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**UNIVERSITY OF AGRICULTURAL SCIENCES
BANGALORE**



**ALL INDIA CO-ORDINATED RESEARCH PROJECT ON
SUGARCANE**

ANNUAL REPORT

2015-16

Compiled by

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**ZONAL AGRICULTURAL RESEARCH STATION
VC. Farm, Mandya - 571405**

WEATHER REPORT

METEOROLOGICAL DATA FROM APRIL 2014 TO MARCH 2015 OF ZONAL AGRICULTURAL RESEARCH STATION, V.C.FARM, MANDYA FOR THE YEAR 2015-16

Sl. No	Month	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	Rainy days	Sunshine hours	Pest / disease occurrence during the month
		Max.	Min.	07.30 hrs	14.30 hrs				
1	April 2015	33.8	19.6	80	33	23.2	3	6.4	ESB,TSB,YLD
2	May 2015	32.8	19.6	87	34	135.3	8	2.2	ESB, Leaf hoppers, YLD
3	June 2015	30.1	19.8	87	57	60.0	5	4.7	Aphid, ESB,YLD
4	July 2015	30.7	19.2	83	55	1.2	0	4.6	ESB,Aphid, YLD
5	Aug 2015	30.4	19.2	84	60	67.8	6	4.8	ESB, Wooly Aphid,YLD
6	Sept 2015	29.6	18.5	91	55	82.6	5	5.1	TSB, Pyrilla, SWA,YLD
7	Oct 2015	29.5	19.4	90	59	47.0	3	5.1	Pyrilla, YLD
8	Nov 2015	29.4	15.3	91	59	168.6	9	1.4	INB,YLD
9	Dec 2015	29.0	15.0	89	66	7.2	2	4.6	INB,YLD
10	Jan 2016	30.0	12.6	80	43	0	0	5.9	ESB,YLD
11	Feb 2016	31.8	15.3	86	65	0	0	4.1	ESB, INB,YLD
12	March 2016	35.8	15.0	80	65	0	0	5.6	ESB, TSB,YLD

ESB – Early Sugarcane Borer, TSB – Top Shoot Borer, YLD – Yellow Leaf Disease, INB – Internode Borer ,SWA-Sugarcane woolly Aphid.

V. RESEARCH RESULTS

1. CROP IMPROVEMENT

All India Coordinated Research Project on sugarcane emphasizes a great deal of work on evaluation of varieties and their acclimatization in various agro climatic zones. Under this, importance was given on the selection for high yielding, high sugar varieties and wider adaptation. Therefore, attempts have been also made to study the genotypes for various yield and yield attributing characters for further inclusion in varietal trials.

- 1. Reporting period** : April 2015- March 2016
- 1. Location** : Zonal Agricultural Research Station,
V.C. Farm, Mandya-571 405
- 2. Project Title** : All India Coordinated Research Project
on Sugarcane

Objectives :

AICRP (Breeding)

- i. To identify suitable mid-late maturing varieties for October-November planting season
- ii. To identify suitable early maturing varieties for January-February planting season
- iii. To develop sugarcane genotype suitable for cultivation in local area from fluff.

CROP IMPROVEMENT

A. Zonal Varietal Trials:

Experiment – 1

01.	Title of the experiment	Evaluation of sugarcane entries under early group of Initial Varietal Trial.
02.	Date of planting	07-01-2015
03.	Date of harvest	17-02-2016
04.	Location	Zonal Agricultural Research Station, V.C. Farm, Mandya
05.	Objective	To isolate elite entries under IVT Early for better adaptability, higher cane and sugar yield.
06.	Number of entries	12+3
07.	Plot size	6 M x 6 R x 1.2 M = 43.2 m ²
08.	Design	RCBD
09.	Replication	02
10.	Standards	Co 85004, Co 94008, CoC 671
11.	Fertilizer application	250:100:125 NPK kg/ha
12.	Intercultural operation	3 hoeing and 4 hand weeding
13.	Irrigation	Once in a week depending upon soil condition
14.	Name of the scientists involved	Dr. Nagaraja, T. E., Dr. Patel, V.N. Dr.Thimmegowda,P., Mr. Ravindrababu, B. T. & Mrs. Sunitha,B.P.

Table 1: Mean data of IVT- Early entries under crop improvement programme of AICRP (Sugarcane)-2015-16

Sl. No	Clone	CCS t/ha	Cane yield t/ha	Brix % (10 m)	Sucrose % (10 m)	Purity % (10 m)	CCS % (10 m)	Pol % cane (10 m)	Extraction % (10 m)	Fiber % (10 m)	NMC at (10 m) ('000/ha)
1	Co 12001	9.34	69.21	21.00	19.10	92.03	13.46	14.48	57.00	14.13	82.06
2	Co 12003	10.77	75.69	21.25	19.93	94.88	14.23	14.99	52.00	14.74	75.58
3	Co 12006	8.15	59.03	20.75	19.36	94.45	13.80	14.51	54.50	15.05	76.74
4	Co 12007	8.83	64.70	20.75	19.22	93.75	13.65	14.52	55.00	14.42	68.75
5	Co 12008	11.80	80.32	22.25	20.68	93.98	14.71	13.17	51.00	14.94	76.27
6	CoM 12081	12.72	92.36	20.50	19.26	95.11	13.77	14.62	54.50	14.07	87.38
7	CoM 12082	13.21	95.52	21.00	19.46	93.81	13.83	14.79	56.00	13.98	88.43
8	CoM 12083	13.15	92.25	21.50	20.03	94.25	14.26	15.29	54.00	13.64	89.93
9	CoN 12071	8.49	66.46	19.50	18.02	93.60	12.79	13.43	56.00	15.42	77.89
10	CoN 12072	11.73	90.05	20.25	18.44	92.14	13.00	13.88	54.50	14.69	76.27
11	CoT 12366	13.02	104.90	19.00	17.56	93.56	12.47	15.92	57.00	13.01	98.15
12	CoT 12367	10.44	88.33	18.75	16.86	91.13	11.82	12.52	52.50	15.73	76.39
Standards											
1	Co 85004 (C)	9.92	72.78	20.50	19.14	94.54	13.65	14.43	54.00	14.61	81.48
2	Co 94008(C)	9.14	70.72	20.50	18.42	90.95	12.91	13.92	55.50	14.44	65.28
3	CoC 671(C)	10.16	74.19	21.00	19.35	93.23	13.71	14.62	52.50	14.44	62.73
	CD at 5%	1.63	10.66	1.51	1.59	NS	1.25	1.06	2.59	NS	10.52
	CV(%)	7.10	6.23	3.43	3.89	1.92	4.33	3.45	2.22	4.79	9.21

IVT Early (Contd...)

Sl. No	Clone	Stalk length (m)	Stalk diameter (cm)	Single cane weight (kg)	Brix % (8 m)	Sucrose % (8 m)	Purity % (8 m)	CCS % (8m)	No of shoots ('000/ha) 240 days	No of tillers ('000/ha) 120 days	Germination % (30 days)
1	Co 12001	2.04	2.74	0.96	18.00	16.66	93.09	11.80	125.06	139.5	46.41
2	Co 12003	1.89	3.15	1.14	20.00	19.18	96.43	13.79	128.51	151.9	54.86
3	Co 12006	2.06	2.56	0.83	18.50	17.48	95.02	12.49	126.99	139.5	46.53
4	Co 12007	2.08	2.89	1.00	19.75	18.84	95.93	13.52	152.89	136.6	51.85
5	Co 12008	2.01	2.78	1.21	20.50	18.78	92.11	13.24	121.76	129.9	41.44
6	CoM 12081	2.09	2.97	1.13	18.00	16.18	90.44	11.31	107.32	129.2	42.01
7	CoM 12082	2.24	2.69	1.17	18.25	16.29	89.72	11.35	105.11	128.8	47.11
8	CoM 12083	1.98	3.20	1.08	19.50	18.98	97.85	13.73	133.01	153.7	51.85
9	CoN 12071	1.81	2.76	0.91	19.00	17.81	94.28	12.69	100.09	121.5	29.28
10	CoN 12072	1.98	3.07	1.27	18.00	16.54	92.38	11.68	118.00	133.7	47.22
11	CoT 12366	2.30	3.28	1.44	16.00	14.22	89.25	9.89	166.18	176.4	45.83
12	CoT 12367	2.11	3.27	1.24	17.00	15.02	88.76	10.41	161.40	175.6	52.25
Standards											
1	Co 85004 (C)	1.69	2.71	0.73	18.00	16.30	91.11	11.43	99.51	124.7	31.41
2	Co 94008(C)	1.98	2.91	1.16	18.00	15.94	89.07	11.06	106.30	129.2	31.02
3	CoC 671(C)	1.74	3.18	1.27	18.50	17.73	96.42	12.75	100.19	118.9	31.19
	CD at 5%	0.43	0.46	0.29	1.84	2.35	5.76	1.91	12.95	15.25	6.93
	CV(%)	10.12	7.28	12.43	4.63	6.43	2.90	7.39	4.20	4.38	6.39

4. Inferences: Totally 12 test entries and 3 standards were included in the trail. CoT 12366 was the best performer which produced 104.90 t/ha of cane yield and 13.02 t/ha of sugar yield followed by CoM 12082 (95.52 t/ha& 13.21 t/ha of cane yield and sugar yield, respectively) compared to the better standard Co 94008 which produced 70.72 t/ha cane yield and 9.14 t/ha sugar yield.

Experiment – 2

01.	Title of the experiment	Advanced Varietal Trial – Early I Plant
02.	Date of planting	24-12-2014
03.	Date of harvest	02-12-2015
04.	Location	Zonal Agricultural Research Station, V.C.Farm, Mandya
05.	Objective	To identify elite entries under AVT Early I PC for higher cane and sugar yield
06.	No. of entries (3)	8+3
07.	Plot size	6 M x 8 R x 1.2 M = 57.6 m ²
08.	Design	RCBD
09.	Replication	3
10.	Standards	Co 85004, Co 94008 and CoC 671
11.	Fertilizer application	250:100:125 NPK kg/ha
12.	Intercultural operation	3 hoeing and 4 hand weeding
13.	Irrigation	Once in a week depending upon soil Condition
14.	Name of the scientists involved	Dr. Nagaraja, T. E., Dr.V.N. Patel, Dr.Thimmegowda, P, Mr. Ravindrababu, B. T. & Mrs. Sunitha,B.P.

Table 2: Mean data of AVT – Early I Plant entries under crop improvement programme of AICRP (Sugarcane) 2015-16

Sl. No	Clone	CCS t/ha	Cane yield t/ha	Brix % (10 m)	Sucrose % (10 m)	Purity % (10 m)	CCS % (10 m)	Pol % cane (10 m)	Extraction % (10 m)	Fiber % (10 m)	NMC at (10 m) ('000/ha)
1	Co 10004	8.68	76.16	18.83	16.38	89.85	11.42	12.38	51.67	14.41	64.70
2	Co 10005	8.80	73.96	18.17	17.00	90.84	11.92	12.92	53.00	13.99	69.21
3	Co 10006	11.06	96.44	18.50	16.52	89.13	11.47	12.68	57.67	13.41	81.94
4	Co 10024	10.27	91.96	17.50	15.95	90.76	11.15	11.99	51.00	14.38	79.63
5	Co 10026	10.87	99.53	17.67	15.79	89.13	10.97	12.01	59.67	13.93	119.10
6	Co 10027	9.43	85.31	18.00	15.98	88.49	11.07	12.11	53.33	14.27	96.70
7	CoT 10366	9.87	97.51	16.67	14.69	87.89	10.13	11.17	51.33	13.95	98.67
8	CoT 10367	9.77	84.84	18.33	16.52	89.93	11.52	12.65	57.00	13.42	73.21
Standards											
1	Co85004	9.63	80.67	17.83	16.92	92.09	11.93	12.94	60.00	13.53	80.44
2	Co 94008	9.26	78.88	17.67	16.69	91.69	11.74	12.85	56.00	13.04	67.25
3	CoC 671	8.90	79.22	18.00	16.14	89.47	11.23	12.24	61.67	14.15	67.07
	CD at 5%	1.13	6.62	0.93	1.47	NS	1.25	NS	5.01	NS	8.50
	CV(%)	6.83	4.53	3.06	5.32	2.94	6.46	5.24	5.29	4.78	10.79

AVT – Early I plant (Contd...)

Sl. No	Clone	Stalk length (m)	Stalk diameter (cm)	Single cane weight (kg)	Brix % (8 m)	Sucrose % (8 m)	Purity % (8 m)	CCS % (8m)	No of shoots ('000/ha) 240 days	No of tillers ('000/ha) 120 days	Germination % (30 days)
1	Co 10004	1.95	2.73	1.17	16.67	15.16	92.40	10.70	119.76	158.0	39.76
2	Co 10005	2.17	2.46	1.02	17.00	15.72	93.80	11.17	84.51	98.8	35.61
3	Co 10006	1.57	2.21	0.78	14.00	11.45	83.31	7.69	96.89	120.0	35.65
4	Co 10024	1.72	2.67	1.03	13.50	10.82	81.62	7.19	83.90	112.6	31.67
5	Co 10026	1.81	2.61	1.05	17.00	15.92	95.19	11.41	132.63	153.3	35.49
6	Co 10027	1.69	2.67	0.99	16.00	14.06	89.25	9.77	121.70	124.25	31.18
7	CoT 10366	1.61	2.56	1.10	14.00	12.85	93.48	9.12	123.92	154.5	30.73
8	CoT 10367	1.77	2.67	1.28	15.33	13.18	86.53	9.06	122.09	128.1	33.04
1	Co85004	1.41	2.09	0.62	17.33	15.61	91.37	10.97	82.57	104.2	36.20
2	Co 94008	1.89	2.81	1.26	15.33	13.35	88.36	9.24	86.22	121.8	34.83
3	CoC 671	1.75	2.79	1.18	16.67	14.42	87.69	9.95	91.41	107.8	31.73
	CD at 5%	0.28	0.37	0.29	1.63	2.24	6.00	1.84	11.94	11.72	8.51
	CV (%)	9.28	8.48	16.52	6.08	9.49	3.94	11.15	5.60	4.57	12.54

- 3. Inferences:** Totally 8 test entries and 3 standards were included in the trail. Co 10026 was the best performer which produced 99.53 t/ha of cane yield and 10.87 t/ha of sugar yield followed by CoT 10366 (97.51 t/ha& 9.87 t/ha of cane yield and sugar yield, respectively) compared to the better standard Co 94008 which produced 78.88 t/ha cane yield and 9.26 t/ha sugar yield.

Experiment- 3

01.	Title of the experiment	Evaluation of sugarcane entries under early group of Advanced Varietal Trial (II Plant Cane)
02.	Date of planting	07-01-2015
03.	Date of harvest	09-01-2016
04.	Location	Zonal Agricultural Research Station, V.C.Farm, Mandya
05.	Objective	To identify elite entries under AVT Early II PC for higher cane and sugar yield.
06.	Number of entries	3+3
07.	Plot size	6 M x 8R x 1.2M = 57.6 m ²
08.	Design	RCBD
09.	Replication	04
10.	Standards	Co 85004, Co 94008 and CoC 671
11.	Fertilizer application	250:100:125 NPK kg/ha
12.	Intercultural operation	3 hoeing and 4 hand weeding
13.	Irrigation	Once in a week depending upon soil condition
14.	Name of the scientists involved	Dr. Nagaraja, T. E., Dr.V.N. Patel, Dr.Thimmegowda,P., Mr. Ravindrababu, B. T. & Mrs. Sunitha,B.P.

Table 3: Mean data of AVT – Early II Plant entries under crop improvement programme of AICRP (Sugarcane)-2015-16

Sl. No	Clone	CCS t/ha	Cane yield t/ha	Brix % (10 m)	Sucrose % (10 m)	Purity % (10 m)	CCS % (10 m)	Pol % cane (10 m)	Extraction % (10 m)	Fiber % (10 m)	NMC at (10 m) ('000/ha)
1	Co09004	11.82	87.89	20.50	19.04	92.75	13.46	14.57	58.00	13.47	86.02
2	CoN 09072	10.31	79.47	19.38	18.26	94.05	12.99	13.83	56.50	14.28	75.26
3	Co09007	10.38	83.33	19.00	17.63	92.59	12.45	13.40	54.00	13.97	71.31
1	Co85004	9.21	71.31	19.25	18.16	94.12	12.92	13.69	53.00	14.58	71.92
2	Co94008	6.62	60.16	18.25	17.34	94.78	12.38	11.88	53.00	15.19	51.48
3	CoC 671	9.71	75.30	19.38	18.14	93.42	12.87	13.63	52.75	14.88	66.36
	CD at 5%	1.02	7.39	0.72	0.76	NS	0.59	0.75	3.72	0.93	7.08
	CV(%)	7.02	6.43	2.47	2.78	1.20	3.07	3.68	4.53	4.27	13.27

AVT-Early II Plant Cane (Contd...)

Sl. No	Clone	Stalk length (m)	Stalk diameter (cm)	Single cane weight (kg)	Brix % (8 m)	Sucrose % (8 m)	Purity % (8 m)	CCS % (8m)	No of shoots ('000/ha) 240 days	No of tillers ('000/ha) 120 days	Germination % (30 days)
1	Co09004	2.22	3.18	1.36	19.50	18.37	94.42	13.09	118.38	158.21	34.46
2	CoN09072	1.93	2.90	0.94	18.38	16.82	91.74	11.83	104.12	115.21	49.70
3	Co09007	2.03	3.33	1.27	18.13	16.72	92.43	11.80	92.75	107.93	43.10
1	Co85004	1.82	2.99	1.03	18.50	16.87	91.40	11.85	96.13	101.34	30.23
2	Co94008	2.12	3.23	1.49	16.63	14.06	83.36	9.02	87.33	98.68	31.18
3	CoC 671	2.05	3.14	1.41	18.38	16.39	89.30	11.40	95.45	105.81	31.16
	CD at 5%	0.24	0.24	0.23	0.94	1.43	4.56	1.32	10.11	10.75	5.11
	CV (%)	7.97	5.01	12.41	3.42	5.73	3.35	7.63	6.78	6.23	9.31

Inferences: Only three test entries and 3 standards were evaluated in 4 replications. Co09004 performed better in terms of cane yield (87.89 t/ha) among the 6 test entries when compared to all the standards included in the trail. Highest sugar yield of 11.82 t/ha was evident for Co 09004 against 6.62 t/ha sugar yield produced by the better standard Co94008 followed by Co09007 (83.33t/ha cane yield and 10.38 t/ha sugar yield) and Sucrose % juice (19.04) and CCS % (13.46) were also more in Co 09004.

Experiment- 4

01.	Title of the experiment	Assessment of sugarcane entries of early group under Advanced Varietal Trial for their ratooning ability.
02.	Date of planting	20-01-2015
03.	Date of harvest	09-01-2016
04.	Location	Zonal Agricultural Research Station, V.C.Farm, Mandya
05.	Objective	To identify elite entries under AVT Early II PC for higher cane and sugar yield.
06.	Number of entries	3+3
07.	Plot size	6 M x 8R x 1.2M = 57.6 m ²
08.	Design	RCBD
09.	Replication	04
10.	Standards	Co 85004, Co 94008 and CoC 671
11.	Fertilizer application	250:100:125 NPK kg/ha
12.	Intercultural operation	3 hoeing and 4 hand weeding
13.	Irrigation	Once in a week depending upon soil condition
14.	Name of the scientists involved	Dr. Nagaraja, T. E., Dr.V.N. Patel, Dr.Thimmegowda, P., Mr. Ravindrababu, B. T. & Mrs. Sunitha,B.P.

Results:

Table 4: Assessment of entries of AVT Early for their ratoonability

Sl No.	Entry/ Genotype
1	Co09004
2	CoN09072
3	Co09007
1	Co85004
2	Co94008
3	C o C671
	S.Em
	CD
	CV

5. Inferences: Only three test entries viz., Co09004, CoN 09072, Co09007 with 3 standards were evaluated in 4 replications. No entry was found good in performance since severe infestation due to Yellow Leaf Disease.

Experiment-5

01.	Title of the experiment	Evaluation of mid late sugarcane entries under Initial Varietal Trial
02.	Date of planting	07-01-2015
03.	Date of harvest	17-02-2016
04.	Location	Zonal Agricultural Research Station, V.C.Farm, Mandya
05.	Objective	To isolate elite entries under IVT mid late for better adaptability, higher cane and sugar yield
06.	Number of entries	15 + 2
07.	Plot size	6 M x 6R x 1.2M = 43.2 m ²
08.	Design	RCBD
09.	Replication	02
10.	Standards	Co 86032 and Co 99004
11.	Fertilizer application	250:100:125 NPK kg/ha
12.	Intercultural operation	3 hoeing and 4 hand weeding
13.	Irrigation	Once in a week depending upon soil condition
14.	Name of the scientists involved	Dr. Nagaraja, T. E., Dr.V.N. Patel, Dr.Thimmegowda, P., Mr. Ravindrababu, B. T. & Mrs. Sunitha,B.P.

Table 5: Mean data of IVT- Mid late entries under crop improvement programme of AICRP (Sugarcane) 2015-16

Sl. No	Clone	CCS t/ha	Cane yield t/ha	Brix % (12 m)	Sucrose % (12 m)	Purity % (12 m)	CCS % (12 m)	Pol % cane (12 m)	Extraction % (12 m)	Fiber % (12 m)	NMC at (10 m) ('000/ha)
1	Co 12009	16.65	118.06	20.50	19.91	93.09	14.10	15.11	50.00	14.12	99.88
2	Co 12012	15.68	112.73	20.75	19.77	91.32	13.88	15.07	53.50	13.33	95.37
3	Co 12014	10.80	87.27	20.50	17.93	87.77	12.37	13.80	63.00	12.38	67.95
4	Co 12016	13.55	102.31	20.00	18.78	92.11	13.24	14.17	51.00	13.70	81.97
5	Co 12017	14.45	107.41	20.25	18.92	93.94	13.46	14.37	53.00	14.06	82.43
6	Co 12019	13.11	93.29	21.25	19.80	93.69	14.06	15.09	59.00	13.64	68.22
7	Co 12021	14.19	107.52	20.00	18.58	93.41	13.18	14.11	54.50	14.10	82.09
8	Co 12024	14.08	97.11	21.75	20.36	94.09	14.49	15.35	51.00	14.47	74.24
9	CoM 12084	15.12	118.17	20.00	18.22	91.57	12.81	13.73	56.00	14.08	91.78
10	CoM 12085	17.13	121.99	21.00	19.71	94.35	14.04	15.09	60.50	13.18	109.32
11	CoM 12086	10.17	74.77	20.50	19.14	93.87	13.61	14.42	65.00	12.25	71.63
12	CoN 12073	12.09	86.92	21.00	19.59	93.75	13.92	14.99	53.50	13.46	69.54
13	CoN 12074	13.08	94.10	21.00	19.58	93.72	13.91	14.77	57.50	14.20	52.86
14	CoT 12368	14.44	106.94	20.50	19.02	93.28	13.48	14.38	54.00	13.64	69.29
15	VSI 12121	17.58	116.55	22.75	21.24	93.80	15.09	16.25	51.00	13.43	85.52
Standers											
1	Co 86032(C)	15.39	108.22	21.50	20.02	93.59	14.21	15.32	53.00	12.96	87.50
2	Co 99004 (C)	15.19	104.86	21.00	20.36	94.09	14.49	15.54	56.00	13.65	82.77
	CD at 5%	2.18	11.30	2.34	1.64	2.41	1.25	1.26	8.00	NS	5.91
	CV(%)	7.19	5.15	5.31	3.98	1.22	4.27	4.03	6.81	4.27	10.11

IVT Mid-late (Contd...)

Sl. No	Clone	Stalk length (m)	Stalk diameter (cm)	Single cane weight (kg)	Brix % (8 m)	Sucrose % (8 m)	Purity % (8 m)	CCS % (8m)	No of shoots ('000/ha) 240 days	No of tillers ('000/ha) 120 days	Germination % (30 days)
1	Co 12009	2.46	2.86	1.14	19.25	17.31	89.77	12.05	135.07	144.90	47.80
2	Co 12012	2.31	2.96	1.11	19.75	18.22	92.00	12.84	132.17	145.52	57.06
3	Co 12014	1.96	3.12	1.04	19.00	17.91	85.90	11.70	117.70	131.40	45.87
4	Co 12016	2.64	3.08	1.50	17.00	19.10	87.23	12.84	127.78	133.80	49.96
5	Co 12017	2.67	3.04	1.37	17.50	15.83	88.84	10.98	125.20	119.63	44.17
6	Co 12019	1.71	2.81	0.79	20.00	18.22	90.92	12.77	135.18	163.01	56.37
7	Co 12021	2.03	3.35	1.31	18.00	16.42	90.88	11.51	101.32	127.64	41.48
8	Co 12024	2.12	3.36	1.21	17.75	16.86	89.64	11.74	103.57	116.73	42.44
9	CoM 12084	2.68	3.27	1.77	18.25	17.01	93.02	12.04	115.17	135.87	51.60
10	CoM 12085	2.71	3.36	1.73	17.75	16.56	93.09	11.73	114.22	142.33	51.02
11	CoM 12086	2.13	2.98	1.03	19.00	17.44	91.60	12.26	111.44	126.21	49.31
12	CoN 12073	1.95	2.75	0.89	19.25	17.67	91.58	12.42	115.52	134.33	45.59
13	CoN 12074	2.75	3.42	1.67	17.25	15.73	90.93	11.03	111.04	126.65	40.49
14	CoT 12368	2.57	3.27	1.53	18.75	17.34	92.29	12.23	102.88	125.55	40.94
15	VSI 12121	2.55	3.00	1.41	20.75	19.61	94.28	13.97	120.29	140.36	46.88
1	Co 86032(C)	2.22	2.83	1.03	19.00	17.44	91.53	12.26	110.77	133.01	44.28
2	Co 99004 (C)	2.31	2.81	1.26	18.50	16.98	91.38	11.94	105.66	130.31	40.49
	CD at 5%	0.39	0.27	0.35	2.28	2.69	7.18	2.14	15.30	19.40	9.04
	CV(%)	7.87	4.11	12.73	5.77	7.30	3.73	8.32	5.24	5.79	7.72

Inferences: Totally 15 test entries and 2 standards were included in the trial. When cane yield (t/ha) and CCS (t/ha) were considered, CoM 12085 (121.99 and 17.13, respectively), CoM 12084(118.17 & 15.12, respectively), Co 12009(118.06 & 16.65, respectively), VSI 12121 (116.55 & 17.58, respectively) and Co 12012(112.73 & 15.68, respectively) were the best performers when compared with standard Co 99004 which produced 104.86 t/ha and yield and 15.19 t/ha of CCS.

Experiment -6

01.	Title of the experiment	Evaluation of sugarcane entries of midlate group of Advanced Varietal Trial (I Plant Cane)
02.	Date of planting	24-12-2014
03.	Date of harvest	02-12-2015
04.	Location	Zonal Agricultural Research Station, V.C.Farm, Mandya
05.	Objective	To isolate elite entries under AVT Midlate I PC for better adaptability, higher cane and sugar yield.
06.	Number of entries	11+2
07.	Plot size	6 M x 8R x 1.2M = 57.6 m ²
08.	Design	RCBD
09.	Replication	02
10.	Standards	Co 86032 and Co 99004
11.	Fertilizer application	250:100:125 NPK kg/ha
12.	Intercultural operation	3 hoeing and 4 hand weeding
13.	Irrigation	Once in a week depending upon soil condition
14.	Name of the scientists involved	Dr. Nagaraja, T. E., Dr.V.N. Patel, Dr.Thimmegowda,P., Mr. Ravindrababu, B. T. & Mrs. Sunitha,B.P.

Table 6: Mean data of AVT-Mid late I plant cane entries under crop improvement programme of AICRP (Sugarcane) 2015-16

Sl. No	Clone	CCS t/ha	Cane yield t/ha	Brix % (10 m)	Sucrose % (10 m)	Purity % (10 m)	CCS % (10 m)	Pol % cane (10 m)	Extraction % (10 m)	Fiber % (10 m)	NMC at (10 m) ('000/ha)
1	Co10015	13.30	102.92	20.25	19.04	94.54	13.58	14.38	54.00	14.46	90.02
2	Co10017	10.35	80.61	21.00	19.35	92.60	13.67	14.58	54.00	14.62	60.07
3	Co10031	12.61	99.27	19.50	18.64	95.51	13.38	14.23	55.01	13.64	85.42
4	Co10033	13.12	103.70	19.75	18.60	94.64	13.27	14.21	54.02	13.60	76.48
5	CoM10083	13.80	103.35	21.00	19.71	94.33	14.04	14.84	53.34	14.71	97.66
6	PI 10131	15.05	105.69	21.50	20.75	97.00	14.96	15.41	54.23	15.75	99.05
7	PI 10132	13.31	101.18	20.50	19.39	95.06	13.86	14.67	54.53	14.36	79.60
8	CoVC10061	13.20	99.01	21.25	19.80	93.64	14.06	14.87	53.62	14.94	72.31
9	CoT10369	14.04	105.17	20.50	19.53	95.76	14.00	14.73	52.64	14.53	105.30
10	CoT10368	12.65	104.65	19.00	17.81	94.26	12.68	13.75	53.74	12.81	76.65
11	Co09009	11.91	104.13	18.50	17.00	92.38	12.00	13.23	53.87	12.16	86.81
1	Co 86032	12.68	99.36	20.00	18.82	94.63	13.43	14.32	52.63	13.92	70.23
2	Co 99004	12.04	98.14	19.00	18.05	95.55	12.93	13.80	54.43	13.54	86.20
	CD at 5%	1.95	9.59	1.51	1.69	3.43	1.34	1.43	5.76	1.42	9.67
	CV(%)	6.93	4.60	3.45	4.10	1.66	4.53	4.55	4.91	4.62	7.99

AVT Mid-late I Plant cane (Contd...)

Sl. No	Clone	Stalk length (m)	Stalk diameter (cm)	Single cane weight (kg)	Brix % (8 m)	Sucrose % (8 m)	Purity % (8 m)	CCS % (8m)	No of shoots ('000/ha) 240 days	No of tillers ('000/ha) 120 days	Germination % (30 days)
1	Co10015	2.46	3.46	1.21	18.00	16.55	92.48	11.69	122.38	148.01	35.61
2	Co10017	2.66	3.43	1.61	20.25	18.80	93.33	13.33	139.48	168.03	45.14
3	Co10031	2.32	3.58	1.37	16.50	14.93	92.01	10.47	129.21	156.66	47.27
4	Co10033	2.44	3.46	1.57	18.25	16.77	92.43	11.84	117.70	150.13	33.29
5	CoM10083	2.11	3.24	1.15	20.25	18.92	92.18	13.46	114.60	140.83	47.22
6	PI 10131	2.22	3.83	1.79	19.25	17.67	92.29	12.46	124.65	139.65	33.87
7	PI 10132	2.51	3.65	1.54	18.75	17.47	93.70	12.41	127.77	142.77	37.64
8	CoVC10061	2.22	3.51	1.07	18.00	16.06	89.77	11.19	141.31	175.35	37.35
9	CoT10369	2.35	3.57	1.58	17.50	15.97	91.83	11.24	146.16	173.79	40.28
10	CoT10368	2.23	3.40	0.98	18.00	16.54	92.42	11.68	135.70	160.46	45.10
11	Co09009	2.19	3.29	1.38	16.50	14.19	86.56	9.72	151.76	165.00	43.60
1	Co 86032	2.43	3.51	1.64	19.50	18.03	93.75	12.25	89.49	123.71	35.55
2	Co 99004	2.17	3.41	1.19	18.50	17.24	61.32	7.92	99.69	125.57	44.16
	CD at 5%	0.55	0.38	0.36	1.50	1.76	3.49	1.39	13.92	15.06	6.35
	CV (%)	10.92	5.01	11.84	3.73	8.82	3.20	9.86	4.42	4.56	7.20

Inferences: Totally 11 test entries were included with 2 standards. PI 10131 and CoT 10369 were the top ranking entries in terms of cane yield (105.69 t/ha, 105.17 t/ha, respectively) followed by CoT 10368(104.65 t/ha), Co 09009(104.13 t/ha) and Co10033 (103.70 t/ha) when compared to Co 99004 (98.14 t/ha of yield and 12.04 t/ha of CCS).

STATUS REPORT OF PREVIOUS YEARS CROSSES

Table : Status report of the crosses made in the previous years.

YEAR	No. of Crosses BPC+GC+PC	Number of seedlings obtained	C-I	C-II	C-III	Accepted for ZVT
2016	48(22+10+13+3(AC))	Yet to sown				Scarcity of water hence fluff stored in cold unit.
2015	46 (14+19+13)	5671				VCF 0961-02, VCF 0706-05, VCF 0961-05 and VCF 0734-05 accepted for ZVT
2014	51(34+05+12)	5795	230	54		VCF 009-64 and VCF 0517 accepted for ZVT
2012	560GC	560	88	43	14	
2011	43(24+07+12)	5182	101	81	4	
2010	67(33+22+12)	12063	8923	148	71	VCF 0604-04 accepted for ZVT
2009	71(32+29+10)	11786	341	128	29	VCF 09-64 accepted for ZVT
2008	70 (29+24+17)	18075	322	98	62	RYT=40 clones
2007	38 (25+10+03)	11429	223	80	26	
2006	29 (9+20+0)	8782	161	81	23	I clone for ZVT

BPC-Biparental cross; GC-General Cross; PC-Poly Cross, AC-Agali crosses; C-I,C-II & C-III, Clonal I,II & III stages, respectively.

Isolated desirable clones maintained for further evaluation are given below.

Year of Fluff raised	No. of isolated Clones
Fluff 2006	1 elite clones
Fluff 2007	2 elite clones
Fluff 2008	1 elite clones
Fluff 2009	10 elite clones
Fluff 2010	10 elite clones
Fluff 2011	2 elite clones
Fluff 2012	6 elite clones
Fluff 2014	28 elite clones
Fluff 2015	440 elite clones