

ALL INDIA COORDINATED RESEARCH PROJECT ON SUGARCANE

TECHNICAL DATA FOR 2013-2014
DISCIPLINE: CROP IMPROVEMENT



NORTH CENTRAL AND NORTH EAST ZONE

SUGARCANE RESEARCH STATION
ASSAM AGRICULTURAL UNIVERSITY
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BURALIKSON – 785 618
ASSAM

North central and North East zone: Centre : Buralikson(2013-14)

1. Advanced Varietal Trial (Early I Plant)

S. No.	Clone	CCS t/ha	Cane yield t/ha	Brix % (10 m)	Sucrose % (10m)	Purity % (10m)	CCS % (10m)	Pol % cane (10m)	Extracti on % (10m)	Fibre % (10m)	NMC at 10m ('000/ha)
1	BO153	8.83	80.50	19.60	17.14	85.44	10.97	-	-	-	108.55
2	CoP08436	8.93	85.06	19.50	16.57	85.60	10.50	-	-	-	110.22
3	CoSe 09452	8.27	77.30	18.10	17.32	87.50	10.70	-	-	-	90.51
4	UP 09453	7.75	70.43	19.00	17.50	85.34	11.00	-	-	-	93.50
Stds											
1	BO 130	10.93	100.50	19.50	17.17	85.85	10.88	-	-	-	130.52
2	CoSe 95422	13.20	120.30	19.55	17.60	90.12	10.98	-	-	-	128.50
	CD	1.83	5.15	0.90	0.27	2.11	0.24	-	-	-	10.55
	CV	9.45	13.13	1.50	2.31	3.51	3.50	-	-	-	15.20

S. 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 % (45 days)
1	BO 153	2.65	2.30	0.750	18.45	15.44	78.55	9.11	120.00	110.32	58.27
2	CoP 08436	2.80	2.48	0.830	19.22	16.62	77.50	9.00	118.00	115.23	72.48
3	CoSe 09452	2.65	2.44	0.875	17.93	16.34	80.35	10.04	105.50	99.00	57.57
4	UP 09453	2.55	2.40	0.750	18.90	16.66	79.20	10.44	100.44	95.60	57.86
Stds											
1	BO 130	1.65	1.53	0.670	19.45	16.00	80.11	9.90	150.05	139.41	70.88
2	CoSe 95422	2.66	2.29	0.873	18.98	16.23	77.33	9.80	140.10	133.55	68.04
	CD	NS.	NS	0.088	0.63	1.20	3.50	1.20	9.31	8.33	9.12
	CV	-	-	5.54	3.00	5.32	2.46	6.51	15.23	14.00	6.77

2. Initial varietal Trial (Midlate)

S. No.	Clone	CCS t/ha	Cane yield t/ha	Brix % (12 m)	Sucrose % (12 m)	Purity % (12 m)	CCS % (12 m)	Pol % cane (10m)	Extracti on % (12 m)	Fibre % (12 m)	NMC at 12 m ('000/ha)
1	CoSe 10451	10.53	83.95	20.09	18.06	89.27	12.55	-	-	-	123.89
2	CoSe 10452	9.17	83.02	20.89	19.30	85.53	11.05	-	-	-	118.57
3	CoSe 10453	9.38	78.08	20.84	20.25	86.69	12.02	-	-	-	104.00
Std											
1	BO 91	8.77	77.46	20.34	18.41	89.79	11.33	-	-	-	111.13
2	CoP 9301	9.03	84.56	19.90	17.69	93.23	10.69	-	-	-	112.74
3	CoSe 92423	9.17	80.86	20.45	18.35	87.35	11.35	-	-	-	82.51
	CD	1.11	5.40	1.20	0.35	2.45	0.39	-	-	-	10.65
	CV	3.5	4.65	5.30	2.54	4.60	2.21	-	-	-	13.37

S. 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 % (45 days)
1	CoSe 10451	2.56	2.20	0.670	19.09	17.90	85.55	11.31	98.80	77.80	57.03
2	CoSe 10452	2.70	2.35	0.700	19.09	18.41	84.33	10.58	106.75	85.68	62.66
3	CoSe 10453	2.68	2.40	0.750	19.69	18.57	85.18	10.82	98.33	79.35	59.32
Std											
1	BO 91	2.69	2.30	0.697	17.50	16.96	79.49	9.29	120.66	90.50	70.70
2	CoP 9301	2.88	2.42	0.750	17.80	16.40	81.16	9.80	103.55	98.55	77.54
3	CoSe 92423	2.90	2.55	0.980	17.45	16.09	82.50	9.35	108.14	80.67	67.60
	CD	NS.	NS	0.13	1.23	1.45	1.30	1.20	7.66	7.23	3.52
	CV	-	-	8.06	3.60	6.53	4.40	3.56	9.35	11.30	14.68

3. Advanced Varietal Trial (Midlate I Plant)

S. No.	Clone	CCS t/ha	Cane yield t/ha	Brix % (12 m)	Sucrose % (12 m)	Purity % (12 m)	CCS % (12 m)	Pol % cane (12m)	Extracti on % (12 m)	Fibre % (12 m)	NMC at 12 m ('000/ha)
1	BO154	7.98	75.62	20.65	17.65	86.51	10.56	-	-	-	85.45
2	CoP 09437	9.12	82.13	21.11	18.06	87.50	11.11	-	-	-	89.30
Stds											
1	BO 91	8.88	81.25	20.45	18.50	88.60	10.93	-	-	-	105.23
2	CoP 9301	8.52	89.71	20.65	18.50	86.22	9.50	-	-	-	95.22
3	CoSe 92423	9.72	87.55	20.70	18.60	87.50	11.11	-	-	-	103.12
	CD	1.32	5.50	1.23	0.35	0.25	0.50	-	-	-	3.22
	CV	9.12	12.34	5.15	3.34	3.27	3.11	-	-	-	14.34

S. 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	Germina tion % (45 days)
1	BO154	2.54	2.55	1.100	19.00	16.12	83.20	10.56	104.30	98.23	65.19
2	CoP 09437	2.50	2.48	1.250	18.54	15.98	82.55	9.70	116.34	100.14	70.11
Stds											
1	BO 91	2.70	2.37	0.855	19.32	15.84	78.50	9.30	105.67	101.23	70.60
2	CoP 9301	2.85	2.40	0.705	18.65	15.90	80.15	9.98	98.65	96.60	75.50
3	CoSe 92423	2.88	2.38	0.985	19.32	15.80	81.51	9.50	103.50	99.57	72.73
	CD	NS	NS	0.14	0.57	0.85	2.50	0.88	4.52	6.24	9.66
	CV			7.09	3.22	7.13	3.99	5.50	10.65	11.56	12.52

4. Advanced varietal Trial (Midlate II Plant)

S. No.	Clone	CCS t/ha	Cane yield t/ha	Brix % (12 m)	Sucrose % (12 m)	Purity % (12 m)	CCS % (12 m)	Pol % cane (10m)	Extracti on % (12 m)	Fibre % (12 m)	NMC at 12 m ('000/ha)
1	CoP08437	8.84	83.56	20.52	18.30	89.32	10.59	-	-	-	103.34
2	CoSe 08451	10.19	90.50	21.22	19.00	88.57	11.26	-	-	-	93.54
3	CoSe 08452	7.64	75.40	19.90	17.98	87.00	10.14	-	-	-	85.23
Std											
1	BO 91	8.28	80.55	20.37	19.26	85.33	10.28	-	-	-	108.53
2	CoP 9301	8.65	85.60	21.17	19.02	87.50	10.11	-	-	-	96.44
3	CoSe 92423	9.67	90.56	20.37	19.05	86.23	10.68	-	-	-	105.33
	CD	1.33	3.25	1.25	0.32	2.62	0.35	-	-	-	4.52
	CV	4.32	12.23	5.63	2.45	4.50	2.52	-	-	-	13.00

S. 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 % (45 days)
1	CoP08437	2.68	2.52	0.780	19.34	17.12	82.33	9.45	107.13	106.23	80.16
2	CoSe 08451	2.50	2.48	0.690	19.22	18.33	83.34	10.13	130.15	127.65	83.33
3	CoSe 08452	2.66	2.50	0.880	19.43	16.83	80.41	9.50	85.68	80.60	75.23
Std											
1	BO 91	2.60	2.60	0.770	18.95	18.20	83.21	9.28	104.61	102.61	80.00
2	CoP 9301	2.59	2.55	0.850	17.93	17.15	84.52	9.50	100.70	98.60	75.33
3	CoSe 92423	2.62	2.49	1.190	19.03	17.68	84.55	9.30	106.54	100.55	85.35
	CD	NS.	NS	0.04	0.55	1.40	1.35	1.25	10.22	8.22	3.56
	CV	-	-	3.22	3.20	6.55	6.40	3.66	12.54	11.35	14.70

5. Advanced varietal Trial (Midlate –Ratoon)

S. 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)
1	CoP08437	6.72	65.18	20.30	17.80	89.32	10.32	-	-	-
2	CoSe 08451	8.09	72.22	20.50	18.10	87.85	11.21	-	-	-
3	CoSe 08452	5.57	52.83	20.39	17.60	86.32	10.56	-	-	-
Std										
1	BO 91	7.46	65.79	20.30	18.00	89.71	11.35	-	-	-
2	CoP 9301	6.60	63.20	19.80	17.50	92.23	10.45	-	-	-
3	CoSe 92423	8.66	76.66	20.50	18.31	88.40	11.30	-	-	-
	CD	1.20	3.33	0.45	0.40	0.35	0.25	-	-	-
	CV	10.56	11.30	4.03	3.99	4.33	4.30	-	-	-

S. No.	Clone	NMC at 11 m ('000/ha)	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	CoP08437	85.80	2.55	2.50	0.750	85.52	73.18
2	CoSe 08451	93.55	2.50	2.49	0.680	95.54	80.55
3	CoSe 08452	81.30	2.60	2.50	0.850	72.80	65.35
Std							
1	BO 91	86.60	2.66	2.62	0.750	83.80	75.59
2	CoP 9301	80.72	2.57	2.43	0.780	75.23	70.32
3	CoSe 92423	65.67	2.60	2.51	1.150	92.23	89.33
	CD	6.59	NS.	NS	0.04	5.59	6.53
	CV	11.23	-	-	5.26	10.50	10.76

National Hybridization and Fluff Programme;2014

No. of crosses/GCs and PCs:

BPC=42, PC=8 & GC =28

Table II.: Germination of fluff at SRS, Buralikson under NH Programme

Date of sowing:06-03-14

Cross No.	crosses	Quantity of fluff (g)	Total No. of seedlings obtained	Germination per g of fluff
	Station crosses			
64	Co8353 X BO130	29.5	230	7.79
65	Co8353XISH69	29	180	6.2
63	CoLK 94184 XBO 130	17	150	8.82
78	ISH69 X CoN05071	24.5	30	1.22
102	Cp-52-1 XCoSe95422	27.5	15	0.50
104	Co8353X BO96	46.5	28	0.60
112	ISH100X Co62198	6.5	38	5.84
120	LG95053X BO91	25.0	40	1.60
193	CoSnk05-103 XBO96	25	215	8.6
194	Co240 XCH112	12.5	200	16
195	Co240X BO91	11	213	19.36
196	LG95053X CoH114	25	214	6.2
197	C0T185118 XCo99006	7.5	45	6.0
198	Co86002XCo775	17	30	1.76
219	CoBlN05501 XCo775	21.6	350	16.2
220	CoBlN05501 XC0H70	37.5	410	10.93
242	Co8213 XCo99006	26.5	210	7.92
243	Co85002X Co62174	55.5	230	4.14
247	CoJ83 XCo1148	9	6	0.67
248	CoN98133XCo775	71	25	0.35
249	CoH92XCoH70	57.5	350	6.08
250	CoN07072XCoH70	51	400	7.84

108	BO91XCo68198	19	200	10.52
2	CoLk8102XCo62198	60	150	2.50
3	CoLk8102XNCO310	43	40	0.95
17	CoS96268XCo62198	17.5	6	0.34
	Zonal crosses			
56	CoLk94184X BO91	35.5	15	0.42
57	BO91 XNCo310	44	25	0.56
58	BO147 XCo62198	23.5	12	0.51
87	BO97 X BO32	28.5	10	0.35
88	CoSe95422XCo62198	34	170	5
131	UP9530XCoP9301	48	80	1.67
147	CoJ83 XCoH70	32.5	105	3.23
163	CoSe95422XCoS8436	38	150	3.94
177	CoS8436 XCo1148	43	160	3.72
191	CoSe95422 X CoSe92423	32	205	6.4
23	Co1158XCo62198	51	300	5.88
297	MS6847XCo775	63.5	350	5.51
298	Co0233X CoS8436	32.5	120	3.69
300	CoS8436XCo0233	43	150	3.48
326	MS6847X Co1148	59.5	419	7.04
393	CoSe96436XCo233	27	250	9.25
Sl. No.	Poly crosses			
1	CoS8436	59	76	1.29
2	Co7201	26.5	0	0
3	CoSe92423	65	150	2.31
4	81V48	27.5	100	3.65
5	CoSe95422	52.5	120	2.28
6	CoJ99192	10.5	55	5.23
7	CoJ83	7	9	1.28

8	ISH100	9	37	4.11
Sl. No.	General collection			
1	BO 96	29.5	230	7.79
2	CoPant 84216	56.5	210	3.12
3	Co 87269	15.5	0	0.00
4	BO 92	151	180	1.19
5	Co 93020	44	0	0.00
6	BO 91	65	120	1.84
7	Co Bln 04-174	40	243	6.07
8	Co 98010	53.5	315	5.88
9	BO 109	136.5	320	2.34
10	BO 108	120	400	3.33
11	Co 99006	26.5	260	9.81
12	CoPant 90224	70	100	4.42
13	Co 98014	42	22	0.52
14	CoPant 88219	70	300	4.28
15	C 79180	59	20	0.33
16	Co 7424	35.5	150	4.22
17	HR 83-65	30	300	10.00
18	BO 89	25	170	6.80
19	Co 0233	7	120	17.14
20	BO 97	22	283	12.86
21	C 79113	20	260	13.00
22	CoSe 95427	45.5	300	6.59
23	BO 106	6	60	10.00
24	BO 110	6	7	1.16
25	HR 83-144	17.5	18	1.02
26	Co 98013	47	0	3.33
27	Co 88028	12	40	1.25
28	Co 7224	27.5	22	0.80

Meteorological data-2013-14

Month/year	Temperature (0c)		Average RH(%)	Rain Fall (mm)	Pest and disease incidence
	Max.	Min.			
March./13	33.6	13.4	75.3	98.2	Termite
April/13	35.3	15.9	81.6	90.6	Early shoot borer
May,13	36.1	18.7	87.6	290.8	Top borer,stem borer
June,13	40.2	23.5	85.5	234.6	Stem borer,top borer
July,13	38.0	23.9	89.4	389.0	Top borer,stem borer, ring leaf spot,eye leaf spot
August,13	38.7	23.1	88.9	393.2	Plassy borer,stem borer, top borer, and ring leaf spots
Sptember,13	38.7	23.2	90.0	193.6	Stem borer,plassy borer, eye and ring leaf spots
October,13	34.9	16.2	90.7	153.2	Stem borer, top borer,ring and eye leaf spots
November.13	30.4	7.5	86.5	5.6	Stem borer, top borer,ring and eye leaf spots
December,13	30.0	2.8	88.1	10.2	Stem borer and top borer
January,14	29.6	3.7	85.9	7.8	Early shoot borer and termite
February,14	30.7	5.8	83.0	25.6	Top borer and termite