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KERALA AGRICULTURAL UNIVERSITY
Sugarcane Research Station, Kallungal .P.O., Thiruvalla 689 102

No. SRS II/287/07

Dated: 19.06.2014

From,

Professor and Head

To,

Dr. O.K.Sinha,
Project Coordinator,
AICRP on Sugarcane,
Indian Institute of Sugarcane Research,
LUCKNOW- 226 002, U.P.

Sir,

Sub:- KAU-SRS- Thiruvalla- AICRP ON Sugarcane – Annual report 2011-12-reg

I am forwarding herewith the Annual Report of the AICRP (S) (Crop Improvement, Crop Production and Plant Pathology) experiments conducted at this station for the year 2013 -14 for necessary action. The reports of Crop Improvement, Crop Production and Plant Pathology have been already sent to the respective PIs. This is for favour of your kind information.

Yours faithfully

Professor and Head

KERALA AGRICULTURAL UNIVERSITY



AICRP ON SUGARCANE

ANNUAL REPORT
2013-2014

Sugarcane Research Station, Kallumkal
Thiruvalla, Kerala-689102

Staff Position

Discipline	Post/ Designation	Number of sanctioned post	Name of the incumbent	Remarks
Plant Breeding	Associate Professor	1	Dr. Shajan, V.R.	
Plant Pathology	Assistant Professor	1	Dr. Sajeena	
Agronomy	Assistant Professor	1	Smt.Bindhu.J.S.	Up to 19-2- 2014
	Assistant Professor		Sri. Jayakumar, G	From 19-2- 2014
	1. Farm Officer. Gr.II	1	Sri.Georgy Joseph	From 27-11-2013
	2. Lab. Assistant	1	Vacant	Vacant
	3. Technical Officer Gr.II	1	Vacant	Vacant

Crop improvement

KERALA AGRICULTURAL UNIVERSITY
Sugarcane Research Station
All India Coordinated Research Project on Sugarcane

Annual Report 2013 - 2014

- 1. Title** : Initial Varietal Trial – Early
- 2. Principal Investigator** : Dr. Shajan, V.R., Associate Professor (Plant Breeding)
- 3. Associates** : Smt. Bindhu.J.S., Assistant Professor (Agronomy)
: Dr. Sajeena.A., Assistant Professor (Plant Pathology)
- 4. Technical Programme** :
- Early (12)** : Co 10004, Co 10005, Co 10006, Co 10024, Co 10026,
Co 10027, CoM 10081, CoM 10082, CoN 10071,
CoN 10072, CoT 10366 and CoT 10367
- Standards (3) : Co 85004, Co 94008 and CoC 671
- Design : Randomised Block Design
- Replications : Two
- Plot size : Gross: 6m x 6r x 1.2 m
Net : 5m x 4r x 1.2 m
- Seed rate : 12 buds per metre
- Planting date : 12/02/1013
- Crop duration : 10 months

5. Results:

CCS t/ha: Standard CoC 671 recorded highest CCS of 9.26 t/ha and significantly superior to all other entries and standards

Yield t/ha: Standard CoC 671 recorded highest yield of 71.67 t/ha followed by CoM 10082 (64.63 t/ha) and significantly superior to all other entries and standards

Brix % : Entry CoM 10081 recorded highest Brix of 22.3 % followed by Co 10004 (21.6 %), Co 10006 (21.4%), Co 10027 (21.0%), CoC 671(20.4%), CoT 10366 (19.7%) and CoT 10367 (19.3 %) and significantly superior to all other entries and other standards

Sucrose %: Entry CoM 10081 recorded highest sucrose of 20.18 followed by Co 10004 (19.65%), Co 10006 (19.43%) and Co 10027 (18.88%) and significantly superior to all other entries and other standards

CCS %: Entry CoM 10081 recorded highest CCS of 14.11% followed by Co 10004 (13.77%), Co 10006 (13.61%) and Co 10027 (13.18%), standard CoC 671(12.89%) and CoT 10366 (12.53%), and significantly superior to all other entries and other standards

Sd/-

Signature of the Principal Investigator

Sd/-

Signature of the head of station

1. Initial Varietal Trial (Early)

Sl. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Brix % (10 m)	Sucrose % (10m)	Purity % (10m)	CCS % (10m)	Pol % cane (10m)	Extraction % (10m)	Fibre % (10m)
1	Co 10004	5.91	42.97	21.60	19.65	90.2	13.77		64.65	
2	Co 10005	5.81	52.78	17.30	15.75	90.1	11.04		63.25	
3	Co 10006	6.78	49.82	21.40	19.43	90.0	13.61		62.46	
4	Co 10024	5.99	52.78	17.95	16.21	89.4	11.33		65.52	
5	Co 10026	6.37	58.34	17.35	15.63	89.1	10.91		68.56	
6	Co 10027	5.92	45.00	20.95	18.88	89.4	13.18		66.97	
7	CoM 10081	5.44	38.52	22.30	20.18	89.8	14.11		56.24	
8	CoM 10082	7.74	64.63	18.85	17.10	89.9	11.97		63.35	
9	CoN 10071	5.56	57.04	15.40	13.93	89.4	9.73		63.26	
10	CoN 10072	5.46	54.26	15.85	14.34	89.5	10.03		61.19	
11	CoT 10366	7.56	60.56	19.70	17.89	90.0	12.53		62.16	
12	CoT 10367	5.98	48.71	19.30	17.53	90.0	12.28		64.07	
Stds										
1	CoC 671	9.26	71.67	20.35	18.43	89.8	12.89		63.87	
2	Co 94008	6.25	54.08	18.35	16.55	89.3	11.55		56.93	
3	Co 85004	4.86	40.74	18.95	17.19	89.8	12.03		55.25	
	CD (0.05)	1.334	9.036	2.988	2.633	NS	1.823		6.290	
	CV	10.49	6.78	7.80	7.60	0.62	7.52		5.01	

Initial Varietal Trial (Early)..... (Cont.)

Sl. No.	Clone	NMC at 10m ('000/ha)	Stalk Length (m)	Stalk Diameter (cm)	Single cane weight (kg)	Brix % (8 m)	Sucrose % (8 m)	Purity % (8 m)	CCS % (8 m)	No. of shoots ('000/ha) 240 days	No. of tillers ('000/ha) 120 days	Germination % (30 days)
1	Co 10004	51.12	1.99	2.96	1.089	16.0	14.71	90.91	10.36	55.74	57.99	40.11
2	Co 10005	64.82	1.92	2.42	0.876	11.2	11.55	90.01	8.11	68.15	72.66	57.89
3	Co 10006	57.59	1.37	2.22	1.008	16.0	14.59	90.17	10.24	61.41	64.01	41.44
4	Co 10024	71.30	1.74	3.04	1.000	12.4	11.19	89.32	7.83	65.67	69.84	65.67
5	Co 10026	69.08	1.87	2.70	1.066	11.8	10.73	89.88	7.53	72.00	77.49	64.44
6	Co 10027	51.86	1.61	2.70	1.051	16.5	14.93	89.51	10.44	53.52	58.25	31.33
7	CoM 10081	48.15	1.71	2.11	0.681	17.0	15.39	89.58	10.76	50.32	54.98	72.56
8	CoM 10082	69.08	2.03	2.72	1.061	13.7	12.38	89.5	8.66	69.82	73.88	55.11
9	CoN 10071	61.11	2.11	2.73	1.224	10.6	9.65	89.86	6.78	67.89	74.12	32.44
10	CoN 10072	63.71	1.78	2.67	0.907	11.3	10.13	88.62	7.06	66.86	72.08	39.33
11	CoT 10366	65.19	1.7	2.91	1.018	13.5	12.26	89.65	8.59	67.08	73.2	27.33
12	CoT 10367	57.23	1.62	2.41	0.978	14.7	13.31	89.77	9.33	62.96	66.56	23.33
Stds												
1	CoC 671	84.08	1.94	2.82	1.115	16.8	15.28	89.99	10.71	90.19	92.98	70.89
2	Co 94008	68.15	1.87	2.56	0.851	13.4	12.14	89.39	8.49	69.45	76.17	53.22
3	Co 85004	54.08	1.76	2.37	0.884	16.0	14.47	89.43	10.12	62.78	70.22	76.89
	CD (0.05)	10.235	0.233	0.386	0.154	1.972	1.181	NS	0.826	9.686	9.332	8.189
	CV	8.16	6.44	7.33	7.77	6.99	4.58	0.69	4.57	7.35	6.61	8.13

KERALA AGRICULTURAL UNIVERSITY
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All India Coordinated Research Project on Sugarcane

Annual Report 2013 - 2014

- 1. Title** : Advanced Varietal Trial (Early) – II Plant
2. Principal Investigator : Dr. Shajan, V.R., Associate Professor (Plant Breeding)
3. Associates : Smt. Bindhu.J.S., Assistant Professor (Agronomy)
: Dr. Sajeena.A., Assistant Professor (Plant Pathology)
4. Technical Programme :
- Early (2) : Co 08001 and VSI 08121
Standards (3) : Co 85004, Co 94008 and CoC 671
Design : Randomised Block Design
Replications : Four
Plot size : Gross: 6m x 8r x 0.9 m
Net : 5m x 6r x 0.9 m
Seed rate : 12 buds per metre
Planting date : 12/02/2013
Crop duration : 10 months

5. Results:

CCS t/ha: Entry VSI 08121 recorded highest CCS of 10.11 t/ha and significantly superior to other entry and standards

Yield t/ha: Entry VSI 08121 recorded highest yield of 76.77 t/ha followed by standard Co 94008 (72.07 t/ha) and significantly superior to other entry and standards

Brix %: Standard CoC 671 recorded highest Brix of 22.48 % followed by Standard Co 85004 (21.90 %), entry Co 08001 (21.78%) and VSI 08121 (21.78%) and significantly superior to standard Co 94008

Sucrose %: Standard CoC 671 recorded highest sucrose of 19.33% followed by standard Co 85004 (18.80 %), entry Co 08001 (18.77%) and VSI 08121 (18.76%) and significantly superior to standard Co 94008

CCS %: Standard CoC 671 recorded highest CCS of 13.54 % followed by entry Co 08001 (13.18%), standard Co 85004 (13.17%) and VSI 08121 (13.16%) and significantly superior to standard Co 94008

Sd/-

Signature of the Principal Investigator

Sd/-

Signature of the head of station

2. Advanced Varietal Trial (Early II Plant)

Sl. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Brix % (10 m)	Sucrose % (10m)	Purity % (10m)	CCS % (10m)	Pol % cane (10m)	Extraction % (10m)	Fibre % (10m)	NMC at 10m ('000/ha)
1	Co 08001	7.34	55.75	21.78	18.77	90.44	13.18		64.54		68.68
2	VSI 08121	10.11	76.77	21.78	18.76	90.36	13.16		63.01		80.97
Stds											
1	CoC 671	7.64	56.40	22.48	19.33	90.1	13.54		65.51		75.56
2	Co 94008	8.21	72.07	19.00	16.25	90.39	11.41		59.98		75.00
3	Co 85004	7.75	59.01	21.90	18.80	90.06	13.17		56.64		72.99
	CD (0.05)	0.907	5.324	1.758	1.599	NS	1.122		NS		NS
	CV	7.77	5.85	5.78	6.12	0.37	6.12		7.45		8.12

Sl. No.	Clone	Stalk Length (m)	Stalk Diameter (cm)	Single cane weight (kg)	Brix % (8 m)	Sucrose % (8 m)	Purity % (8 m)	CCS % (8 m)	No. of shoots ('000/ha) 240 days	No. of tillers ('000/ha) 120 days	Germination % (30 days)
1	Co 08001	1.68	2.44	1.017	17.750	14.31	89.81	10.02	77.03	81.46	63.83
2	VSI 08121	1.80	2.66	1.118	17.950	14.47	89.65	10.13	85.89	87.16	63.79
Stds											
1	CoC 671	1.71	2.76	1.085	18.930	15.33	89.64	10.73	77.22	81.91	62.38
2	Co 94008	1.84	2.62	1.130	15.700	12.44	89.60	8.71	78.37	84.14	62.88
3	Co 85004	1.51	2.32	0.839	18.150	14.69	89.94	10.29	77.54	82.00	73.04
	CD (0.05)	0.151	NS	0.122	1.435	1.31	NS	0.927	NS	NS	NS
	CV	6.221	8.02	8.27	5.71	6.49	0.59	6.54	5.74	6.04	8.96

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All India Coordinated Research Project on Sugarcane

Annual Report 2013 - 2014

- 1. Title** : Advanced Varietal Trial – Early (Ratoon)
2. Principal Investigator : Dr. Shajan, V.R., Associate Professor (Plant Breeding)
3. Associates : Smt. Bindhu.J.S., Assistant Professor (Agronomy)
: Dr. Sajeena.A., Assistant Professor (Plant Pathology)
4. Technical Programme :
- Early (2) : Co 08001 and VSI 08121
Standards (3) : Co 85004, Co 94008 and CoC 671
Design : Randomised Block Design
Replications : Four
Plot size : Gross: 6m x 8r x 0.9 m
Net : 5m x 6r x 0.9 m
Ratooning date : After harvest of AVT Plant – I
Crop duration : 9 months

5. Results:

CCS t/ha: Entry VSI 08121 recorded highest CCS of 9.39 t/ha and significantly superior to other entry and standards
Yield t/ha: Entry VSI 08121 recorded highest yield of 66.67 t/ha significantly superior to other entry and standards
Brix % : Entry VSI 08121 recorded highest Brix of 22.2% followed by standard CoC 671 (21.6%) and significantly superior to other entry and standards
Sucrose %: Entry VSI 08121 recorded highest sucrose of 20.11% followed by standard CoC 671 (19.70%) and standard Co 85004 (19.21%) significantly superior to other entry and standard
CCS %: Entry VSI 08121 recorded highest CCS of 14.08% followed by standard CoC 671 (13.83%) and standard Co 85004 (13.50%) significantly superior to other entry and standard

Sd/-

Signature of the Principal Investigator

Sd/-

Signature of the head of station

3. Advanced Varietal Trial (Early ratoon)

Sl. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Brix % (9 m)	Sucrose % (9m)	Purity % (9m)	CCS % (9m)	Pol % cane (9m)	Extraction % (9m)	Fibre % (9m)	NMC at ('000/ha) (9m)
1	Co 08001	6.18	46.46	20.8	18.95	90.32	13.29		65.97		56.39
2	VSI 08121	9.39	66.67	22.2	20.11	90.06	14.08		59.03		72.71
Stds											
1	CoC 671	7.09	51.25	21.6	19.7	90.55	13.83		57.43		61.25
2	Co 94008	5.02	41.67	19.0	17.26	90.06	12.09		57.72		55.63
3	Co 85004	5.89	43.54	21.0	19.21	90.7	13.50		56.10		56.53
	CD (0.05)	0.675	4.192	1.118	1.018	NS	0.717		5.987		6.809
	CV	7.08	5.91	3.76	1.02	0.45	3.78		7.11		7.92

S. No.	Clone	Stalk Length (m)	Stalk Diameter (cm)	Single cane weight (kg)	No. of tillers ('000/ha) 120 days	No. of tillers ('000/ha) 90 days
1	Co 08001	1.71	2.76	0.983	62.50	65.11
2	VSI 08121	1.87	2.67	1.034	79.24	84.83
Stds						
1	CoC 671	2.01	2.95	1.255	65.70	69.72
2	Co 94008	2.05	2.54	1.126	67.57	75.07
3	Co 85004	1.85	2.42	0.907	66.74	71.39
	CD (0.05)	0.166	0.242	0.109	7.651	7.318
	CV	6.15	6.39	7.22	7.88	7.03

KERALA AGRICULTURAL UNIVERSITY
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All India Coordinated Research Project on Sugarcane

Annual Report 2013 - 2014

- 1. Title** : Initial Varietal Trial – Midlate
2. Principal Investigator : Dr. Shajan, V.R., Associate Professor (Plant Breeding)
3. Associates : Smt. Bindhu.J.S., Assistant Professor (Agronomy)
: Dr. Sajeena.A., Assistant Professor (Plant Pathology)
4. Technical Programme :
- Midlate (14) : Co 10015, Co 10017, Co 10031, Co 10033, CoM 10083,
CoM 10084, CoN 10073, CoT 10368, CoT 10369,
CoVC 10061, CoVSI 10121, CoVSI 10122, PI 10131 and
PI 10132
- Standards (2) : Co 86032 and Co 99004
- Design : Randomised Block Design
- Replications : Two
- Plot size : Gross: 6m x 6r x 1.2 m
Net : 5m x 4r x 1.2 m
- Seed rate : 12 buds per metre
- Planting date : 21/01/2013
- Crop duration : 12 months

5. Results:

CCS t/ha: Entry CoVC 10061 recorded highest CCS of 9.18 t/ha followed by CoM 10084 (9.11%), CoVSI 10121 (8.79%), Co 10033 (8.51%) and standard Co 99004 (8.16%) and significantly superior to other entries and other standard.

Yield t/ha: Standard Co 99004 recorded highest yield of 75.93 t/ha followed by entry CoVC 10061 (74.08 t/ha) and CoVSI 10121 (72.41%) and significantly superior to other entries and other standard.

Brix %: Entry PI 10132 recorded highest Brix of 22.1% followed by standard Co 86032 (21.6%), entry CoM 10084 (21.5%), Co 10015 (21.2%), CoT 10369 (21.1%) and Co 10031 (21.0%) and significantly superior to other entries and other standard.

Sucrose %: Entry PI 10132 recorded highest sucrose of 20.2% followed by standard Co 86032 (19.66%) and entry CoM 10084 (19.54%), Co 10015 (19.22%), CoT 10369 (19.22%) and Co 10031 (19.11%) and significantly superior to other entries and other standard.

CCS %: Entry PI 10132 recorded highest CCS of 14.19% followed by standard Co 86032(13.80%) and entry CoM 10084 (13.69%), CoT 10369 (13.50%), Co 10015 (13.47%), and Co 10031 (13.41%) and significantly superior to other entries and other standard.

Sd/-

Sd/-

Signature of the Principal Investigator

Signature of the head of station

4. Initial Varietal Trial (Midlate)

Sl. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Brix % (12 m)	Sucrose % (12 m)	Purity % (12 m)	CCS % (12 m)	Pol % cane (12m)	Extraction % (12 m)	Fibre % (12 m)	NMC at 12 m ('000/ha)
1	Co 10015	7.50	55.74	21.2	19.22	90.1	13.47		58.43		69.07
2	Co 10017	5.15	44.63	18.0	16.42	90.29	11.52		58.52		57.22
3	Co 10031	4.61	34.45	21.0	19.11	90.41	13.41		59.91		52.41
4	Co 10033	8.51	68.15	19.4	17.77	90.76	12.50		62.14		75.37
5	CoM 10083	5.03	50.37	15.7	14.24	89.65	9.96		64.09		53.7
6	CoM 10084	9.11	66.48	21.5	19.54	90.13	13.69		57.37		71.48
7	CoN 10073	3.04	28.15	16.9	15.39	90.08	10.79		57.58		41.11
8	CoT 10368	6.47	51.3	19.8	17.99	90.23	12.61		64.67		66.3
9	CoT 10369	6.84	50.56	21.1	19.22	90.53	13.50		65.59		59.81
10	CoVC 10061	9.18	74.08	19.3	17.65	90.61	12.40		65.67		86.67
11	CoVSI 10121	8.79	72.41	19.1	17.32	90.07	12.14		58.29		85.56
12	CoVSI 10122	4.38	42.6	15.9	14.59	90.73	10.27		60.93		51.85
13	PI 10131	5.91	46.48	19.9	18.1	90.35	12.70		66.03		52.96
14	PI 10132	7.52	52.97	22.1	20.2	90.67	14.19		57.39		64.81
15	Co 86032	6.93	50.19	21.6	19.66	90.47	13.80		61.45		63.89
16	Co 99004	8.16	75.93	16.8	15.28	90.24	10.73		64.60		84.63
	CD	1.181	6.218	1.835	1.687	0.520	1.190		5.115		6.960
	CV	8.78	5.73	4.73	4.77	0.29	4.79		4.15		9.07

Initial Varietal Trial (Midlate) (Cont.)

Sl. No.	Clone	Stalk Length (m)	Stalk Diameter (cm)	Single cane weight (kg)	Brix % (10 m)	Sucrose % (10 m)	Purity % (10 m)	CCS % (10 m)	No. of shoots ('000/ha) 240 days	No. of tillers ('000/ha) 120 days	Germination % (30 days)
1	Co 10015	1.84	2.60	0.907	17.55	15.72	88.66	10.94	75.51	81.21	68.78
2	Co 10017	2.05	3.10	1.168	16.20	14.46	88.25	10.04	63.78	72.31	43.56
3	Co 10031	1.67	3.30	1.257	16.80	15.16	89.28	10.59	59.95	65.29	46.23
4	Co 10033	2.00	2.92	1.114	15.00	13.60	89.59	9.52	81.85	83.81	47.67
5	CoM 10083	1.83	2.83	1.042	14.10	12.64	88.48	8.80	63.88	71.00	60.00
6	CoM 10084	1.74	2.67	0.959	17.90	16.19	89.55	11.32	78.84	80.26	37.34
7	CoN 10073	1.68	2.83	0.913	15.00	13.45	88.61	9.37	47.19	54.38	21.34
8	CoT 10368	1.90	2.58	0.863	17.25	15.48	88.78	10.78	72.22	77.32	51.78
9	CoT 10369	1.76	3.46	1.219	17.75	16.09	89.73	11.26	67.18	74.62	45.00
10	CoVC 10061	2.05	2.94	1.258	15.20	13.78	89.56	9.64	91.05	96.58	61.11
11	CoVSI 10121	1.79	2.67	0.995	15.70	14.24	89.68	9.97	92.30	97.73	37.89
12	CoVSI 10122	1.97	3.03	1.024	14.00	12.61	88.93	8.80	56.81	66.57	48.12
13	PI 10131	1.89	3.07	1.301	16.15	14.58	89.23	10.18	59.76	68.22	41.56
14	PI 10132	2.18	2.74	0.940	18.80	16.96	89.35	11.84	70.85	77.75	24.89
15	Co 86032	1.97	2.94	1.114	17.95	16.17	89.16	11.28	71.52	77.01	57.78
16	Co 99004	1.85	2.89	1.088	13.70	12.37	89.14	8.64	88.85	96.48	58.00
	CD	NS	NS	0.124	1.657	1.529	NS	1.082	9.40	9.472	7.188
	CV	7.21	7.73	5.75	5.09	5.21	0.50	5.28	6.55	6.08	7.62

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Annual Report 2013 - 2014

- 1. Title** : Advanced Varietal Trial (Midlate) – II Plant
2. Principal Investigator : Dr. Shajan, V.R., Associate Professor (Plant Breeding)
3. Associates : Smt. Bindhu.J.S., Assistant Professor (Agronomy)
: Dr. Sajeena.A., Assistant Professor (Plant Pathology)

4. Technical Programme :

- Midlate (5) : Co 08008, Co 08009, Co 08016, Co 08020 and CoSnk 08101
Standards (2) : Co 86032 and Co 99004
Design : Randomised Block Design
Replications : Three
Plot size : Gross: 6m x 8r x 0.9m
Net : 5m x 6r x 0.9m
Seed rate : 12 buds per metre
Planting date : 21/01/2013
Crop duration : 12 months

5. Results:

CCS t/ha: Standard Co 86032 recorded highest CCS of 10.69 t/ha followed standard Co 99004 (10.25%) and entry Co 08009 (9.84 t/ha) and significantly superior to other entries.

Yield t/ha: Standard Co 99004 recorded highest yield of 84.82 t/ha and significantly superior to other entry and all the entries.

Brix % : Entry Co 08009 recorded highest Brix of 22.7% followed by Co 08020 (22.1%) and standard Co 86032 (21.8%) and significantly superior to other entries and other standard.

Sucrose %: Entry Co 08009 recorded highest sucrose of 20.76 % followed by Co 08020 (20.10%) and standard Co 86032 (19.79%) and significantly superior to other entries and other standard.

CCS %: Entry Co 08009 recorded highest CCS of 14.59 % followed by Co 08020 (14.10%), standard Co 86032 (13.87%) and entry CoSnk 08101 (12.82%) and significantly superior to other entries and other standard

Sd/-
Signature of the Principal Investigator

Sd/-
Signature of the head of station

1. Advanced Varietal Trial (Midlate II pant)

Sl. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Brix % (12 m)	Sucrose % (12 m)	Purity % (12 m)	CCS % (12 m)	Pol % cane (12m)	Extraction % (12 m)	Fibre % (12 m)	NMC at 12 m ('000/ha)
1	Co 08008	6.22	49.31	19.7	17.95	90.31	12.60		60.77		56.57
2	Co 08009	9.84	67.39	22.7	20.76	90.75	14.59		60.63		75.09
3	Co 08016	6.87	54.76	19.6	17.88	90.37	12.55		62.78		62.13
4	Co 08020	7.83	55.55	22.1	20.10	90.34	14.10		62.22		63.89
5	CoSnk 08101	7.55	58.89	20.0	18.26	90.47	12.82		62.20		66.02
1	Co 86032	10.69	77.04	21.8	19.79	90.19	13.87		62.22		85.74
2	Co 99004	10.12	84.82	18.6	16.98	90.41	11.92		65.26		90.46
	CD	0.991	5.745	1.199	1.124	NS	0.8002		NS		6.0529
	CV	7.15	5.48	3.54	3.64	0.30	3.69		5.76		5.17

Sl. No.	Clone	Stalk Length (m)	Stalk Diameter (cm)	Single cane weight (kg)	Brix % (10 m)	Sucrose % (10 m)	Purity % (10 m)	CCS % (10 m)	No. of shoots ('000/ha) 240 days	No. of tillers ('000/ha) 120 days	Germination % (30 days)
1	Co 08008	1.77	2.44	1.041	16.33	14.78	89.48	10.33	62.31	70.6	81.33
2	Co 08009	1.89	2.20	1.029	17.63	15.91	89.30	11.11	82.41	88.12	51.33
3	Co 08016	1.49	2.29	0.894	15.53	14.08	89.61	9.85	69.91	77.08	61.55
4	Co 08020	1.75	2.70	1.136	18.27	16.51	89.5	11.54	72.59	79.74	60.55
5	CoSnk 08101	1.67	2.27	0.713	16.77	15.08	89.00	10.52	73.24	80.72	60.67
1	Co 86032	1.81	2.56	1.137	17.23	15.54	89.25	10.85	91.39	99.04	68.78
2	Co 99004	1.81	2.55	1.255	14.83	13.43	89.43	9.39	98.7	107.47	87.78
	CD	0.151	0.250	0.136	0.764	0.682	NS	0.48	8.100	8.918	5.150
	CV	5.28	6.15	8.07	2.80	2.76	0.53	2.78	6.28	6.31	4.65

KERALA AGRICULTURAL UNIVERSITY
Sugarcane Research Station
All India Coordinated Research Project on Sugarcane

Annual Report 2013 - 2014

- 1. Title** : Advanced Varietal Trial (Midlate - Ratoon)
2. Principal Investigator : Dr. Shajan, V.R., Associate Professor (Plant Breeding)
3. Associates : Smt. Bindhu.J.S., Assistant Professor (Agronomy)
: Dr. Sajeena.A., Assistant Professor (Plant Pathology)

4. Technical Programme

- Midlate (5) : Co 08008, Co 08009, Co 08016, Co 08020 and CoSnk 08101
Standards (2) : Co 86032 and Co 99004
Design : Randomised Block Design
Replications : Three
Plot size : Gross: 6m x 8r x 0.9m
Net : 5m x 6r x 0.9m
Ratooning date : After harvest of AVT Plant I
Crop duration : 11 months

5. Results:

CCS t/ha: Standard Co 99004 recorded highest CCS of 10.09 t/ha followed entry Co 08009 (9.06 t/ha) and significantly superior to other entries and other standard.

Yield t/ha: Standard Co 99004 recorded highest yield of 74.08 t/ha followed entry Co 08009 (67.04 t/ha) and significantly superior to other entries and and other standard.

Brix % : No significant difference was observed for the character.

Sucrose %: No significant difference was observed for the character.

CCS %: No significant difference was observed for the character.

Sd/-
Signature of the Principal Investigator

Sd/-
Signature of the head of station

2. Advanced Varietal Trial (Midlate - Ratoon)

Sl. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Brix % (11 m)	Sucrose % (11 m)	Purity % (11 m)	CCS % (11 m)	Pol % cane (11m)	Extraction % (11 m)	Fibre % (11 m)	NMC at ('000/ha) (11 m)
1	Co 08008	7.49	54.63	21.3	19.51	90.67	13.71		60.49		63.55
2	Co 08009	9.06	67.04	21.1	19.28	90.46	13.53		58.93		76.64
3	Co 08016	6.58	46.48	22.1	20.17	90.37	14.15		56.81		56.59
4	Co 08020	8.22	64.07	20.0	18.25	90.57	12.82		59.92		73.8
5	CoSnk 08101	7.40	53.15	21.3	19.74	91.97	13.95		59.72		62.82
6	Co 86032	8.67	62.59	21.7	19.73	90.31	13.84		60.70		70.99
7	Co 99004	10.09	74.08	21.3	19.44	90.38	13.64		62.42		82.78
	CD	1.287	8.178	NS	NS	NS	NS		NS		8.733
	CV	9.55	8.27	5.95	5.64	1.02	5.55		3.98		7.65

Sl. No.	Clone	Stalk Length (m)	Stalk Diameter (cm)	Single cane weight (kg)	No. of shoots ('000/ha) 180 days	No. of tillers ('000/ha) 90 days
1	Co 08008	1.98	2.52	0.90	67.02	70.61
2	Co 08009	2.29	2.63	1.19	79.33	83.69
3	Co 08016	1.71	2.50	0.76	62.02	65.23
4	Co 08020	2.10	2.69	1.06	76.64	79.36
5	CoSnk 08101	2.01	2.68	1.06	66.58	69.80
6	Co 86032	2.15	2.92	1.22	74.91	78.51
7	Co 99004	2.01	2.96	1.23	87.53	91.06
	CD	0.213	NS	0.140	8.653	8.608
	CV	6.37	6.92	8.06	7.18	6.82

Fluff 2013

Date of sowing: 10/04/2014

No. of Station Crosses: 12

No. of Zonal Crosses: 13

No. of PCs: 12

No. of GCs: 18

Sl. No.	Station crosses	Fluff wt	No .of seedling	No of seedling per gram
1	Co 8371 X Co 62198	9.5	32	3.4
2	ISH 100 X Co 94008	25.0	77	3.1
3	Co 98010 X ISH 69	18.5	63	3.4
4	Co 0233 X CoC 8001	18.0	259	14.4
5	Q 63 X CoT 8201	35.5	216	6.1
6	Co 88025 X Co 94008	21.0	38	1.8
7	Co 2000-10 X CoV 92102	93.0	150	1.6
8	Co 88025 X CoV 92102	26.0	19	0.7
9	Co 94007 X ISH2	33.0	17	0.5
10	Co 92007 X Co 0233	27.5	784	28.5
11	Co 06033 X Co 94008	16.0	471	29.4
12	Co 86032 X CoV 92102	50.0	102	2.0
	Zonal crosses			
1	Co 86002 X Co 1148	10.0	72	7.2
2	Co 85002 X Co 62174	21.5	107	5.0
3	Co 8213 X Co 86017	16.0	84	5.3
4	Co 8213 X Co 8201	17.0	83	4.9
5	CoV 94101 X Co 92015	8.0	18	2.3
6	Co 8371 X CoT 8201	11.0	85	7.7
7	CoC 671 X CoT 8201	17.5	603	34.5
8	CoC 671 X Co 94008	12.0	48	4.0
9	Co 740 X Co 775	7.5	153	20.4
10	CoM 0265 X Co 99006	9.5	22	2.3
11	Co 86032 X Co 86250	10.5	64	6.1
12	Co 8371 X Co 86011	11.5	72	6.3
13	CoM 0265 X Co 775	7.0	18	2.6
	Poly crosses			
1	CoM 0265	7.5	21	2.8
2	ISH 100	18.5	47	2.5
3	Co 94012	38.5	443	11.5
4	Co 85002	26.5	74	2.8
5	Co7602	8.5	24	2.8
6	86 V 46	8.0	26	3.3
7	CoC 671	10.0	71	7.1

8	CP 52-68	6.5	24	3.7
9	Co 2000-10	23.5	78	3.3
10	CoC 96003	4.0	0	0.0
11	Co 7201	11.5	61	5.3
12	Co 8371	4.0	0	0.0
	General collection			
1	CoH 119	71.0	143	2.0
2	Co 7224	43.0	78	1.8
3	Co 93020	52.5	102	1.9
4	Co 86002	29.0	876	30.2
5	Co 0233	7.5	62	8.3
6	CoTl 85118	4.0	0	0.0
7	Co 7219	55.5	148	2.7
8	Co740	34.0	215	6.3
9	CoV 94101	24.0	115	4.8
10	Co 98010	98.5	1008	10.2
11	Co 85246	45.5	274	6.0
12	CoV 92102	57.0	669	11.7
13	Co 8213	18.0	117	6.5
14	CoH 104	32.5	984	30.3
15	CoC 8001	88.5	783	8.8
16	Co 85002	32.0	211	6.6
17	CoH 1	51.0	253	5.0
18	Co 87267	12.0	726	60.5
	Total		11290	

Details of seedlings obtained from fluff exchange programe from 2009-2013							
Sl. No.	Year sown	Crosses	PC / GC	No. of seedlings obtained initially	Seedlings transplanted	C1	CII
1	2013	25	30	11290			
2	2012	32	31	6262	4832		
3	2011	32	34	12352	8545		
4	2010	29	26	6498	4253	110	
5	2009	26	43	6529	4328	60	10

