	CoLk 15469	70.19	83.79	72.96	65.61	-	73.14	
4	CoP 15438	75.74	83.32	75.79	64.89	-	74.94	
5	CoP 15439	80.19*	87.2	71.01	65.49	-	75.97	4
6	CoP 15440	77.22	85.75	74.47	67.16	-	76.15	3
7	CoP 15441	80.93*	76.34	63.08	70.52	-	72.72	
8	CoSe 15453	97.59*	93.57	75.62	68.67	-	83.86	1
9	CoSe 15454	92.59*	89.35	72.98	69.35	-	81.07	2
10	CoSe15457	89.81*	74.59	66.75	67.38	-	74.63	
Standards								
1	BO 91	67.96	76.23	68.62	68.43	-	70.31	
2	CoP 9301	66.85	81.43	74.78	66.26	-	72.33	
3	CoP 06436	72.04	93.25	66.08	72.48	-	75.96	5
	GM	77.96	79.75	69.26	66.77	-		
	SE(m)	2.69	5.01	1.59	2.11	-		
	CD	7.85	14.97	4.66	6.15	-		
	CV	5.98	11.07	3.99	5.47	-		
Top three qualifying entries at each locations								
		CoSe 15453						
		CoSe 15454						
		CoSe 15457						

* Significantly superior over the best standard.

Qualifying entries: CoSe 15453(1), CoSe 15454 (1), CoSe15457 (1) and CoP 15439 (1).

Performance across the locations: The test entry CoSe 15453 ranked top with 10.40% improvement over best standard CoP 06436 (75.96 t/ha) for mean cane yield across locations in the zone and also recorded 35.47% improvement for cane yield over the best standard at Seorahi centre. The entry CoSe 15454 ranked second in the zone and recorded 28.53% improvement over standard CoP 06436 (72.04 t/ha) at Seorahi centre. Other test entries CoSe15457 and CoP 15439 recorded 24.67% and 11.39% over the best standard at Seorahi centre.

Table 5.7.3. CCS (%) at harvest

S. No.	Entries	Seo Rahi	Pusa	Moti Pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoBln 15502	11.86	10.22	11.43	11.24	-	11.19	
2	CoLk 15468	12.74	13.04	11.71	11.51	-	12.25	
3	CoLk 15469	13.23	14.39	11.77	11.98	-	12.84	1
4	CoP 15438	12.39	11.73	11.59	12.11	-	11.96	
5	CoP 15439	12.31	12.7	11.56	12.35	-	12.23	
6	CoP 15440	12.99	13.11	11.62	12.28	-	12.50	5
7	CoP 15441	12.19	12.65	11.75	12.49	-	12.27	
8	CoSe 15453	13.57	11.45	11.44	12.63	-	12.27	
9	CoSe 15454	13.61	12.5	11.86	12.44	-	12.60	3
10	CoSe15457	13.54	13.41	11.84	11.99	-	12.70	2
Standards								
1	BO 91	12.5	13.03	11.63	11.58	-	12.19	
2	CoP 9301	13.24	12.58	11.60	12.63	-	12.51	4
3	CoP 06436	11.72	12.51	11.62	11.55	-	11.85	
	GM	12.76	12.56	11.65	12.06	-		
	SE(m)	0.15	0.26	0.08	0.40	-		
	CD	0.44	0.76	0.24	1.16	-		
	CV	2.04	3.57	1.23	5.75	-		
Top three qualifying entries at each locations								
			CoLk 15469					

* Significantly superior over the best standard.

Qualifying entry: CoLk 15469 (1).

Performance across the locations: None of the test entries recorded >5% improvement over best standard for CCS% across locations. The entry CoLk 15469 (12.84%) ranked top in the zone and also recorded 10.51% improvement over best standard CoP 9301 (12.58%) for CCS% at Pusa centre. CoSe 15457 (12.70%) and CoSe 15454 (12.60%) ranked second and third across the locations.

Table 5.7.4. Sucrose (%) at harvest

S. No.	Entries	Seo Rahi #	Pusa	Moti Pur	Bethua dahari	Bura likson	Mean	Overall rank
1	CoBln 15502	17.41	14.96	16.46	16.30	-	16.28	
2	CoLk 15468	18.58	18.97	17.04	16.66	-	17.81	
3	CoLk 15469	19.25	20.71*	17.18	17.39	-	18.63	1
4	CoP 15438	18.15	16.97	16.65	17.55	-	17.33	
5	CoP 15439	18.01	18.31	16.71	17.92	-	17.74	
6	CoP 15440	18.86	18.94	17.01	17.79	-	18.15	5
7	CoP 15441	17.73	18.41	17.26	18.11	-	17.88	
8	CoSe 15453	19.76	16.65	16.36	18.29	-	17.77	
9	CoSe 15454	19.73	17.94	16.96	17.99	-	18.16	4
10	CoSe15457	19.67	19.43	17.04	17.42	-	18.39	2
Standards								
1	BO 91	18.24	18.89	16.81	16.78	-	17.68	
2	CoP 9301	19.25	18.28	17.10	18.23	-	18.22	3
3	CoP 06436	17.25	18.06	16.71	16.73	-	17.19	
	GM	18.61	18.19	16.87	17.47	-		
	SE(m)	0.19	0.36	0.17	0.58	-		
	CD	0.55	1.05	0.49	1.69	-		
	CV	1.75	3.42	1.74	5.75	-		
Top three qualifying entries at each locations								
			CoLk 15469					

*Significantly superior over the best standard.

Qualifying entries: CoLk 15469(1).

Performance across the locations: None of the test entries recorded >5% improvement over the best standard for sucrose% across locations. The test entry CoLk 15469 ranked top in the zone with 18.63% of mean sucrose% and recorded 9.63% improvement over best standard BO 91 (18.89%) at Pusa center.

Table 5.7.5. Brix (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	20.30	17.34	18.45	18.53	-	18.66
2	CoLk 15468	21.38	21.70	19.50	18.89	-	20.37
3	CoLk 15469	22.05	23.20	19.79	19.82	-	21.22
4	CoP 15438	21.09	19.23	18.60	19.95	-	19.72
5	CoP 15439	20.86	20.57	18.90	20.41	-	20.19
6	CoP 15440	21.49	21.37	19.74	20.20	-	20.70
7	CoP 15441	20.31	21.10	20.17	20.58	-	20.54
8	CoSe 15453	22.64	19.07	18.07	20.73	-	20.13
9	CoSe 15454	22.43	20.23	18.76	20.35	-	20.44
10	CoSe15457	22.47	22.13	19.08	19.88	-	20.89
Standards							
1	BO 91	21.05	21.47	19.01	19.04	-	20.14
2	CoP 9301	22.17	20.87	20.1	20.54	-	20.92
3	CoP 06436	21.17	20.37	18.72	18.98	-	19.81
	GM	21.49	20.67	19.15	19.84	-	
	SE(m)	0.21	0.39	0.408	0.66	-	
	CD	0.61	1.13	1.19	1.93	-	
	CV	1.67	3.23	3.69	5.76	-	

Table 5.7.6. Purity (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	85.73	86.27	89.27	87.96	-	87.31
2	CoLk 15468	86.87	87.42	87.38	88.19	-	87.47
3	CoLk 15469	87.29	89.20	86.81	87.73	-	87.76
4	CoP 15438	86.07	88.30	89.57	87.96	-	87.98
5	CoP 15439	86.35	89.00	88.41	87.80	-	87.89
6	CoP 15440	87.76	88.53	86.23	88.06	-	87.65
7	CoP 15441	87.33	87.27	85.59	87.99	-	87.05
8	CoSe 15453	87.26	87.30	90.74	88.22	-	88.38
9	CoSe 15454	87.94	88.67	90.42	88.40	-	88.86
10	CoSe15457	87.54	87.77	89.14	87.62	-	88.02
Standards							
1	BO 91	86.68	87.97	88.45	88.13	-	87.81
2	CoP 9301	86.82	87.60	89.35	88.75	-	88.13
3	CoP 06436	86.23	88.53	85.14	88.14	-	87.01
	GM	86.91	87.99	88.19	88.07	-	
	SE(m)	0.52	0.47	1.177	-	-	
	CD	1.52	1.38	3.43	NS	-	
	CV	1.04	0.93	3.99	5.63	-	

Table 5.7.7. Pol (%) cane at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	12.85	12.42	14.67	-	-	13.31
2	CoLk 15468	13.76	15.39	15.06	-	-	14.74
3	CoLk 15469	14.21	16.89	14.99	-	-	15.36
4	CoP 15438	13.45	14.02	14.53	-	-	14.00
5	CoP 15439	13.34	14.64	14.69	-	-	14.22
6	CoP 15440	13.92	14.99	15.02	-	-	14.64
7	CoP 15441	13.13	14.57	14.89	-	-	14.20
8	CoSe 15453	14.63	13.69	14.62	-	-	14.31
9	CoSe 15454	14.59	14.15	14.97	-	-	14.57
10	CoSe15457	14.52	15.65	14.98	-	-	15.05
Standards							
1	BO 91	13.54	15.61	9.87	-	-	13.01
2	CoP 9301	14.24	15.10	14.95	-	-	14.76
3	CoP 06436	12.79	14.96	14.75	-	-	14.17
	GM	13.77	14.78	14.46	-	-	
	SE(m)	-	0.31	1.40	-	-	
	CD	-	0.92	4.08	-	-	
	CV	-	3.68	16.78	-	-	

Table 5.7.8. Extraction (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	58.42	51.70	63.91	-	-	58.01
2	CoLk 15468	59.04	55.84	64.21	-	-	59.70
3	CoLk 15469	58.02	59.08	64.20	-	-	60.43
4	CoP 15438	59.02	59.18	62.22	-	-	60.14
5	CoP 15439	59.24	57.92	63.29	-	-	60.15
6	CoP 15440	57.07	56.47	67.26	-	-	60.27
7	CoP 15441	58.15	59.67	58.97	-	-	58.93
8	CoSe 15453	60.17	56.47	64.61	-	-	60.42
9	CoSe 15454	61.02	58.40	67.44	-	-	62.29
10	CoSe15457	61.00	59.65	65.00	-	-	61.88
Standards							
1	BO 91	58.08	55.83	64.05	-	-	59.32
2	CoP 9301	58.05	60.67	65.06	-	-	61.26
3	CoP 06436	59.12	58.58	64.65	-	-	60.78
	GM	58.95	57.65	64.22	-	-	
	SE(m)	-	1.42	3.10	-	-	
	CD	-	4.16	-	-	-	
	CV	-	4.26	8.36	-	-	

Table 5.7.9. Fibre (%) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	13.84	12.00	12.95	-	-	12.93
2	CoLk 15468	13.66	13.87	11.63	-	-	13.05
3	CoLk 15469	13.62	13.47	12.46	-	-	13.18
4	CoP 15438	13.58	12.40	13.05	-	-	13.01
5	CoP 15439	13.54	15.07	13.08	-	-	13.90
6	CoP 15440	13.92	15.87	12.13	-	-	13.97
7	CoP 15441	13.58	15.87	13.08	-	-	14.18
8	CoSe 15453	13.46	12.80	11.36	-	-	12.54
9	CoSe 15454	13.28	16.13	12.70	-	-	14.04
10	CoSe15457	13.32	14.47	12.83	-	-	13.54
Standards							
1	BO 91	13.90	12.4	11.95	-	-	12.75
2	CoP 9301	13.78	12.4	11.10	-	-	12.43
3	CoP 06436	13.65	12.13	12.92	-	-	12.90
	GM	13.63	13.76	12.40	-	-	
	SE(m)	-	0.28	0.18	-	-	
	CD	-	0.83	0.53	-	-	
	CV	-	3.57	2.54	-	-	

Table 5.7.10. Number of Millable Canes ('000/ha) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	87.0	63.7	59.11	85.3	-	73.77
2	CoLk 15468	90.0	105.1	77.93	120.5	-	98.38
3	CoLk 15469	81.0	107.3	48.92	126.5	-	90.92
4	CoP 15438	106.0	112.6	104.95	123.6	-	111.81
5	CoP 15439	96.0	115.1	74.39	109.1	-	98.66
6	CoP 15440	101.0	117.6	91.98	110.2	-	105.21
7	CoP 15441	108.0	109.2	65.59	125.2	-	102.01
8	CoSe 15453	109.0	104.1	92.6	123.8	-	107.39
9	CoSe 15454	108.0	102.6	30.87	126.9	-	92.09
10	CoSe15457	104.0	98.3	77.47	119.7	-	99.87
Standards							
1	BO 91	99.0	112.4	109.73	128.7	-	112.46
2	CoP 9301	96.0	115.7	93.22	110.7	-	103.91
3	CoP 06436	98.0	110.7	114.67	133.1	-	114.10
	GM	98.69	105.73	80.11	118.72	-	
	SE(m)	3.7	5.43	7.85	3.71	-	
	CD	10.8	15.95	22.92	10.84	-	
	CV	6.5	8.9	16.97	5.42	-	

Table 5.7.11. Stalk Length (cm) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	143.0	186.5	306.3	238.5	-	218.58
2	CoLk 15468	178.0	215.9	243.3	249.9	-	221.78
3	CoLk 15469	161.0	189.5	220.0	232.2	-	200.66
4	CoP 15438	191.0	241.6	273.3	237.1	-	235.74
5	CoP 15439	197.0	250.1	296.7	248.1	-	247.96
6	CoP 15440	177.0	258.8	243.3	257.7	-	234.19
7	CoP 15441	169.0	185.1	230.0	245.5	-	207.40
8	CoSe 15453	232.0	277.4	191.0	244.8	-	236.27
9	CoSe 15454	212.0	229.2	235.0	244.4	-	230.16
10	CoSe15457	197.0	204.1	293.3	241.7	-	234.04
Standards							
1	BO 91	181.0	223.2	276.7	233.5	-	228.60
2	CoP 9301	165.0	216.1	256.7	229.0	-	216.69
3	CoP 06436	187.0	255.8	276.7	263.2	-	245.68
	GM	183.85	225.64	257.10	243.50	-	
	SE(m)	3.6	8.48	28.39	8.13	-	
	CD	10.5	24.90	-	23.73	-	
	CV	3.4	6.51	19.12	5.78	-	

Table 5.7.12. Stalk Diameter (cm) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	2.10	2.90	2.56	1.89	-	2.36
2	CoLk 15468	2.20	2.76	2.56	2.17	-	2.42
3	CoLk 15469	2.30	2.76	2.53	2.05	-	2.41
4	CoP 15438	2.00	2.49	2.16	2.10	-	2.19
5	CoP 15439	1.90	2.79	2.43	2.27	-	2.35
6	CoP 15440	2.10	2.58	2.20	2.27	-	2.29
7	CoP 15441	2.10	2.28	2.46	2.14	-	2.25
8	CoSe 15453	2.30	2.54	2.46	2.27	-	2.39
9	CoSe 15454	2.10	2.9	2.33	2.16	-	2.37
10	CoSe15457	2.30	2.81	2.50	2.25	-	2.47
Standards							
1	BO 91	2.20	2.24	2.26	2.17	-	2.22
2	CoP 9301	2.00	2.07	2.53	2.03	-	2.16
3	CoP 06436	2.20	2.48	2.30	2.32	-	2.33
	GM	2.14	2.58	2.41	2.16	-	
	SE(m)	0.04	0.08	0.10	0.07	-	
	CD	0.13	0.24	-	0.20	-	
	CV	3.53	5.56	7.42	5.62	-	

Table 5.7.13. Single Cane Weight (kg) at harvest

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	0.77	0.56	-	0.52	-	0.62
2	CoLk 15468	0.82	0.72	-	0.67	-	0.74
3	CoLk 15469	0.85	0.78	-	0.53	-	0.72
4	CoP 15438	0.72	0.74	-	0.64	-	0.70
5	CoP 15439	0.83	0.76	-	0.66	-	0.75
6	CoP 15440	0.77	0.73	-	0.61	-	0.71
7	CoP 15441	0.75	0.70	-	0.62	-	0.69
8	CoSe 15453	0.87	0.90	-	0.66	-	0.81
9	CoSe 15454	0.86	0.87	-	0.64	-	0.79
10	CoSe15457	0.87	0.76	-	0.61	-	0.75
Standards							
1	BO 91	0.68	0.68	-	0.64	-	0.67
2	CoP 9301	0.70	0.70	-	0.61	-	0.67
3	CoP 06436	0.71	0.90	-	0.74	-	0.78
	GM	0.79	0.75	-	0.63	-	
	SE(m)	0.01	0.03	-	0.02	-	
	CD	0.02	0.08	-	0.06	-	
	CV	1.27	6.45	-	5.22	-	

Table 5.7.14. CCS (%) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	11.86	10.07	10.91	10.18	-	10.76
2	CoLk 15468	12.18	13.13	11.74	10.33	-	11.85
3	CoLk 15469	12.52	12.44	11.66	11.35	-	11.99
4	CoP 15438	11.67	11.86	11.05	11.29	-	11.47
5	CoP 15439	11.09	12.27	11.06	11.49	-	11.48
6	CoP 15440	12.12	11.26	11.66	11.16	-	11.55
7	CoP 15441	12.15	11.42	11.56	11.75	-	11.72
8	CoSe 15453	12.21	12.31	9.99	11.76	-	11.57
9	CoSe 15454	11.94	12.26	11.52	11.51	-	11.81
10	CoSe15457	12.14	11.99	11.28	11.18	-	11.65
Standards							
1	BO 91	11.67	12.19	11.37	10.80	-	11.51
2	CoP 9301	13.2	12.91	11.52	11.32	-	12.24
3	CoP 06436	11.8	10.20	11.16	10.60	-	10.94
	GM	12.04	11.87	11.27	11.13	-	
	SE(m)	0.23	0.30	0.30	-	-	
	CD	0.68	0.89	0.90	NS	-	
	CV	3.32	4.43	4.74	6.54	-	

Table 5.7.15. Sucrose (%) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	17.24	14.71	15.83	15.02	-	15.70
2	CoLk 15468	17.65	19.11	16.84	15.16	-	17.19
3	CoLk 15469	18.05	17.87	16.98	16.70	-	17.40
4	CoP 15438	16.82	17.21	16.02	16.54	-	16.65
5	CoP 15439	16.09	18.20	16.04	16.90	-	16.81
6	CoP 15440	17.62	16.34	16.88	16.39	-	16.81
7	CoP 15441	17.59	16.59	16.90	17.19	-	17.07
8	CoSe 15453	17.69	17.70	14.69	17.25	-	16.83
9	CoSe 15454	17.24	17.64	16.64	16.92	-	17.11
10	CoSe15457	17.55	17.47	16.38	16.48	-	16.97
Standards							
1	BO 91	16.85	17.57	16.40	15.83	-	16.66
2	CoP 9301	19.05	18.67	16.90	16.66	-	17.82
3	CoP 06436	16.98	14.89	16.12	15.48	-	15.87
	GM	17.42	17.23	16.36	16.35	-	
	SE(m)	0.35	0.40	0.40	0.54	-	
	CD	1.01	1.17	1.17	1.58	-	
	CV	3.45	4.00	4.23	5.74	-	

Table 5.7.16. Brix (%) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	19.10	17.00	18.02	17.70	-	17.96
2	CoLk 15468	20.04	21.93	18.73	17.68	-	19.60
3	CoLk 15469	20.30	19.93	19.47	19.56	-	19.82
4	CoP 15438	18.90	19.60	18.20	19.20	-	18.98
5	CoP 15439	18.32	20.47	18.24	19.77	-	19.20
6	CoP 15440	20.14	18.60	19.13	19.13	-	19.25
7	CoP 15441	19.94	18.93	19.53	19.90	-	19.58
8	CoSe 15453	20.07	19.80	17.20	20.08	-	19.29
9	CoSe 15454	19.45	19.73	18.78	19.78	-	19.44
10	CoSe15457	19.83	19.87	18.70	19.37	-	19.44
Standards							
1	BO 91	18.97	19.73	18.43	18.39	-	18.88
2	CoP 9301	21.43	21.13	19.67	19.51	-	20.44
3	CoP 06436	19.02	17.20	18.20	17.87	-	18.07
	GM	19.65	19.53	18.64	19.07	-	
	SE(m)	0.27	0.40	0.47	0.63	-	
	CD	0.80	1.18	1.37	1.85	-	
	CV	2.41	3.57	4.36	5.77	-	

Table 5.7.17. Purity (%) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	89.42	86.57	87.73	84.85	-	87.14
2	CoLk 15468	88.11	87.13	89.92	85.74	-	87.73
3	CoLk 15469	88.90	89.67	87.24	85.37	-	87.80
4	CoP 15438	88.97	87.77	88.02	86.14	-	87.73
5	CoP 15439	87.84	88.97	87.97	85.48	-	87.57
6	CoP 15440	87.49	87.80	88.22	85.67	-	87.30
7	CoP 15441	88.23	87.60	86.74	86.38	-	87.24
8	CoSe 15453	88.01	89.40	85.22	85.90	-	87.13
9	CoSe 15454	88.64	89.40	88.63	85.54	-	88.05
10	CoSe15457	88.49	87.97	87.58	85.08	-	87.28
Standards							
1	BO 91	88.81	89.00	88.98	86.07	-	88.22
2	CoP 9301	88.86	88.37	85.96	85.39	-	87.15
3	CoP 06436	89.25	86.50	88.54	86.62	-	87.73
	GM	88.54	88.17	87.75	85.71	-	
	SE(m)	0.43	0.28	1.33	-	-	
	CD	1.24	0.83	-	NS	-	
	CV	0.83	3.57	2.63	5.66	-	

Table 5.7.18. Number of Shoots (*000/ha) at 240 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	-	94.9	83.34	104.0	-	94.07
2	CoLk 15468	-	124.9	89.82	140.0	-	118.26
3	CoLk 15469	-	124.6	56.02	145.7	-	108.78
4	CoP 15438	-	135.9	136.43	144.4	-	138.92
5	CoP 15439	-	128.2	105.72	127.8	-	120.56
6	CoP 15440	-	132.6	110.04	130.1	-	124.25
7	CoP 15441	-	117.1	91.06	144.6	-	117.62
8	CoSe 15453	-	120.2	107.11	144.5	-	123.93
9	CoSe 15454	-	117.0	57.41	146.9	-	107.11
10	CoSe15457	-	114.1	95.53	140.0	-	116.56
Standards							
1	BO 91	-	133.7	146.77	149.2	-	143.22
2	CoP 9301	-	134.0	109.89	129.8	-	124.54
3	CoP 06436	-	122.5	133.81	154.4	-	136.91
	GM	-	123.06	101.76	138.57	-	
	SE(m)	-	4.75	7.52	4.37	-	
	CD	-	13.96	21.93	12.75	-	
	CV	-	6.69	12.79	5.46	-	

Table 5.7.19. Number of Tillers ('000/ha) at 120 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	98.0	89.1	96.92	98.2	-	95.57
2	CoLk 15468	108.0	102.7	87.04	133.8	-	107.89
3	CoLk 15469	91.0	104.2	57.41	141.3	-	98.49
4	CoP 15438	141.0	124.6	114.97	138.2	-	129.71
5	CoP 15439	117.0	95.3	89.20	121.9	-	105.85
6	CoP 15440	140.0	124.3	97.69	124.1	-	121.53
7	CoP 15441	146.0	102.2	59.11	139.1	-	111.62
8	CoSe 15453	163.0	98.5	107.57	138.2	-	126.84
9	CoSe 15454	138.0	102.4	64.05	140.8	-	111.31
10	CoSe15457	125.0	98.4	80.56	134.7	-	109.67
Standards							
1	BO 91	134.0	117.1	148.01	143.2	-	135.57
2	CoP 9301	110.0	96.5	106.64	123.8	-	109.23
3	CoP 06436	136.0	101.6	129.48	148.3	-	128.84
	GM	126.69	104.39	95.28	132.75	-	
	SE(m)	6.20	5.63	6.08	4.18	-	
	CD	18.10	16.52	17.74	12.21	-	
	CV	8.48	9.34	11.05	5.49	-	

Table 5.7.20. Germination (%) at 45 days

S. No.	Entries	Seo rahi	Pusa	Moti pur	Bethua dahari	Bura likson	Mean
1	CoBln 15502	38.06	26.39	37.68	26.32	-	32.11
2	CoLk 15468	34.9	31.25	29.98	32.93	-	32.27
3	CoLk 15469	33.42	35.59	25.20	38.71	-	33.23
4	CoP 15438	43.61	44.34	24.73	38.94	-	37.91
5	CoP 15439	42.87	32.30	25.31	31.03	-	32.88
6	CoP 15440	49.62	42.23	36.75	32.24	-	40.21
7	CoP 15441	41.48	37.06	24.00	39.09	-	35.41
8	CoSe 15453	53.51	39.63	32.78	39.80	-	41.43
9	CoSe 15454	38.51	38.73	22.48	40.29	-	35.00
10	CoSe15457	44.44	28.22	24.85	36.95	-	33.62
Standards							
1	BO 91	40.09	41.75	49.35	40.09	-	42.82
2	CoP 9301	41.39	37.03	43.98	37.89	-	40.07
3	CoP 06436	42.59	40.81	49.65	42.32	-	43.84
	GM	41.88	36.56	32.83	36.66	-	
	SE(m)	2.81	1.55	3.01	1.15	-	
	CD	8.2	4.57	8.78	3.37	-	
	CV	7.75	7.37	16.66	5.45	-	

Table 5.7.21. Assessment of entries by monitoring team constituted by AICRP(S)

Entry	Seorahi	Pusa	Motipur	Bethuadhari	Buralikson
CoBln 15502	Poor	Poor	Average	Average	Not conducted
CoLk 15468	Good	Good	Excellent	Very good	
CoLk 15469	Good	Good	Very good	Good	
CoP 15438	Very good	Good	Very good	Good	
CoP 15439	Good	Good	Excellent	Very good	
CoP15440	Good	Good	Very good	Very good	
CoP 15441	Good	Very good	Very good	Excellent	
CoSe 15453	Very good	Excellent	Excellent	Very good	
CoSe 15454	Good	Good	Very good	Very good	
CoSe 14457	Very good	Good	Very good	Very good	
Standards					
BO 91	Good	Very good	Very good	Good	
CoP 9301	Average	Good	Very good	Very good	
CoP 06436					

6. FLUFF SUPPLY AND NATIONAL HYBRIDIZATION PROGRAMME

National breeding gene pool of sugarcane having 595 parental clones was maintained at National Hybridization Garden- 2018 in healthy and pest and disease free condition. Database on parents in NHG were updated by adding the information on red rot resistance of 141 parental clones with respect to their reaction to *cf 08* isolate of *Collectotrichum falcatum*. All the parental clones in NHG were observed for their flowering behaviour. The flowering was found earlier by 10 days when compared to the last year and the first flowering was noticed in LG 99122 on 10th October, 2018 followed by CoLk 7901 on 13th October 2018. Data collected on flowering of parental clones in NHG were uploaded and updated at weekly intervals in ICAR-Sugarcane Breeding Institute website <http://sugarcane.icar.in>. Out of 595 parents, 404 flowered and the per cent of clones flowered during 2018 was 67.90 % against 43.33 % during 2017 flowering season.

Among 24 participating centers of Fluff supply / National Hybridization programme, 22 attended the crossing programme 2018-19. Buralikson and Powarkheda did not attend the crossing programme. Hybridization work was initiated on 23rd October 2018 and concluded on 8th December 2018. Out of 403 parents flowered during 2018 flowering season, 125 female and 70 male parents were utilised for generating genetic variability for different agronomic traits. Co 86032 was the frequently used female parent in the crossing programme which was the female in 20 cross combinations. This was followed by Co 0238 (19 crosses), Co 98008 and Co 92006 (18 crosses each). Other female parents which were involved in more than 10 crosses were Co 8371(17), CoC 671 (17), CoV 89101 (17), Co 98010 (16), Co 2000-10 (13), Co 86002 (12), CoJ 64 (12), CoM 6806 (10) and CoS 8436 (10). Similarly Co 775 was the most frequently used male parent (60) because of its longer duration of flowering making the flowers available to the breeders of both tropical and subtropical regions. This was followed by Co 1148 (37), Co 62198 (33), Co 97015 (32), Co 11015 (24), ISH 69 (22), CoH 70 (21), Co 89003 (19), CoSe 92423 (16), CoVc 14061 (16), CoT 8201 (15), CoA 7602 (13), CoC 8001 (13) and CoS 510 (11) which were utilized more than 10 times in the crossing programme.

Twenty two fluff receiving centers were facilitated to make 539 bi-parental, 14 poly crosses, 154 general collections at NHG by ICAR-SBI, Coimbatore. Maximum number of bi-parental crosses was effected by the Shahjahanpur (39) followed by Pusa (33). Further, nine centers were facilitated to effect 32 bi-parental crosses and 30 general collections at National Distant Hybridization Facility (NDHF) available at ICAR-SBI, RC, Agali. Fluff weighing 26.86 kg of crosses made at NHG and NDHF during 2018 flowering season was supplied to the 22 sugarcane breeding centers of National Hybridization and Fluff Supply Programme.

The Parental Diversity Index (PDI) and Parental Utilization Index (PUI) of crosses effected by the 22 centers were analyzed by classifying the source of the parental clones in to eight categories viz., parents developed by ICAR-SBI (Co 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 ranged from 54.84 % (Faridkot) to 87.50% (Vuyyuru) which was significantly higher than that of crosses effected during the previous years. Pattern of utilization of parents by the Sankeshwar with higher PDI and PUI is depicted in Fig. 1. The PDI and PUI of the crosses done by the participating centers during 2018 flowering season is presented in table 6.1. Four centres viz., Sankeshwar, Faridkot, Lucknow and Shahjahanpur had PUI equal to PDI which indicated the utilization of all the classes of parents by these centres.

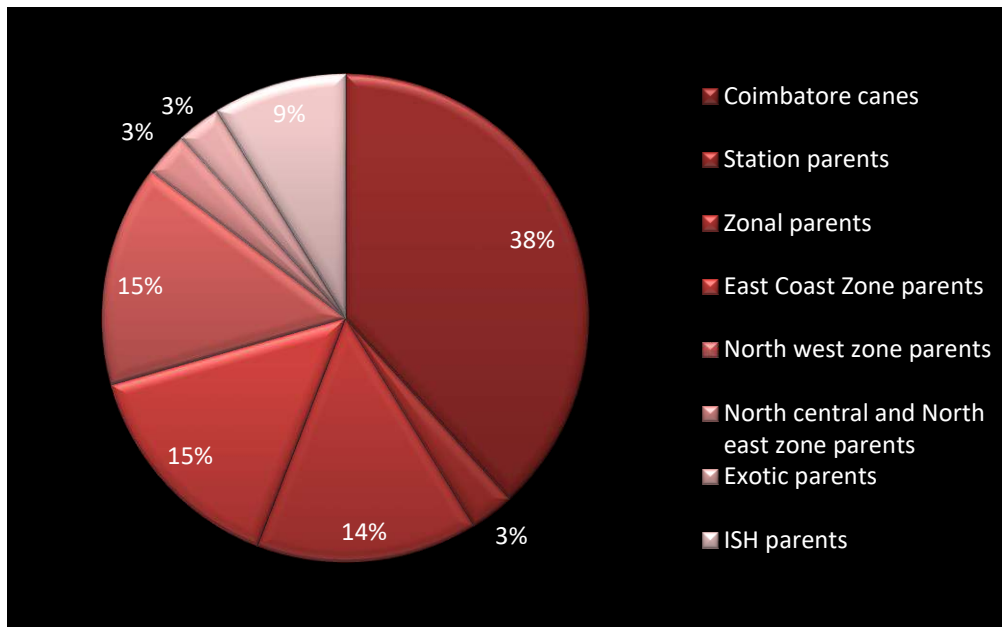


Fig.1. Utilization of parents by Sankeshwar Centre

Nineteen clones of Anakapalle viz., 69 A 5, 69A 591, 70 A 5, 70 A 2, 72 A 66, CoA 7701, 74 A 96, CoA 8401, CoA 8402, CoA 89081, CoA 93081, CoA 93082, CoA 95081, CoA 96081, CoA 99081, 97 A 28, CoA 90081, CoA 92082 and CoA 88081 were supplied to Anakapalle centre. Three parental clones CoLk 97154, BO 110 and BO 156 were excluded from the hybridization garden.

Thirty one parental clones viz., BO 128, CoP 9301, CoP 11437, CoP 11438, CoP 14436, CoP 14437, CoP 15436, CoP 15437, CoP 15438, CoP 15439, CoP 15440, CoP 15441, CoP 16437, CoP 17437, CoPb 16211, CoPb 16212, CoPb 17211, CoPb 17213, CoPb 17214, CoV 12357, CoV 15356, LG 09475,

LG 09487, CoSnk 13103, CoSnk 13106, CoSnk 14102, CoSnk 14103, CoSnk 15101, CoSnk 15102, CoSnk 15103 and CoSnk 15104 from five participating centres of fluff supply programme were included in NHG -2019.

Table 6.1. Parental diversity index of crosses done by the fluff receiving centers during 2018-19

Centre	Parental Diversity Index	Parental Utilization Index
Peninsular Zone	(PDI)	(PUI)
Mandya	73.68	55.26
Navasari	81.48	71.29
Padegaon	66.67	41.67
Perumalapalle	84.38	63.28
Pune	68.75	60.16
Rudrur	59.38	51.95
Sankeshwar	77.27	77.27
Thiruvalla	78.13	68.36
North West Zone		
Faridkot	54.84	54.84
Kapurthala	66.67	50.00
Lucknow	66.67	66.67
Shajahanpur	60.26	60.26
Pantnagar	68.75	51.56
Uchani	65.00	40.62
East Coast Zone		
Anakapalle	63.33	55.42
Cuddalore	68.12	51.14
Nayagarh	72.22	54.17
Vuyyuru	87.50	65.63
North central Zone		
Bethuadahari	79.55	59.66
Motipur	56.52	35.33
Pusa	56.06	56.06
Seorahi	66.07	49.55

* PUI nearing PDI indicate utilization of parental from all classes of parents

Table 6.2. Number of crosses effected and quantity of fluff supplied to the participating centers

Centre	Crosses effected at NHG						Crosses effected at NDHF				Total quantity of fluff sent (g)
	Bi-parental crosses		General Collections		Poly crosses		Bi-parental crosses		General Collections		
	No	Fluff weight (g)	No	Fluff weight (g)	No	Fluff weight (g)	No	Fluff weight (g)	No	Fluff weight (g)	
Peninsular Zone											
Mandya	19	374.0	16	299.5	6	41.5	-	-	-	-	715.0
Navsari	27	527.0	26	807.0	6	26.5	2	36.5	7	80.5	1477.5
Padegaon	18	395.5	8	259.0	6	40.5	2	45.5	4	36.0	776.5

Perumalapalle	17	409.0	23	397.5	6	38.0	-	-	-	-	844.5
Pune	24	387.0	45	889.0	6	26.5	10	140.0	5	65.5	1508.0
Rudrur	32	710.0	13	272.5	6	38.5	-	-	-	-	1021.0
Sankeshwar	22	398.5	13	308.0	6	39.0	1	17.5	9	119.0	882.0
Thiruvalla	16	396.0	29	484.0	6	34.5	-	-	-	-	914.5
Subtotal	175	3597.0	173	3716.5	6	285.0	15	239.5	25	301.0	8139.0
East Coast Zone											
<i>Anakapalle</i>	30	697	44	843	5	36.5	8	187.5	-	-	1764.0
<i>Nayagarh</i>	18	336.5	24	675.5	5	45.0	-	-	-	-	1057.0
<i>Vuyyuru</i>	20	449	22	381	5	43.5	-	-	-	-	873.5
<i>Cuddalore</i>	22	359.5	20	414	6	40.5	1	11.0	-	-	825.0
Subtotal	90	1842	110	2313.5	6	165.5	9	198.5	-	-	4519.5
North West Zone											
Faridkot	31	601	25	599	8	60	3	88	5	49.5	1397.5
Kapurthala	30	715	34	778.5	8	56.5	-	-	-	-	1550.0
Uchani	20	454.5	26	705	7	40	-	-	-	-	1199.5
Lucknow	24	467	48	1157.5	8	54	3	42			1720.5
Shahjahanpur	39	907.5	69	1656.5	8	53	-	-	-	-	2617.0
Pantnagar	24	544	31	716.5	8	55.5	-	-	-	-	1260.5
Subtotal	168	3689	233	5613	8	263.5	6	130	5	49.5	9745.0
North central and North East Zone											
Motipur	23	548	44	550	8	37	2	30			1165.0
Pusa	33	745	22	391	8	50.5	-	-	-	-	986.5
Bethuadahari	22	499.5	23	484	8	51.5	-	-	-	-	1038.0
Seorahi	28	650	15	373.5	8	49	-	-	-	-	1072.5
Subtotal	106	2442.5	104	1798.5	8	188	2	30	-	-	4459.0
Grand total	539	11570.5		13441.5	8	902.0	32	598.0	30	350.5	26862.5

*Excluding duplicates

6.1 Receipt of fluff and seedlings raising by the participating centres during 2018-19

6.1.1 Peninsular Zone

6.1.1.1 Padegaon

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	25	497.5	7066	14.20
Polycrosses	3	16	28	1.75
General collections	11	120	580	4.83
Agali Station crosses	5	107	125	1.17
Grand Total	44	740.5	7799	10.53

6.1.1.2 Mandya

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	12	158.0	790	5.00
Polycrosses	3	16.0	10	0.63
Agali Station crosses	3	47.0	56	1.19
Grand Total	18	221.0	856	3.87

6.1.1.3 Navsari

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	27	527.0	6243	11.85
Polycrosses	6	26.5	390	14.72
General collections	26	807	4358	5.40
Agali Station crosses	2	36.5	128	3.51
Agali general collection	7	80.5	504	6.26
Grand Total	68	1477.5	12712	8.61

6.1.1.4 Perumalapalle

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	28	647.5	4340	6.70
Polycrosses	7	44.5	1484	33.34
General collections	34	560	3612	6.45
Grand Total	69	1252	9436	7.53

6.1.1.5. Pune

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	24	307.0	1009	3.29
Polycrosses	-	26.5	0	0.00
General collections	45	889.00	2496	2.81
Agali crosses	10	140.0	169	1.21
Aghali General collections	5	65.5	164	2.50
Grand Total	97	1508	3832	2.54

6.1.1.6 Sankeshwar

Three thousand and eighty three seedlings were produced which will be transplanted in ground nursery.

6.1.1.7 Thiruvalla

Fluff was kept under refrigeration due to land constraint

6.1.2. East Coast Zone

6.1.2.1 Anakapalle

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	29	489.0	3100	6.34
Polycrosses	3	18.50	100	5.41
General collections	21	233.0	1333	5.72
Grand Total	53	740.50	4533	6.12

6.1.2.2 Cuddalore

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight* (g)	No of seedlings	No. of seedlings obtained / g of fluff*
Station Crosses	20		1886	
General collections	11		1089	
Polycrosses	5		150	
Grand Total	36		3125	

* Quantity of fluff sown was not reported and hence seedlings production rate could not be calculated

6.1.2.3 Nayagarh

Total number seedlings produced: 4560

6.1.2.4 Vuyyuru

Seedlings generated from the Fluff Supply and National Hybridization Programme 2017-18

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	20	449.0	7265	16.18
General Collections	22	381.0	4407	11.57
Poly crosses	7	43.5	945	21.72
Grand Total	49	873.5	12617	14.44

6.1.3. North West Zone

6.1.3.1 Faridkot

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station crosses	20	483.00	1152	2.39
Polycrosses	4	38.00	174	4.58
General collections	2	51.00	153	3.00
Selfing	1	36.50	13	0.36
Total	27	608.50	1492	2.45

6.1.3.2 Kapurthala

From 2018 crossing programme, fluff of 72 crosses was received from ICAR-SBI, Coimbatore in March and was sown in April, 2018. Twenty three cross combinations recorded less than 20 seedlings while 16 cross combinations had 50-100 seedlings. Remaining 43 crosses exhibited good germination and a total of about 10000-12000 seedlings is expected during for 2018-19 crop season.

6.1.3.3 Lucknow

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	16	-	2787	
Selfs	3	-	708	
General collections	38	-	7181	
Grand Total	57	-	10676	

6.1.3.4 Uchani

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	20	454.0	2540	5.59
Polycrosses	7	40.0	221	5.52
General collections	26	705.0	8272	11.73
Grand Total	53	1199.0	11033	9.20

6.1.3.5 Shahjahanpur

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	39	907.5	14328	15.79
Polycrosses	8	53.0	35	0.66
General collections	69	1656.5	10600	6.40
Grand Total	116	2617.0	24963	9.54

6.1.4 North Central and North east Zone

6.1.4.1 Bethuadahari

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	22	499.5	2231	4.47
Polycrosses	8	51.5	246	4.78
General collections	23	484.5	3314	6.84
Grand Total	43	1035.5	5791	5.59

6.1.4.2 Motipur

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	23	548	1574	2.87
General collections	34	550	2042	3.71
Polycrosses	8	37	274	7.41
Agali crosses	2	30	271	9.03
Grand Total	67	1165	4161	3.57

6.1.4.3 Pusa

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	33	745.0	18996	25.50
Polycrosses	8	50.5	615	12.18
General collections	22	391.0	20909	53.48
Grand Total	63	1186.5	40520	34.15

6.1.4.4. Seorahi

Seedlings generated from the Fluff Supply and National Hybridization Programme 2018-19

Crosses	No. of crosses sown	Fluff weight (g)	No of seedlings	No. of seedlings obtained / g of fluff
Station Crosses	28	650.0	3911	6.01
Polycrosses	8	49.0	161	3.28
General collections	17	457.5	4531	9.90
Grand total	53	1156.5	8603	7.44

Seedlings production potential and actual seedlings produced by the fluff receiving centres

Centre	Biparental crosses			General collections			Poly crosses			Total number of seedlings	
	FW	SPR	PNS	FW	SPR	PNS	FW	SPR	PNS	Potential	Actual
ECZ											
Cuddalore	359.5	11.3	4062	414	34.10	14115	40.5	9.64	390	18567	3125
Vuyyuru	449.0	14.05	6307	381	8.60	3275	43.5	9.18	399	9982	12617
Nayagarh	336.5	10.06	3385	675.5	21.82	14740	45.0	9.56	430	18556	4560
Anakapalle	697.0	5.14	3584	843	18.51	15603	36.5	11.11	405	19270	4533
NCNEZ											
Seorahi	650.0	10.16	6604	373.5	42.68	15940	49.0	6.7	328	22872	8603
Bathuadahari	499.5	9.03	4510	484	22.78	11026	51.5	6.64	342	15880	5791
Pusa	745.0	10.67	7946	391	25.90	10125	50.5	7.06	356	18427	40520
Motipur	548.0	18.34	10053	550	26.09	14351	37.0	7.41	274	24679	4161
PZ											
Padegaon	395.5	11.46	4531	259	15.95	4129	40.5	13.07	529	9189	7799
Sankeshwar	398.5	12.35	4921	308	14.49	4463	39.0	12.68	494	9879	3083
Mandya	374.0	17.04	6372	299.5	18.17	5440	41.5	13.25	550	12362	856
Rudrur	710.0	7.85	5575	272.5	24.55	6690	38.5	12.95	498	12764	
Perumalapalle	409.0	11.95	4889	397.5	22.74	9039	38.0	13.12	498	14477	9436
Thiruvalla	396.0	12.3	4870	484	19.76	9561	34.5	8.77	302	14731	
Pune	387.0	13.37	5175	889	23.63	21007	26.5	7.75	205	26386	3832
Navsari	527.0	15.11	7964	807	28.84	23277	26.5	10.13	268	32036	12712
NWZ											
Faridkot	601.0	11.19	6724	599	46.53	27872	60.0	6.45	387	34981	1492
Shahjahanpur	907.5	9.73	8828	1656.5	14.88	24650	53.0	6.54	346	3382	24963
Kapurthala	715.0	9.93	7100	778.5	20.48	15945	56.5	6.3	353	23399	12000
Lucknow	467.0	12.74	5951	1157.5	14.81	17146	54.0	6.58	355	23454	10976
Pantnagar	544.0	10.22	5557	716.5	22.46	16092	55.5	6.54	363	22012	
Uchani	454.5	4.4	1998	705	31.28	22050	40.0	8.25	330	24380	11033

FW=Fluff weight (g); SPR=seedling production potential (No. of germinant per gram of fluff); PNS= Potential number of seedlings possible from the quantity of fluff sent

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

Among the 17 bi-parental crosses effected at NHG, no germination was observed in CoC 671 x CoSe 92423, Co 94008 GC and CoC 671 GC and no seedlings establishment in the field in case of the cross ISH 100 x Co 97015 and Co 88025 GC. Some crosses viz., CoA 14324 x Co 89003, Co 94012 x CoA 7602, Co 2000-10 x Co 94008, CoC 671 GC, ISH 100 GC, Co 0238 GC, Co 2000-10 PC and Co 85002 PC did not give any selections. Among four crosses effected at Agali, three crosses viz., CoC 671 x BN 342, CoC 671 x Co 86249 and Co 85015 x Co 7201 did not germinate. Among the six general collections from Agali, two general collections of Co 94008 and Co 8371 did not show any germination. Performance of the other crosses and number of clones selected from these crosses are given in the table.

Cross combination	Quantity of fluff sown (g)	No of seedlings produced	Total number of seedlings evaluated	HR brix (%)		NMC		Cane diameter (cm)		No. of seedlings / clones selected
				Mean	Range	Mean	Range	Mean	Range	
Co 8371 x Co 62198	18.0	418	200	19.41	17.0-22.0	-	-	-	-	23
Co 8371 x Co 775	14.0	417	170	20.32	15.2-21.0	-	-	-	-	24
ISH 100 x CoA 7602	37.5	78	50	20.00	19.0-21.0	-	-	-	-	02
Co 2000-10 x ISH 69	14.5	12	12	19.0	-	-	-	-	-	01
Co 06022 x CoH 70	16.5	124	70	19.13	18.0-21.0	-	-	-	-	12
Co 88025 x Co 94008	16.0	110	60	19.8	-	-	-	-	-	01
ISH 100 x CoA 7602	13.0	48	30	18.67	17.2-19.8	-	-	-	-	03
MS 68/47 x Co 89003	21.0	39	26	18.0	18.0	-	-	-	-	02
UP 05125 x 85 R 186	11.5	151	90	18.38	17.0-20.0	-	-	-	-	12
Co 6304 x Co 94008	9.5	81	50	17.6	17.0-18.0	-	-	-	-	05
Co 98010 x Co 97015	16.5	190	100	19.14	17.0-21.0	-	-	-	-	10
Co 06022 x Co 775	11.5	106	60	20.32	20.0-21.0	-	-	-	-	06
Total	266.5	1816	960	-	-	-	-	-	-	101
Agali cross										
CoC 671 x CoA 7602	19.0	74	50	20.0	-	-	-	-	-	01
Total	72.0	74	50	-	-	-	-	-	-	01
Agali GCs										
Co 99008	38.0	94	28	19.65	18.3-21.0	-	-	-	-	02
ISH 100	40.5	06	06	-	-	-	-	-	-	-
Co 775	5.5	02	02	20.0	-	-	-	-	-	01
Total	153.5	102	36	-	-	-	-	-	-	03
Poly cross										
CoV 89101	11.0	186	120	18.98	17.0-21.0	-	-	-	-	13
CoA 7602	12.0	56	30	18.00	17.0-19.0	-	-	-	-	04
ISH 100	8.5	32	28	19.5	19.0-20.0	-	-	-	-	02
86 V46	2.5	33	20	20.0	-	-	-	-	-	01
Co 8371	8.0	108	38	19.07	19.0-19.2	-	-	-	-	03

Total	49.5	424	245	-	-	-	-	-	-	23
General crosses (Additional GC's collection transplanted on 12-09-2018)										
Co 92013	122.0	65	25	14.10	13.0-16.0	-	-	-	-	06
Co 8353	30.59	302	105	11.71	11.0-13.0	-	-	-	-	07
Co 98006	2.87	14	06	13.0	13.0	-	-	-	-	02
Total	198.5	386	137	-	-	-	-	-	-	15
Grand Total	740.0	2802	1428	-	-	-	-	-	-	143

Performance of crosses in first clonal trial

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	
CoC 671 x Co 94008	5	-	-	18.3	16.56-20.12	-	-	-	-	-	-	01
ISH 100 x CoH 70	08	-	-	15.52	14.42-16.67	-	-	-	-	-	-	-
CoA 11324 x Co 1158	03	-	-	16.38	14.67-18.33	-	-	-	-	-	-	-
Co 8371X Co 775	34	-	-	15.75	13.80-17.45	-	-	-	-	-	-	03
CP 52-68 PC	04	-	-	17.82	16.50-18.95							-
Co 7201 PC	03	-	-	15.79	14.27-17.00							-
CoV 89101PC	17	-	-	16.89	15.44-18.22							02
Total	74	-	-									06

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
Co 86002 X Co 1148									01
Co 86011 X CoT 8201									09
Co 8371 X Co 94008									01
Co 8013 X ISH 229									01
Co 86032 X Co 86011									03
ISH 100 PC									01
CoA 7602 PC									02
86 V 46 PC									01
Co 2000-10 PC									01
CoV 89101 PC									01
Total									21

6.2.1.2 Navsari

Performance of crosses in ground nursery (2017)

Cross combination	Quantity of fluff sown	No of seedlings produced	Total number of seedlings evaluated	HR brix (%)		NMC		DIA		No. of seedlings selected
				Mean	Range	Mean	Range	Mean	Range	
CoA 13327 x Co 62198	20	365	360	20.8	15-23	85	72-102	2-15	2.03-2.28	157
Co 98008x CoH 104	15	46	42	20.3	15-24	96	76-108	2.21	2.06-2.33	40
CoH 110 x LG 05434	20	125	117	20.0	16-23	101	91-118	2.28	2.09-2.37	23

Performance of crosses in first clonal trial (2017)

Cross combination	No of clones planted	HRB-8		HRB-10		HRB-12		NMC		DIA		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
CoV 89101	122	14.2	12-18.0	118.6	15-22	22.8	17-25	98.2	86-117	2.48	2.31-2.65	93
Co 8371PC	54	13.8	11.5-18	18.1	15-23	21.4	16-24	103.4	91-118	2.45	2.31-2.61	29
Co 92013 x CoS 510	39	13.6	11-17.0	17.3	16-22	21.3	17-25	96.2	85-123	2.54	2.28-2.70	17

Performance of crosses in second clonal trial-II (2016)

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 > 70 NMC /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
Co 98008PC	18	-	-	1	1	2	5	RR	7
97 R 401	29	1	1	1	2	2	6	Sucrose	8
ISH 306 GC	13	-	-	-	-	1	5	RR	4

6.2.1.3 Padegaon

Performance of crosses in ground nursery

Four hundred and ninety four seedlings of 58 crosses were evaluated in ground nursery. Less than 10 selections were effected in the crosses viz., Co 8371 PC, Co 8371 x CoC 8001, Co 98006 GC, Co 98001 x CoPant 97222, CoM 0265 x CoC 671, ISH 100 x Co 62198, Co 09008 x CoM 9217, CoLk 8102 x BO 130, CP 52-1 x Co 87268, Co

89036 x Co 62198, CoA 7602 PC, ISH 100PC, VSI 434 GC, Co 86249GC , CoSnk 03044 x Co 0208, Co 62175 x Co 94008, Co 86002 x Co 87268, CoM 0265GC, CoN 98133 x LG 6839, Co 85002PC, C 79218GC, Co 98006GC, Co 0240 x Co 62198 GC, Co 88007 x CoH 70, MS 68/47 x Co 86011 and Co 92006 x Co 775.

Cross combination	Quantity of fluff sown (g)	No of seedlings produced	Total number of seedlings evaluated	HR brix (%)		NMC		Cane diameter (cm)		No. of seedlings /clones selected
				Mean	Range	Mean	Range	Mean	Range	
Co 8371 x CoC 8001				19.80	24.0-25.0	7.8	5-13			30
BO 91 x Co 62198				20.70	16.0-24.0	8.7	6-14			25
Co 86002 x BO 130				21.50	14.5-24.0	7.3	3-14			54
CoA 05321 GC				21.8	18.5-25.0	7.3	4-12			17
Co 0209 GC				22.67	17.5-25.0	7.6	5-15			18
CoV 89101 PC				24.39	18.5-25.0	7.8	4-13			38
Co 86002 x Co 87268				22.67	16.5-25.0	7.1	4-13			29
Co 8371PC				21.19	17.0-24.0	8.2	4-13			48
MS 68/47 x Co 86011				21.77	19.0-25.0	8.4	4-13			15
Co 8353 x Co 06037				21.50	16.0-24.0	9.1	6-12			11
86V 96 PC				22.13	16.0-25.0	8.4	7-11			12
Co 86002 Self				21.91	19.0-25.0	6.7	3-11			11
Co 8371 x Co 97015				20.71	13.0-25.0	7.9	4-13			40
Co 92006 x Co 775				25.0	23.0-27.	7	8-13			15
Co 98008 x CoPant 97222				20.72	15.0-24.0	9.11	5-13			15
UP 9530 x Co 62198				20.58	19-24	9.33	7-11			12

Performance crosses in first clonal trial

Cross combination	No of clones planted	H.R.Brix*		NMC		DIA		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	
BO 91 x CoPant 97222	82	19.31	18-21	60.86	48-85	3.76	3.1-3.8	8
CoM 6806 x Co 775	15	21		89		3.4		1
CoM 6806 x CoH 104	37	20	20	47.33	45-50	3.6	3.5-3.7	3
CoM 9217 x BO 17	47	20.5		72	-	3.2		1
CoV 89101PC	22	19.5	19-20	47.5	46-49	3.55	3.4-3.7	2
Co 7201 PC	11	19.67	17.5-21.5	53.67	45-66	3.5	3.4-3.6	3
CoA 7602PC	7	20.5	19-22	43.5	42-45	4.2	4.1-4.3	2
CoM 9220GC	3	20		50		3.4		1
Co 87001GC	40	20.3	19-21.5	50.67	45-65	3.8	3.4-4.4	12
Co 8013 GC	15	20.0		55		3.9		1
ISH 301 GC	10	22.0	20-21.5	49	48-50	3.35	3.3-3.4	2
CoSi 6 GC	14	19.33	18-20	56.33	40-84	3.5	3.4-3.6	3

*Observation on HR brix was reported for one time only

Performance of crosses in second clonal trial : It was reported that second clonal was not planted at Padegaon centres and the materials selected in first clonal trials was directly planted in station trial.

6.2.1.4 Perumalapalle

Performance crosses in ground nursery

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 (min. & max.)		
CoLk 8102 x Co 62198	31	176	130	20.2	14.3	22.1	5.00	3	7	2.60	2.2	3.1	1
Co A 12321 GC	7.5	177	130	19.9	17.6	21.2	7.42	6	8	2.78	2.1	3.1	24
Co H 70 GC	28	168	130	19.5	16.3	20.1	7.60	4	10	2.72	2.4	3.2	5
Co 94008 GC	8.5	34	10	17.4	14.2	18.6	7.33	4	9	2.77	2.3	3.3	3
Co A 7602 GC	11.5	35	10	17.3	15.3	18.5	7.60	4	10	3.08	2.2	3.2	5
Co A 11326 GC	21	23	10	19.3	16.3	20.2	7.40	5	9	3.02	2.4	3.2	5
81 V 48 GC	31	34	10	18.8	17.3	19.4	8.25	4	9	2.80	2.3	3.2	4
Co 8213 X Co Pant 97222	11.5	65	50	18.2	17.3	19.5	7.20	4	11	2.66	2.3	3.2	5
69 A 591 GC	6	54	10	18.8	16.4	19.4	7.29	5	12	2.66	2.2	3.2	7
BO 91 GC	48.5	145	90	19.1	15.2	20.8	8.55	6	9	2.83	2.3	3.2	11
Co 98006 GC	5	57	10	18.4	17.1	19.9	7.00	5	9	2.90	2.3	3.0	2
Co H 70 X Co 87268	51	144	90	19.3	17.2	20.9	7.80	5	12	2.75	2.2	3.2	15
Co Snk 05103 GC	10	176	130	18.2	16.7	19.3	7.38	5	14	2.75	2.3	3.2	8
Co Snk 03044 X ISH 69	25.5	133	90	17.9	16.2	19.3	7.60	4	12	2.60	2.3	3.2	10
HR 83144 X Co 92008	13.5	140	90	18.6	15.3	19.9	7.13	6	9	2.51	2.1	3.2	15
Co M 9220 GC	15	221	170	18.7	14.2	20.3	6.08	5	14	2.70	2.2	2.9	13
C 81615 x Co 775	23.5	98	50	18.7	16.3	19.3	5.55	5	14	2.95	2.3	3.2	20
97 R 401 GC	10.5	760	550	18.4	13.3	20.6	6.53	5	14	2.50	2.3	3.2	44
70 A 2 GC	26	190	170	18.4	16.3	19.3	8.00	5	9	2.60	2.4	3.0	2
97 R 129 X 97 R 401	15.5	265	250	18.7	16.2	20.0	6.86	5	10	2.69	2.3	3.2	7
Co 86002 X Co 1158	17.5	270	250	21.9	16.3	22.3	6.25	5	11	2.83	2.4	3.2	4
Co 86002 X Co 06037	17	380	350	21.4	15.3	23.2	5.44	4	11	2.75	2.3	3.2	16
Co V 89101 X Co 1148	32.5	1546	1500	20.2	16.4	22.2	7.88	5	9	2.57	2.3	3.2	40
Co V 89101 GC	22.5	33	10	21.9	16.3	23.1	8.00	5	11	2.55	2.3	3.2	2
Co M 6806 X Co 97015	16.5	388	370	18.5	14.2	20.1	6.07	4	10	2.66	2.3	3.2	46
Co 8371 PC	8.5	455	370	19.2	16.2	21.2	6.79	4	12	2.67	2.1	3.1	29
Co 92006 X Co C 8001	34.5	615	570	19.2	15.2	20.4	6.26	5	11	2.73	2.2	3.3	47
Co V 89101 PC	8	300	270	19.8	14.3	21	6.65	4	9	2.67	2.3	3.1	23
Co 98008 X Co 1148	15	680	660	18.2	15.3	21.2	7.33	5	9	2.69	2.3	3.2	18
Co 98006 X 97 R 401	27.5	460	420	18.6	14.4	20.2	5.38	4	9	3.01	2.4	3.2	40
ISH 28 GC	46.5	1900	1888	18.3	14.5	21.2	7.19	5	11	2.55	2.2	3.3	43
NCo 310 GC	14	170	130	18.6	15.3	19.9	6.88	4	14	2.53	2.2	3.1	8
Co 0209 X Co 1148	9.5	67	50	18.7	15.2	21.2	6.00	4	9	2.68	2.3	3.2	10
86 V 96 PC	2	35	10	18.1	15.3	22.3	6.00	5	13	2.95	2.4	3.2	2
CoM 9220 GC	15	35	10	18.2	15.3	21.2	6.67	5	10	2.83	2.3	2.9	6
Co N 98133 X 97 R 129	5	68	50	18.6	16.7	20.1	5.71	4	10	2.62	2.3	3.3	14
93 V 297 GC	9.5	38	10	19.0	16.2	21.2	5.71	4	11	2.73	2.4	3.2	7
Co 86032 GC	5	67	50	19.7	15.3	23.3	6.80	5	9	2.86	2.3	3.2	5
Co H 70 X Co 87268	51	45	30	18.7	16.2	21.5	7.33	5	12	2.70	2.4	3.3	3
Co H 110 GC	29	23	10	18.6	14.5	21.2	5.80	4	11	2.68	2.2	3.2	5
Co T 8201 GC	4.5	25	10	18.8	15.2	22.1	8.00	5	10	2.72	2.2	3.2	5
Co H 70 X Co 87268	51	35	10	20.4	15.5	23.9	6.00	4	10	2.80	2.3	3.2	2
Co Snk 03044 X Co 87298	17.5	27	10	18.2	15.1	21.8	6.00	4	9	2.83	2.3	3.1	6
Total number of selections													587

Performance of crosses in first clonal trial

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	
97 R 129 GC	4	14.4	13.3-16.6	16.2	15.1-18.3	18.95	17.5-20.7	124.8	101.8-166.6	2.7	2.4-2.8	4
Co H 110 GC	6	12.8	9.6-15.4	15.2	10.1-20.9	15.2	9.3-21.0	110.7	43.1-168.0	2.1	1.9-2.6	1
Co 8371 PC	18	13.2	10.0-16.4	15.5	12.0-19.8	16.3	12.5-20.0	135.2	83.2-211.5	2.2	1.5-3.4	7
Co 86002 GC	3	14.7	10.6-18.9	17.6	14.9-19.3	19.1	15.0-21.7	114.3	92.5-133.5	2.3	1.9-2.9	1
Co 85002 PC	6	15.3	13.5-17.6	16.9	14.0-19.6	17.6	14.0-20.8	142.9	94.4-213.6	2.2	2.0-2.5	1
ISH 100 GC	5	12.8	11.4-12.8	15.32	12.3-20.8	15.8	13.-21.7	112.2	90.4-156.1	2.52	1.9-3.4	2
Co 8371 X Co 99006	2	16.3	15.7-117.0	17	16.3-17.6	16.5	16.0-17.0	126.5	107.3-145.8	2.5	2.1-2.8	1
Co C 671 X Co 86249	5	14.9	11.8-17.1	17.3	16.7-18.3	17.5	16.0-20.0	131.9	83.3-186.9	2.6	2.2-3.2	3
ISH 229 GC	2	16.1	15.4-16.8	16.2	15.5-16.9	16.3	15.6-17.0	194.1	176.6-211.5	2	2.0-2.0	0
97 R 401 GC	10	14.7	11.7-18.8	16.6	14.3-18.9	15.6	7-19.6	103	74 -127.3	2.7	2-3.4	5
Co 99006 GC	5	15.9	14.8-17.3	17.4	15 -18.3	17.7	15 -20	103	64.8-138.7	2.6	2.1-2.8	4
Co 8213 X Co 86011	8	16.8	12.9 -20.5	18.1	14.7-20.4	19.4	14.9 -22.5	96.1	74 -121.2	2.8	1.9 -3.3	7
Co 98006 X Co S 8376	3	14.5	11-16.6	15	11.6-17.9	14.1	12.4-16	134	94.4 -158.1	2.4	2.3-2.5	0
Co MS 6806 X 85 R 186	2	15.1	14.5 -15.6	16.1	15.9 -16.3	17	16 -17.9	66.6	44.4 -88.8	3.1	2.5 -3.6	1
ISH 100 X ISH 229	6	16.2	13.3 -21.0	17.8	17-19.3	17.9	16.9 -19.4	105.5	79.6 -122.1	2.6	2.4 -2.7	6
Co 8371 X Co 94008	8	16.2	11.4 -20.3	18.5	13-23.1	17	14 -21.2	118.8	94.4 -158.1	2.1	1.9 -2.7	1
Co H 110 X Co T 8201	7	15.9	12.3 -18.9	17.3	15 -19.7	17.8	16 -20.9	101.2	77.7-146.2	2.3	1.6 -3.2	3
Co 86032 GC	1	15.4	-	19.8	-	21.7	-	111	-	2.6	-	1
Co A 7602 GC	4	14.6	11.6 -16	16.2	15.9 -17.1	16.7	14 -19.4	118.1	94.4 -155.4	2.5	2.1 -2.8	2
Co 0612 GC	3	13.7	12.7 -15.2	16.3	14.7 -18.3	17.2	14.7 -22	118.5	96.5 -149.9	2.2	1.5 -3	1
Co C 671 X Co T 8201	3	14.5	12.5 -43.4	15.5	14.3 -17.1	16.6	15.4 -18.2	115.9	111 -120.3	2.1	1.5 -3.2	1
Co 85002 X Co H 13	6	14.4	13 -15.9	15.7	14 -16.7	16.8	16 -17.7	131.5	103.6 -157.3	1.9	1.2 -2.8	2
Co 85002 X Co H 106	2	14.7	11.8 -17.6	17.6	17.3 -17.9	14.7	9.7 -19.6	118.1	111 -125.3	2.2	1.2 -3.2	1
Co H 114 GC	2	15.4	14.6 -16.4	17.3	16.7 -17.9	17.5	17 -18	165.3	141.7 -188.9	1.7	1.6 -1.9	0
Co 8371 X Co C 2061	6	14.1	12 -15.2	16.2	15.1 -18.1	17.2	16 -18.8	125.9	82.1 -182.8	1.9	1.2 -2.9	2
Co Snk 03044 X Co 3091	3	14.6	13.4 -15.7	16.6	14.3 -18.6	17.1	15.3 -18	172.5	111 -236.2	2.1	1.5 -2.8	1
ISH 41 X Co 94008	3	15.6	13.3-17.1	16.8	13.9-19.3	17.8	16.0-19.1	139	111.0-178.0	2.3	2.2-2.8	1
Co M 6806 X Co H 104	3	13.1	12.3-14.4	14.8	13.9-16.3	15.7	15.0-17.0	187.6	158.1-223.8	1.9	1.3-2.0	0
Co 8213 X Co H 12	4	15.9	15.3-16.7	18.7	17.8-19.7	18.6	18.0-20.0	164.8	111.0-207.4	1.3	2.0-2.8	1
Co H 106 GC	3	14.3	11.5-17.3	15.9	14.3-18.4	16.9	15.6-19.3	187.6	147.9-213.6	2	2.0-2.1	0

Co 97009 X Co H 106	4	13.7	13.0-14.9	14.8	13.7-17.0	15.9	14.0-18.2	172.5	111.0-267.0	2.4	2.1-2.5	1
Co 8213 X ISH 69	2	16.7	15.1-18.4	17.6	17.0-18.7	18	18.0-18.0	83.7	65.7-101.8	2.3	1.6-2.9	1
ISH 100 X Co 775	4	13.3	10.9-16.5	15.6	14.0-17.9	16.2	15.6-17.0	111.2	101.8-121.2	2.1	1.5-2.9	2
Co 98006 X Co H 70	8	14.1	12.6-15.5	15.7	14.3-18.3	17.1	15.4-19.0	127.2	103.6-172.5	2.4	1.1-3.2	5
Co N 0571 X Co 0331	9	14.4	12.4-16.9	15.9	13.0-18.3	16.7	14.0-20.7	136.6	78.0-219.7	2.1	1.2-3.2	3
Co S 07231 GC	2	13.1	12.5-13.8	13.9	13.0-14.9	15.6	15.0-16.2	106.8	84.2-129.5	2.6	2.2-3.0	1
Co 85002 PC	3	14.9	13.2-16.8	16.2	15.6-17.3	17.3	16.8-18.0	126.2	111.0-144.3	2.6	2.3-2.8	2
Co V 89101 PC	5	12.7	11.5-15.4	15.6	12.9-17.3	16.5	13.0-18.5	137.5	120.3-156.1	2.5	2.0-2.8	3
Co 0312 X Co 0209	2	13.9	12.4-15.4	14.5	13.1-158.8	15.3	14.6-16.0	184.4	101.8-267.0	2.3	2.0-2.6	1
Co 0635 X Co 1148	4	13.8	10.7-16.1	17.4	15.9-18.7	18.3	16.0-19.5	147.6	101.8-219.5	2.2	1.9-2.6	1
Co J 87 GC	10	12.9	5.3-16.3	15.5	14.2-17.0	15.9	14.0-17.2	185.9	133.5-308.0	2.3	2.0-3.0	1
Co A 7602 PC	3	15.2	14.3-16.3	16.2	14.7-19.9	17	17.0-17.1	111.2	101.8-119.1	2.7	2.3-3.0	2
Co H 12 X Co 1148	2	14.8	13.4-16.2	16.2	15.1-17.3	13	10.0-16.0	208.4	201.2-215.6	1.9	1.9-2.0	0
Co 8371 PC	5	14.7	13.4-15.8	16.3	14.9-18.2	16.2	12.0-25.5	127.6	61.6-199.2	2.4	2.1-2.8	2
Co H 111 GC	6	12.3	10.3-14.0	14.8	13.1-16.7	14.1	6.1-18.0	116.4	92.5-164.3	2.4	2.0-3.1	2
Co M 6806 GC	15	14.7	8.5-18.0	16.1	16.7-19.3	16.8	11.6-20.5	188.7	111.0-275.2	2.3	1.9-2.8	4
Co V 89101 PC	58	15.5	10.8-22.0	17.1	11.0-21.9	17.5	8.5-27.0	126.8	43.1-201.2	2.4	1.9-3.2	22
	303											116

Performance of crosses in second clonal trial

Fifty five clones of the 14 crosses were evaluated in second clonal trial. No selection was effected in 97 R 401, Co 8371 PC, Co 85002 GC, Co 85002 PC, Co 86002 GC and CoJaw 270 GC. Crosses with better selections were 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 > 70 NMC /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
97 R 401 GC	7	0	0	0	0	5	--	Diameter	4
Co 86249 GC	11	0	0	0	0	7	--	Diameter	5
Co 99006 GC	1	0	0	0	0	1	--	Diameter	1
Co H 110 X Co T 8201	1	0	0	0	0	1	--	Diameter	1
Co Lk 8102 GC	5	0	0	0	0	2	--	Diameter	1
Co VC 89101 PC	5	0	0	0	0	2	--	Diameter	2
86 V 96 PC	7	0	0	0	1	2	--	Diameter	2
Co H 110 GC	6	0	0	0	0	2	--	Diameter	4
Total	55								20

6.2.5 Pune

Performance of crosses in ground nursery (2017 batch)

Thirty seven crosses including 20 bi-parental crosses, three general collections and seven poly-crosses done at NHG and 7-biparental crosses effected at NDHF were evaluated in ground nursery. Among them, no selection was effected in Co 85002 x Co 775, Co 98008 x Co 89003, Co 88025 x Co 775, CoM 6806 x Co 97015, Co 98010 x Co 0233, Co 8213 x CoH 119, ISH 100 x Co 97015, Co 88028 x Co 92008, Co 85002 x CoT 8201, Co 8371 x Co 89003 and Co 88025 x Co 94008 effected at NHG all the seven crosses from NDHF viz., CoM 6806 x Co 94008, CoC 671 x CoT 8201, CoC 671 x 57 NG 126, CoA 7602 x Co 94008, CoV 92101 x Co 94008 and Co 92020 x CoT 8201, six polycrosses viz., CoA 7602 PC, Co 2000-10 PC, ISH 100 PC, 86V 96 PC, Co 85002 PC and Co 8371 PC and three general collections viz., Co 88025GC, Co 8213GC and CoC 671GC . Crosses from which 28 superior types selected were given below.

Cross combination	Quantity of fluff sown(g)	No of seedlings produced	Total number of seedlings evaluated	HR brix (%)		NMC		Cane diameter (cm)		No. of seedlings /clones selected
				Mean	Range	Mean	Range	Mean	Range	
Co 92013 x Co 62198	33.5	105	104	19.4	18.2-22.2	8.22	8-16	2.84	2.6-3.2	1
Co 98006 x CoT 8201	41.5	1198	1190	18.2	16.2-21.0	8.89	6-14	2.58	2.3-3.1	2
Co 92006x Co 89003	43.5	1000	991	18.83	17.4-22.4	8.63	6-12	2.52	2.4-3.0	5
Co 8371 x Co 775	25.0	970	966	17.17	16.2-22.0	9.83	7-12	2.76	2.5-3.2	2
Co 92006 x Co 89003	29.0	2005	2003	18.33	14.4-22.6	7.17	6-12	2.66	2.3-3.10	3
Co 98006 x Co 88013	29.0	800	794	18.17	16.2-22.4	8.22	7-11	2.70	2.4-3.1	4
Co 92002 x Co 97015	16.0	995	991	17.83	15.4-21.2	9.67	5-16	2.62	2.4-3.2	4
MS 68/47 x Co 92008	46.5	2700	2700	17.17	13.2-23.6	11.74	5-16	2.66	2.2-3.3	4
Co 06022 x Co 97015	13.0	340	332	17.83	16.4-23.2	7.67	4-10	2.78	2.36-3.0	2
CoV 89101PC	8.5	520	501	17.05	14.2-21.8	6.91	4-11	2.41	2.2-2.9	1

Performance crosses in first clonal trial (2016batch)

Fifty three clones of 17 crosses were evaluated in second clonal trials. Among them no selection was effected in Co 11001 x Co 62198, Co 7915 x Co 1148, Co 11001 x Co 06037, Co 92013 x Co 1158, Co 98010 x Co 0331, Co 82013 x Co 0327, CoV 89101 x Co 8210, CoV 89101 x Co 89003, CoC 671 x CoT 8201, Co 86032 x Co 94005, CP 52-68 PC and Co 85002 PC. Performance of crosses giving superior selection for further testing is given below.

Cross combination	No. of clones	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
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	planted	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	selected
Co 06035 x Co 1148	2			15.0	14.8	15.2	16.4-16.6	105	-12	2.8	2.7-3.0	1
Co 8208 x Co 775	12			19.06	17.2-22.2	21.33	17.0-24.2	9.67	8-13	3.03	2.7-3.2	6
ISH 41 x Co 94008	2			19.3	19.2-21.6	20.4	19.2-21.6	16.5	12.21	2.95	2.9-3.0	1
Co 0312 x Co 0209	1			18.8		20.2		13		2.9	-	1
CoC 671 x Co 94008	5			21.2	20.8-21.4	22.52	22.2-23.0	13.8	12-15	3.06	2.9-3.3	3

Performance of crosses in second clonal trial (2015 Batch)

	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 /20' row	No. of clones with > 2.5 cm 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 86002 x Co 99006	3	0	0	1	2	2	--	b	1
Co 99006 x Co 94008	2	0	1	1	1	1	--	a	1
Co 6304 x Co 97009	1	0	0	0	1	1	--	c	1
ISH 100 x Co 99006	1	0	0	0	1	1	--	c	1
Co 06036 GC	1	0	0	1	1	1	01	b	
Co 99006 GC	1	0	0	0	1	1	--		

6.2.1.6 Sankeshwar

Performance of crosses in ground nursery

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	
Co 06022 x CoC 8001	23.5	412	398	18.02	17.2-19.1	5.28	3-10	2.41	1.92-2.61	6
Co 8213 x CoH 119	23.0	585	562	19.40	17.5-19.6	5.29	2-13	2.49	1.40-2.69	22
CoA 92081 x UP 05125	11.0	363	351	18.04	17.3-19.7	6.00	4-8	2.50	1.99-2.73	01
UP 05125 x ISH 41	35.0	87	72	17.80	16.9-18.8	11.00	7-11	2.42	2.00-2.71	01
Co 6304 x Co 1148	15.5	524	488	19.10	18.4-20.0	6.4	1-13	2.31	1.80-2.74	37
ISH 1 x Co 775	20.5	703	673	18.10	17.3-19.10	4.98	1-12	2.12	1.71-2.38	32
Co 0238 x Co 775	11.5	298	243	19.50	17.9-20.5	2.80	1-6	2.69	2.10-2.92	02
Co 0238 x CoT 8201	15.0	89	82	18.8	17.2-19.8	6.81	4-11	2.64	2.25-2.92	00
MS 68/47 x CoPant 97222	7.5	222	198	17.9	16.3-18.8	7.57	3-11	2.81	2.41-2.98	06

CoC 90063 x CoT 8201	12.0	369	351	18.51	17.5-19.3	3.17	1-6	2.80	2.38-2.97	07
Co 8371 PC	7.5	112 2	1012	18.3	17.1-19.4	6.18	4-13	2.71	2.50-2.91	00

Performance of crosses in first clonal trial

Cross combination	No of clones planted / Evaluated	Single cane weight (kg) 10 th month		*Juice brix (CB) at 10 th month		*Sucrose % at 10 th month		Number of millable canes (NMC)		Cane diameter (cm)		No. of Clones Selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
ISH 100 x CoH 13	33	1.10	0.59-1.86	17.33	13.42-21.34	14.54	10.51-18.53	29.79	11-48	2.77	2.42-3.58	3
ISH 101 x Co 1158	46	1.05	0.66-1.98	15.77	11.73-19.22	12.42	9.03-16.73	27.02	12-44	2.67	2.20-3.42	4
CoP 06436 x ISH 307	23	1.05	0.59-1.55	14.15	9.91-19.14	8.79	4.01-13.40	39.39	27-47	2.62	1.90-3.13	1
Co 8213 x Co 06035	28	0.81	0.55-1.34	14.73	10.96-19.34	12.13	8.55-17.39	21.96	11-38	2.77	2.11-3.53	9
NB 94-545 x Co 92013	78	1.47	0.63-2.15	16.63	9.68-22.01	14.01	5.81-19.92	27.51	12-44	2.74	2.14-3.71	28
Co 85002 x Co 1148	30	1.06	0.58-2.10	15.91	10.73-21.42	12.59	7.42-18.24	35.23	18-47	2.88	2.37-3.58	3
C81615 x Co 775	55	1.30	0.53-2.04	15.19	11.93-18.42	11.70	17.32-16.84	28.55	11-44	2.76	2.06-3.24	21
Co 0209 x Co 1148	25	1.11	0.71-1.79	17.98	12.54-20.54	15.06	7.52-18.06	31.63	18-50	2.73	2.02-3.31	7
Co 92013 x CoPant 97222	35	1.11	0.59-1.70	14.93	11.33-19.92	11.71	7.98-18.01	31.23	14-49	2.80	2.32-3.64	12
Zonal crosses												
ISH 41x Co 94008	50	1.06	0.65-2.00	15.90	11.53-20.12	12.65	8.15-17.10	26.22	12-43	2.88	2.04-3.38	23
Co 0312 x Co 0209	21	1.17	0.75-1.50	18.90	14.92-21.92	16.22	11.65-18.61	24.48	12-38	2.83	2.30-3.86	6
CoC 671 x CoT 8201	03	1.39	1.0-1.83	17.59	16.92-17.92	15.12	14.69-15.61	30.67	27-34	2.82	2.75-2.93	3
CoM 0265 x CoC 671	02	1.20	0.85-1.56	18.21	17.80-18.62	15.59	14.56-16.62	32.50	25-40	2.54	2.49-2.60	1
CoC 671 x Co 94008	08	1.25	0.95-1.77	17.63	15.90-19.01	15.25	13.82-16.65	28.50	24-34	2.69	2.54-3.18	5
Co 86032 x Co 94005	40	1.27	0.56-2.08	16.42	11-21.59	14.29	6.71-20.05	29.25	13-52	2.66	2.05-3.30	24
Poly crosses												
Co 94012 PC	01	1.05	1.85-	20.59	20.59-	19.09	19.09-	30.00	30-	3.18	3.18-	1
CP 52-68 PC	05	1.44	1.05-1.86	16.37	12.57-20.08	13.90	9.74-18.27	31.80	12-42	3.07	2.87-3.20	1
CoC 90063 PC	01	1.55	1.55-	17.99	17.99-	16.32	16.32-	29.00	29-	3.26	3.26-3.76	1
CoV 89101 PC	23	1.09	0.58-1.67	18.14	12.45-22.01	16.02	8.52-19.05	32.52	16-47	2.89	2.12-3.78	4
Co 7201 PC	05	1.77	1.37-1.95	15.45	14.07-16.97	12.39	10.66-14.41	26.80	23-32	2.32	2.32-	1
CoA 7602 PC	03	1.51	1.14-1.88	20.05	17.68-23.19	16.91	14.69-19.59	32.33	21-43	2.63	2.29-3.11	2
Co 2000-10 PC	01	1.85	1.85-	18.88	18.88-	16.02	16.02-	30.00	30-	2.61	2.61-	1
Agali crosses												
Co 7201 x Co 97009	25	1.20	0.71-1.91	15.63	12.70-18.81	13.02	9.70-16.90	35.12	16-49	2.70	2.2-3.28	9
Co 7201 x Co 97015	03	1.21	1.10-1.38	18.00	17.07-19.01	15.98	14.67-16.90	31.67	14-37	2.38	2.29-2.56	1

Coimbatore general collection												
Co 89003GC	09	1.12	0.51-1.78	16.98	14.27-20.08	13.76	10.99-17.39	30.78	19-42	2.21	2.22-3.54	1
Co 87012GC	06	1.02	0.64-1.43	17.42	14.74-20.14	14.30	11.12-18.18	28.50	14-45	3.25	2.77-3.51	3
85R186GC	02	1.06	1.04-1.09	20.54	19.74-21.34	18.50	17.18-19.82	35.00	25-45	3.35	3.11-3.61	1
Co 97015GC	25	1.12	0.53-1.72	19.76	16.14-22.34	17.10	13.28-19.39	25.38	16-37	2.87	2.38-4.07	5

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 > 70N MC /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 *
Station crosses									
Co8371 x Co 86032	2	0	0	0	1	2	NS	--	0
Co 2000-10 x Co 775	5	2	0	1	2	2	NS	--	0
Co 8371 x Co 99006	3	0	0	1	1	1	NS	--	0
CoSnk 05103GC	3	1	1	1	1	-	NS	--	0

*Lower number of clones in CI and CII because of high frequency of inferior juice quality and profuse flowering progenies, subsequently none of the clones were advanced to CIII.

6.2.1.7 Thiruvalla

Performance of crosses in ground nursery

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		
ISH 100 X CoC 8001	19	0	0										
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
CoTl 1153 X Co 1148	24	0	0										
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 94007 self	36.5	0	0										
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

Performance of crosses in first clonal trial

Due to severe drought the experiment was vitiated hence the experiment is repeated during 2017-18 and the ratoon trial was affected by heavy flood that hit the state during August 2018 and reliable data could not be drawn during 2018-19

Performance of crosses in second clonal trial

Trial is in progress

6.2.2 East Coast Zone

6.2.2.1 Anakapalle

Performance of crosses in ground nursery

CoA 13327 x BO 91, Co2000-10 x Co 1148, CoC 671 x Co Se 92423, CoH 167 x BO 155, Co S 88216 GC, CoA 92081 GC, Co 0238GC, CoA 11324GC, CoA 13327GC, Co 8316GC, C 81615GC, Co Se 95422GC, Co 62198GC, Co 94012 PC and CoC 90063 PC did not germinate. Performance of other crosses is given below.

Cross combination	Quantity of fluff sown (g)	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	
Co M 6806X ISH 69	31.50	186	167	23.61	22.00-25.00	3.10	2-8	2.80	2.00-3.26	28
Co 06035X Co 88013	30.00	125	119	24.75	24.00-25.50	3.25	2-6	2.15	1.85-2.65	8
C 79218X Co Pant 90223	17.50	100	98	25.20	25.00-26.00	4.40	4-6	2.18	1.92-2.60	5
Co M 6806X Co H 70	31.00	81	53	24.40	24.00-25.00	4.00	3-7	2.78	2.00-3.10	5
CoA 13327X Co 1148	32.00	200	173	23.14	22.50-24.00	6.30	5-8	2.13	1.91-2.29	7
ISH 147X Co H 104	24.00	108	75	25.75	25.00-26.50	6.00	5-8	1.89	1.70-2.20	4
Co 88025X Co H 7803	19.00	25	21	23.40	23.00-24.00	4.80	3-9	1.89	1.82-2.30	3
Co 94007X Co 97015	22.50	25	23	23.30	22.50-24.00	3.60	2-6	2.24	2.10-2.60	3
Co T 8201X Co Se 92423	16.00	150	141	23.16	22.50-24.00	4.00	3-6	2.13	2.00-2.30	12
CoA 10321X Co Pant 84213	7.00	125	96	22.40	22.00-23.50	6.50	5-9	2.30	2.10-2.46	5
Co 91019X BO 91	8.00	150	136	22.60	21.50-24.00	4.30	3-7	2.15	1.90-2.30	3
Co H 76X Co 97015	6.50	100	97	23.88	22.00-24.50	4.00	3-6	2.32	2.14-2.65	8
Co 98010X Co 1148	13.00	225	197	23.40	22.50-25.00	5.00	3-9	2.73	2.20-3.12	5
Co M 9220X Co 62198	8.50	200	178	22.00	21.00-23.00	4.00	3-6	2.10	2.00-2.30	6
Co 0238X ISH 69	15.00	50	37	22.50	22.00-23.50	6.75	5-9	2.20	2.10-2.34	4
Co 86002X Co S 87216	7.00	50	43	23.00	22.50-23.50	5.50	3-8	3.20	3.12-3.28	2
Co 2000-10X BO 91	25.50	150	125	22.50	21.00-24.00	3.40	3-6	2.34	2.17-2.83	5

Co Se 92423X BO 155	17.00	75	66	24.02	22.50-25.50	4.20	3-8	2.26	2.08-2.54	5
Co 94007X Co 1148	22.00	100	90	23.40	22.00-24.00	6.80	5-9	2.43	2.20-2.62	6
Co S 8436X Co 62198	16.00	125	114	24.16	23.00-25.00	4.00	3-7	2.25	2.00-2.40	7
Co H 119X LG 07482	22.00	75	74	24.14	23.00-25.00	4.14	3-6	2.03	1.92-2.35	4
Co S 90269X BO 155	6.00	175	175	24.00	23.00-26.00	3.25	2-7	2.03	1.90-2.20	7
Co S 92268 X CoA 10321	12.00	75	59	23.86	22.00-26.00	4.57	3-8	2.04	1.85-2.30	8
Co 98010X BO 130	11.50	150	141	22.00	21.00-23.50	6.50	5-9	2.04	2.00-2.20	4
Co Or 03152X Co 1148	14.00	150	120	22.25	21.00-23.00	4.25	3-6	2.48	2.18-2.72	4
Co 87268 GC	10.00	50	46	25.50	24.40-25.50	4.50	4-5	2.01	1.89-2.30	4
CoA 10321GC	7.00	50	47	23.50	22.00-24.20	4.50	4-6	2.40	2.30-2.60	5
Co 94005 GC	20.00	25	9	22.00	21.80-22.20	10.50	10-11	1.87	1.62-2.12	2
Co H 7803 GC	19.00	8	7	25.00	24.00-25.50	4.16	3-7	2.73	2.57-3.16	6
Co H 92 GC	9.00	166	112	23.60	22.60-24.80	5.00	3-7	1.85	1.73-2.10	20
Co M 6806 GC	21.00	175	147	24.35	23.00-25.40	4.82	4-8	2.98	2.60-3.26	17
Co 8340 GC	13.00	289	145	24.15	22.00-23.00	5.50	5-7	2.49	2.26-2.68	4
Co H 106 GC	14.00	61	61	26.00	26.00	4.00	4.0	2.35	2.18-2.49	1
BO 91 GC	14.00	68	67	24.30	23.00-26.00	3.80	3-6	2.97	2.80-3.20	9
Co 89036 GC	8.00	35	344	24.96	23.00-26.00	3.82	3-6	2.81	2.62-3.15	23
Co S 90269 GC	6.00	66	64	23.86	22.50-25.50	4.90	4-8	2.96	2.60-3.30	22
Co 97015 GC	12.00	25	24	25.80	25.00-26.00	3.00	2-5	2.73	2.50-2.93	5
Co V 89101PC	6.5	100	97	24.30	24.00-25.50	4.83	3-6	1.99	1.86-2.29	6

Performance of crosses in first clonal trial

Among the 26 crosses evaluated two crosses viz., CoA 10321 x CoH 70 and CoA 10321 x Co 1158 established in the first clonal trial. Performance of other crosses is given below.

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
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
CoS 87216 x CoH 70	21	17.42	16.5-19.2	20.26	18.2-21.8	23.70	22-26	118.83	114-125	2.44	2.1-2.8	10
CoA 92081x Co 62198	8	17.0	17.0	19.99	19.99	24	24	128	128	2.60	2.60	1
CoTI 1153 x BO 91	8	17.1	16.2-17.8	19.86	19.4-20.3	23.2	22.6-24	108.44	98-122	2.60	2.5-2.8	3
Co 8371 x CoH 70	56	16.8	15.6-18.8	20.07	18.5-22.8	23.46	18-26	102.57	85-119	2.67	2.5-2.8	22
Co 89036 x CoS 88216	19	16.31	15.8-17.4	18.43	17.8-19.6	21.9	19.6-23.6	104.25	92-122.33	2.70	2.4-2.9	4
CoA 11324 x Co 62198	11	17.6	16.9-18.6	19.67	19-20	22.73	22-23.2	98	86-121	2.43	2.3-2.7	3
CP 52-1 x Co 62198	2	17.68	16.9-18.5	18.95	18.8-19.1	22.5	22-23	105.5	88-123	2.45	2.4-2.5	2
CoV 89101 x Co1158	1	16.62	16.62	20.51	20.51	24	24	110	110	2.70	2.70	1
CoV 89101 x ISH69	6	16.51	15.4-17.2	18.67	18-19	23.4	22.6-25	116.89	99-128	2.47	2.4-2.5	3
CoA 11324 x CoH 15	6	17.9	17.4-18.3	19.88	19-20.6	23.66	23.2-24.6	111.89	105.67-120	2.53	2.5-2.6	3
CoV 89101x BO91	1	20.8	20.80	23.35	23.35	26.2	26.2	120	120	2.60	2.60	1
CoA 11324 x Co1158	1	16.62	16.62	19.21	19.21	22.8	22.8	113.6	113.6	2.80	2.80	1
Co 09321 x Co 775	3	16.71	16.71	18.71	18.71	22	22	123	123	2.60	2.60	1
BO 91 x Co 62198	11	17.53	16.4-17.8	19.02	18.8-19.4	23.50	23.2-26.0	103.25	96-112	2.60	2.5-2.7	4

CoV 89101x Co 62198	6	17.80	16.8-19.3	19.54	18.4-21	22.8	22.4-23	105.77	95-120.33	2.66	2.6-2.7	3
CoA 10321 x CoH 119	2	17.13	17.13	18.82	18.82	21.8	21.8	121	121	2.80	2.80	1
Co8371 x CoA 7602	4	18.40	18.2-18.6	19.80	19.6-20	23.4	23.2-23.6	111.25	110-112.5	2.55	2.5-2.6	2
CoA92081XCo97015	3	18.93	17.8-20	20.21	19.6-21	23.4	22.6-24.2	111.83	111.5-112	2.56	2.5-2.6	3
CoN05072XCo89003	1	19.51	19.51	20.49	20.49	24	24	112	112	2.6	2.6	1
CoA7602PC	1	18.6	18.60	19.67	19.67	22.6	22.6	112.5	112.5	2.40	2.4	1
CoV89101PC	5	18.45	18-18.9	20.15	20-20.3	23.5	23-24	112.25	98.5-126	2.75	2.7-2.8	2
Co85002PC	1	16.51	16.51	19.22	19.22	22	22	110	110	2.5	2.5	1
Co8371PC	3	18.15	17.5-18.8	19.99	19.3-20.7	23.2	23-23.4	97	94-100	2.35	2.3-2.4	2
Co98008GC	2	17.5	17.50	19.16	19.16	22.4	22.4	120.33	120.33	2.5	2.5	1
Total	208											76

Performance of crosses in second clonal trial

One hundred and twenty selections from 26 crosses were planted in second clonal trial. Among the twenty seven crosses no selection was effected in 12 crosses viz., CoA 10321 x CoH 128, Co 09321 x CoH 70, Co Or 03152 x CoS 96260, CoLk 8102 x Co 62198, CoA 7602 GC, Co 1158 x HR 83-65, Co 8371 PC, CoA 11324 x Co 775, CoV 89101 x ISH 69, Co 7201 PC and Co 86032 x Co 94008. Performance of other crosses in the second clonal trial is given 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 > 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
CoA 12321 x Co775	14					3			5
Co 88013 x Co 97015	15	1	1			2			3
CoA 10321x CoC8001	13		1			3			6
CoA 10321 x CoS 96260	3								1
CoA 13327 x CoH 15	9	1				3			3
CoT 8201 x Co 94008	9		1			1			3
CoA 13327GC	1					1			1
Co 0235GC	4	1				1			1
Co7202GC	4					2			3
CoV 89101 x CoA 7602	9	1				2			4
CoV 89101 x CoT 8201	17	2	1	1		4			6
CoSnk 05103 x CH 15	2					1			1
Co 06036 x Co 1148	2	1				1			1
CoV 89101PC	3					1			1
Co 8013 X CoC 671	2		1			1			1
Total	120								40

6.2.2.2 Cuddalore

Performance of Crosses in ground nursery (2018-19)

Cross combination	Qty of Fluff Sown (g)	No. of seedlings produced	No. of seedlings evaluated	HR Brix (%)		No. of Millable canes (NMC)		Cane diameter (Cm)		No. of seedlings selected
				Mean	Range	Mean	Range	Mean	Range	
CoH 70 x BO 154		164	158	21.32	17.4-23.0	5.25	3-9	2.64	2.4-3.2	20
Co 0238 x Co 97015		96	91	20.63	19.8-22.2	6.32	4-11	2.59	2.1-2.9	9
Co 8371 x CoT 8201		115	108	20.8	20.4-21.8	5.11	4-10	2.66	2.5-3.4	3
Co 85002 x CoH 70		304	291	20.5	19.4-22.6	6.31	3-12	2.48	2.1-3.1	30
Co 88025 x ISH 270		10	8	20.7	20.4-21.0	5.82	5-8	2.91	2.8-3.2	1
CoC 08336 x CoPant 97222		42	37	22.0	21.6-22.4	5.34	4-9	2.69	2.4-3.0	1
Co 06022 x Co 97015		36	35	20.6	20.2-21.0	4.10	3-8	2.54	2.1-3.2	3
NB 94545 x CoA 13327		527	502	20.5	18.6-23.4	6.21	3-12	2.76	2.2-3.5	86
CoOr 0315 x CoH 70		18	14	20.2	19.6-20.8	5.73	4-7	2.61	2.5-3.0	2
BO 102 x Co 97015		567	542	20.7	19.2-22.6	5.50	3-11	2.71	2.1-3.0	21
CoM 6806 x CoPant 90233		358	337	20.9	19.2-23.6	6.47	5-10	2.56	2.4-3.2	11
Co 0238 x CoH 7602		241	221	22.5	20.4-24.1	4.48	3-9	2.50	2.1-3.1	23
Co 2000-10 x Co 97015		18	13	20.7	19.8-22.6	4.67	4-6	2.69	2.6-3.0	1
CoH 76 x CoSe 95436		29	25	21.2	20.4-22.4	5.13	3-9	2.73	2.4-2.9	1
CoOr 03152 x CoH 70		18	15	20.3	19.6-20.4	6.11	5-10	2.68	2.5-3.2	1
CoC 671 x CoH 13		9	6	21.8	21.6-22.4	5.97	5-8	2.97	2.8-3.2	1
Co 98008 x CoH 15		88	81	20.6	19.6-23.2	6.31	4-9	2.49	2.1-3.3	14
Co 98010 x CoPnat 97222		127	122	20.7	19.6-23.4	5.27	3-11	2.54	2.2-2.8	25
CoA 13327 x CoLK 8002		19	11	20.6	19.8-21.2	5.68	5-8	2.68	2.5-2.8	1
CoPb 13183GC		132	120	21.1	20.6-22.8	4.79	3-9	2.70	2.2-2.9	2
CoM 9220 GC		17	11	20.8	20.4-23.2	4.88	4-9	2.69	2.5-2.8	1
CoM 6806 GC		15	14	21.3	21.2-21.8	5.14	3-7	2.51	2.2-2.7	1
ISH 69GC		17	14	21.6	20.2-23.8	4.96	3-8	2.56	2.3-2.8	1

Performance of Crosses in first clonal trial (2018-19)

Cross combination	No. of clones planted	HR Brix (%) 8 th month		HR Brix (%) 10 th month		HR Brix (%) 12 th month		No. of Millable canes (NMC)		Cane diameter (Cm)		No. of clones selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
CoC 90063 x Co 97015	57	16.23	15.4-17.8	19.24	18.2-20.4	21.66	20.4-22.6	7.23	5-11	2.68	2.4-3.1	14
CoC 90063 x Co 1148	42	15.98	14.8-17.6	19.26	17.8-20.0	21.17	20.0-21.8	6.45	4-9	2.71	2.5-3.3	11
MS 68/47 x Co 94008	28	16.32	14.2-18.0	20.06	18.4-20.6	22.43	21.6-23.2	6.71	5-10	2.67	2.4-3.0	5
Co 2000-10 x CoH 70	37	16.84	15.8-17.8	19.72	18.6-20.8	21.07	20.4-21.8	7.30	4-11	2.83	2.2-3.2	7
ISH 100 x Co 89003	15	16.93	15.4-18.2	20.57	19.0-21.2	22.42	20.8-23.2	6.93	5-12	2.69	2.5-3.0	8
Co 89003 x Co 0233	5	16.27	14.8-17.2	20.64	19.2-21.0	22.09	21.6-22.8	7.10	6-9	2.81	2.6-3.2	1
Co 98008 x CoC 8001	41	16.90	14.2-17.8	19.86	18.4-20.8	22.41	20.4-23.0	6.55	4-10	2.88	2.2-3.1	2
CoC 8201 x Co 97015	37	17.23	15.6-18.4	20.08	18.8-21.4	22.82	22.2-23.2	7.38	5-11	2.63	2.5-3.2	5
Co 06022 x Co 97015	12	16.28	15.8-16.8	20.41	19.4-21.2	22.39	20.4-23.2	6.94	6-10	2.80	2.5-3.3	2

Performance of crosses in second clonal trial (2018-19)

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 > 70 NMC / 20 row	No. of clones with > 2.5 cm cane thickness	No. of red rot resistance clones *	Superiority of the cross (Sucrose (a)/NMC (b)/ cane diameter (c) red Rot resistance (d))	No. of clones selected
CoV 89101 x CoS 93278	15	-	1	2	3	6		a, b & c	5
CoV 89101 x Co 86249	11	-	--1	3	5	8		a, b & c	6
CoV 89101 x Co 1148	21	-	2	2	5	3		a & b	1
CoC 8201 x Co 775	12	1	1	1	4	6		a, b & c	1
Co 98006 x Co 0233	15	-	-	1	6	4		b & c	1
Co 85002 x CoPant 97222	11	-			4	5		b & c	1
CoC 8201 x Co 0233	8	-	-	-	2	3		b & c	1

*- Not tested

6.2.2.3 Vuyyuru

Performance of crosses in ground nursery (2018-19)

Among the 12 crosses evaluated in ground nursery, no germination was observed in CoLk 8102 x Co 0235. Similarly among the three poly-crosses two viz., CoC 90063 PC and Co 94012 PC did not give any germinant. No selection was effected in five crosses viz., Co 8353 x CoH 15, CoM 9220 x Co 1148, Co 92006 x CoH 15, CoC 671 x Co 1148 and CoOr 03152 x Co 0235, seven general collections viz., Co A 90081 GC, CoSnk 05103 GC, CoBln 03174 GC, CP 52-1GC, ISH 127GC, Co 85019GC and Co Pant 90224 GC and a Poly cross CoV 89101PC . Performance other crosses with better selections is presented below.

Cross combination	Quantity of fluff sown (g)	No of seedlings produced	Total number of seedlings evaluated (survived)	HR brix (%)		Number of millable canes (NMC)		Cane diameter (cm)		No.of seedlings selected
				Mean	Range	Mean	Range	Mean	Range	
Co C 671 x Co H 70	28.5	120	62	23.05	21.8-24.3	3.0	-	2.93	-	2
Co V 89101 x LG 05434	22.0	192	98	24.88	22.5-26.8	4.13	3-6	2.62	2.29-2.89	8
Co 98008 x Co 1148	17.0	539	289	21.82	19.2-24.2	3.97	2-11	2.63	2.29-3.25	30
Co H 110 x Co 775	7.0	93	38	26.20	-	3.0	-	2.98	-	1
Co 98010 x Co Pant 97222	13.0	205	94	22.22	19.9-25.3	3.5	2-5	2.56	2.19-3.09	12
Co 98010 x Co H 104	14.0	157	85	22.52	21.2-24.0	4.0	2-6	2.86	2.59-3.00	5
ISH 100 GC	11.0	23	18	22.20	-	3	-	2.95	-	1
Co 98003 GC	6.0	7	4	26.90	-	3	-	2.58	-	1

Performance of crosses in first clonal trial*

Among the 13 crosses evaluated in the trial, three crosses viz., Co 98010 x CoH 119, Co 94012 x CoS 88216 and 97 R 401 PC did not have any selection for further evaluation.

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 A 12-321 X Co H 119	18	19.82	18.7-22.3	23.60	22.8-24.7	74.0	60.0-100.0	10
Co A 92081 X Co1148	4	20.11	18.9-21.0	22.33	20.3-23.7	81.7	50.0-107.5	3
Co 8213 X Co Pant 97222	4	19.20	19.1-19.3	24.18	23.7-24.7	85.0	50.0-120.0	2
Co 98008 X Co H 70	13	19.4	17.3-23.0	23.09	22.1-23.7	90.0	80.0-97.5	3
Co 11015 GC	1	22.60	-	23.00	-	110.0	-	1
Co V 89101 PC	14	18.74	16.8-19.8	23.24	22.5-23.8	77.1	55.0-90.0	6
97 R 129 X 97 R 401	2	20.070	-	23.00	-	72.5	-	1
Co C 90063 X Co 97015	22	21.83	18.2-24.9	23.13	22.4-23.4	71.7	60.0-82.5	6
Co 06022 X Co 97015	7	20.13	19.6-20.7	22.67	22.3-23.0	92.5	70.0-115.0	2
Co V 89101 X Co Pant 97222	6	19.49	19.4-19.6	23.19	22.8-23.6	82.5	82.5	2

*Data on HR brix at 360 days and cane diameter were not reported.

Performance of crosses in second clonal trial

Among the 17 crosses evaluated in the second trial, no superior types for any of the economic traits was observed in CoP 06436 x Co 62198, ISH 100 x CoH12, CoLk 7901 x B0 32, Co 8353 x CoS 510, BO 91 x Co S 08272, Co 09022 x Co 89029, Co 92002 GC, Co8371 PC and Co 2000-10 PC

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 (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
ISH 100 X Co 94008	1							A (>21%)	1
Co 8013 X Co C 671	2				1	1			2
CoV 89101 X ISH 69	7					3		A and C	6
CoLk 8102 X Co 62198	3				1				1
CoV 89101 X Co A 7602	1				1	1			1
CoV 89101 GC	8							A (<20%)	2
CoV 89101 x CoT 8201	4					1		A (<20.5%)	2
Co 2000-10 PC									1

6.2.2.4 Nayagarh

Performance of crosses in ground nursery

Cross combination	Qty. of fluff Sown (g)	No. of seedlings produced	Total No. of Seedlings evaluated	HR brix%		NMC		Cane Diameter (cm)		No. of seedling selected
				Mean	Range	Mean	Range	Mean	Range	
CoOr 03152 x CoPant 97222	24	196	110	23.2	16.5-26.8	4.1	2-9	2.2	1.6-2.7	12
CoC671 x Co 1148	22	142	80	23.2	18.4-25.7	3.8	3-9	2.2	1.8-2.7	10
Co 98008 x Co 1148	19	122	74	22.8	20.8-23.6	2.8	2-8	2.4	2.0-2.5	13
Co86002 x BO 91	19.5	109	68	22.3	17.8-24.2	2.5	2-6	2.3	1.8-2.7	11
CoM6806 x Co1148	9.5	65	46	20.4	18.8-24.60	3.8	3-7	2.2	1.8-2.6	10
Co98010 x CoH 70	6.5	48	30	22.3	20.2-23.5	3.4	3-9	2.2	1.8-2.3	09
CoV89101 x Co 775	16.5	112	70	22.6	19.0-25.2	3.8	2-9	2.4	2.1-2.4	12
CoLk 8102 GC	14.0	89	54	23.0	20.3-24.5	43.2	2-6	2.3	1.5-2.3	14
LG 04607 GC	21.0	146	72	22.6	22.0-24.2	4.1	2-8	2.2	1.9-2.4	13
Co11001 GC	20.0	139	64	21.6	21.8-24.4	3.5	2-8	2.2	1.8-2.5	10
CoOr 03152 GC	29.0	169	53	23.5	22.4-24.5	2.8	2-9	2.4	1.9-2.6	9
CoA7602 GC	7.0	52	30	22.4	22.30-24.3	3.4	2-7	2.2	2.0-2.5	6
C81615 GC	8.0	64	24	23.4	19.2-25.4	2.8	2-8	2.3	1.8-2.4	8
Co 88013 GC	3.0	16	8	23.0	20.4-24.6	3.2	2-10	2.3	1.7-2.8	4
Co 1148 GC	8.5	75	35	23.3	22.3-24.4	3.8	2-8	2.1	1.7-2.6	7
Co 87272 GC	15.5	104	46	22.6	20.2-23.8	3.9	3-9	2.3	2.2-2.4	12
Co 87044 GC	13.8	68	26	23.6	21.5-24.4	3.2	2-10	2.2	1.8-2.4	7
Co V 89101 PC	15.5	94	38	23.4	22.7-24.3	3.5	3-8	2.3	1.9-2.9	5
CoM 6806 PC	15.0	86	42	23.5	20.3-24.8	2.6	2-7	2.2	1.9-2.4	8
Co94012 PC	16.0	114	29	23.7	22.4-24.4	3.5	3-8	2.0	1.7-2.3	5
CoC 90063PC	6.5	39	17	23.2	19.2-24.4	3.9	2-8	2.2	2.1-2.4	5
CoM 0265 PC	14.0	94	42	23.6	20.6-24.2	3.8	2-8	2.2	1.7-2.4	9
Co 85002 PC	5.5	47	19	21.8	22.2-23.8	3.9	3-8	2.2	1.7-2.7	6

Performance of crosses in the second clonal trial

Among the twenty bi-parental crosses two crosses viz., Co 06027 x CoC 671 and CoC 671 x Co 1148 and four among the 10 poly-crosses viz., CoC 90063 PC, CoC 671 PC, Co 7201 PC and CoM 0265 PC did not give any selections.

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 > 2.5cm cane thickness	No. of Red rot Resistant clones	Superiority of the cross (Sucrose/NMC/ Cane dia./Red Rot resistant
Co1158 x Co62198	5	-	-	-	2	2	NT	NMC/Cane dia
Co0238 x ISH127	4	-	-	-	2	1	NT	NMC/Cane dia
ISH100x Co89029	3	-	-	-	1	2	NT	NMC/Cane dia
CoC8001 x ISH 69	2	-	-	-	1	1	NT	NMC/Cane dia
Co06035 x Co89029	4	-	-	-	2	1	NT	NMC/Cane dia
Co92013 x BO 91	4	-	-	-	2	2	NT	NMC/Cane dia
Co 06036x Co 1158	3	-	-	-	2	1	NT	NMC/Cane dia
Co 0327 x ISH69	2	-	-	-	1	1	NT	NMC/Cane dia
CoA13327 x CoH 70	1	-	-	-	1	1	NT	NMC/Cane dia
Co85002 x Co 775	2	-	-	-	1	1	NT	NMC/Cane dia
CoV89101 x Co 1148	3	-	-	-	2	1	NT	NMC/Cane dia
ISH 100 x Co94008	2	-	-	-	1	-	NT	NMC/Cane dia
CoV89101 x ISH 69	3	-	-	-	2	1	NT	NMC/Cane dia
CoA92081 x Co T8201	2	-	-	-	1	1	NT	NMC/Cane dia
CoV89101 x CoA7602	3	-	-	-	1	1	NT	NMC/Cane dia
Co8013 x CoC671	2	-	-	-	1	1	NT	NMC/Cane dia
Co 86032 x Co94008	2	-	-	-	1	1	NT	NMC/Cane dia
CoV89101 x CoA7602	2	-	-	-	1	1	NT	NMC/Cane dia
Co 88013GC	2	-	-	-	1	1	NT	NMC/Cane dia
Co7424 GC	2	-	-	-	1	1	NT	NMC/Cane dia
ISH28 GC	1	-	-	-	1	1	NT	NMC/Cane dia
ISH 306 GC	2	-	-	-	1	1	NT	NMC/Cane dia
CP 52-63 PC	2	-	-	-	2	1	NT	NMC/Cane dia
CoV 89101 PC	2	-	-	-	1	1	NT	NMC/Cane dia
Co2000-10 PC	1	-	-	-	1	1	NT	NMC/Cane dia
ISH 100PC	1	-	-	-	1	1	NT	NMC/Cane dia
86V96 PC	1	-	-	-	1	1	NT	NMC/Cane dia
Co 85002 PC	2	-	-	-	1	1	NT	NMC/Cane dia

6.2.3 North West Zone

6.2.3.1 Faridkot

Performances of crosses in ground nursery

Among the 27 crosses / selfs evaluated in ground nursery no seedlings production was observed in CoJ 88 self, CoPb 12182 x HR 83-65 and BO 91 x Co 62198. No superior types was selected from the crosses Co 1148 GC, CoS 8436 GC, CoLk 8102 x NCo 310 and CoPb 13183 x NCo 310. Performance of other crosses is given below.

Cross Combinations	Quantity of fluff sown (g)	No. of seedlings produced	Total number of seedlings evaluated	Number millable of canes		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	
CoJ 88 PC	11	27	13	7.61	2-13	16.86	10.2-21.8	17.47	10.221.8	18.39	12.6-22.6	
CoV 8910PC1	9.5	73	24	4.37	1-13	16.75	12.2-22.1	17.43	14.021.2	19.03	15.6-22.0	4
CoJ 83PC	6.5	45	18	4	2.0-10.0	17.41	11.6-21.4	17.96	12.4-21.6	18.71	14.0-21.7	12
Co 0238PC	11	29	9	5.89	2.0-13.0	17.93	10.4-23.1	19.04	15.4-21.0	20.07	18.8-21.0	8
CoJ 46XBo130	30	125	13	5.9	2.0-10.0	16.08	11.2-19.6	16.68	11.2-20.0	17.92	13.0-20.0	7
CoLk 8102XBo130	33	117	24	4.92	1.0-10.0	17.54	11.2-21.0	18.06	14.4-21.6	19.28	15.0-22.8	3
CoPb13183XCoS8279	14.5	70	4	4.25	1.0-10.0	16.9	15.9-18.2	17.4	15.4-19.2	19.3	16.2-20.8	10
CoPb13183XISH280	21	56	2	3.0	2.0-4.0	15.6	11.7-19.4	18.0	17.0-19.0	18.8	17.2-20.4	3
CoP13436XCo89029	19.5	16	6	4.2	2.0-7.0	14.6	14.0-20.0	17.9	15.0-20.0	18.8	17.2-20.6	1
CoJ64XISH176	11.5	4	2	6.5	4.0-9.0	17.0	16.6-17.4	17.2	16.4-18.0	19.4	19.2-19.6	2
CoLk8102XCo89029	36.5	42	14	6.1	2.0-11.0	14.2	10.7-18.0	14.8	11.0-19.0	16.9	16.0-20.2	1
Co87272XCoH15	16	37	24	6.8	11.0-14.0	14.7	11.0-18.9	16.8	13.0-20.0	18.2	15.0-20.4	3
CoPb13183XBo154	22.5	58	12	5.3	1.0-10.0	15.0	10.2-17.1	17.1	15.0-20.0	19.3	17.6-20.6	10
CoLk8102XCo87268	27	97	23	4.8	1.0-10.0	15.8	11.8-19.0	17.9	14.0-21.0	19.3	16.6-21.6	8
Co86002XBo91	26	99	25	3.9	1.0-9.0	15.7	11.3-19.8	17.06	12.0-21.0	18.2	13.6-22.0	15
CoPb10182XCo62198	21	49	13	4.0	1.0-8.0	15.6	11.0-19.6	17.8	16.0-20.0	19.6	17.2-22.0	12
CoH92XLG04605	13.5	68	21	4.0	1.0-7.0	14.2	10.4-19.0	16.5	14.0-20.0	17.8	16.0-20.4	7
CoPb13182XCo1158	26.5	90	16	4.3	1.0-10.0	16.4	12.0-18.6	18.0	14.4-21.0	19.7	17.6-21.8	1
CoN98133XCo89036	26.5	33	6	2.3	1.0-4.0	14.3	11.0-17.4	17.3	14.0-20.0	18.7	17.0-20.6	6
Co8353XCoS510	26.5	76	52	4.8	2.0-11.0	13.7	10.0-17.2	15.9	12.0-20.0	18.2	15.2-21.0	2
Total number of selections												23

Performance of crosses at first clonal trial

Cross Combinations	Germination		No. of clones		HR Brix at 8th months		HR Brix at 10th Months		HR Brix at 12th Months		NMC		Tiller	
	Mean	Range	Planted	Selected	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Co 7314 x Co 1148	6.3	2.0-9.0	10	2	16.59	12.0-20.0	18.2	12.8-20.0	19.4	18.4-21.6	18.4	5.0-30.0	33.9	18.0-60.0
CoPb 12181 GC	6.8	6.0-8.0	5	3	17.2	15.6-19.0	18.3	16.6-20.8	19.7	19.0-21.4	19.8	10.0-26.0	32.8	20.0-49.0
Co 89003 GC	6.0	3.0-8.0	22	9	16.7	10.0-20.0	18.9	15.6-21.0	19.6	17.0-21.2	15.2	7.0-27.0	34.3	19.0-55.0
CoS 8436 GC	6.1	1.0-9.0	10	3	15.3	13.4-17.0	16.2	16.0-18.0	17.3	15.6-18.0	18.2	7.0-35.0	30.5	12.0-57.0
Co 775 GC	5.7	5.0-6.0	4	0	13.4	11.0-16.0	15.1	12.6-16.0	17.3	16.6-18.8	14.0	10.0-21.0	28.5	34.0-45.0
ISH 69 GC	6.1	4.0-8.0	15	0	14.0	10.0-16.6	15.5	13.0-18.6	16.6	13.0-18.8	16.1	2.0-25.0	34.1	15.0-45.0
Co 1148 GC	6.3	3.0-8.0	4	1	15.0	13.0-19.2	16.8	14.2-18.8	18.2	17.6-19.2	16.6	5.0-26.0	33.1	21.0-43.0

Co 98008 GC	6.5	3.0-8.0	6	2	16.3	13.6-18.2	18.2	17.6-18.8	18.9	18.0-20.0	13.0	5.0-25.0	31.2	21.0-47.0
Awela Green Sport GC	5.6	4.0-7.0	3	0	14.1	11.0-19.0	15.8	13.2-19.8	15.9	13.3-20.0	20.3	9.0-26.0	40.5	15.0-62.0
CoPb 10182 GC	5.0	3.0-6.0	5	0	14.5	12.2-17.0	15.5	13.0-17.0	15.6	13.0-17.2	13.3	4.0-31.0	28.3	10.0-62.0
CoPant 97222 GC	5.3	3.0-9.0	26	1	14.5	10.0-18.4	16.0	13.0-18.8	17.3	14.0-20.0	13.7	1.0-26.0	33.0	12.0-53.0
CoPb 10183 GC	6.1	5.0-8.0	13	4	15.1	12.6-17.2	16.1	13.4-18.2	17.2	13.0-19.0	14.5	2.0-26.0	35.5	24.0-53.0
CoJ 83 PC	6.0	6.0-6.0	1	0	16.0	16.0-16.0	17.8	17.8-17.8	18.0	18.0-18.0	27.0	27.0-27.0	21.0	21.0
CoJ 88 PC	5.7	3.0-8.0	7	3	14.1	11.0-16.0	17.8	16.6-19.2	18.6	16.8-19.4	17.7	1.0-29.0	28.1	9.0-45.0
ISH 100 PC	8.0	8.0-8.0	1	0	17.0	17.0-17.0	17.6	17.6-17.6	18.0	18.0-18.0	29.0	29.0-29.0	55.0	55.0-55.0

Performance of crosses in second clonal trial*

Among the 20 crosses evaluated in the second clonal trial ten crosses viz., Co 98010 x CoSe 92423, CoC 671 x CoSe 92423, Co 98010 x CoS 8436, CoJ 80 x SP 80-185, CoC 671 x Co 775, CoN 05071 x CoJ 76, LG 95053 x BO 91, Co 98010 x Co 1148, CoS 8436 x CoPant 97222, MS 68 / 47 x CoV 92102 did not have better selections. Performance of other crosses is given below.

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 cones selected
Co 86032 x CoSe 92423	5	1	0	0	4	5	NMC, Sucrose	3
MS 68/47 x CoT 8201	1	0	0	0	1	1	NMC, Sucrose	1
CoJ 83 x CoT 8201	5	0	0	0	4	5	NMC, Sucrose	1
Co 86032 x 85R186	10	0	0	0	8	10	NMC, Sucrose	3
Co 86032 x CoH 15	4	0	0	0	4	4	NMC, Sucrose	1
Co 0237 x CoS 8436	1	0	0	0	1	1	NMC, Sucrose	1
Co 98008 x Co775	3	0	0	0	2	2	NMC, Sucrose	1
Co 0238 x CoSe 92423	2	0	0	0	2	2	NMC, Sucrose	1
Co 98008 x Co 89003	1	0	0	0	1	0	Sucrose	1
CoS 8436 x Co 89003	3	0	0	1	3	2	NMC, Sucrose	2

*Data on red rot resistance were not reported.

6.3.3.2 Kapurthala

Performances of crosses in ground nursery

Crosses	Quantity of fluff sown	No. of seedling produced	Total no. of seedling evaluated	Brix		No. of millable canes		Cane thickness		No. of seedlings selected
				Mean	Range	Mean	Range	Mean	Range	
Co 0238 x Co 89003	21.5	70	65	15.0	14-16	6.56	5-15	2.47	2.1-3.1	11
CoH 70 Self	48.5	490	230	14.9	14-16	5.75	3-10	2.37	2.1-2.7	7
UP 05125 x CoH 70	26.0	136	128	15.9	15-17	6.25	5-12	2.39	1.8-3.1	7

CoPb 10182 x Co 62198	20.5	162	156	16.5	14-20	5.64	3-15	2.41	1.7-3.0	20
CoPb 13183 x BO 91	12.5	160	157	16.1	15-19	5.89	4-15	2.33	1.7-3.7	11
CoPb 10182 x Co 62198	22.5	187	160	16.2	14-19	6.33	4-10	2.36	1.9-2.9	23
CoPant 84212 x CoSe 01434	29.5	245	161	15.8	14-22	6.25	3-12	2.23	1.8-3.0	42
CoLK 8102 x ISH 176	13.0	140	74	15.6	14-19	5.45	4-15	2.14	1.9-2.4	13
CoS 08272 x CoS 510	27.0	175	156	18.1	14-22	6.78	3-10	2.32	1.8-3.3	42
CoSe 01434 x CoH 70	22.5	175	141	16.3	15-21	5.98	5-15	2.35	1.9-2.5	15
CoPb 13182 x Co 62198	8.0	131	123	18.1	15-22	5.45	5-10	2.29	1.6-3.1	67
CoPant 84212 x CoS 510	24.0	210	161	16.5	15-19	5.66	4-10	1.88	1.5-2.3	24
LG 95053 x Co 62198	33.5	69	40	17.9	15-21	7.25	5-12	2.19	1.4-2.7	21
LG 95053 x CoS 510	26.0	132	125	16.7	15-19	5.36	5-11	2.18	1.7-2.7	36
CoPb 10182 x CoS 88216	26.0	180	133	16.5	15-18	6.35	5-16	2.19	1.5-2.9	38
CoPb 10182 x BO 130	21.0	252	232	16.6	15-18	5.89	4-15	2.18	1.6-2.5	40
CoLK 8102 x BO 154	33.5	360	304	16.8	15-20	5.74	5-12	2.3	2.0-3.3	60
Co 775 Self	29.0	135	119	16.2	15-18	5.23	3-15	2.28	1.8-2.7	29
CoJ 83 x CoPant 97222	21.0	144	79	16.0	15-19	6.12	4-11	2.24	2.1-2.6	21
Co 98008 x CoPant 97222	22.0	243	176	16.8	15-18	5.83	5-10	2.25	2.0-2.7	33
ISH 1 x CoPant 97222	30.0	307	147	16.5	15-20	5.75	3-16	2.16	1.6-2.8	35
CoS 92263 (GC)	31.0	52	31	16.9	16-19	5.94	4-16	2.23	2.1-2.6	13
CoPb 09181 x Co 89003	21.5	27	16	16.2	15-18	6.05	3-12	2.16	2.1-2.2	5
CoJ 88 x BO 130	22.0	28	21	16.8	16-20	5.97	4-15	2.55	2.1-2.7	6
CoJ 64 x BO 91	19.0	25	23	17.8	16-20	6.24	3-11	2.73	1.9-3.2	6
CoPb 10183 x CoS 88216	29.0	22	16	16.2	16-17	5.99	4-12	2.73	2.1-3.3	6
CoPb 09181 x Co 775	26.0	31	27	17.3	16-18	7.01	5-13	2.82	2.3-3.5	6
CoS 8436 x Co 775	18.0	47	27	17.2	16-18	6.23	6-10	3.2	2.9-3.3	6
CoPb 12182 x Co 775	22.0	19	13	16.8	16-18	7.21	5-15	2.72	2.5-3.0	5
Co 8353 x BO 146	15.0	18	13	15.8	15-16	7.56	3-16	2.68	2.1-3.3	4
CoN 98133 x Co 775	24.0	17	15	16.0	15-17	6.84	4-12	3.05	2.4-3.6	4
ISH 100 x Co 775	17.5	19	11	15.8	15-16	6.42	6-15	3.28	3.1-3.4	4
CoJ 88PC	13.0	19	8	16.7	16-18	5.98	6-11	2.27	1.9-2.8	3
CoJ 83PC	6.5	15	13	16.2	14-18	5.68	3-12	2.14	1.9-2.3	5
Co 0238PC	10.0	13	11	17.3	16-18	6.21	4-15	2.35	2.1-3.1	4
Co 11015 (GC)	12.5	29	8	17.0	16-18	5.81	6-15	2.58	2.3-2.9	4
CoT 8201(GC)	5.0	20	15	18.2	16-20	6.35	5-11	2.66	2.4-3.0	5
CoPant 84212 x CoH 98	20.0	67	10	16.7	16-17	5.81	6-10	2.73	2.4-3.2	3
CoSe 92423(GC)	13.0	137	52	16.6	15-19	5.64	5-11	2.41	1.8-2.9	22
CoH 70 GC	24.5	155	76	16.5	15-18	5.87	4-12	2.32	2.0-2.6	22
CoPb 12181 x Co 1158	26.5	160	84	17.0	15-19	5.12	3-11	2.42	2.3-2.6	15
Co 0238 x Co 89003	21.5	27	8	17.8	17-18	6.25	6-12	2.3	2.1-2.5	5
CoH 70 Self	48.5	222	141	16.4	15-18	6.21	3-15	2.4	2.1-2.8	28
CoPb 10182 x Co 62198	20.5	200	154	17.8	15-20	7.01	3-16	2.43	1.8-3.0	25
CoPb 13183 x BO 91	12.5	160	133	17.8	15-21	6.23	4-16	2.29	1.9-2.9	18
CoPant 84212 x CoSe 01434	29.5	149	98	17.5	15-20	5.86	3-16	2.34	2.0-2.9	18
CoLK 8102 x ISH 176	13.0	80	33	16.4	16-17	5.24	4-15	2.43	1.9-2.8	5
CoS 08272 x CoS 510	27.0	320	259	18.6	15-22	6.32	3-16	2.36	2.1-2.8	34
CoSe 01434 x CoH 70	22.5	255	109	16.1	15-20	7.12	3-17	2.66	2.2-3.5	23
CoPb 13182 x Co 62198	8.0	77	37	18.5	16-20	5.85	5-12	2.77	2.5-3.3	6
CoPant 84212 x CoS 510	24.0	120	69	18.8	16-21	6.87	4-16	2.43	2.1-2.9	15
UP 05125 x CoH 70	26.0	107	62	17.6	15-20	6.89	3-17	2.33	2.1-2.5	5
LG 95053 x CoS 510	26.0	80	57	18.0	17-19	7.50	4-15	2.68	2.3-3.3	6

Performances of crosses in first clonal trial

Among the 34 crosses evaluated in first clonal trial, nine crosses viz., CoPant 84211 GC, CoS 8436 x Co 89003, Co 98002 x Co 89003, CoJ 83 x CoH 13, CoPant 84212 x BO 91, CoS 92423 GC, BO 128GC, CoS 8436 GC and CoJ 80 GC did not give any selection. Performances of the other crosses are given in the following table.

Cross combination	No. of clones planted	HR (%) 8 th month		HR (%) 10 th month		HR (%) 12 th month		Number of millable canes (NMC) /plot (2 rows of two meter)		Cane diameter		No. of seedlings selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	
CoPb 10181 x Co 1148	95	15.5	9-18	16.7	10-18	18.05	11-22	35.02	15-61	3.01	2.2-3.8	35
CoV 89101 x Co 1148	136	14.01	7-19	17.76	8-20	18.19	13-23	42.13	21-69	2.89	1.7-3.3	38

CoPb 09181 x Co 1148	37	12.25	8-18	16.23	10-19	20.01	11-23	47.66	51-53	2.78	2.6-3.6	15
Co 98010 x Co 0775	37	10.65	7-18	18.85	10-20	19.86	12-22	51.80	25-71	2.65	1.6-3.0	19
CoJ 83 x CoPant 97222	27	11.25	8-19	16.01	11-19	16.55	13-20	32.56	21-80	2.45	2.1-3.4	14
CoH 14 x Co 62198	5	13.55	8-17	15.53	10-20	15.77	13-22	49.02	19-53	2.11	1.6-2.82	
Bo 91 x Co 0775	17	12.5	7-16	18.70	9-16	18.04	14-23	29.25	31-47	1.95	1.4-2.4	4
Co 238 GC	37	12.85	7-17	14.61	9-18	17.12	12-21	46.08	17-66	2.51	1.8-3.5	3
Co 98008 x Co 94008	14	11.66	7-19	13.63	10-17	16.62	13-19	42.54	33-58	1.99	1.6-2.7	1
CoH 128 x Co 89029	12	11.75	10-16	14.95	11-17	18.49	13-20	39.86	13-62	2.19	2.1-2.9	4
CoPant 97222 self	9	10.04	8-13	13.51	9-16	16.75	14-19	48.29	15-50	3.11	2.8-3.3	3
Co 0775 self	40	10.65	9-15	16.63	10-18	18.97	14-21	59.36	17-65	3.24	2.9-3.4	2
CoJ 88 x Bo 91	64	11.0	9-14	15.20	11-19	17.01	12-18	45.69	16-58	2.64	1.5-2.6	3
CoH 92 x Co 0775	24	11.25	8-13	16.01	10-18	18.28	13-20	37.55	21-40	2.96	1.7-3.2	3
CoV 81101	18	8.25	7-15	12.07	9-14	17.41	13-19	52.08	19-68	2.55	1.8-2.8	2
Co 8209 GC	59	9.50	8-15	13.93	8-17	17.69	11-20	43.69	26-38	2.68	2.1-3.5	2
CoBIN 05-501GC	17	11.5	7-13	14.62	10-15	16.85	14-18	40.62	15-50	2.05	1.8-2.6	1
Sp-80-185 GC	8	10.5	8-14	13.02	9-15	15.45	12-19	56.33	31-67	2.56	1.6-3.0	3
CoJ 61 GC	3	9.25	7-13	12.88	9-14	14.64	13-18	34.67	21-40	2.04	1.9-2.3	1
CoV 89101 PC	8	10.25	8-15	13.37	9-13	17.38	12-19	39.38	19-45	2.65	2.0-2.9	5
Co 90018 x CoH 70	19	12.5	7-14	14.60	8-15	18.58	13-20	29.36	16-35	3.02	2.2-3.5	5
Bo 91 x Co 62198	10	10.5	7-14	13.35	9-17	17.35	13-19	37.23	15-40	1.90	1.5-2.9	1
ISH 100 x Co 89029	1	15	15	18	18	20	20	22	22	1.95	1.95	1
CoN 05071 GC	1	15	15	16	16	20	20	33	33	1.77	1.77	1
CoSe 92423 PC	1	16	16	15	15	19	19	62	62	1.95	1.95	1

Performances of crosses in second clonal trial

Among the 28 crosses evaluated in second clonal trial six crosses viz., Co 1148 GC, CoJ 83 PC, Co 7314 x Co 1148, 97 R 401 x CoPant 97222, and Co 0124 x Co 94008 did exhibit superiority for any of the economic traits of breeding importance. Performance of other crosses is given 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/2 0 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
Co 775 GC	35	0	0	0	29	17	28	24
CoJ 82315 GC	6	0	0	0	3	2	5	2
CoJ 65 GC	7	0	0	0	6	4	7	4
ISH 69 GC	7	0	0	0	5	5	5	2
CoH 99 GC	19	0	0	0	15	10	15	11
Co7201 PC	16	0	0	0	12	12	14	10
Co 89003 GC	6	0	0	1	5	6	5	4
CoJ 46 GC	2	0	0	0	1	2	2	1
CoT 8201 GC	2	0	0	0	2	1	2	1
CoV 89401 GC	3	0	0	0	2	2	2	1
CoSe 95422 PC	4	0	0	0	3	4	4	1
CoSe 92423 PC	1	0	0	0	0	1	1	1
CoJ 88 PC	6	0	0	0	6	6	4	2
CoS 8436 PC	9	0	0	0	7	8	9	3

Co 128 X CoPant 97222	12	0	0	0	10	11	10	5
SP80-185 GC	10	0	0	0	8	8	8	6
CoSe 95423 GC	5	0	0	0	4	3	5	3
LG95053 X BO 91	6	0	0	0	4	4	6	2
CoJ 64 X CoPant97222	5	0	0	0	4	5	5	5
CoJ 80 X Co 775	4	0	0	0	3	3	4	2
Co 238 X Co 62198	6	0	0	0	5	5	6	4
Co 98008 X Co 775	1	0	0	0	1	1	1	1
	178							95

6.2.3.3 Uchani

Performance of crosses in ground nursery

A total number 1240 seedlings survived out of 1503 seedlings planted in ground nursery. The observations will be recorded during October, 2019 in ratoon crop.

Performance of crosses in first clonal trial

Five hundred and three clones of three poly crosses, seven general collections and 11 bi-parental crosses were evaluated in first clonal trial. No superior clone was selected from the five crosses viz., CoH 92 x Co 89029, CoH 70 x CoPant 97222, Co 89003 GC, CoSe 92432 PC and CoJ 83 PC. A total number of 130 clones were selected from the 503 clones evaluated in the first clonal trial. Performance of crosses with at least two selections is given in the following table.

Cross combination	Number of seedling planted	HR Brix (%) at 8m		HR Brix (%) at 10 m		Cane Diameter (cm)		Number of millable cane (NMC)		Number of seedling selected
		Mean	Range	Mean	Range	Mean	Range	Mean	Range	
CoH 128 x Co 06037	14	17.6	16.6-18.7	22.0	21.0-22.7	2.6	2.5-2.7	6.0	5-8	3
CoH 110 x Co 88216	11	16.3	15.4-17.6	19.5	18.1-20.3	2.3	2.2-2.4	5.3	3-8	3
Co 98008 x Co 94008	20	17.1	15.7-19.7	20.9	19.2-21.8	2.7	2.3-3.4	5.0	4-6	3
Co 8213 x CoH 70	10	17.4	15.8-18.7	20.7	20.2-21.7	2.6	2.5-2.8	6.0	5-7	3
CoH 104 x Co 775	58	18.3	15.5-21.5	22.3	18.2-25.2	2.5	2.3-2.9	5.9	4-10	23
Co 98010 x Co 775	21	16.1	15.6-16.7	21.5	19.9-22.2	2.8	2.7-3.1	6.5	5-7	4
CoS 8436 x Co 89003	30	18.2	15.1-22.1	21.8	20.5-24.0	2.5	2.4-3.0	4.6	3-8	12
Co 1158 x CoS 93278	61	17.2	16.2-19.0	21.2	19.5-24.1	2.5	2.2-2.8	4.8	3-7	14
CoH 92 GC	116	17.6	15.6-21.2	22.4	19.8-25.7	2.7	2.3-3.4	4.6	3-7	31
CoH 128 GC	13	16.3	15.6-17.1	22.1	20.6-23.5	2.8	2.6-3.0	6.0	5-7	2
CoH 56 GC	40	17.8	16.2-21.7	21.4	19.3-23.7	2.6	2.5-3.0	5.6	3-9	9
CoS 96260 GC	10	15.7	15.1-16.2	18.3	17.5-19.0	2.2	2.1-2.3	5.0	4-6	2
Co 7704 GC	17	17.9	16.7-18.9	22.2	21.2-23.1	2.4	2.1-2.8	5.0	4-6	6
CoS 8436 GC	4	17.9	16.7-19.1	21.2	21.1-21.2	2.6	2.5-2.7	5.0	4-6	2
CoV 89101 PC	40	17.9	15.7-21.7	21.5	19.8-23.1	2.6	2.2-3.4	5.5	4-11	12

Performance of crosses in second clonal trial

Two hundred and eighty five selections from the 38 crosses were evaluated in second clonal trial. No selection was effected in the 9 crosses viz., Co 0238 x CoSe 92423 , ISH 100, CoH 112, CoH 12, CoH 129, CoH 14, CoJ 72, CoS 97261 and Co 7717. Out the 285 clones, 54 clones were selected for further evaluation. Crosses with at least one selection each are presented below.

Cross Combination	No. 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	No. of seedling selected
Bo 91 x Co 453	8	0	2	-	b	-	2
Co 98008 x Co 775	2	0	1	-	b	-	1
Co 98010 x Co 1148	15	0	5	2	b & c	-	4
Co 7201 PC	18	0	2	2	b & c	-	3
CoS 8436 PC	4	0	1	-	b	-	1
CoSe 92423 PC	6	0	2	3	C & c	-	4
CoV 89101 PC	19	0	4	3	b & c	-	4
Co 0327 GC	5	0	2	-	b	-	1
Co 86011 GC	10	0	3	1	b & c	-	3
Co 88039 GC	6	0	-	1	c	-	1
Co 99006 GC	7	0	1	2	b & c	-	2
CoH 102 GC	17	0	-	3	c	-	3
CoH 110 GC	6	0	1	1	b & c	-	2
CoH 56 GC	2	0	-	1	c	-	1
CoH 92 GC	32	1	5	2	b & c	-	5
CoH 98 GC	7	0	2	2	b & c	-	2
CoH 99 GC	6	0	4	1	b & c	-	4
CoJ 77 GC	4	0	-	1	c	-	3
CoJ 82315 GC	20	0	1	5	b & c	-	4
CoJ 88 GC	1	0	1	-	b	-	1
CoS 510 GC	13	0	1	1	b & c	-	1
ISH 69 GC	17	0	2	2	b & c	-	2

6.2.4 North central and North East Zone

6.2.4.1 Bethuadahari

Performance of crosses in ground nursery (2017-18) of crosses made during 2016.

Cross combination	Quantity of fluff sown (g)	No of seedlings produced	Total number of seedlings	HR brix (%)		Number of millable canes (NMC)		Cane diameter (cm)		No. of seedlings selected
				Mea	Range	Me	Ran	Mea	Range	

			evaluated	n		an	ge	n		ed
Co 94012 x ISH 41	26.0	18	7	18.7	17.6-19.5	3.5	2-5	2.16	1.98-2.83	7
Co 2000-10 x 85R 186	17.5	3	2	18.4	18.2-18.6	5.0	4-6	2.03	1.99-2.07	2
CoA 09321PC	22.0	2	2	18.8	18.7-18.9	7.5	6-9	1.97	1.95-1.99	2
LG 05828 GC	17.0	56	17	17.9	17.1-19.8	5.2	2-12	1.89	1.76-2.24	16
Co 0235 GC	31.0	272	218	19.3	17.4-22.3	5.5	2-9	2.17	1.45-2.84	217
Co 04602 GC	22.0	169	104	18.8	17.2-20.6	4.6	2-12	2.07	1.52-2.78	100
Co 7201 GC	49.0	64	35	19.1	18.0-20.9	3.8	2-7	2.14	1.58-2.67	34
LG 04605 GC	37.0	230	129	18.9	17.6-21.2	4.3	2-10	1.95	1.44-2.46	124
Co 200-10 GC	28.0	20	11	18.8	18.2-20.4	2.7	2-5	1.97	1.63-2.28	9
CoLk 7901 GC	13.0	32	19	19.2	18.4-20.6	3.8	3-6	2.03	1.69-2.57	16
LG 07650 GC	21.0	35	30	18.6	17.8-20.2	4.2	2-9	2.18	1.84-2.81	28
CoBln 03174 GC	29.0	17	6	18.5	17.4-20.4	4.5	2-7	1.88	1.46-2.52	6
BO 155 GC	23.0	76	60	19.2	17.6-21.4	3.7	2-7	1.95	1.43-2.62	57

CP 52-1 x ISH 69, ISH 100 GC did not produce any seedlings for the ground nursery. Seedlings of the crosses Co 94012 x CoSe 92423 (2), CoC 671 x Co 97015 (2) and LG 99183 GC (8) were not established in the field.

Performance of crosses in first clonal trial

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	
BO 91 x CoH-70	58	17.2	16.6-17.8	19.4	17.6-21.2	20.1	19.2-21.6	22.3	15-29	2.28	1.99-2.42	12
BO 91 x CoSnk 05103	49	15.6	14.2-16.8	17.5	16.4-18.8	18.8	17.6-20.5	19.2	14-23	2.17	1.85-2.38	2
Co 98008 x CoH 70	164	17.3	16.2-17.6	19.2	17.8-20.8	20.3	19.6-22.2	21.7	17-30	2.33	2.07-2.68	11
BO 91 x Co1148	106	15.4	13.6-16.4	17.1	16.2-18.8	18.7	17.4-20.2	17.8	15-24	2.19	1.85-2.41	01
Co 0209 x CoSe 92423	37	17.1	15.2-17.8	19.8	17.6-21.2	21.2	19.8-22.6	27.4	19-34	2.37	2.05-2.83	19
Co 89036 GC	80	16.8	14.8-17.8	19.6	18.0-20.2	20.5	18.8-21.6	23.3	19-32	2.27	1.88-2.83	18
BO 91 GC	256	14.8	12.6-17.0	17.3	15.4-20.2	19.2	18.0-21.2	22.6	17-31	1.94	1.76-2.97	25

No selection was effected in the crosses Co 0238 X CoS 88216, Co 98008 x UP 05125, Co 98008 x UP 05125, MS 68/47 x Co-0233, CoH-119 x CoS 88216, Co-0238 x CoC 86062, CoJ 88PC, CoV 89101 PC, CoJ 83 PC and Co 98008 GC.

Performance of crosses in second clonal trial

Eighty eight clones of seven crosses viz., BO-91 x CoH-70) (12), BO91 x CoSnk05103 (2), Co 98008 x CoH-70 (11), BO91 x Co1148 (1), Co 0209 x CoSe 92423 (19), Co 89036 GC(18) and BO 91 GC (25) were in second clonal trial.

6.4. Progress made by the participating centres of fluff supply programme

6.4.1 Peninsular Zone

6.4.1.1 Mandya

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
2017	-	-	-	-	CoVC 17061	
2016	1544	76			CoVC 16061 CoVC 16062	
2015	5671	400	79		CoVC 15061 CoVC 15062 CoVC 15063 CoVC 15064	
2014	5795	230	54	4	CoVC 14062 CoVC 14061	
2013						

6.4.1.2 Navsari

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 for Zonal varietal trials	Name (s) of the clone(s) released by SVRC / CVRC
2014	17740	1584	293+7	46+6		
2015	17210	1075	280	40+6		
2016	8610	951	153	50+6		CoN 09072
2017	4591	278	159			CoN 13073
2018	1339	250				

6.4.1.3 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
2014-15	14297	505	---	6	MS 14081 & MS 14082	NIL
2015-16	7528	526	---	14	NIL	NIL
2016-17	17830	301	---	17	MS 16081 & MS 16082	NIL
2017-18	8495	357	---	17	MS 17081 & MS 17082	NIL
2018-19	7760	422	---	39	PDN 16005	-

6.4.1.4 Perumalapalle

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
2014	8,651	140	24	14	2	
2015	5,382	90	36	20	0	
2016	13,386	249	33	19	1	
2017	5,137	220	96	18	1	
2018	9436	587	116	38	4	

6.4.1.5 Pune

Cross Combination	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 for zonal varietal trial	Name(s) of the clone(s) released by SVRC/CVRC
				PFVT	FVT		
2012	22151	128	-	11	06	01	
2013	9283	26	05	05	01	01	
2014	9710	99	-	14	06*		
2015	16911	55	44	11*			
2016	13,893	49*					

6.4.4.6 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 trials	Name (s) of the clone(s) released by SVRC / CVRC
2012-13	10790	572	84	9 Early + 5 Mid-late	NIL-	NIL
2013-14	630	123	41	9 Early + 16 Mid-late	-NIL	NIL
2014-15	5728	220	45	9 Early + 9 Mid-late	-NIL	NIL
2015-16	5640	270	250	22	NIL	NIL
2016-17	9168	2740	482	-	-	-

6.4.4.7 Sankeshwar

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
2013-14	3012	3012	459	50	-	-
2014-15	4011	308	230	21	-	-
2015-16	7280	642	-	-	-	-
2016-17	6140	-	-	-	-	-
2017-18	656	-	-	-	-	-

6.4.4.8 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
2013-14	230*	44	28	**	-	-
2014-15	783*	108	**			
2015-16	Seedling stage	**				
2016-17	232	232*				
2017-18	All the seedlings in the nursery have been lost completely due to heavy flood occurred during 15 th to 20 th of July 2018					

6.4.2 East Coast Zone

6.4.2.1 Anakapalle

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
2014-15	8539	300	115	26	Early- 2 Midlate- 2	-
2015-16	7314	760	76	28	-	CoA 08323 and CoA05322 released by SVRC in 2015-16
2016-17	5931	609	225	25	Early- 1 Mid-late- 1	-
2017-18	5273	207	122	23	Early- 3 Midlate- 1	CoA 11321 submitted release and notification proposal to CVRC
2018-19	4533	208	120	22		

6.4.2.2 Cuddalore

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 planted in station trials – first year	No. of clones selected for Zonal Varietal Trails	Name of clone(s) released by SVRC / CVRC
2018-19	3235	342	66	56	Early clones -2 Mid-late clones-2	
2017-18	4,335	351	136	31	Early clones -3 Mid-late clones-2	
2016-17	4,732	332	108	42	Early clones -1 Mid-late clones-1	CoC 11336 was released as CoC 25 by SVRC
2015-16	4189	428	175	67	Early clones -3 Mid-late clones-1	-
2014-15	4625	839	262	95	-	-

6.4.2.3 Vuyyuru

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 of the clone released by SVRC / CVRC
2013-14	4475	133	42	16; Early (10) Mid late(6)	(1); 2006 V 41 (Co V 13-356)	-
2014-15	6660	97	44	14 Early (8) Mid late(6)	(1); 2007 V 127 (Co V 14-356)	-
2015-16	6291	180	35	12 Early (11) Mid late(1)	(1); 2009 V 127 (Co V 15-356)	-
2016-17	2750	253	180	*15 Early (10) Mid late(5)	(2); 2010 V 32 (Co V 16-356) 2010 V 146 (Co V 16-357)	-
2017-18	3288	83	57	IP- 16 (2013 V) E (10), ML (2013 V (5)+ 2012 V(1)) II P&R-11 (2012 V) E(11)		

6.4.2.4 Nayagarh

Year	No. of seedlings evaluated in ground nursery	No. of clones planted in 1 st clonal trial	No. of clones planted in 2 nd 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
2014	386	160	104	40	1 (CoOr 14346)	
2015	324	148	110	36	1 (CoOr 15346)	
2016	298	180	98	32		CoOr 10346
2017		353	58	30	1 (CoOr 17346)	
2018	1077		72	28	1 (CoOr 18346)	CoOr 12346 (SVRC)

6.4.3 Northwest Zone

6.4.3.1 Faridkot

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	No. of clones selected for zonal varietal trials	Name of the clone(s) released by SVRC/ CVRC
2018-19	328	138				
2017-18	612	355	28	-	-	-
2016-17	667	355	48	15+7-	-	-
2015-16	773	501	37	14+9	-	-
2014-15	1551	587	50	17+8	2	-

6.4.3.2 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
2014-15	1500	362	243	56	02 (1 Early & 1 ML)	CoPb 09181 (CoPb 91)
2015-16	4406	383	110	81	04 (2 Early & 2 ML)	-
2016-17	8563	478	135	57	02 (1 Early & 1 ML)	CVRC: CoPb 08212 (CoPb 92), SVRC: CoPb 08217 (CoPb 93) & CoPb 10181 (CoPb 94)
2017-18	13175	433	120	50	05 (2 Early & 3 ML)	-
2018-19	5550	812	194	64	04 (2 Early & 2 ML)	-

6.4.3.3 Shajahanpur

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 trial	Name (s) of the clone (s) released by SVRC/CVRC
2013-14	8281	1984	101		03	01
2014-15	45801	2079	172		03	
2015-16	14048	1136	36		04	
2016-17	6770	751	36		03	
2017-18	3319	715	52		07	

6.4.3.4 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
2014-15	12588	373	107	16	2	
2015-16	33947	3212	285	24		
2016-17	9708	503	130	15		
2017-18	-	-	-	25	2	
2018-19	1503			15		

6.4.4 North Central and North East Zone

6.4.4.1 Bethudahari

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
2018	640	618				
2017	828	821	88			
2016	0					
2015	0					
2014	0					

#No participation in Crossing Programme during 2013-2015 from Bethuadahari Centre

6.4.4.3 Pusa

Year	No. of seedlings raised /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	No. of clones selected for zonal varietal trials.	Names of the clones released by SVRC / CVRC
2013-14	817(only Pusa cross)	591	103	11	04	-----
2014-15	5859	441	108	13	06	CoP11437(CoP112) early variety through SVRC and CoP 2061(ML) through CVRC
2015-16	26824	231	174	08	06	-----
2016-17	40427	441	94	10	07	Rajendra Ganna -1 (CoP16437) early variety through SVRC
2017-18	23812	448	162	10		