

TAMIL NADU AGRICULTURAL UNIVERSITY

From
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Professor and Head,
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Cuddalore – 607 001

To
The Project Coordinator
AICRP on Sugarcane
Indian Institute of Sugarcane Research (IISR)
Rae Bareli Road, Dilkusha, Post
Lucknow – 226 002.
Uttar Pradesh

No.P&H/SRS/CDL/AICRP (S)/ Annual Report for 2015-16 /2016 dt. 13.06.2016

Sir,

Sub : Sugarcane Research Station, Cuddalore – AICRP on Sugarcane- Annual Report for 2015-16 – Submitted – Regarding.

Ref : i. F. NO. 2-11/2016 - PCS. Dated. 10.05.2016 of the Project Coordinator, AICRP (S), IISR, Lucknow.

ii. D.O No; 1- 11/ 2016 - dated. 22.04.2016 from Principal Investigator, AICRP (S) – Crop Improvement, SBI, Coimbatore – 641 007.

As per the references cited above, I submit to enclose herewith the Annual Report of AICRP (s) pertaining to Crop Improvement under East Coast Zone of AICRP on Sugarcane of this centre for kind perusal.

**-Sd-
Professor and Head**

Copy submitted to the Principal Investigator (CI), AICRP (S), SBI, Coimbatore – 641 007.

Copy submitted to the Director of Research, TNAU, Coimbatore - 641 003.

Copy submitted to the Director, CPBG, TNAU, Coimbatore - 641 003.

Copy submitted to the Director, TRRI, Aduthurai-612 101

ALL INDIA CO-ORDINATED RESEARCH PROJECT (S)

EAST COAST ZONE

Annual Report - 2015-16

CROP IMPROVEMENT

**SUGARCANE RESEARCH STATION, CUDDALORE
TAMILNADU AGRICULTURAL UNIVERSITY
CUDDALORE - 607 001 (TN).**

AICRP (S) – EAST COAST ZONE
SUGARCANE RESEARCH STATION (TNAU)
CUDDALORE - 607 001 (TN)

CROP IMPROVEMENT

Four early trials (IVT, AVT -I, AVT - II, AVT Ratoon) and one mid-late trial (IVT) were conducted during 2015-16 as per the technical programme.

Trials Conducted during 2015-16

S. No.	Trial	Entries	Date of Planting
1.	IVT (Early)	8 + 3	09.02.2015
2.	AVT (E) – I Plant	5 + 3	09.02.2015
3.	AVT (E) – II Plant	4 + 3	12.02.2015
4.	AVT (Early) Ratoon	4 + 3	23.03.2015
5.	IVT (Mid-late)	8 + 3	13.02.2015

1. Initial Varietal Trial (Early) – Cuddalore Centre

Entries (8)	:	CoA 13321, CoA 13322, CoA 13323, CoA 13324, CoC 13336 CoC 13327, CoC 13328 and CoV 13356
Standards (3)	:	Co 6907, CoC 01061 and CoA 92081
Design	:	RBD
Replications	:	Three
Plot size	:	Gross: 6.0 m x 6 r x 0.9 m Net : 5.0 m x 4 r x 0.9 m
Seed rate	:	12 buds/m
Date of Planting	:	09.02.2015
Crop duration	:	10 months

1. Initial Varietal Trial (Early)

A total of eight clones and three standards were evaluated in RBD with three replications. The clone CoC 13337 recorded higher CCS yield (17.92 t/ha) followed by clone CoC 13336 (17.25 t/ha) and clone CoA 13322 (16.53 t/ha). The Cane yield was maximum in the clone CoC 13337 (139.81 t/ha) followed by the clone CoC 13336 (134.26 t/ha) and CoA 13322 (129.59 t/ha). The sucrose per cent was maximum in the clone CoC 13337 (17.61 %) followed by the clone CoC 13336 (17.57 %) and standard CoC 01 061 (17.52 %) (Table 1.1 to 1.20).

1. Initial Varietal Trial (Early) – ECZ – Cuddalore

S. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Sucrose (%) (10 m)	Brix (%) (10 m)	Purity (%) (10 m)	CCS (%) (10 m)	Pol.(%) cane (10 m)	Extraction (%) (10 m)	Fibre (%) (10 m)	NMC ('000/ha) (10 m)
1	CoA 13321	15.05	121.09	16.82	19.91	88.80	12.42	13.43	48.90	13.74	113.38
2	CoA 13322	16.53	129.59	17.42	20.37	89.40	12.76	13.56	49.28	13.63	113.80
3	CoA 13323	16.28	128.93	17.45	20.43	89.54	12.62	13.54	49.21	13.64	115.47
4	CoA 13324	16.24	127.48	17.49	20.55	89.82	12.74	13.64	49.72	13.43	121.32
5	CoC 13336	17.25	134.26	17.57	20.82	89.81	12.85	13.85	50.67	13.42	106.93
6	CoC 13337	17.92	139.81	17.61	20.62	89.97	12.82	13.95	50.71	13.38	118.94
7	CoC 13338	14.11	112.79	17.40	20.43	88.33	12.50	13.32	49.88	13.48	98.52
8	CoV 13356	15.75	126.86	17.13	20.28	89.61	12.43	13.50	50.41	13.49	112.68
Standard											
1.	Co 6907	13.09	105.41	16.92	19.64	88.03	12.42	13.26	49.11	13.06	93.88
2.	CoC 01061	14.50	113.93	17.52	20.51	89.30	12.73	13.82	50.10	13.35	113.65
3.	CoA 92081	14.81	117.50	17.31	20.24	89.17	12.61	13.41	50.18	13.04	97.62
	CD (0.05%)	1.36	10.57	0.40	0.33	0.85	0.20	0.36	0.82	0.29	13.09
	CV (%)	5.14	5.03	1.36	0.95	0.56	0.92	1.54	0.97	1.26	7.00

S. No.	Clone	Stalk length (cm)	Stalk Diameter (cm)	Single Cane Wt. (kg)	Brix (%) (8 m)	Sucrose (%) (8 m)	Purity (%) (8 m)	CCS (%) (8 m)	No. of shoots ('000/ha)	No. of tillers ('000/ha)	Germination (%)
1	CoA 13321	265.33	2.64	1.13	18.66	15.05	84.85	10.45	126.65	130.39	51.76
2	CoA 13322	272.67	2.74	1.27	19.11	15.58	85.35	10.77	133.31	138.33	58.45
3	CoA 13323	274.61	2.72	1.22	19.36	15.47	84.87	10.64	131.78	136.20	48.37
4	CoA 13324	274.33	2.76	1.17	19.47	15.61	85.53	10.70	131.05	136.41	43.70
5	CoC 13336	277.11	2.95	1.31	19.60	15.67	85.65	10.75	129.55	134.29	51.33
6	CoC 13337	278.33	3.04	1.35	19.73	15.66	85.75	10.80	135.49	141.01	55.77
7	CoC 13338	260.45	2.50	1.13	19.38	15.30	85.00	10.51	113.67	118.09	44.23
8	CoV 13356	255.62	2.55	1.26	19.40	15.20	84.75	10.44	130.46	136.24	44.82
Standard											
1	Co 6907	253.33	2.25	1.15	18.78	14.95	84.62	10.40	111.27	116.73	53.43
2	CoC 01061	272.33	2.43	1.03	19.51	15.61	84.80	10.72	132.91	136.72	62.29
3	CoA 92081	251.83	2.58	1.22	19.27	15.27	84.31	10.53	114.13	118.49	50.99
	CD (0.05%)	14.41	0.20	0.14	0.35	0.41	0.84	0.25	13.95	14.10	7.59
	CV (%)	3.17	4.34	6.86	1.07	1.55	0.58	1.36	6.48	6.31	8.69

1. IVT (Early) – (Centre – Cuddalore)

Table 1. 1. CCS Yield (t/ha) at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	15.96	14.33	14.85	15.05
CoA 13 322	16.49	15.85	17.26	16.53
CoA 13 323	15.74	17.07	16.02	16.28
CoA 13 324	16.62	15.35	16.75	16.24
CoC 13 336	17.55	17.27	16.94	17.25
CoC 13 337	18.05	18.32	17.40	17.92
CoC 13 338	12.91	13.74	15.67	14.11
CoV 13 356	15.61	16.30	15.34	15.75
Standard				
Co 6907	13.02	13.99	12.25	13.09
CoC 01061	14.35	15.04	14.10	14.50
CoA 92081	14.20	14.52	15.70	14.81
CD (0.05%)				1.36
CV (%)				5.14

Table 1. 2. Cane yield (t/ha) at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	127.15	115.46	120.65	121.09
CoA 13 322	129.72	124.42	134.62	129.59
CoA 13 323	124.81	134.22	127.76	128.93
CoA 13 324	129.37	120.45	132.61	127.48
CoC 13 336	137.53	134.41	130.84	134.26
CoC 13 337	139.84	143.13	136.47	139.81
CoC 13 338	104.35	109.75	124.28	112.79
CoV 13 356	123.68	131.24	125.65	126.86
Standard				
Co 6907	105.65	112.77	97.81	105.41
CoC 01061	113.45	118.18	110.15	113.93
CoA 92081	111.72	114.95	125.84	117.50
CD (0.05%)				10.57
CV (%)				5.03

Table 1. 3. Sucrose per cent at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	17.24	16.81	16.42	16.82
CoA 13 322	17.40	17.22	17.65	17.42
CoA 13 323	17.67	17.25	17.42	17.45
CoA 13 324	17.75	17.45	17.26	17.49
CoC 13 336	17.35	17.54	17.83	17.57
CoC 13 337	17.85	17.52	17.47	17.61
CoC 13 338	17.42	17.15	17.63	17.40
CoV 13 356	17.33	17.21	16.85	17.13
Standard				
Co 6907	16.78	16.93	17.05	16.92
CoC 01061	17.73	17.52	17.31	17.52
CoA 92081	17.15	17.34	17.43	17.31
CD (0.05%)				0.40
CV (%)				1.36

Table 1. 4. CCS per cent at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	12.55	12.41	12.31	12.42
CoA 13 322	12.71	12.74	12.82	12.76
CoA 13 323	12.61	12.72	12.54	12.62
CoA 13 324	12.85	12.74	12.63	12.74
CoC 13 336	12.76	12.85	12.95	12.85
CoC 13 337	12.91	12.80	12.75	12.82
CoC 13 338	12.37	12.52	12.61	12.50
CoV 13 356	12.62	12.45	12.21	12.43
Standard				
Co 6907	12.32	12.41	12.52	12.42
CoC 01061	12.65	12.73	12.80	12.73
CoA 92081	12.71	12.63	12.48	12.61
CD (0.05%)				0.20
CV (%)				0.92

Table 1. 5. Brix % at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	20.25	19.82	19.65	19.91
CoA 13 322	20.52	20.34	20.25	20.37
CoA 13 323	20.32	20.55	20.41	20.43
CoA 13 324	20.65	20.45	20.55	20.55
CoC 13 336	20.72	20.85	20.9	20.82
CoC 13 337	20.52	20.70	20.65	20.62
CoC 13 338	20.32	20.51	20.45	20.43
CoV 13 356	20.45	20.25	20.15	20.28
Standard				
Co 6907	19.35	19.47	20.10	19.64
CoC 01061	20.65	20.45	20.42	20.51
CoA 92081	20.15	20.35	20.22	20.24
CD (0.05%)				0.33
CV (%)				0.95

Table 1. 6. Purity % at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	88.50	89.15	88.74	88.80
CoA 13 322	88.95	89.50	89.75	89.40
CoA 13 323	89.35	90.52	88.75	89.54
CoA 13 324	90.15	89.65	89.67	89.82
CoC 13 336	89.85	89.42	90.15	89.81
CoC 13 337	90.52	89.71	89.67	89.97
CoC 13 338	88.21	87.95	88.84	88.33
CoV 13 356	89.62	89.45	89.75	89.61
Standard				
Co 6907	87.85	88.32	87.92	88.03
CoC 01061	89.52	88.75	89.64	89.30
CoA 92081	89.35	89.75	88.42	89.17
CD (0.05%)				0.85
CV (%)				0.56

Table 1. 7. Pol. % at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	13.15	13.46	13.67	13.43
CoA 13 322	13.72	13.61	13.35	13.56
CoA 13 323	13.77	13.34	13.51	13.54
CoA 13 324	13.84	13.45	13.63	13.64
CoC 13 336	13.75	14.15	13.64	13.85
CoC 13 337	13.81	13.93	14.12	13.95
CoC 13 338	13.35	13.16	13.44	13.32
CoV 13 356	13.25	13.41	13.85	13.50
Standard				
Co 6907	13.42	13.25	13.12	13.26
CoC 01061	13.85	13.67	13.94	13.82
CoA 92081	13.42	13.26	13.55	13.41
CD (0.05%)				0.36
CV (%)				1.54

Table 1. 8. Extraction % at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	48.52	49.84	48.35	48.90
CoA 13 322	48.85	49.71	49.28	49.28
CoA 13 323	49.15	48.65	49.83	49.21
CoA 13 324	49.76	49.47	49.92	49.72
CoC 13 336	50.42	50.33	51.25	50.67
CoC 13 337	51.26	50.15	50.72	50.71
CoC 13 338	50.12	49.72	49.81	49.88
CoV 13 356	50.26	50.61	50.35	50.41
Standard				
Co 6907	49.35	49.47	48.51	49.11
CoC 01061	50.17	49.76	50.36	50.10
CoA 92081	50.24	49.85	50.45	50.18
CD (0.05%)				0.82
CV (%)				0.97

Table 1. 9. Fibre % at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	13.85	13.72	13.65	13.74
CoA 13 322	13.67	13.51	13.71	13.63
CoA 13 323	13.54	13.65	13.72	13.64
CoA 13 324	13.52	13.41	13.37	13.43
CoC 13 336	13.45	13.53	13.29	13.42
CoC 13 337	13.54	13.24	13.35	13.38
CoC 13 338	13.62	13.55	13.26	13.48
CoV 13 356	13.31	13.45	13.72	13.49
Standard				
Co 6907	13.12	13.27	12.78	13.06
CoC 01061	13.26	13.45	13.34	13.35
CoA 92081	13.24	13.21	12.67	13.04
CD (0.05%)				0.29
CV (%)				1.26

Table 1. 10. NMC ('000/ha) at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	123.14	103.24	113.75	113.38
CoA 13 322	115.25	105.34	120.80	113.80
CoA 13 323	107.64	118.61	120.15	115.47
CoA 13 324	112.36	122.85	128.74	121.32
CoC 13 336	108.38	110.47	101.95	106.93
CoC 13 337	118.65	122.95	115.22	118.94
CoC 13 338	92.77	97.64	105.15	98.52
CoV 13 356	105.95	116.28	115.81	112.68
Standard				
Co 6907	92.51	101.45	87.68	93.88
CoC 01061	103.12	125.29	112.54	113.65
CoA 92081	90.52	94.73	107.61	97.62
CD (0.05%)				13.09
CV (%)				7.00

Table 1. 11. Stalk length (cm) at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	275.00	264.00	257.00	265.33
CoA 13 322	262.00	275.00	281.00	272.67
CoA 13 323	269.50	274.33	280.00	274.61
CoA 13 324	267.00	275.00	281.00	274.33
CoC 13 336	285.33	276.00	270.00	277.11
CoC 13 337	277.00	285.00	273.00	278.33
CoC 13 338	254.35	262.00	265.00	260.45
CoV 13 356	266.00	254.00	246.85	255.62
Standard				
Co 6907	245.00	252.00	263.00	253.33
CoC 01061	271.00	265.00	281.00	272.33
CoA 92081	242.50	256.00	257.00	251.83
CD (0.05%)				14.41
CV (%)				3.17

Table 1. 12. Stalk diameter (cm) at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	2.55	2.65	2.72	2.64
CoA 13 322	2.63	2.85	2.74	2.74
CoA 13 323	2.72	2.81	2.64	2.72
CoA 13 324	2.85	2.77	2.65	2.76
CoC 13 336	3.05	2.94	2.85	2.95
CoC 13 337	2.95	3.02	3.15	3.04
CoC 13 338	2.65	2.54	2.31	2.50
CoV 13 356	2.45	2.54	2.66	2.55
Standard				
Co 6907	2.35	2.22	2.18	2.25
CoC 01061	2.35	2.41	2.52	2.43
CoA 92081	2.57	2.75	2.41	2.58
CD (0.05%)				0.20
CV (%)				4.34

Table 1. 13. Single cane weight (kg) at harvest

Clone	R I	R II	R III	Mean
CoA 13 321	1.22	1.12	1.05	1.13
CoA 13 322	1.26	1.33	1.22	1.27
CoA 13 323	1.21	1.32	1.12	1.22
CoA 13 324	1.24	1.15	1.12	1.17
CoC 13 336	1.32	1.35	1.26	1.31
CoC 13 337	1.41	1.30	1.35	1.35
CoC 13 338	1.24	1.04	1.12	1.13
CoV 13 356	1.32	1.24	1.21	1.26
Standard				
Co 6907	1.17	1.04	1.23	1.15
CoC 01061	0.95	1.04	1.10	1.03
CoA 92081	1.25	1.35	1.05	1.22
CD (0.05%)				0.14
CV (%)				6.86

Table 1. 14. Brix % at 8th month

Clone	R I	R II	R III	Mean
CoA 13 321	18.5	18.85	18.64	18.66
CoA 13 322	19.42	19.15	18.75	19.11
CoA 13 323	19.45	19.36	19.27	19.36
CoA 13 324	19.65	19.33	19.42	19.47
CoC 13 336	19.34	19.69	19.76	19.60
CoC 13 337	19.65	19.82	19.72	19.73
CoC 13 338	19.18	19.51	19.45	19.38
CoV 13 356	19.42	19.63	19.14	19.40
Standard				
Co 6907	19.14	18.52	18.67	18.78
CoC 01061	19.65	19.52	19.37	19.51
CoA 92081	19.15	19.42	19.25	19.27
CD (0.05%)				0.35
CV (%)				1.07

Table 1. 15. Sucrose % at 8th month

Clone	R I	R II	R III	Mean
CoA 13 321	15.35	14.86	14.94	15.05
CoA 13 322	15.62	15.75	15.37	15.58
CoA 13 323	15.35	15.45	15.61	15.47
CoA 13 324	15.85	15.35	15.64	15.61
CoC 13 336	15.48	15.72	15.81	15.67
CoC 13 337	15.81	15.54	15.63	15.66
CoC 13 338	15.42	15.15	15.32	15.30
CoV 13 356	15.46	15.21	14.92	15.20
Standard				
Co 6907	14.76	14.65	15.45	14.95
CoC 01061	15.65	15.73	15.46	15.61
CoA 92081	15.67	14.96	15.17	15.27
CD (0.05%)				0.41
CV (%)				1.55

Table 1. 16. Purity % 8th month

Clone	R I	R II	R III	Mean
CoA 13321	84.55	85.25	84.75	84.85
CoA 13 322	85.85	84.95	85.26	85.35
CoA 13 323	84.35	85.52	84.75	84.87
CoA 13 324	85.15	85.65	85.78	85.53
CoC 13 336	85.87	85.42	85.67	85.65
CoC 13 337	85.65	85.75	85.85	85.75
CoC 13 338	84.35	85.92	84.72	85.00
CoV 13 356	84.65	85.45	84.15	84.75
Standard				
Co 6907	84.72	84.34	84.81	84.62
CoC 01061	84.94	85.71	83.75	84.80
CoA 92081	84.25	84.75	83.92	84.31
CD (0.05%)				0.84
CV (%)				0.58

Table 1. 17. CCS % 8th month

Clone	R I	R II	R III	Mean
CoA 13 321	10.43	10.67	10.26	10.45
CoA 13 322	10.72	10.67	10.93	10.77
CoA 13 323	10.61	10.75	10.57	10.64
CoA 13 324	10.85	10.68	10.56	10.70
CoC 13 336	10.75	10.56	10.94	10.75
CoC 13 337	10.85	10.75	10.81	10.80
CoC 13 338	10.37	10.52	10.65	10.51
CoV 13 356	10.65	10.42	10.25	10.44
Standard				
Co 6907	10.41	10.48	10.32	10.40
CoC 01061	10.62	10.73	10.81	10.72
CoA 92081	10.6	10.54	10.45	10.53
CD (0.05%)				0.25
CV (%)				1.36

Table 1. 18. Number of shoots ('000/ha) – 180 days

Clone	R I	R II	R III	Mean
CoA 13 321	134.16	113.52	132.27	126.65
CoA 13 322	132.65	125.42	141.85	133.31
CoA 13 323	126.93	138.14	130.28	131.78
CoA 13 324	131.52	123.82	137.81	131.05
CoC 13 336	128.34	139.45	120.85	129.55
CoC 13 337	130.81	140.18	135.47	135.49
CoC 13 338	105.87	110.86	124.28	113.67
CoV 13 356	124.34	135.28	131.77	130.46
Standard				
Co 6907	107.65	120.74	105.43	111.27
CoC 01061	122.94	144.38	131.41	132.91
CoA 92081	106.62	111.95	123.83	114.13
CD (0.05%)				13.95
CV (%)				6.48

Table 1. 19. Number of tillers ('000/ha) - 120 days

Clone	R I	R II	R III	Mean
CoA 13 321	135.75	118.45	136.97	130.39
CoA 13 322	137.41	130.92	146.65	138.33
CoA 13 323	130.61	143.18	134.81	136.20
CoA 13 324	136.85	128.67	143.72	136.41
CoC 13 336	135.64	144.81	122.41	134.29
CoC 13 337	136.36	145.55	141.13	141.01
CoC 13 338	110.25	114.37	129.64	118.09
CoV 13 356	130.62	141.35	136.75	136.24
Standard				
Co 6907	113.64	126.81	109.75	116.73
CoC 01061	128.15	145.85	136.17	136.72
CoA 92081	111.27	116.48	127.72	118.49
CD (0.05%)				14.10
CV (%)				6.31

Table 1. 20. Germination per cent – 30 days

Clone	R I	R II	R III	Mean
CoA 13 321	52.34	47.49	55.46	51.76
CoA 13 322	56.15	57.91	61.28	58.45
CoA 13 323	46.15	51.34	47.61	48.37
CoA 13 324	47.36	38.47	45.28	43.70
CoC 13 336	47.55	54.78	51.66	51.33
CoC 13 337	53.85	57.91	55.55	55.77
CoC 13 338	49.15	39.46	44.07	44.23
CoV 13 356	45.37	38.62	50.46	44.82
Standard				
Co 6907	46.37	50.46	63.47	53.43
CoC 01061	57.4	67.59	61.87	62.29
CoA 92081	47.83	51.85	53.29	50.99
CD (0.05%)				7.59
CV (%)				8.69

2. Advanced Varietal Trial (Early) - I Plant

Entries (5)	:	CoA 12321, CoA 12322, CoA 12323, CoOr 12346 and CoV 12356
Standards (3)	:	Co 6907, CoC 01061 and CoA 92081
Design	:	RBD
Replications	:	Three
Plot size	:	Gross: 6.0 m x 6 r x 0.90 m Net : 5.0 m x 4 r x 0.9 0m
Seed rate	:	12 buds /m
Date of Planting	:	09.02.2015
Crop duration	:	10 months

2. Advanced Varietal Trial (Early):

A total of five clones and three standards were evaluated in RBD with three replications. The clone CoA 12322 recorded the higher cane yield (126.70 t/ha) followed by CoA 12321 (123.23 t/ha) and CoA12323 (122.13 t/ha). The CCS yield was maximum in the clone CoA 12322 (15.92 t/ha) followed by the clone CoOr 12 346 (15.54 t/ha) and CoA 12323 (15.46 t/ha). The sucrose per cent was maximum in CoOr 12 346 (17.87 %) followed by the standard CoC 01061 (17.74 %) and CoA 12 223 (17.66 %). (Table 2.1 to 2.20).

2. Advanced Varietal Trial (Early) – I Plant - (Centre – Cuddalore)

S. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Sucrose (%) (10 m)	Brix (%) (10 m)	CCS (%) (10 m)	Purity (%) (10 m)	Pol. (%) cane (10 m)	Extraction (%) (10 m)	Fibre (%) (10 m)	NMC ('000/ha) (10 m)
1	CoA 12321	15.45	123.23	17.26	20.72	12.53	88.31	12.97	49.08	13.16	104.95
2	CoA 12322	15.92	126.70	17.33	20.43	12.56	89.20	12.91	48.90	13.22	98.36
3	CoA 12323	15.46	122.13	17.66	20.75	12.65	89.55	13.55	49.11	13.21	98.45
4	CoOr 12346	15.54	121.88	17.87	20.40	12.75	88.96	13.21	49.19	13.30	113.48
5	Co V 12356	15.06	119.38	17.39	20.82	12.62	90.06	13.60	49.61	13.24	95.88
Standard											
1	Co 6907	11.66	98.12	16.77	19.82	11.87	88.32	12.77	48.67	13.08	106.82
2	CoC 01061	13.73	108.30	17.74	20.85	12.68	90.04	13.32	49.56	13.36	116.52
3	CoA 92081	14.32	114.82	17.16	20.62	12.47	89.10	12.85	48.84	12.82	92.51
	CD (0.05%)	1.31	9.84	0.51	0.37	0.24	1.61	0.63	0.54	0.48	11.06
	CV (%)	5.18	4.87	1.69	1.04	1.09	1.05	2.75	0.63	2.11	6.14

S. No.	Clone	Stalk length (cm)	Stalk Diameter (cm)	Single Cane Wt. (kg)	Brix (%) (8 m)	Sucrose (%) (8 m)	Purity (%) (8 m)	CCS (%) (8 m)	No. of shoots ('000/ha)	No. of tillers ('000/ha)	Germination (%)
1	CoA 12321	284.33	2.77	1.17	18.93	15.36	84.97	10.33	116.48	132.40	52.72
2	CoA 12322	293.33	2.92	1.27	18.80	15.32	85.07	10.57	109.81	129.10	53.58
3	CoA 12323	283.67	2.79	1.44	19.20	15.45	85.21	10.62	111.72	125.57	46.72
4	CoOr 12346	281.00	2.48	1.37	18.98	15.25	85.10	10.46	123.98	136.09	67.82
5	Co V 12356	270.67	2.76	1.32	19.48	15.54	86.16	10.77	110.85	127.05	53.89
Standard											
1	Co 6907	263.67	2.58	0.97	18.58	15.04	84.09	10.47	114.11	125.28	67.37
2	CoC 01061	275.67	2.35	1.04	19.41	15.37	85.48	10.64	125.94	143.89	72.46
3	CoA 92081	261.67	2.73	1.26	19.13	14.79	84.42	10.54	101.89	115.79	52.12
	CD (0.05%)	16.98	0.18	0.20	0.48	0.42	1.06	0.38	13.53	14.49	12.01
	CV (%)	3.55	3.96	9.82	1.47	1.60	0.72	2.07	6.84	6.47	11.90

2. AVT (Early) - (Centre – Cuddalore)

Table 2. 1. CCS Yield (t/ha) at harvest (10th Month)

Clone	R I	R II	R III	Mean
CoA 12 321	15.38	15.04	15.92	15.45
CoA 12 322	16.20	16.41	15.14	15.92
CoA 12 323	15.28	16.29	14.80	15.46
CoOr 12 346	15.39	15.76	15.46	15.54
CoV 12 356	15.24	14.41	15.54	15.06
Standard				
Co 6907	12.63	10.37	11.99	11.66
CoC 01061	12.96	14.59	13.64	13.73
CoA 92081	15.02	14.33	13.60	14.32
CD (0.05%)				1.31
CV (%)				5.18

Table 2. 2. Cane yield (t/ha) at harvest (10 m)

Clone	R I	R II	R III	Mean
CoA 12 321	122.64	121.36	125.69	123.23
CoA 12 322	128.15	131.50	120.45	126.70
CoA 12 323	121.16	127.64	117.59	122.13
CoOr 12 346	121.68	122.62	121.34	121.88
CoV 12 356	121.64	114.69	121.82	119.38
Standard				
Co 6907	104.36	88.77	101.24	98.12
CoC 01061	101.65	115.62	107.64	108.30
CoA 92081	121.64	113.64	109.18	114.82
CD (0.05%)				9.85
CV (%)				4.87

Table 2. 3. Sucrose % at harvest (10 m)

Clone	R I	R II	R III	Mean
CoA 12 321	17.25	16.86	17.68	17.26
CoA 12 322	17.69	17.34	16.95	17.33
CoA 12 323	17.64	17.38	17.95	17.66
CoOr 12 346	17.85	17.92	17.83	17.87
CoV 12 356	17.36	17.65	17.15	17.39
Standard				
Co 6907	16.35	16.85	17.10	16.77
CoC 01061	17.72	17.64	17.86	17.74
CoA 92081	16.95	17.15	17.38	17.16
CD (0.05%)				0.51
CV (%)				1.69

Table 2. 4. CCS % at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	12.54	12.39	12.67	12.53
CoA 12 322	12.64	12.48	12.57	12.56
CoA 12 323	12.61	12.76	12.59	12.65
CoOr 12 346	12.65	12.85	12.74	12.75
CoV 12 356	12.53	12.56	12.76	12.62
Standard				
Co 6907	12.1	11.68	11.84	11.87
CoC 01061	12.75	12.62	12.67	12.68
CoA 92081	12.35	12.61	12.46	12.47
CD (0.05%)				0.24
CV (%)				1.09

Table 2. 5. Brix % at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	20.50	20.75	20.90	20.72
CoA 12 322	20.35	20.55	20.40	20.43
CoA 12 323	20.50	20.90	20.85	20.75
CoOr 12 346	20.70	20.30	20.20	20.40
CoV 12 356	20.50	20.80	21.15	20.82
Standard				
Co 6907	19.70	19.75	20.00	19.82
CoC 01061	20.80	21.00	20.75	20.85
CoA 92081	20.65	20.35	20.85	20.62
CD (0.05%)				0.37
CV (%)				1.04

Table 2. 6. Purity % at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	87.55	89.24	88.15	88.31
CoA 12 322	89.75	88.39	89.45	89.20
CoA 12 323	87.65	90.17	90.82	89.55
CoOr 12 346	89.34	88.38	89.16	88.96
CoV 12 356	90.32	90.25	89.62	90.06
Standard				
Co 6907	89.26	87.95	87.76	88.32
CoC 01061	90.13	90.57	89.42	90.04
CoA 92081	89.52	88.16	89.62	89.10
CD (0.05%)				1.61
CV (%)				1.05

Table 2. 7. Pol. % (cane) at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	12.75	13.05	13.12	12.97
CoA 12 322	12.32	13.24	13.17	12.91
CoA 12 323	13.55	13.35	13.76	13.55
CoOr 12 346	12.76	13.76	13.12	13.21
CoV 12 356	13.55	13.76	13.48	13.60
Standard				
Co 6907	12.86	12.53	12.92	12.77
CoC 01061	13.74	13.47	12.76	13.32
CoA 92081	12.82	12.61	13.12	12.85
CD (0.05%)				0.63
CV (%)				2.75

Table 2. 8. Extraction % at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	48.65	49.15	49.23	49.08
CoA 12 322	48.35	49.25	49.10	48.90
CoA 12 323	48.42	49.35	49.55	49.11
CoOr 12 346	48.76	49.65	49.15	49.19
CoV 12 356	49.55	49.76	49.51	49.61
Standard				
Co 6907	48.76	48.43	48.82	48.67
CoC 01061	49.63	49.35	49.71	49.56
CoA 92081	48.77	48.61	49.15	48.84
CD (0.05%)				0.54
CV (%)				0.63

Table 2. 9. Fibre % at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	13.32	13.25	12.91	13.16
CoA 12 322	13.08	13.32	13.25	13.22
CoA 12 323	13.34	13.07	13.22	13.21
CoOr 12 346	13.12	13.45	13.32	13.30
CoV 12 356	12.92	13.15	13.64	13.24
Standard				
Co 6907	13.61	12.78	12.85	13.08
CoC 01061	13.21	13.55	13.32	13.36
CoA 92081	12.72	13.12	12.63	12.82
CD (0.05%)				0.48
CV (%)				2.11

Table 2. 10. NMC ('000/ha) at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	91.35	108.254	115.241	104.95
CoA 12 322	104.722	92.676	97.677	98.36
CoA 12 323	96.388	95.625	103.345	98.45
CoOr 12 346	116.481	102.341	121.615	113.48
CoV 12 356	99.424	92.621	95.591	95.88
Standard				
Co 6907	99.305	115.624	105.527	106.82
CoC 01061	115.952	127.45	106.156	116.52
CoA 92081	97.64	92.45	87.451	92.51
CD (0.05%)				11.06
CV (%)				6.14

Table 2. 11. Stalk length (cm) at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	285	276	292	284.33
CoA 12 322	283	302	295	293.33
CoA 12 323	287	292	272	283.67
CoOr 12 346	293	276	274	281.00
CoV 12 356	275	261	276	270.67
Standard				
Co 6907	255	265	271	263.67
CoC 01061	275	287	265	275.67
CoA 92081	270	261	254	261.67
CD (0.05%)				16.98
CV (%)				3.55

Table 2. 12. Stalk diameter (cm) at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	2.62	2.92	2.76	2.77
CoA 12 322	2.92	2.86	2.97	2.92
CoA 12 323	2.81	2.64	2.92	2.79
CoOr 12 346	2.42	2.35	2.67	2.48
CoV 12 356	2.65	2.81	2.82	2.76
Standard				
Co 6907	2.42	2.66	2.65	2.58
CoC 01061	2.35	2.41	2.28	2.35
CoA 92081	2.65	2.73	2.82	2.73
CD (0.05%)				0.18
CV (%)				3.96

Table 2. 13. Single cane weight (kg) at harvest

Clone	R I	R II	R III	Mean
CoA 12 321	1.07	1.15	1.28	1.17
CoA 12 322	1.15	1.42	1.24	1.27
CoA 12 323	1.42	1.53	1.38	1.44
CoOr 12 346	1.35	1.52	1.23	1.37
CoV 12 356	1.28	1.41	1.27	1.32
Standard				
Co 6907	0.98	0.92	1.02	0.97
CoC 01061	1.24	0.91	0.97	1.04
CoA 92081	1.27	1.16	1.34	1.26
CD (0.05%)				0.20
CV (%)				9.82

Table 2. 14. Brix % at 8th month

Clone	R I	R II	R III	Mean
CoA 12 321	19.2	19	18.6	18.93
CoA 12 322	18.75	19.15	18.5	18.80
CoA 12 323	19.14	18.95	19.52	19.20
CoOr 12 346	19.25	18.6	19.1	18.98
CoV 12 356	19.25	19.5	19.7	19.48
Standard				
Co 6907	18.47	18.75	18.52	18.58
CoC 01061	19.62	19.35	19.25	19.41
CoA 92081	19.12	19.36	18.9	19.13
CD (0.05%)				0.48
CV (%)				1.47

Table 2. 15. Sucrose % 8th month

Clone	R I	R II	R III	Mean
CoA 12 321	15.27	15.55	15.26	15.36
CoA 12 322	15.38	15.21	15.37	15.32
CoA 12 323	15.45	15.16	15.75	15.45
CoOr 12 346	15.37	14.95	15.42	15.25
CoV 12 356	15.25	15.65	15.72	15.54
Standard				
Co 6907	14.92	15.34	14.85	15.04
CoC 01061	15.71	15.24	15.16	15.37
CoA 92081	14.92	14.71	14.75	14.79
CD (0.05%)				0.42
CV (%)				1.60

Table 2. 16. Purity % 8th month

Clone	R I	R II	R III	Mean
CoA 12 321	85.37	83.82	85.71	84.97
CoA 12 322	85.34	84.17	85.69	85.07
CoA 12 323	85.16	85.52	84.95	85.21
CoOr 12 346	85.26	85.32	84.71	85.10
CoV 12 356	85.67	86.65	86.16	86.16
Standard				
Co 6907	84.82	83.31	84.15	84.09
CoC 01061	85.16	85.72	85.57	85.48
CoA 92081	84.88	83.75	84.62	84.42
CD (0.05%)				1.06
CV (%)				0.72

Table 2. 17. CCS % 8th month

Clone	R I	R II	R III	Mean
CoA 12 321	10.41	10.25	10.33	10.33
CoA 12 322	10.35	10.85	10.52	10.57
CoA 12 323	10.62	10.37	10.86	10.62
CoOr 12 346	10.45	10.37	10.55	10.46
CoV 12 356	10.74	10.92	10.65	10.77
Standard				
Co 6907	10.22	10.24	10.94	10.47
CoC 01061	10.53	10.58	10.81	10.64
CoA 92081	10.25	10.41	10.95	10.54
CD (0.05%)				0.38
CV (%)				2.07

Table 2. 18. No of Shoots ('000/ha) – 180 days

Clone	R I	R II	R III	Mean
CoA 12 321	110.35	122.56	116.53	116.48
CoA 12 322	121.45	97.34	110.64	109.81
CoA 12 323	110.16	109.48	115.52	111.72
CoOr 12 346	122.43	119.65	129.85	123.98
CoV 12 356	115.47	106.95	110.13	110.85
Standard				
Co 6907	102.55	123.27	116.52	114.11
CoC 01061	125.34	134.55	117.93	125.94
CoA 92081	97.65	105.14	102.87	101.89
CD (0.05%)				13.53
CV (%)				6.84

Table 2. 19. No of tillers ('000/ha) – 120 days

Clone	R I	R II	R III	Mean
CoA 12 321	132.75	128.89	135.55	132.40
CoA 12 322	135.64	118.94	132.73	129.10
CoA 12 323	132.63	125.67	118.41	125.57
CoOr 12 346	143.15	136.48	128.64	136.09
CoV 12 356	127.34	117.64	136.16	127.05
Standard				
Co 6907	117.16	135.22	123.46	125.28
CoC 01061	147.54	152.37	131.75	143.89
CoA 92081	125.93	109.25	112.18	115.79
CD (0.05%)				14.49
CV (%)				6.47

Table 2. 20. Germination % – 30 days

Clone	R I	R II	R III	Mean
CoA 12 321	45.64	62.84	49.67	52.72
CoA 12 322	47.34	61.02	52.37	53.58
CoA 12 323	47.34	56.34	36.48	46.72
CoOr 12 346	63.45	66.35	73.65	67.82
CoV 12 356	46.56	55.37	59.74	53.89
Standard				
Co 6907	71.64	61.95	68.52	67.37
CoC 01061	74.38	65.34	77.66	72.46
CoA 92081	46.65	58.35	51.37	52.12
CD (0.05%)				12.01
CV (%)				11.90

3. Advanced Varietal Trial (Early) – II plant - (Centre – Cuddalore)

Entries (4)	: CoA 11321, CoA 11323, CoC 10336 and CoC 11336
Standards (3)	: Co 6907, CoC 01061 and CoA 92081
Design	: RBD
Replications	: Three
Plot size	Gross: 6.0 m x 6 r x 1.2 m Net : 5.0 m x 4 r x 1.2 m
Seed rate	: 12 buds / m
Crop duration	: 10 months

3. Advanced Varietal Trial (Early) – II Plant

The performance of four clones was evaluated against three standard varieties. The clone CoC 11336 registered the higher cane yield (139.25 t/ha) followed by the CoC 10336 (123.34 t/ha) and CoA11323 (120.60 t/ha). The CCS yield was maximum in CoC 11336 (17.83 t/ha) followed by CoC 10336 (15.39 t/ha) and CoA 11323 (15.26 t/ha). The sucrose content was maximum in the clone CoC 11336 (17.62 %) followed by CoC 01061 (17.48 %) and clone CoA 11321 (17.44 %). (Tables 3.1 to 3.20).

3. Advanced Varietal Trial (Early) – II Plant - (Centre – Cuddalore)

S. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Sucrose (%) (10 m)	Brix (%) (10 m)	CCS (%) (10 m)	Purity (%) (10 m)	Pol. (%) cane (10 m)	Extraction (%) (10 m)	Fibre (%) (10 m)	NMC ('000/ha) (10 m)
1	CoA 11321	14.73	115.34	17.44	20.00	12.78	88.73	13.61	52.76	13.04	103.65
2	CoA 11323	15.26	120.60	17.42	19.98	12.65	89.75	13.85	53.35	12.93	102.25
3	CoC 10 336	15.39	123.34	17.21	19.77	12.48	88.78	13.39	53.97	13.01	120.61
4	CoC 11336	17.83	139.25	17.62	20.05	12.81	89.91	13.94	56.16	12.91	123.69
	Standard										
1	Co 6907	12.00	100.38	17.02	19.17	11.96	87.31	13.35	50.34	13.02	99.63
2	CoC 01061	14.29	111.91	17.48	20.03	12.77	89.95	13.85	52.21	12.90	128.97
3	CoA 92081	13.97	112.93	17.10	19.93	12.37	88.50	13.50	52.78	12.97	100.06
	CD (0.05%)	1.29	9.52	0.29	0.46	0.36	1.15	0.34	1.76	0.45	12.56
	CV (%)	5.07	4.55	0.93	1.32	1.62	0.72	1.40	1.87	1.97	6.34

S. No.	Clone	Stalk length (cm)	Stalk Diameter (cm)	Single Cane Wt. (kg)	Brix (%) (8 m)	Sucrose (%) (8 m)	Purity (%) (8 m)	CCS (%) (8 m)	No. of shoots ('000/ha)	No. of tillers ('000/ha)	Germination (%)
1	CoA 11321	265.67	2.72	1.26	18.33	15.27	84.63	10.89	124.38	136.27	50.31
2	CoA 11323	272.67	2.85	1.21	19.13	15.47	85.26	10.60	128.35	135.75	57.18
3	CoC 10 336	275.00	2.93	1.34	18.67	14.97	84.86	10.94	131.55	137.50	70.86
4	CoC 11336	297.33	3.11	1.42	19.27	15.54	85.24	10.18	136.98	142.64	68.70
	Standard										
1	Co 6907	255.33	2.63	0.98	18.00	15.05	83.71	10.65	103.98	122.81	67.18
2	CoC 01061	275.33	2.48	0.99	19.15	15.22	85.21	10.38	136.62	145.00	71.89
3	CoA 92081	259.33	2.66	1.23	18.62	15.11	84.51	10.61	111.09	117.60	50.28
	CD (0.05%)	19.86	0.18	0.13	0.41	0.40	0.81	0.31	13.78	13.07	8.41
	CV (%)	4.11	3.70	6.25	1.24	1.46	0.54	1.66	6.21	5.56	7.59

3. AVT (Early) – II Plant - (Centre – Cuddalore)

Table 3. 1. CCS yield (t/ha) at harvest (10 m)

Clone	R I	R II	R III	Mean
CoA 11321	14.84	15.49	13.86	14.73
CoA 11323	15.50	14.29	15.99	15.26
CoC 10 336	15.22	15.36	15.59	15.39
CoC 11336	17.57	17.37	18.55	17.83
Standard				
Co 6907	12.13	11.63	12.25	12.00
CoC 01061	14.74	13.76	14.36	14.29
CoA 92081	14.97	13.08	13.85	13.97
CD (0.05%)				1.29
CV (%)				5.07

Table 3. 2. Cane Yield (t/ha) at harvest (10 m)

Clone	R I	R II	R III	Mean
CoA 11321	115.46	123.3	107.25	115.34
CoA 11323	121.53	113.85	126.42	120.60
CoC 10 336	122.75	119.5	127.76	123.34
CoC 11336	137.25	134.65	145.85	139.25
Standard				
Co 6907	100.25	98.4	102.5	100.38
CoC 01061	115.64	108.74	111.34	111.91
CoA 92081	118.35	105.95	114.5	112.93
CD (0.05%)				9.52
CV (%)				4.55

Table 3. 3. Sucrose per cent at harvest (10 m)

Clone	R I	R II	R III	Mean
CoA 11321	17.60	17.25	17.48	17.44
CoA 11323	17.30	17.41	17.55	17.42
CoC 10 336	16.95	17.45	17.22	17.21
CoC 11336	17.47	17.68	17.72	17.62
Standard				
Co 6907	17.10	16.92	17.05	17.02
CoC 01061	17.62	17.32	17.50	17.48
CoA 92081	17.10	16.95	17.25	17.10
CD (0.05%)				0.29
CV (%)				0.93

Table 3. 4. Brix per cent at harvest (10 m)

Clone	R I	R II	R III	Mean
CoA 11321	20.10	19.70	20.20	20.00
CoA 11323	20.10	19.80	20.05	19.98
CoC 10336	19.50	20.10	19.70	19.77
CoC 11336	20.10	20.05	20.00	20.05
Standard				
Co 6907	19.50	19.10	18.90	19.17
CoC 01061	20.10	19.80	20.20	20.03
CoA 92081	19.80	20.20	19.80	19.93
CD (0.05%)				0.46
CV (%)				1.32

Table 3. 5. CCS per cent at harvest

Clone	R I	R II	R III	Mean
CoA 11321	12.85	12.56	12.92	12.78
CoA 11323	12.75	12.55	12.65	12.65
CoC 10336	12.40	12.85	12.20	12.48
CoC 11336	12.80	12.72	12.90	12.81
Standard				
Co 6907	12.10	11.82	11.95	11.96
CoC 01061	12.75	12.65	12.90	12.77
CoA 92081	12.65	12.35	12.10	12.37
CD (0.05%)				0.36
CV (%)				1.62

Table 3. 6. Purity per cent at harvest (10 m)

Clone	R I	R II	R III	Mean
CoA 11321	88.71	89.64	87.85	88.73
CoA 11323	89.85	90.13	89.27	89.75
CoC 10 336	88.68	89.14	88.52	88.78
CoC 11336	89.87	89.74	90.12	89.91
Standard				
Co 6907	87.95	86.25	87.72	87.31
CoC 01061	89.72	90.75	89.38	89.95
CoA 92081	88.35	88.21	88.94	88.50
CD (0.05%)				1.15
CV (%)				0.72

Table 3. 7. Pol. % (cane) at harvest (10 m)

Clone	R I	R II	R III	Mean
CoA 11321	13.61	13.82	13.41	13.61
CoA 11323	13.95	13.82	13.77	13.85
CoC10336	13.37	13.64	13.16	13.39
CoC 11336	13.81	13.95	14.07	13.94
Standard				
Co 6907	13.62	13.15	13.27	13.35
CoC 01061	13.95	13.78	13.82	13.85
CoA 92081	13.41	13.82	13.26	13.50
CD (0.05%)				0.34
CV (%)				1.40

Table 3. 8. Extraction per cent at harvest

Clone	R I	R II	R III	Mean
CoA 11321	53.12	52.21	52.96	52.76
CoA 11323	53.42	52.21	54.42	53.35
CoC10336	53.64	55.75	52.51	53.97
CoC 11336	55.94	56.21	56.32	56.16
Standard				
Co 6907	50.34	51.43	49.25	50.34
CoC 01061	52.16	52.81	51.65	52.21
CoA 92081	51.85	53.95	52.54	52.78
CD (0.05%)				1.76
CV (%)				1.87

Table 3. 9. Fibre per cent at harvest

Clone	R I	R II	R III	Mean
CoA 11321	12.85	13.32	12.94	13.04
CoA 11323	13.35	12.76	12.68	12.93
CoC 10 336	13.17	12.75	13.12	13.01
CoC 11336	12.63	13.12	12.97	12.91
Standard				
Co 6907	13.12	13.06	12.87	13.02
CoC 01061	13.11	12.64	12.94	12.90
CoA 92081	12.97	13.16	12.78	12.97
CD (0.05%)				0.45
CV (%)				1.97

Table 3. 10. NMC ('000/ha) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	102.42	94.52	114.00	103.65
CoA 11323	101.24	110.50	95.00	102.25
CoC10336	120.32	125.00	116.50	120.61
CoC 11336	128.16	119.50	123.42	123.69
Co 6907	97.50	102.15	99.25	99.63
CoC 01061	121.33	130.45	135.12	128.97
CoA 92081	99.26	108.59	92.33	100.06
CD (0.05%)				12.56
CV (%)				6.34

Table 3. 11. Stalk length (cm) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	264	257	276	265.67
CoA 11323	281	264	273	272.67
CoC10336	262	276	287	275.00
CoC 11336	294	288	310	297.33
Standard				
Co 6907	247	263	256	255.33
CoC 01061	282	269	275	275.33
CoA 92081	262	273	243	259.33
CD (0.05%)				19.86
CV (%)				4.11

Table 3. 12. Stalk diameter (cm) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	2.64	2.71	2.81	2.72
CoA 11323	2.78	2.85	2.92	2.85
CoC10336	2.92	2.76	3.12	2.93
CoC 11336	3.17	2.96	3.21	3.11
Standard				
Co 6907	2.64	2.68	2.57	2.63
CoC 01061	2.55	2.47	2.41	2.48
CoA 92081	2.64	2.52	2.81	2.66
CD (0.05%)				0.18
CV (%)				3.7

Table 3. 13. Single cane weight (kg) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	1.25	1.17	1.35	1.26
CoA 11323	1.20	1.18	1.26	1.21
CoC10336	1.26	1.46	1.31	1.34
CoC 11336	1.36	1.43	1.47	1.42
Standard				
Co 6907	1.05	0.97	0.93	0.98
CoC 01061	0.95	0.91	1.12	0.99
CoA 92081	1.22	1.18	1.29	1.23
CD (0.05%)				0.13
CV (%)				6.25

Table 3. 14. Brix % at 8th month

Clone	R I	R II	R III	Mean
CoA 11321	18.30	18.50	18.20	18.33
CoA 11323	19.30	18.70	19.40	19.13
CoC10336	18.75	18.92	18.35	18.67
CoC 11336	19.25	19.35	19.20	19.27
Standard				
Co 6907	18.10	18.10	17.80	18.00
CoC 01061	19.40	18.90	19.15	19.15
CoA 92081	18.75	18.45	18.65	18.62
CD (0.05%)				0.41
CV (%)				1.24

Table 3. 15. Sucrose % at 8th month

Clone	R I	R II	R III	Mean
CoA 11321	15.32	14.95	15.55	15.27
CoA 11323	15.68	15.47	15.27	15.47
CoC10336	14.85	15.15	14.92	14.97
CoC 11336	15.56	15.45	15.62	15.54
Standard				
Co 6907	15.42	14.87	14.85	15.05
CoC 01061	15.47	15.25	14.95	15.22
CoA 92081	15.21	14.86	15.25	15.11
CD (0.05%)				0.40
CV (%)				1.46

Table 3. 16. Purity % at 8th month

Clone	R I	R II	R III	Mean
CoA 11321	85.34	84.15	84.39	84.63
CoA 11323	85.40	85.25	85.14	85.26
CoC10336	84.75	85.15	84.67	84.86
CoC 11336	85.46	85.72	84.53	85.24
Standard				
Co 6907	83.85	83.34	83.95	83.71
CoC 01061	84.96	85.55	85.12	85.21
CoA 92081	84.93	83.82	84.78	84.51
CD (0.05%)				0.81
CV (%)				0.54

Table 3. 17. CCS % at 8th month

Clone	R I	R II	R III	Mean
CoA 11321	11.27	10.74	10.65	10.89
CoA 11323	10.45	10.52	10.83	10.60
CoC10336	10.85	10.92	11.05	10.94
CoC 11336	10.35	9.95	10.24	10.18
Standard				
Co 6907	10.57	10.64	10.75	10.65
CoC 01061	10.52	10.25	10.37	10.38
CoA 92081	74.73	73.55	74.5	10.61
CD (0.05%)				0.31
CV (%)				1.66

Table 3. 18. Number of shoots ('000/ha) - 180 days

Clone	R I	R II	R III	Mean
CoA 11321	125.64	115.34	132.15	124.38
CoA 11323	131.37	132.31	121.38	128.35
CoC10336	131.67	138.46	124.52	131.55
CoC 11336	145.65	129.35	135.95	136.98
Standard				
Co 6907	103.62	110.15	98.17	103.98
CoC 01061	127.39	136.62	145.85	136.62
CoA 92081	110.86	107.14	115.27	111.09
CD (0.05%)				13.78
CV (%)				6.21

Table 3. 19. Number of tillers ('000/ha) - 120 days

Clone	R I	R II	R III	Mean
CoA 11321	137.52	125.67	145.61	136.27
CoA 11323	141.15	128.47	137.62	135.75
CoC10336	136.71	142.59	133.21	137.50
CoC 11336	141.65	138.85	147.43	142.64
Standard				
Co 6907	115.38	126.21	126.84	122.81
CoC 01061	141.54	148.62	144.85	145.00
CoA 92081	115.48	112.16	125.15	117.60
CD (0.05%)				13.07
CV (%)				5.56

Table 3. 20. Germination per cent – 30 days

Clone	Entires	R I	R II	R III
CoA 11321	57.45	49.34	44.15	50.31
CoA 11323	52.64	57.65	61.24	57.18
CoC10336	72.34	67.12	73.13	70.86
CoC 11336	65.31	72.64	68.16	68.70
Standard				
Co 6907	63.25	67.37	70.91	67.18
CoC 01061	74.34	68.17	73.16	71.89
CoA 92081	46.48	55.69	48.67	50.28
CD (0.05%)				8.41
CV (%)				7.59

4. Advanced Varietal Trial (Early) - Ratoon - (Centre – Cuddalore)

Entries	: CoA 11321, CoA 11323, CoC 10336 and CoC 11336
Standards	: Co 6907, CoC 01061 and CoA 92081
Design	: RBD
Replications	: Three
Plot size	Gross: 6.0 m x 6 r x 1.2 m Net : 5.0 m x 4 r x 1.2 m
Seed rate	: 12 buds / m

4. Advanced Varietal Trial (Early) – Ratoon

The performance of four clones was evaluated against three standard varieties. The CCS yield was maximum in CoC 11336 (17.27 t/ha) followed by CoC 10336 (15.25 t/ha) and CoA 11323 (14.97 t/ha). The clone CoC 11336 registered the higher cane yield (134.43 t/ha) followed by the clone CoC 10336 (121.33 t/ha) and CoA 11323 (118.42 t/ha). The sucrose content was maximum in the clone CoC 11336 (17.70 %) followed by the clone CoA 11321 (17.51 %) and check variety CoC 01061 (17.50 %) (Tables 4.1 to 4.19).

4. Advanced Varietal Trial (Early) – Ratoon - (Centre – Cuddalore)

S. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Sucrose (%) (10 m)	Brix (%) (10 m)	CCS (%) (10 m)	Purity (%) (10 m)	Pol. (%) Cane (10 m)	Extraction (%) (10 m)	Fibre (%) (10 m)	NMC ('000/ha) (10 m)
1	CoA 11321	14.47	114.70	17.51	19.83	12.62	88.84	13.44	50.46	13.83	105.64
2	CoA 11323	14.97	118.42	17.44	20.07	12.64	90.12	13.83	52.16	13.26	100.77
3	CoC 10 336	15.25	121.33	17.26	19.97	12.57	89.23	13.57	51.60	13.42	118.40
4	CoC 11336	17.27	134.43	17.70	20.43	12.84	89.67	13.86	53.51	13.40	117.47
	Standard										
1	Co 6907	11.80	97.23	17.13	19.17	12.13	87.72	13.46	48.91	13.28	101.39
2	CoC 01061	13.38	104.94	17.50	20.20	12.75	89.64	13.80	49.86	13.10	125.15
3	CoA 92081	12.98	103.35	17.25	20.00	12.56	88.70	13.59	50.04	13.30	96.18
	CD (0.05%)	1.01	8.59	0.28	0.42	0.31	1.29	0.35	1.50	0.37	10.90
	CV (%)	4.01	4.25	0.91	1.20	1.37	0.81	1.46	1.66	1.56	5.61

S. No.	Clones	Stalk length (cm)	Stalk Diameter (cm)	Single Cane Wt. (kg)	Brix (%) (8 m)	Sucrose (%) (8 m)	Purity (%) (8 m)	CCS (%) (8 m)	No. of Shoots ('000/ha)	No. of Tillers ('000/ha)
1	CoA 11321	263.33	2.67	1.32	18.60	15.03	85.07	10.56	123.47	130.34
2	CoA 11323	273.00	2.78	1.31	19.20	15.35	85.34	10.79	127.82	134.80
3	CoC 10 336	282.67	2.84	1.38	18.73	15.00	85.13	10.40	131.63	138.49
4	CoC 11336	291.00	2.96	1.46	19.27	15.30	85.20	10.71	130.96	141.68
	Standard									
1	Co 6907	261.00	2.44	0.96	17.80	14.85	84.01	10.25	104.68	116.73
2	CoC 01061	275.67	2.38	1.05	19.27	15.20	85.02	10.50	136.42	141.78
3	CoA 92081	255.33	2.65	1.23	18.40	14.78	84.41	10.24	107.56	116.75
	CD (0.05%)	16.28	0.21	0.16	0.49	0.39	0.87	0.31	13.70	13.60
	CV (%)	3.37	4.34	7.39	1.46	1.43	0.57	1.68	6.25	5.81

4. AVT (Early) – Ratoon - (Centre – Cuddalore)

Table 4. 1. CCS Yield (t/ha) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	14.84	15.49	13.86	14.47
CoA 11323	15.50	14.29	15.99	14.97
CoC 10 336	15.22	15.36	15.59	15.25
CoC 11336	17.57	17.37	18.55	17.27
Standard				
Co 6907	12.13	11.63	12.25	11.80
CoC 01061	14.74	13.76	14.36	13.38
CoA 92081	14.97	13.08	13.85	12.98
CD (0.05%)				1.01
CV (%)				4.01

Table 4. 2. Cane Yield (t/ha) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	109.16	119.45	115.5	114.70
CoA 11323	117.45	115.46	122.34	118.42
CoC 10 336	123.17	116.46	124.37	121.33
CoC 11336	134.68	129.13	139.49	134.43
Standard				
Co 6907	97.64	98.4	95.64	97.23
CoC 01061	109.64	102.82	102.35	104.94
CoA 92081	111.95	95.45	102.64	103.35
CD (0.05%)				8.59
CV (%)				4.25

Table 4. 3. Sucrose per cent at harvest

Clone	R I	R II	R III	Mean
CoA 11321	17.54	17.34	17.65	17.51
CoA 11323	17.36	17.52	17.43	17.44
CoC 10 336	17.16	17.47	17.15	17.26
CoC 11336	17.53	17.75	17.82	17.70
Standard				
Co 6907	16.82	17.24	17.32	17.13
CoC 01061	17.35	17.75	17.41	17.50
CoA 92081	17.22	17.14	17.39	17.25
CD (0.05%)				0.28
CV (%)				0.91

Table 4. 4. Brix % at harvest

Clone	R I	R II	R III	Mean
CoA 11321	19.80	20.10	19.60	19.83
CoA 11323	20.30	19.80	20.10	20.07
CoC 10 336	19.80	20.20	19.90	19.97
CoC 11336	20.50	20.80	20.00	20.43
Standard				
Co 6907	19.50	19.10	18.90	19.17
CoC 01061	20.50	20.00	20.10	20.20
CoA 92081	20.00	20.20	19.80	20.00
CD (0.05%)				0.42
CV (%)				1.20

Table 4. 5. CCS % at harvest

Clone	R I	R II	R III	Mean
CoA 11321	12.74	12.35	12.76	12.62
CoA 11323	12.71	12.65	12.57	12.64
CoC 10336	12.54	12.74	12.43	12.57
CoC 11336	12.85	12.72	12.95	12.84
Standard				
Co 6907	12.2	11.9	12.3	12.13
CoC 01061	12.67	12.73	12.86	12.75
CoA 92081	12.75	12.61	12.31	12.56
CD (0.05%)				0.31
CV (%)				1.37

Table 4. 6. Purity % at harvest

Clone	R I	R II	R III	Mean
CoA 11321	89.15	89.50	87.87	88.84
CoA 11323	89.64	90.25	90.48	90.12
CoC 10 336	89.72	89.46	88.52	89.23
CoC 11336	90.34	89.92	88.76	89.67
Standard				
Co 6907	88.15	86.76	88.25	87.72
CoC 01061	90.52	89.54	88.85	89.64
CoA 92081	88.42	89.75	87.94	88.70
CD (0.05%)				1.29
CV (%)				0.81

Table 4. 7. Pol. % (cane) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	13.65	13.24	13.42	13.44
CoA 11323	13.92	13.75	13.81	13.83
CoC10336	13.54	13.42	13.75	13.57
CoC 11336	13.86	13.68	14.05	13.86
Standard				
Co 6907	13.16	13.74	13.47	13.46
CoC 01061	13.85	13.64	13.92	13.80
CoA 92081	13.45	13.81	13.52	13.59
CD (0.05%)				0.35
CV (%)				1.46

Table 4. 8. Extraction % at harvest

Clone	R I	R II	R III	Mean
CoA 11321	51.26	50.25	49.86	50.46
CoA 11323	53.64	52.37	50.48	52.16
CoC10336	51.35	52.48	50.97	51.60
CoC 11336	52.64	54.38	53.51	53.51
Standard				
Co 6907	49.72	48.75	48.25	48.91
CoC 01061	50.65	49.13	49.81	49.86
CoA 92081	49.75	50.16	50.22	50.04
CD (0.05%)				1.5
CV (%)				1.66

Table 4. 9. Fibre % at harvest

Clone	R I	R II	R III	Mean
CoA 11321	13.75	13.84	13.91	13.83
CoA 11323	13.45	13.21	13.12	13.26
CoC 10 336	13.35	13.24	13.67	13.42
CoC 11336	13.65	13.43	13.12	13.40
Standard				
Co 6907	13.47	13.12	13.24	13.28
CoC 01061	13.26	13.18	12.86	13.10
CoA 92081	13.25	13.07	13.59	13.30
CD (0.05%)				0.37
CV (%)				1.56

Table 4. 10. NMC ('000/ha) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	105.23	95.34	116.34	105.64
CoA 11323	105.34	95.64	101.34	100.77
CoC10336	120.65	115.22	119.34	118.40
CoC 11336	116.56	112.68	123.18	117.47
Standard				
Co 6907	95.38	107.16	101.64	101.39
CoC 01061	119.14	125.56	130.75	125.15
CoA 92081	95.65	101.51	91.38	96.18
CD (0.05%)				10.90
CV (%)				5.61

Table 4. 11. Stalk length (cm) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	263	250	277	263.33
CoA 11323	272	264	283	273.00
CoC10336	293	274	281	282.67
CoC 11336	297	284	292	291.00
Standard				
Co 6907	265	261	257	261.00
CoC 01061	275	284	268	275.67
CoA 92081	246	251	269	255.33
CD (0.05%)				16.28
CV (%)				3.37

Table 4. 12. Stalk diameter (cm) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	2.64	2.81	2.57	2.67
CoA 11323	2.75	2.67	2.92	2.78
CoC10336	2.92	2.72	2.87	2.84
CoC 11336	2.97	3.06	2.85	2.96
Standard				
Co 6907	2.45	2.55	2.31	2.44
CoC 01061	2.27	2.52	2.34	2.38
CoA 92081	2.68	2.75	2.52	2.65
CD (0.05%)				0.21
CV (%)				4.34

Table 4. 13. Single cane weight (kg) at harvest

Clone	R I	R II	R III	Mean
CoA 11321	1.31	1.22	1.42	1.32
CoA 11323	1.27	1.28	1.37	1.31
CoC10336	1.32	1.47	1.35	1.38
CoC 11336	1.47	1.53	1.38	1.46
Standard				
Co 6907	0.98	0.97	0.92	0.96
CoC 01061	1.21	0.95	0.98	1.05
CoA 92081	1.32	1.23	1.14	1.23
CD (0.05%)				0.16
CV (%)				7.39

Table 4. 14. Brix % at 8th month

Clone	R I	R II	R III	Mean
CoA 11321	18.70	18.30	18.80	18.60
CoA 11323	19.10	19.20	19.30	19.20
CoC10336	18.60	19.10	18.50	18.73
CoC 11336	18.90	19.70	19.20	19.27
Standard				
Co 6907	17.80	17.50	18.10	17.80
CoC 01061	19.10	19.20	19.50	19.27
CoA 92081	18.40	18.20	18.60	18.40
CD (0.05%)				0.49
CV (%)				1.46

Table 4. 15. Sucrose % 8th month

Clone	R I	R II	R III	Mean
CoA 11321	15.10	15.30	14.70	15.03
CoA 11323	15.20	15.75	15.10	15.35
CoC10336	14.80	15.00	15.20	15.00
CoC 11336	15.45	15.10	15.35	15.30
Standard				
Co 6907	14.95	15.00	14.60	14.85
CoC 01061	15.20	15.30	15.10	15.20
CoA 92081	14.65	14.87	14.82	14.78
CD (0.05%)				0.39
CV (%)				1.43

Table 4. 16. Purity % 8th month

Clone	R I	R II	R III	Mean
CoA 11321	85.24	84.12	85.85	85.07
CoA 11323	84.92	85.35	85.75	85.34
CoC10336	85.1	84.74	85.56	85.13
CoC 11336	85.65	84.76	85.18	85.20
Standard				
Co 6907	84.52	83.34	84.17	84.01
CoC 01061	85.15	85.42	84.5	85.02
CoA 92081	84.72	83.75	84.75	84.41
CD (0.05%)				0.87
CV (%)				0.57

Table 4. 17. CCS % 8th month

Clone	R I	R II	R III	Mean
CoA 11321	10.75	10.52	10.42	10.56
CoA 11323	10.65	10.78	10.93	10.79
CoC10336	10.53	10.41	10.26	10.40
CoC 11336	10.85	10.57	10.72	10.71
Standard				
Co 6907	9.95	10.25	10.54	10.25
CoC 01061	10.47	10.35	10.68	10.50
CoA 92081	10.27	10.10	10.35	10.24
CD (0.05%)				0.31
CV (%)				1.68

Table 4. 18. No of Shoots ('000/ha) – 180 days

Clone	R I	R II	R III	Mean
CoA 11321	126.54	112.72	131.15	123.47
CoA 11323	127.35	122.64	133.47	127.82
CoC10336	130.52	138.72	125.64	131.63
CoC 11336	135.65	124.53	131.71	130.96
Standard				
Co 6907	104.64	112.15	97.25	104.68
CoC 01061	125.47	138.62	145.17	136.42
CoA 92081	102.34	110.51	108.84	107.56
CD (0.05%)				13.70
CV (%)				6.25

Table 4. 19. No of tillers ('000/ha) – 120 days

Clone	R I	R II	R III	Mean
CoA 11321	134.75	119.45	136.81	130.34
CoA 11323	134.21	127.35	141.65	134.80
CoC10336	136.23	145.34	137.51	138.49
CoC 11336	140.31	135.45	147.73	141.68
Standard				
Co 6907	112.17	126.81	109.75	116.73
CoC 01061	135.42	147.85	141.13	141.78
CoA 92081	104.21	114.37	125.64	116.75
CD (0.05%)				13.60
CV (%)				5.81

5. Initial Varietal Trial (Mid-late) - (Centre – Cuddalore)

Entries (8)	:	CoA 12324, CoA 13325, CoA 13326, CoA 13327, CoA 13328 CoC 13339, CoOr 13346 and CoV 12357
Standards (3)	:	Co 6907, CoC 01061 and CoA 92081
Design	:	RBD
Replications	:	Three
Plot size	:	Gross: 6.0 m x 6 r x 0.9 m Net : 5.0 m x 4 r x 0.9 m
Seed rate	:	12 buds/m
Date of Planting	:	11.02.2015
Crop duration	:	11 months

5. Initial Varietal Trial (Mid-late)

A total of eight clones and three standards were evaluated in RBD with three replications during 2015-16. The clone CoC 13339 recorded higher CCS yield (18.19 t/ha) followed by clone CoA 13328 (16.69 t/ha) and clone CoA 12324 (15.68 t/ha). The Cane yield was maximum in the clone CoC 13339 (139.52 t/ha) followed by the clone CoA 13328 (131.33 t/ha) and CoA 12324 (124.28 t/ha). The sucrose content was maximum in the clone CoC 13338 (18.06 %) followed by the clone CoA 13328 (17.76%) and CoA 12324 (17.74 %).(Table 5.1 – 5.20).

5. Initial Varietal Trial (Mid-late) – SRS, Cuddalore

S. No.	Clone	CCS (t/ha)	Cane yield (t/ha)	Sucrose (%) (12 m)	Brix (%) (12 m)	Purity (%) (12 m)	CCS (%) (12 m)	Pol. (%) cane (12 m)	Extraction (%) (12 m)	Fibre (%) (12 m)	NMC ('000/ha) (12 m)
1	CoA 12 324	15.68	124.28	17.74	20.44	89.33	12.62	13.41	49.91	13.45	112.11
2	CoA 13 325	15.17	123.29	17.48	20.26	88.30	12.30	13.34	50.61	13.55	114.29
3	CoA 13 326	15.43	122.83	17.63	20.64	88.65	12.56	13.72	48.85	13.61	105.37
4	CoA 13 327	13.63	114.08	17.11	20.28	89.51	11.95	13.62	49.64	13.53	111.34
5	CoA 13 328	16.69	131.33	17.76	20.84	89.84	12.71	13.84	50.53	13.27	106.88
6	CoC 13 339	18.19	139.52	18.06	21.37	90.34	13.04	14.05	50.78	13.42	113.65
7	CoOr 13 346	14.97	120.11	17.60	20.64	89.63	12.47	13.64	49.72	13.54	101.56
8	CoV 12 357	15.18	122.92	17.56	20.50	89.50	12.35	13.51	49.96	13.35	112.68
Standard											
1.	CoV 92102	15.00	117.67	17.75	20.85	90.22	12.75	13.81	50.30	13.42	110.14
2.	Co 7219	13.61	111.85	17.11	20.07	88.78	12.17	13.37	48.34	13.38	94.24
3.	Co 86249	12.41	108.75	16.91	19.84	88.76	11.40	13.29	48.71	13.54	97.62
	CD (0.05%)	1.54	12.26	0.18	0.17	0.23	0.32	0.20	0.72	0.22	11.60
	CV (%)	5.99	5.93	0.60	0.48	0.15	1.50	0.85	0.85	0.96	6.35

5. Initial Varietal Trial (Mid-late) – Cont...

S. No.	Clone	Stalk length (cm)	Stalk Diameter (cm)	Single Cane Wt. (kg)	Brix (%) (10 m)	Sucrose (%) (10 m)	Purity (%) (10 m)	CCS (%) (10 10 m)	No. of shoots ('000/ha)	No. of tillers ('000/ha)	Germination (%)
1	CoA 12 324	275.67	2.67	1.22	18.45	15.73	85.22	10.56	132.77	137.44	54.90
2	CoA 13 325	274.00	2.71	1.19	18.27	15.46	84.96	10.65	130.48	134.03	51.70
3	CoA 13 326	260.17	2.50	1.20	18.65	15.63	84.87	10.73	125.43	130.39	44.65
4	CoA 13 327	272.33	2.74	1.15	18.25	15.35	85.53	10.70	128.81	133.94	51.33
5	CoA 13 328	277.11	2.84	1.30	18.81	15.73	85.67	10.68	129.74	141.01	55.77
6	CoC 13 339	280.50	3.00	1.36	19.34	16.25	85.64	10.94	130.72	136.40	52.73
7	CoOr 13 346	265.12	2.50	1.18	18.55	15.61	85.02	10.54	125.15	136.20	52.77
8	CoV 12 357	261.83	2.55	1.25	18.51	15.53	85.28	10.47	127.32	132.48	48.97
Standard											
1	CoV 92102	274.00	2.60	1.21	18.78	15.73	85.30	10.74	127.54	133.09	60.65
2	Co 7219	253.33	2.29	1.03	18.15	15.12	84.80	10.73	115.31	119.77	51.85
3	Co 86249	255.67	2.57	1.11	17.74	14.74	83.94	10.34	114.54	119.80	52.62
	CD (0.05%)	12.66	0.17	0.10	0.15	0.19	0.78	0.23	13.17	12.43	6.66
	CV (%)	2.77	3.80	4.81	0.47	0.72	0.54	1.24	6.13	5.52	7.44

5. IVT (Mid-late) – Cuddalore Centre (ECZ)

Table 5. 1. CCS Yield (t/ha) at harvest (12th month)

Clone	R - I	R - II	R III	Mean
CoA 12 324	15.25	16.64	15.16	15.68
CoA 13 325	15.14	14.16	16.20	15.17
CoA 13 326	15.38	16.07	14.84	15.43
CoA 13 327	14.14	13.07	13.67	13.63
CoA 13 328	16.93	15.83	17.31	16.69
CoC 13 339	17.82	17.65	19.10	18.19
CoOr 13 346	15.10	14.06	15.74	14.97
CoV 12 357	14.23	15.35	15.98	15.18
Standard				
CoV 92102	14.74	16.30	13.96	15.00
Co 7219	13.91	13.16	13.77	13.61
Co 86249	13.84	11.09	12.29	12.41
CD (0.05%)				1.54
CV (%)				5.99

Table 5. 2. Cane Yield (t/ha) at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	123.48	131.51	117.86	124.28
CoA 13 325	124.62	115.85	129.41	123.29
CoA 13 326	120.75	128.57	119.16	122.83
CoA 13 327	115.25	109.41	117.58	114.08
CoA 13 328	132.16	124.65	137.17	131.33
CoC 13 339	138.32	134.96	145.27	139.52
CoOr 13 346	119.78	112.95	127.59	120.11
CoV 12 357	114.64	124.31	130.17	122.92
Standard				
CoV 92102	116.65	127.85	108.52	117.67
Co 7219	115.47	108.74	111.34	111.85
Co 86249	119.64	97.68	108.94	108.75
CD (0.05%)				12.26
CV (%)				5.93

Table 5. 3. Sucrose % at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	17.67	17.72	17.82	17.74
CoA 13 325	17.55	17.42	17.47	17.48
CoA 13 326	17.73	17.64	17.53	17.63
CoA 13 327	16.95	17.12	17.25	17.11
CoA 13 328	17.78	17.84	17.66	17.76
CoC 13 339	18.15	18.08	17.95	18.06
CoOr 13 346	17.52	17.57	17.71	17.60
CoV 12 357	17.67	17.55	17.47	17.56
Standard				
CoV 92102	17.67	17.74	17.85	17.75
Co 7219	17.22	16.94	17.16	17.11
Co 86249	16.91	16.86	16.95	16.91
CD (0.05%)				0.18
CV (%)				0.60

Table 5. 4. CCS % at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	12.35	12.65	12.86	12.62
CoA 13 325	12.15	12.22	12.52	12.30
CoA 13 326	12.74	12.50	12.45	12.56
CoA 13 327	12.27	11.95	11.63	11.95
CoA 13 328	12.81	12.70	12.62	12.71
CoC 13 339	12.88	13.08	13.15	13.04
CoOr 13 346	12.61	12.45	12.34	12.47
CoV 12 357	12.42	12.36	12.28	12.36
Standard				
CoV 92102	12.64	12.75	12.86	12.75
Co 7219	12.05	12.10	12.37	12.17
Co 86249	11.57	11.35	11.28	11.40
CD (0.05%)				0.32
CV (%)				1.50

Table 5. 5. Brix % at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	20.35	20.42	20.54	20.44
CoA 13 325	20.32	20.18	20.27	20.26
CoA 13 326	20.64	20.72	20.55	20.64
CoA 13 327	20.22	20.28	20.35	20.28
CoA 13 328	20.75	20.81	20.95	20.84
CoC 13 339	21.25	21.32	21.54	21.37
CoOr 13 346	20.74	20.55	20.62	20.64
CoV 12 357	20.57	20.41	20.52	20.50
Standard				
CoV 92102	20.85	20.92	20.77	20.85
Co 7219	20.15	19.92	20.13	20.07
Co 86249	19.91	19.87	19.75	19.84
CD (0.05%)				0.17
CV (%)				0.48

Table 5. 6. Purity % at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	89.21	89.32	89.46	89.33
CoA 13 325	88.43	88.21	88.27	88.30
CoA 13 326	88.65	88.72	88.59	88.65
CoA 13 327	89.45	89.56	89.51	89.51
CoA 13 328	89.75	89.81	89.95	89.84
CoC 13 339	90.27	90.32	90.43	90.34
CoOr 13 346	89.71	89.55	89.62	89.63
CoV 12 357	89.57	89.41	89.51	89.50
Standard				
CoV 92102	90.32	90.15	90.20	90.22
Co 7219	89.15	88.45	88.75	88.78
Co 86249	88.86	88.77	88.65	88.76
CD (0.05%)				0.23
CV (%)				0.15

Table 5. 7. Pol. % (cane) at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	13.26	13.45	13.52	13.41
CoA 13 325	13.45	13.22	13.34	13.34
CoA 13 326	13.61	13.73	13.82	13.72
CoA 13 327	13.52	13.64	13.71	13.62
CoA 13 328	13.75	13.82	13.94	13.84
CoC 13 339	13.95	14.15	14.05	14.05
CoOr 13 346	13.74	13.57	13.62	13.64
CoV 12 357	13.52	13.41	13.61	13.51
Standard				
CoV 92102	13.91	13.84	13.67	13.81
Co 7219	13.55	13.25	13.32	13.37
Co 86249	13.24	13.18	13.45	13.29
CD (0.05%)				0.20
CV (%)				0.85

Table 5. 8. Extraction % at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	49.55	50.84	49.35	49.91
CoA 13 325	50.85	50.71	50.28	50.61
CoA 13 326	49.15	48.65	48.75	48.85
CoA 13 327	49.65	49.45	49.81	49.64
CoA 13 328	50.15	50.26	51.17	50.53
CoC 13 339	50.55	50.44	51.35	50.78
CoOr 13 346	49.76	49.47	49.92	49.72
CoV 12 357	50.25	49.75	49.87	49.96
Standard				
CoV 92102	50.12	50.33	50.45	50.30
Co 7219	48.15	48.37	48.51	48.34
Co 86249	48.52	49.25	48.35	48.71
CD (0.05%)				0.72
CV (%)				0.85

Table 5. 9. Fibre % at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	13.34	13.55	13.45	13.45
CoA 13 325	13.45	13.65	13.54	13.55
CoA 13 326	13.58	13.51	13.75	13.61
CoA 13 327	13.45	13.52	13.63	13.53
CoA 13 328	13.26	13.47	13.08	13.27
CoC 13 339	13.53	13.44	13.28	13.42
CoOr 13 346	13.61	13.55	13.45	13.54
CoV 12 357	13.27	13.35	13.43	13.35
Standard				
CoV 92102	13.42	13.49	13.34	13.42
Co 7219	13.45	13.17	13.53	13.38
Co 86249	13.67	13.54	13.41	13.54
CD (0.05%)				0.22
CV (%)				0.96

Table 5. 10. NMC ('000/ha) at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	121.17	102.34	112.82	112.11
CoA 13 325	107.36	114.85	120.65	114.29
CoA 13 326	97.55	108.41	110.15	105.37
CoA 13 327	102.36	112.85	118.81	111.34
CoA 13 328	108.21	110.47	101.95	106.88
CoC 13 339	112.65	117.95	110.35	113.65
CoOr 13 346	94.77	99.64	110.27	101.56
CoV 12 357	105.95	116.28	115.81	112.68
Standard				
CoV 92102	100.18	121	109.25	110.14
Co 7219	91.42	102.34	88.95	94.24
Co 86249	90.52	94.73	107.61	97.62
CD (0.05%)				11.60
CV (%)				6.35

Table 5. 11. Stalk length (cm) at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	274.00	268.00	285.00	275.67
CoA 13 325	265.00	280.00	277.00	274.00
CoA 13 326	255.50	260.00	265.00	260.17
CoA 13 327	271.00	265.00	281.00	272.33
CoA 13 328	285.33	276.00	270.00	277.11
CoC 13 339	280.50	289.00	272.00	280.50
CoOr 13 346	260.35	265.00	270.00	265.12
CoV 12 357	256.50	261.00	268.00	261.83
Standard				
CoV 92102	276.00	268.00	278.00	274.00
Co 7219	245.00	252.00	263.00	253.33
Co 86249	265.00	254.50	247.50	255.67
CD (0.05%)				12.66
CV (%)				2.77

Table 5. 12. Stalk diameter (cm) at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	2.62	2.65	2.75	2.67
CoA 13 325	2.61	2.8	2.72	2.71
CoA 13 326	2.55	2.51	2.45	2.50
CoA 13 327	2.81	2.77	2.65	2.74
CoA 13 328	2.95	2.82	2.75	2.84
CoC 13 339	2.95	3.00	3.05	3.00
CoOr 13 346	2.65	2.54	2.31	2.50
CoV 12 357	2.45	2.54	2.66	2.55
Standard				
CoV 92102	2.62	2.75	2.43	2.60
Co 7219	2.35	2.3	2.21	2.29
Co 86249	2.57	2.68	2.45	2.57
CD (0.05%)				0.17
CV (%)				3.80

Table 5. 13. Single cane weight (kg) at harvest

Clone	R - I	R - II	R III	Mean
CoA 12 324	1.31	1.21	1.14	1.22
CoA 13 325	1.16	1.28	1.13	1.19
CoA 13 326	1.27	1.19	1.15	1.20
CoA 13 327	1.16	1.22	1.08	1.15
CoA 13 328	1.30	1.35	1.26	1.30
CoC 13 339	1.42	1.31	1.35	1.36
CoOr 13 346	1.24	1.18	1.12	1.18
CoV 12 357	1.30	1.24	1.21	1.25
Standard				
CoV 92102	1.27	1.15	1.22	1.21
Co 7219	0.95	1.04	1.10	1.03
Co 86249	1.11	1.15	1.07	1.11
CD (0.05%)				0.10
CV (%)				4.81

Table 5. 14. Brix % at 10th month

Clone	R - I	R - II	R III	Mean
CoA 12 324	18.37	18.44	18.55	18.45
CoA 13 325	18.35	18.21	18.25	18.27
CoA 13 326	18.64	18.72	18.58	18.65
CoA 13 327	18.25	18.17	18.32	18.25
CoA 13 328	18.72	18.81	18.90	18.81
CoC 13 339	19.25	19.34	19.42	19.34
CoOr 13 346	18.65	18.52	18.47	18.55
CoV 12 357	18.52	18.45	18.57	18.51
Standard				
CoV 92102	18.71	18.85	18.78	18.78
Co 7219	18.25	18.15	18.04	18.15
Co 86249	17.75	17.82	17.64	17.74
CD (0.05%)				0.15
CV (%)				0.47

Table 5. 15. Sucrose % 10th month

Clone	R - I	R - II	R III	Mean
CoA 12 324	15.62	15.75	15.81	15.73
CoA 13 325	15.51	15.40	15.47	15.46
CoA 13 326	15.75	15.62	15.51	15.63
CoA 13 327	15.35	15.21	15.48	15.35
CoA 13 328	15.75	15.64	15.81	15.73
CoC 13 339	16.15	16.24	16.35	16.25
CoOr 13 346	15.52	15.60	15.71	15.61
CoV 12 357	15.63	15.51	15.45	15.53
Standard				
CoV 92102	15.71	15.64	15.83	15.73
Co 7219	15.15	15.27	14.94	15.12
Co 86249	14.85	14.72	14.64	14.74
CD (0.05%)				0.19
CV (%)				0.72

Table 5. 16. Purity % 10th month

Clone	R - I	R - II	R III	Mean
CoA 12 324	85.45	85.30	84.92	85.22
CoA 13 325	84.77	84.95	85.16	84.96
CoA 13 326	84.35	85.52	84.75	84.87
CoA 13 327	85.15	85.65	85.78	85.53
CoA 13 328	85.87	85.46	85.67	85.67
CoC 13 339	85.65	85.75	85.52	85.64
CoOr 13 346	84.41	85.92	84.72	85.02
CoV 12 357	85.65	85.45	84.75	85.28
Standard				
CoV 92102	85.72	85.34	84.85	85.30
Co 7219	84.94	85.71	83.75	84.80
Co 86249	83.52	84.37	83.92	83.94
CD (0.05%)				0.78
CV (%)				0.54

Table 5. 17. CCS % 10th month

Clone	R - I	R - II	R III	Mean
CoA 12 324	10.55	10.67	10.45	10.56
CoA 13 325	10.65	10.52	10.79	10.65
CoA 13 326	10.61	10.75	10.84	10.73
CoA 13 327	10.85	10.68	10.56	10.70
CoA 13 328	10.62	10.56	10.85	10.68
CoC 13 339	11.12	10.75	10.94	10.94
CoOr 13 346	10.44	10.52	10.65	10.54
CoV 12 357	10.65	10.42	10.33	10.47
Standard				
CoV 92102	10.81	10.75	10.67	10.74
Co 7219	10.65	10.73	10.84	10.74
Co 86249	10.25	10.31	10.47	10.34
CD (0.05%)				0.23
CV (%)				1.24

Table 5. 18. No of Shoots ('000/ha) – 180 days

Clone	R - I	R - II	R III	Mean
CoA 12 324	130.27	126.87	141.16	132.77
CoA 13 325	126.75	135.76	128.92	130.48
CoA 13 326	130.86	113.27	132.16	125.43
CoA 13 327	131.24	120.45	134.75	128.81
CoA 13 328	127.92	138.45	122.85	129.74
CoC 13 339	130.52	123.82	137.81	130.72
CoOr 13 346	126.28	117.52	131.64	125.15
CoV 12 357	120.55	128.45	132.95	127.32
Standard				
CoV 92102	118.15	134.21	130.26	127.54
Co 7219	113.55	125.92	106.45	115.31
Co 86249	108.24	111.62	123.76	114.54
CD (0.05%)				13.17
CV (%)				6.13

Table 5. 19. No of tillers ('000/ha) – 120 days

Clone	R - I	R - II	R III	Mean
CoA 12 324	136.35	130.22	145.76	137.44
CoA 13 325	128.61	141.18	132.29	134.03
CoA 13 326	135.75	118.45	136.97	130.39
CoA 13 327	134.65	126.45	140.71	133.94
CoA 13 328	136.36	145.55	141.13	141.01
CoC 13 339	136.85	128.64	143.72	136.40
CoOr 13 346	130.61	143.18	134.81	136.20
CoV 12 357	125.62	136.35	135.46	132.48
Standard				
CoV 92102	123.15	141.85	134.28	133.09
Co 7219	116.55	129.92	112.84	119.77
Co 86249	115.21	116.48	127.72	119.80
CD (0.05%)				12.43
CV (%)				5.52

Table 5. 20. Germination % – 30 days

Clone	R - I	R - II	R III	Mean
CoA 12 324	52.25	53.81	58.65	54.90
CoA 13 325	51.64	47.52	55.94	51.70
CoA 13 326	48.36	39.47	46.13	44.65
CoA 13 327	47.55	54.78	51.66	51.33
CoA 13 328	53.85	57.91	55.55	55.77
CoC 13 339	53.45	48.57	56.16	52.73
CoOr 13 346	47.37	48.46	62.47	52.77
CoV 12 357	46.75	51.85	48.32	48.97
Standard				
CoV 92102	56.32	65.15	60.47	60.65
Co 7219	46.37	50.46	58.72	51.85
Co 86249	49.65	52.85	55.35	52.62
CD (0.05%)				6.66
CV (%)				7.44

6. Fluff supply programme – 2015

1.	Total no. of Crosses received	65
		a) Zonal crosses: 08
		b) Station crosses: 22
		c) Poly crosses: 13
		d) General Collections: 22
2.	Total weight of Fluff received:	1010.5 g
3.	Date of sowing	04.03.2016 to 10.03.2016
4.	No. of crosses / GC germinated	35
5.	Total no. of seedlings germinated	4189

Table 6. 1. Number of Seedlings Germinated

Type of cross	No. of Cross Sown	Total no. of Seedlings obtained
Station Crosses	22	1715
Zonal crosses	08	535
Poly Crosses	13	816
General Collections	22	1123
Total	65	4189

Table 7. Meteorological Data - 2015

Month	Temperature		RH (%)	RF (mm)	No. of Rainy days
	Max (0°C)	Min (0°C)			
January 2015	30.4	22.3	83.54	0.00	0
February 2015	31.9	18.7	81.57	0.00	0
March 2015	33.1	21.0	81.23	0.00	0
April 2015	35.5	25.5	80.5	0.00	0
May 2015	39.1	23.6	84.5	0.00	0
June 2015	38.0	24.0	74.92	0.00	0
July 2015	38.6	25.7	68.99	0.00	0
August 2015	35.1	25.6	81.35	66.00	6
September 2015	38.2	23.4	75.15	46.50	3
October 2015	34.8	22.3	88.27	285.5	12
November 2015	32.3	22.1	95.19	1172.5	19
December 2015	31.4	21.6	90.26	999.0	9
Total				2569.5	49