

From

Regional Director,
CCS HAU, Regional Research Station,
Uchani, Karnal

To

Director/ Principal Investigator,
AICRP(S)-Crop Improvement
Sugarcane Breeding Institute,
Coimbatore – 641007 (T.N.)

Memo No. _____

Dt. 15.05.2017

Sub:- AICRP(S) – Data of crop improvement trials for the year 2016-17 regarding

Kindly find enclosed here with the data recorded in the trials conducted at Regional Research station Uchani, Karnal centre for the year 2016-17. As requested, the data has been prepared as per the prescribed format. The information on Fluff supply programme is also enclosed herewith. As per allotment, four AICRP experiments were conducted during the period under report. The soft as well as hard copy of mean data as well as replicated data recorded on IVT (ML), AVT Early (I Plant), AVT Early (II Plant) and AVT Early (Ratoon) along with fluff information is being sent herewith for your kind information and necessary action, please.

Regional Director

Fluff supply and National Hybridization Programme at RRS, Uchani, Karnal

Table 1: Seedlings generated from fluff of crosses affected in 2015-16. Fluff received on 18thFeb, 2016.

Cross	Fluff wt. (g)	No of Seedlings transplanted	Cross germinated	No of seedlings survived	Survival %
Station crosses coimbatore + Agali	353+48.5=401.5	4068	8/21 (Coimbatore) and 0/3 (Agali)	3068	75.42
Zonal crosses	64.5	2097	3/6	1468	70.00
Poly crosses	40.5	1423	3/8	1030	72.38
Agali G.C.	32.5	578	2/3	434	75.09
coimbatore G.C.	365.0	4540	5/11	3708	81.67
Total	904.0	12706	21/52	9708	76.40

Out of 52 crosses, the fluff of 21 crosses germinated with 76.4% survival. Fluff of six zonal crosses received in Feb., 2016 at RRS Uchani centre, only three crosses viz., CoS 8436 x Co 89003, Co 98010 x Co 775 and Co 98002 x Co 94008 germinated and 2097 seedlings were transplanted in the field in July, 2016 and 1468 seedlings of these crosses survived in the field. A total of 45801 seedlings which were planted in July, 2015 were harvested in January 2016. Selection was practiced in ratoon seedlings (33927/45801) in Oct./Nov., 2016 and 3212 seedlings were selected for evaluation in settling I during 2017-18.

The performance of zonal crosses in ground nursery 2016-17 at RRS Uchani, Karnal

Table 2: Number of zonal crosses attempted and seedlings selected in ratoon

Sr No.	Name of cross	Fluff wt. (g)	Clones Planted	Clones survive	Clones selected
1	B 091 x Co 453	11.0	368	300	60
2	Co 98010 x Co 1148	10.0	236	180	34
3	Co 98008 x Co 775	9.5	52	30	11
4	CoS 8436 x CoP 97222	15.0	162	60	32
5	Co 0238 x CoSe 92223	12.0	144	100	28
6	CoS 8436 x Co 89003	10.0	212	160	45
7	MS 68147 x CoV 92102	21.0	805	435	68
8	Co 7314 x Co 1118	7.0	144	105	17
9	Co 0124 x Co 94008	4.0	16	10	9
10	LG 95053 x B 091	17.0	NG	NA	-
11	Co 0237 x CoS 8436	11.5	NG	NA	-
12	Co 98008 x Co 89003	14.0	NG	NA	-
	Total	142.0	1939	1380	294

Fluff of twelve zonal crosses was received on 27thFeb, 2015. Fluff sowing completed in 2nd week of March, 2015. Seedlings were transplanted in the field in July, 2015. The plant seedlings of these zonal crosses were harvested in Jan, 2016. Selection was practiced in ratoon seedlings in Oct/ Nov., 2016. Out of 1380/1939 seedlings of zonal crosses, 294 selections were made and planted as Settling I in Oct./Nov., 2016.

North West Zone

CCSHAU Regional Research Station, Uchani, Karnal

1. Initial Varietal Trial (Midlate)

Sr. No.	Entry	CCS (t/ha)	Cane yield (t/ha)	CCS % (12 m)	Sucrose % (12 m)	Brix % (12 m)	Purity % (12 m)	NMC at 12 m ('000/ha)
1	Co 13035	9.37	91.13	10.28	15.53	19.1	81.27	140.0
2	Co 13036	9.19	71.07	12.93	18.86	21.7	86.80	123.7
3	CoH 13261	11.94	92.13	12.95	19.09	22.5	84.97	143.7
4	CoH 13262	10.72	87.20	12.30	18.43	22.4	82.42	139.3
5	CoH 13263	11.29	85.40	13.23	19.29	22.2	86.89	139.7
6	CoLk 13204	5.65	75.93	7.45	12.15	17.0	71.48	144.0
7	CoLk 13205	10.95	93.07	11.77	17.40	20.6	84.59	136.7
8	CoPant 13223	8.90	72.60	12.24	18.00	21.1	85.49	138.0
9	CoPant 13224	11.29	86.87	13.00	19.19	22.6	84.80	143.3
10	CoPb 13182	9.20	80.60	11.44	16.50	18.6	88.84	139.3
11	CoPb 13183	7.99	71.40	11.21	16.82	20.5	82.22	137.7
12	CoS 13232	9.41	71.83	13.08	18.96	21.6	88.13	139.0
13	CoS 13233	10.92	87.80	12.43	18.39	21.8	84.35	146.0
Standards								
1	CoS 767	9.46	84.60	11.18	16.32	18.8	86.63	147.7
2	CoS 8436	9.01	72.40	12.44	18.44	21.9	84.08	138.0
3	CoPant 97222	10.07	87.60	11.49	16.50	18.4	89.73	144.3
	SE (m)	0.34	1.94	0.37	0.40	0.36	1.84	1.38
	CD	0.99	5.64	1.08	1.15	1.06	5.35	4.02
	CV	6.07	4.10	5.42	3.91	3.05	3.78	1.71

Initial Varietal Trial (Midlate)

S. No.	Entry	Stalk Length (cm) 12M	Stalk Diameter (cm) 12M	Single cane weight (kg) 12M	CCS % (10 m)	Sucrose % (10 m)	Brix % (10 m)	Purity % (10 m)	No. of shoots ('000/ha) 240 days	No. of tillers ('000/ha) 120 days	Germination % (45 days)
1	Co 13035	239.3	2.29	0.74	9.99	14.81	17.6	84.09	145.3	174.0	49.33
2	Co 13036	220.0	2.21	0.72	12.28	17.94	20.7	86.56	133.0	142.7	49.67
3	CoH 13261	244.7	2.34	0.71	12.93	18.83	21.6	87.07	149.3	170.7	48.00
4	CoH 13262	236.7	2.40	0.70	11.86	17.52	20.7	84.55	144.0	164.7	48.33
5	CoH 13263	234.0	2.17	0.78	11.19	16.25	18.5	87.69	142.0	162.0	50.00
6	CoLk 13204	226.7	1.73	0.58	10.68	15.76	18.6	84.92	148.0	171.3	51.00
7	CoLk 13205	262.0	2.15	0.74	11.10	16.36	19.2	85.08	141.0	166.0	46.33
8	CoPant 13223	196.7	2.17	0.63	9.02	13.66	16.9	80.71	142.0	157.7	48.67
9	CoPant 13224	235.3	2.31	0.71	10.66	15.72	18.5	84.81	148.7	168.7	45.67
10	CoPb 13182	236.7	2.21	0.63	11.68	16.95	19.3	87.74	143.3	163.3	49.00
11	CoPb 13183	225.3	2.04	0.66	9.72	14.60	17.8	81.93	140.0	150.7	46.33
12	CoS 13232	195.3	1.93	0.68	12.87	18.52	20.8	89.19	142.7	157.3	42.67
13	CoS 13233	220.7	2.18	0.78	10.36	15.53	18.9	82.31	150.0	168.3	50.33
Standards											
1	CoS 767	242.7	2.02	0.66	11.30	16.65	19.6	84.95	152.0	170.3	48.67
2	CoS 8436	192.0	2.31	0.64	11.27	16.49	19.1	86.23	144.0	161.0	49.67
3	CoPant 97222	228.0	2.14	0.67	10.71	15.84	18.8	84.44	149.3	170.0	50.33
	SE (m)	4.24	0.03	0.01	0.29	0.34	0.30	1.30	1.73	2.42	1.29
	CD	12.30	0.08	0.03	0.84	0.98	0.87	3.78	5.03	7.01	3.75
	CV	3.23	2.17	2.46	4.52	3.56	2.69	2.65	2.08	2.56	4.63

Morphological Characters : Initial Varietal Trial (Mid Late)

Sr. No.	Clone	Characters
1	Co-13035	Purple sheath, waxy cane, splits absent, non-lodging, flowering absent
2	Co-13036	Purple sheath, green waxy cane, low NMC, flowering absent
3	CoH-13261	Green cane, brown radish sheath, medium thick cane, non lodging, tall, soft, good ratoon, no flowering
4	CoH-13262	Medium green cane & sheath, solid, juicy, agave, no flowering
5	CoH-13263	Dark purple sheath, non lodging, medium growth, solid, juicy, no flowering
6	CoLK-13204	Green sheath and cane, lodging, flowering absent
7	CoLK-13205	Purple sheath, waxy tall cane, flowering absent
8	CoP-13223	Medium green cane, flowering absent
9	CoP-13224	Green cane & top, medium tall cane, no flowering
10	CoPb-13182	Medium thick green waxy cane, logging tendency, no flowering
11	CoPb-13183	Purple sheath, medium tall, agave, non-lodging, no flowering
12	CoS-13232	Stunted green cane, slow growing, flowering absent
13	CoS-13233	More trash, waxy sheath, good cane, flowering absent

CCSHAU Regional Research Station, Uchani, Karnal

2. Advanced Varietal Trial (Early – I Plant)

Sr. No.	Entry	CCS (t/ha)	Cane yield (t/ha)	CCS % (10m)	Sucrose % (10m)	Brix % (10 m)	Purity % (10m)	Extraction % (10m)	NMC at 10m ('000/ha)
1	Co 12026	11.98	85.93	13.94	20.15	22.77	88.56	53.0	106.7
2	Co 12027	10.99	74.81	14.68	20.95	23.03	90.95	51.0	113.5
3	CoLk 12203	10.96	94.57	11.60	16.70	18.73	89.21	53.0	109.5
4	CoPant 12221	10.75	89.87	11.97	17.43	20.00	87.16	50.0	117.9
Standards									
1	CoJ 64	10.93	81.25	13.45	19.05	20.63	92.36	53.0	120.3
2	Co 0238	12.73	91.24	13.94	19.79	21.53	91.91	51.0	107.5
	SE (m)	0.36	2.13	0.24	0.28	0.36	1.13	0.86	2.69
	CD	1.15	6.80	0.78	0.89	1.16	N/A	N/A	8.58
	CV	0.05	4.28	3.18	2.55	2.99	2.75	2.86	4.13

Advanced Varietal Trial (Early – I Plant)

Sr.No.	Entry	Stalk Length (cm) at 10M	Stalk Diameter (cm) at 10M	Single cane weight (kg) at 10M	CCS % (8 m)	Sucrose % (8 m)	Brix % (8 m)	Purity % (8 m)	No. of shoots ('000/ha) 240 days	No. of tillers ('000/ha) 120 days	Germination % (45 days)
1	Co 12026	263.3	2.50	0.73	12.88	18.62	21.07	88.56	126.8	147.8	49.17
2	Co 12027	230.0	2.30	0.70	12.89	18.93	22.10	85.70	131.3	150.1	45.83
3	CoLk 12203	253.3	2.31	0.83	7.85	12.71	17.60	72.27	141.1	158.7	51.40
4	CoPant 12221	283.3	2.20	0.78	10.29	15.47	18.90	81.79	135.9	143.2	52.50
Standards											
1	CoJ 64	230.0	2.20	0.71	12.18	17.99	21.27	84.63	140.4	151.4	50.93
2	Co 0238	281.7	2.57	0.90	11.38	16.72	19.53	85.65	134.6	143.1	53.07
	SE (m)	6.47	0.06	0.02	0.29	0.32	0.46	1.89	2.17	1.70	2.30
	CD	20.65	0.19	0.08	0.92	1.01	1.47	6.04	6.94	5.42	N/A
	CV	4.36	4.30	5.23	4.43	3.26	3.97	3.94	2.79	1.97	7.90

Morphological Characters: Advance Varietal Trial (Early I Plant)

Sr. No.	Clone	Characters
1	Co-12026	Partial lodged bud sprouting observed, solid, soft, juicy cane, non-synchronous, non flowering, leaf yellowing observed
2	Co-12027	Partial lodged, green cane, medium thin, non-synchronous, light purple waxy sheath, non flowering
3	CoLK-12203	Medium thin cane, small cavity, less juicy, green waxy cane, non flowering
4	CoP-12221	Slight cavity, non-synchronous, medium thin, green waxy cane, tall, partial lodging
5	CoJ-64	Green cane, lodging, light purple waxy sheath, solid, soft, medium cane
6	Co-0238	Partial lodging, hard, medium thick waxy cane, blade formed

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3. Advanced Varietal Trial (Early II Plant)

Sr. No.	Entry	CCS (t/ha)	Cane yield (t/ha)	CCS % (10m)	Sucrose % (10m)	Brix % (10 m)	Purity % (10m)	Extraction % (10m)	NMC at 10m ('000/ha)
1	CoH 11262	12.73	96.13	13.2	19.0	21.2	89.8	54.0	115.4
2	CoLk 11201	9.53	72.87	13.1	18.8	21.0	89.6	55.3	123.5
3	CoLk 11202	13.59	100.97	13.5	19.4	21.7	89.3	54.1	123.7
4	CoLk 11203	11.66	87.70	13.3	19.2	21.7	88.4	51.3	137.4
Standards									
1	CoJ 64	11.25	85.33	13.2	18.9	21.1	89.8	54.3	129.9
2	Co 0238	13.71	101.13	13.5	19.4	21.6	89.9	52.2	122.5
	SE (m)	0.46	2.27	0.22	0.28	0.36	1.03	0.73	2.70
	CD	1.47	7.24	N/A	N/A	N/A	N/A	2.34	8.60
	CV	6.63	4.33	2.81	2.49	2.92	1.20	2.37	3.72

Advanced Varietal Trial (Early II Plant)

Sr.No.	Entry	Stalk Length (cm) at 10M	Stalk Diameter (cm) at 10M	Single cane weight (kg) at 10M	CCS % (8 m)	Sucrose % (8 m)	Brix % (8 m)	Purity % (8 m)	No. of shoots ('000/ha) 240 days	No. of tillers ('000/ha) 120 days	Germination % (45 days)
1	CoH 11262	234.7	2.36	0.98	11.3	16.6	19.6	84.8	130.4	151.1	51.07
2	CoLk 11201	194.7	2.22	0.73	11.7	17.6	21.4	82.0	130.9	150.6	50.33
3	CoLk 11202	226.0	2.28	0.90	11.6	17.6	22.0	80.3	128.7	143.1	49.27
4	CoLk 11203	235.3	1.97	0.74	13.3	19.3	22.0	87.6	144.1	164.6	50.53
Standards											
1	CoJ 64	198.7	2.13	0.77	12.7	18.5	21.4	86.5	135.3	146.1	51.93
2	Co 0238	238.3	2.43	0.99	12.4	18.3	21.6	84.7	131.5	139.0	53.73
	SE (m)	6.62	0.03	0.03	0.40	0.43	0.26	1.52	2.50	2.17	1.00
	CD	21.13	0.11	0.08	1.26	1.38	0.84	N/A	7.98	6.94	N/A
	CV	5.18	2.63	5.07	5.63	4.18	2.13	3.13	3.25	2.53	3.40

Morphological Characters: Advance Varietal Trial (Early II Plant)

Sr. No.	Clone	Characters
1	CoH-11262	Green waxy sheath, medium thick cane, non flowering
2	CoLK-11201	Purple sheath, non flowering, medium thick cane, non lodging
3	CoLK-11202	Green waxy sheath, no flowering, good medium cane, non lodging, non-synchronous canes
4	CoLK-11203	Medium thin, non-synchronous canes, non flowering, narrow blade, green sheath
5	CoJ-64	Good MNC, non lodging, non flowering
6	Co-0238	Tall, good stand, partial lodging, medium thick, blade formed

CCSHAU Regional Research Station, Uchani, Karnal

4. Advanced Varietal Trial (Early Ratoon)

Sr. No.	Entry	CCS (t/ha)	Cane yield (t/ha)	CCS % (9 m)	Sucrose % (9 m)	Brix % (9 m)	Purity % (9 m)	Extraction % (9 m)
1	CoH 11262	5.18	42.67	12.16	17.49	19.57	89.64	51.0
2	CoLk 11201	8.36	70.00	11.93	17.63	20.87	84.54	53.3
3	CoLk 11202	11.66	88.73	13.15	19.25	22.33	86.19	52.3
4	CoLk 11203	9.88	77.13	12.81	18.86	22.17	85.11	49.3
Standards								
1	CoJ 64	8.91	69.40	12.86	18.40	20.33	90.59	53.3
2	Co 0238	10.20	83.80	12.21	17.94	20.97	85.64	51.3
	SE (m)	0.21	2.30	0.37	0.36	0.49	2.49	0.70
	CD	0.67	7.32	N/A	1.16	1.56	N/A	2.23
	CV	4.01	5.52	5.18	3.45	4.02	4.96	2.34

Advanced Varietal Trial (Early Ratoon)

Sr. No.	Entry	NMC at 9 months ('000/ha)	Stalk Length (cm) at 9M	Stalk Diameter (cm) at 9M	Single cane weight (kg) at 9M	No. of shoots ('000/ha) 180 days	No. of tillers ('000/ha) 90 days
1	CoH 11262	60.10	178.0	2.19	0.82	67.1	72.47
2	CoLk 11201	112.73	182.0	2.11	0.66	141.9	124.53
3	CoLk 11202	113.07	209.3	2.15	0.79	146.4	125.17
4	CoLk 11203	124.87	224.0	1.81	0.61	147.2	139.70
Standards							
1	CoJ 64	112.93	186.0	2.04	0.70	142.1	126.47
2	Co 0238	102.60	212.7	2.27	0.83	131.6	117.07
	SE (m)	2.84	3.62	0.02	0.02	2.45	1.68
	CD	9.06	11.54	0.07	0.06	7.81	5.37
	CV	4.71	3.15	1.76	4.07	3.28	2.48

CCSHAU Regional Research Station, Uchani, Karnal

1. Initial Varietal Trial (Mid Late)

Sr. No	Clone	CCS(t/ha)			Cane yield (t/ha) at 12M			Stalk diameter (cm) 12M			Single cane wt. (kg) at 12M			Stalk length (cm) 12M		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	Co-13035	8.90	9.91	9.30	90.8	94.6	88.0	2.26	2.3	2.32	0.76	0.74	0.72	240	232	246
2	Co-13036	9.29	8.64	9.66	70.4	68.2	74.6	2.12	2.24	2.26	0.71	0.72	0.73	220	215	225
3	CoH-13261	11.51	12.96	11.36	88.4	96.6	91.4	2.32	2.36	2.34	0.69	0.71	0.72	250	240	244
4	CoH-13262	10.90	10.80	10.45	86.6	84.8	90.2	2.4	2.42	2.38	0.72	0.7	0.69	236	234	240
5	CoH-13263	11.05	11.49	11.33	86.4	88.2	81.6	2.2	2.12	2.18	0.76	0.81	0.77	232	240	230
6	CoLK-13204	5.33	5.52	6.11	68.8	78.6	80.4	1.78	1.68	1.72	0.55	0.58	0.61	226	230	224
7	CoLK-13205	10.37	10.74	11.76	86.4	94.6	98.2	2.1	2.16	2.2	0.72	0.75	0.75	260	270	256
8	CoP-13223	8.13	8.65	9.91	72.6	70.4	74.8	2.12	2.22	2.16	0.61	0.63	0.64	210	200	180
9	CoP-13224	10.18	11.96	11.73	86.4	90.2	84.0	2.28	2.3	2.36	0.7	0.72	0.7	236	240	230
10	CoPb-13182	9.57	8.90	9.13	76.8	84.2	80.8	2.16	2.24	2.22	0.61	0.64	0.63	228	244	238
11	CoPb-13183	7.99	8.16	7.83	71.4	68.6	74.2	2.06	2.1	1.96	0.65	0.66	0.67	220	230	226
12	CoS-13232	9.06	10.42	8.74	70.6	76.4	68.5	1.86	2	1.94	0.7	0.68	0.67	190	210	186
13	CoS-13233	9.90	11.17	11.70	84.8	88.4	90.2	2.1	2.2	2.24	0.8	0.76	0.78	220	230	212
	Standards															
1	CoS-767	9.45	8.71	10.22	80.8	84.2	88.8	2.04	2.06	1.96	0.65	0.68	0.66	238	248	242
2	CoS-8436	8.84	9.39	8.78	72.2	74.6	70.4	2.3	2.36	2.28	0.62	0.65	0.64	200	190	186
3	CoP-97222	9.57	10.13	10.51	84.4	88.0	90.4	2.12	2.14	2.16	0.68	0.67	0.66	220	230	234

Initial Varietal Trial (Mid Late)

Sr.No	Clone	NMC at 12 months (*000/ha)			No. of shoots 000/ha at 240 days			No of Tillers (000/ha & 120 days			Germination % at 45 days		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	Co-13035	142	140	138	150	144	142	180	174	168	52	49	47
2	Co-13036	122	128	121	134	129	136	144	136	148	50	48	51
3	CoH-13261	146	144	141	150	152	146	176	170	166	46	48	50
4	CoH-13262	140	136	142	144	140	148	164	160	170	48	47	50
5	CoH-13263	140	138	141	142	140	144	162	158	166	49	49	52
6	CoLK-13204	144	146	142	148	150	146	176	170	168	51	53	49
7	CoLK-13205	140	136	134	144	140	139	164	168	166	45	46	48
8	CoP-13223	138	137	139	140	142	144	154	158	161	46	49	51
9	CoP-13224	142	143	145	146	148	152	164	170	172	44	47	46
10	CoPb-13182	136	140	142	138	144	148	158	164	168	52	48	47
11	CoPb-13183	140	136	137	142	138	140	154	150	148	46	49	44
12	CoS-13232	137	138	142	140	142	146	160	154	158	45	42	41
13	CoS-13233	146	148	144	150	152	148	171	166	168	52	48	51
	Standards												
1	CoS-767	148	146	149	154	150	152	176	168	167	48	52	46
2	CoS-8436	140	138	136	146	144	142	161	164	158	50	51	48
3	CoP-97222	146	142	145	152	146	150	174	166	170	48	54	49

Initial Varietal Trial (Mid Late)

Sr.No	Clone	Brix % at 12M			Sucrose % at 12M			Purity % at 12M			CCS % at 12M		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	Co-13035	18.2	18.4	20.8	14.79	15.50	16.29	81.26	84.26	78.31	9.80	10.47	10.57
2	Co-13036	21.9	21.8	21.5	19.16	18.62	18.81	87.51	85.40	87.48	13.19	12.66	12.94
3	CoH-13261	22.5	22.8	22.1	19.16	19.64	18.48	85.18	86.14	83.60	13.02	13.41	12.43
4	CoH-13262	22.9	21.8	22.4	18.86	18.69	17.74	82.34	85.73	79.19	12.58	12.73	11.59
5	CoH-13263	22.2	21.8	22.6	18.86	18.97	20.04	84.93	87.04	88.69	12.79	13.03	13.89
6	CoLK-13204	17.6	16.8	16.6	12.60	11.67	12.17	71.60	69.49	73.34	7.74	7.03	7.59
7	CoLK-13205	20.4	20.3	21	17.57	16.91	17.71	86.14	83.28	84.35	12.00	11.35	11.97
8	CoP-13223	21.5	20.5	21.2	17.10	17.88	19.02	79.52	87.22	89.73	11.19	12.29	13.25
9	CoP-13224	22.8	22.6	22.5	18.05	19.43	20.09	79.15	85.96	89.30	11.79	13.25	13.96
10	CoPb-13182	19.0	18.4	18.3	17.62	15.60	16.29	92.73	84.77	89.00	12.46	10.57	11.30
11	CoPb-13183	21.5	20.2	19.7	17.10	17.41	15.95	79.52	86.16	80.99	11.19	11.89	10.55
12	CoS-13232	22.7	20.2	21.8	19.05	19.12	18.71	83.90	94.64	85.84	12.84	13.64	12.76
13	CoS-13233	21.6	21.3	22.5	17.60	18.45	19.12	81.46	86.63	84.96	11.68	12.64	12.97
	Standards												
1	CoS-767	18.8	18.1	19.6	16.81	15.29	16.86	89.42	84.47	86.01	11.69	10.34	11.51
2	CoS-8436	22.5	21.7	21.6	18.40	18.52	18.38	81.79	85.36	85.09	12.24	12.59	12.48
3	CoP-97222	18.1	17.9	19.2	16.26	16.38	16.86	89.86	91.52	87.80	11.34	11.52	11.62

Initial Varietal Trial (Mid Late)

Sr.No	Clone	Brix % at 10M			Sucrose % at 10M			Purity % at 10M			CCS % at 10M		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	Co-13035	17.7	18.0	17.1	14.79	15.50	14.12	83.56	86.13	82.60	9.95	10.59	9.44
2	Co-13036	20.1	21.1	21.0	17.57	18.33	17.93	87.42	86.88	85.37	12.09	12.57	12.19
3	CoH-13261	22.5	21.2	21.2	19.33	18.76	18.40	85.92	88.49	86.81	13.19	12.98	12.62
4	CoH-13262	20.8	21.4	20.0	17.98	17.62	16.98	86.42	82.33	84.89	12.30	11.76	11.51
5	CoH-13263	18.5	18.0	19.1	15.76	16.24	16.74	85.21	90.22	87.64	10.71	11.34	11.53
6	CoLK-13204	19.2	18.2	18.3	15.79	16.34	15.15	82.23	89.75	82.77	10.53	11.38	10.14
7	CoLK-13205	20.0	18.9	18.8	16.79	15.91	16.38	83.93	84.16	87.14	11.32	10.74	11.25
8	CoP-13223	16.9	16.7	17.2	12.98	14.10	13.91	76.82	84.43	80.87	8.33	9.53	9.19
9	CoP-13224	19.0	18.5	18.1	16.53	15.79	14.86	86.98	85.34	82.10	11.34	10.73	9.90
10	CoPb-13182	19.7	18.6	19.7	17.02	16.79	17.05	86.42	90.25	86.54	11.65	11.73	11.67
11	CoPb-13183	17.1	18.5	17.8	13.43	15.74	14.62	78.56	85.08	82.15	8.74	10.69	9.75
12	CoS-13232	20.8	20.6	20.9	18.36	18.31	18.90	88.25	88.88	90.45	12.69	12.70	13.22
13	CoS-13233	19.0	18.8	18.8	15.05	15.86	15.67	79.22	84.36	83.35	9.83	10.72	10.52
	Standards												
1	CoS-767	20.0	19.2	19.6	16.93	15.91	17.12	84.65	82.85	87.35	11.46	10.65	11.77
2	CoS-8436	19.1	18.6	19.7	16.81	16.12	16.55	88.01	86.67	84.01	11.60	11.04	11.16
3	CoP-97222	19.1	18.5	18.7	15.79	15.62	16.12	82.66	84.44	86.21	10.56	10.56	11.02

2. Advance Varietal Trial (Early I Plant)

Sr.No	Clone	CCS (t/ha)			Cane yield (t/ha)			Stalk diameter (cm)			Single cane wt. (kg)			Stalk length (cm)		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	Co-12026	11.53	11.91	12.51	83.70	85.93	88.15	2.46	2.40	2.64	0.75	0.74	0.70	260	275	255
2	Co-12027	10.70	10.77	11.48	74.07	72.59	77.78	2.30	2.22	2.38	0.65	0.70	0.75	230	220	240
3	CoLK-12203	10.64	11.61	10.64	97.04	96.30	90.37	2.40	2.20	2.32	0.80	0.82	0.88	250	245	265
4	CoP-12221	10.61	11.42	10.21	94.81	90.37	84.44	2.10	2.20	2.30	0.80	0.76	0.79	280	295	275
	Standards															
1	CoJ-64	10.50	11.17	11.11	78.56	81.48	83.70	2.30	2.20	2.10	0.70	0.76	0.68	240	220	230
2	Co-0238	13.74	12.19	12.25	95.19	88.15	90.37	2.56	2.64	2.50	0.85	0.90	0.96	285	290	270

Sr.No	Clone	NMC after 10 months ('000/ha) at harvest			No. of shoots (000/ha) at 240 days			Germination % at 45 days			No of Tillers (000/ha & 120 days)		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	Co-12026	110.8	106.4	102.8	130.2	124.6	125.6	51.4	46.7	49.4	152.4	146.2	144.8
2	Co-12027	116.7	115.2	108.6	127.3	135.6	131.1	46.7	48.6	42.2	148.4	151.6	150.4
3	CoLK-12203	112.8	109.4	106.2	142.7	136.2	144.4	48.6	52.3	53.3	161.2	154.8	160.2
4	CoP-12221	110.8	118.8	124.1	136.7	132	138.9	48.9	51.4	57.2	146.6	142.8	140.2
	Standards												
1	CoJ-64	120.4	116.3	124.2	138.4	136.2	146.7	55.6	45.8	51.4	150.2	149.6	154.5
2	Co-0238	110.8	106.4	105.3	131.1	134.4	138.2	55.0	46.7	57.5	146.4	142.8	140.2

Advance Varietal Trial (Early I Plant)

Sr.No	Clone	Brix % at 10M			Sucrose % at 10M			Purity % at 10M			CCS % at 10M			Extraction %		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	Co-12026	22.8	21.7	23.8	20.00	19.76	20.69	87.71	91.06	86.92	13.78	13.86	14.19	52.0	54.0	53.0
2	Co-12027	23.0	23.0	23.1	20.71	21.09	21.04	90.04	91.70	91.10	14.45	14.84	14.76	50.0	52.0	51.0
3	CoLK-12203	19.2	18.8	18.2	16.22	17.17	16.72	84.46	91.32	91.84	10.97	12.06	11.77	54.0	53.0	52.0
4	CoP-12221	20.1	19.8	20.1	16.69	18.02	17.57	83.04	91.03	87.42	11.19	12.64	12.09	50.0	48.0	52.0
	Standards															
1	CoJ-64	20.4	21.3	20.2	18.90	19.50	18.76	92.66	91.54	92.87	13.36	13.71	13.27	55.0	52.0	52.0
2	Co-0238	21.8	21.9	20.9	20.35	19.78	19.24	93.36	90.33	92.04	14.44	13.82	13.56	50.0	52.0	51.0

Sr.No	Clone	Brix % at 8M			Sucrose % at 8M			Purity % at 8M			CCS % at 8M		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	Co-12026	21.9	19.5	21.8	19.14	18.26	18.45	87.40	93.65	84.64	13.17	12.97	12.49
2	Co-12027	22.7	22.6	21.0	19.00	19.33	18.45	83.69	85.54	87.86	12.79	13.16	12.73
3	CoLK-12203	18.4	17.0	17.4	12.70	12.70	12.72	69.01	74.69	73.11	7.60	8.01	7.92
4	CoP-12221	19.8	18.3	18.6	16.74	14.55	15.12	84.54	79.52	81.30	11.33	9.53	10.02
	Standards												
1	CoJ-64	22.1	20.7	21.0	18.52	18.12	17.33	83.81	87.53	82.54	12.48	12.47	11.58
2	Co-0238	19.2	18.8	20.6	17.24	15.93	16.98	89.78	84.74	82.41	12.01	10.79	11.34

3. Advance Varietal Trial (Early II Plant)

Sr.No	Clone	CCS (t/ha)			Cane yield (t/ha) at 10M			Stalk diameter (cm) at 10M			Single cane wt. (kg) at 10M		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	CoH-11262	12.56	13.68	11.95	96.4	100.2	91.8	2.44	2.38	2.26	0.98	0.95	1.01
2	CoLK-11201	10.19	9.18	9.22	78.2	71.8	68.6	2.18	2.28	2.20	0.74	0.68	0.76
3	CoLK-11202	13.65	14.18	12.94	102.1	104.6	96.2	2.28	2.26	2.30	0.86	0.94	0.90
4	CoLK-11203	11.02	11.52	12.44	84.6	88.2	90.3	2.00	2.06	1.86	0.70	0.78	0.74
	Standards												
1	CoJ-64	12.00	10.33	11.44	88.4	81.0	86.6	2.16	2.20	2.02	0.70	0.76	0.84
2	Co-0238	14.79	13.08	13.25	106.0	100.6	96.8	2.40	2.48	2.42	0.96	0.94	1.07

Sr.No	Clone	Stalk length (cm) at 10M			NMC after 10 months ('000/ha) at harvest			No. of shoots (000/ha) at 240 days			Germination % at 45 days			No of Tillers (000/ha & 120 days)		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	CoH-11262	236	240	228	110.6	114.2	121.4	128.2	130.4	132.6	48.6	54.2	50.4	148.2	150.4	154.6
2	CoLK-11201	198	176	210	122.4	128.2	119.8	131.2	134.6	126.8	51.2	52.0	47.8	151.4	154.3	146.2
3	CoLK-11202	226	230	222	120.2	122.4	128.4	126.4	128.2	131.6	49.0	51.2	47.6	146.2	144.4	138.8
4	CoLK-11203	230	241	235	131.2	136.4	144.6	142.0	141.8	148.4	51.2	52.4	48.0	160.8	164.6	168.4
	Standards															
1	CoJ-64	194	190	212	132.8	130.6	126.4	141.6	134.2	130.0	48.4	54.6	52.8	148.8	146.6	142.9
2	Co-0238	220	246	249	119.6	127.2	120.8	127.2	136.4	130.8	54.4	56.2	50.6	140.4	142.4	134.2

Advance Varietal Trial (Early II Plant)

Sr.No	Clone	Brix % at 10M			Sucrose % at 10M			Purity % at 10M			CCS % at 10M			Extraction %		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	CoH-11262	20.7	21.9	20.9	18.67	19.62	18.71	90.17	89.57	89.54	13.03	13.65	13.02	54.4	55.6	52
2	CoLK-11201	21.2	20.3	21.4	18.81	18.31	19.26	88.72	90.19	90.00	13.03	12.78	13.43	55.2	56.4	54.4
3	CoLK-11202	21.2	21.9	22.0	19.14	19.52	19.45	90.29	89.14	88.41	13.37	13.56	13.45	53.8	52.8	55.8
4	CoLK-11203	22.2	21.1	21.9	19.09	18.81	19.74	86.01	89.14	90.12	13.03	13.06	13.77	50.6	52	51.3
	Standards															
1	CoJ-64	20.6	21.5	21.1	19.16	18.62	18.95	93.03	86.59	89.81	13.57	12.75	13.21	54	55.2	53.8
2	Co-0238	22.3	20.8	21.7	20.02	18.67	19.59	89.78	89.74	90.29	13.95	13.00	13.69	52.8	51.2	52.6

Sr.No	Clone	Brix % at 8M			Sucrose % at 8M			Purity % at 8M			CCS % at 8M		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	CoH-11262	19.2	19.4	20.2	16.36	16.60	16.91	85.20	85.55	83.69	11.11	11.30	11.38
2	CoLK-11201	21.5	21.9	20.8	17.29	18.93	16.45	80.40	86.42	79.11	11.39	12.95	10.74
3	CoLK-11202	22.0	21.9	22.0	17.19	17.05	18.67	78.14	77.85	84.84	11.15	11.03	12.65
4	CoLK-11203	22.5	22.0	21.6	19.66	19.19	19.05	87.40	87.22	88.17	13.53	13.19	13.16
	Standards												
1	CoJ-64	21.0	21.9	21.3	17.88	18.64	19.00	85.15	85.12	89.19	12.14	12.66	13.20
2	Co-0238	22.0	21.5	21.4	18.52	18.43	18.00	84.19	85.71	84.11	12.51	12.55	12.15

4. Advance Varietal Trial (Early Ratoon)

Sr.No	Clone	CCS (t/ha)			Cane yield (t/ha) after 270 days at harvest			Stalk diameter (cm) at 270 days			Single cane wt. (kg) at 270 days		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	CoH-11262	5.36	5.25	4.94	46.0	42.0	40.0	216	218	222	0.80	0.85	0.82
2	CoLK-11201	8.54	8.93	7.61	70.0	74.0	66.0	210	216	208	0.66	0.62	0.70
3	CoLK-11202	11.51	11.86	11.62	88.4	86.2	91.6	212	218	216	0.82	0.76	0.80
4	CoLK-11203	10.40	10.07	9.17	76.2	80.4	74.8	172	186	184	0.58	0.62	0.64
	Standards												
1	CoJ-64	9.40	8.55	8.80	68.6	66.4	73.2	201	202	208	0.72	0.70	0.68
2	Co-0238	10.42	10.09	10.11	90.2	82.8	78.4	226	230	224	0.84	0.80	0.86

Sr.No	Clone	Stalk length(cm) 270 days			NMC at (*000/ha) 270 days at harvest			No of canes formed (000/ha) after 180 days			No. of Tillers (000/ha) at 90 days		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	CoH-11262	186	172	176	65.4	60.1	54.8	68.6	70.4	62.2	74.2	76.4	66.8
2	CoLK-11201	184	170	192	112.4	116.6	109.2	136.8	140.6	148.4	124.2	126.6	122.8
3	CoLK-11202	210	212	206	110.2	108.4	120.6	148.4	146.6	144.2	124.2	126.1	125.2
4	CoLK-11203	218	224	230	121.6	128.2	124.8	146.8	148.2	146.6	135.8	140.7	142.6
	Standards												
1	CoJ-64	186	182	190	112.8	116.6	109.4	140.4	142.2	143.6	128.2	126.4	124.8
2	Co-0238	216	212	210	102.7	108.3	96.8	136.8	132.7	125.4	120.2	116.8	114.2

Advance Varietal Trial (Early Ratoon)

Sr.No	Clone	Brix % at 9M			Sucrose % at 9M			Purity % at 9M			CCS % at 9M			Extraction %		
		R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	CoH-11262	19.8	18.1	20.8	17.05	17.41	18.02	86.10	96.16	86.65	11.64	12.50	12.35	51.4	49.6	52
2	CoLK-11201	21.9	20.6	20.1	18.19	17.69	17.02	83.06	85.88	84.70	12.20	12.06	11.53	54.2	52.8	53
3	CoLK-11202	22.4	22.7	21.9	19.14	19.95	18.67	85.45	87.88	85.23	13.02	13.76	12.68	52.8	54	50.2
4	CoLK-11203	22.1	22.7	21.7	19.66	18.74	18.19	88.98	82.54	83.82	13.64	12.52	12.25	48.6	50.4	48.8
	Standards															
1	CoJ-64	20.0	19.9	21.1	19.12	18.28	17.79	95.59	91.88	84.29	13.70	12.88	12.02	54.4	52.6	53
2	Co-0238	21.7	20.7	20.5	17.50	17.83	18.48	80.65	86.15	90.12	11.55	12.18	12.90	52.5	50.5	51