

SUGARCANE RESEARCH STATION::ASSAM AGRICULTURAL UNIVERSITY::
BURALIKSON-785618::P.O.BARUABAMUNGAON::GOLAGHAT::ASSAM

(Through the Chief Scientist Sugarcane Research Station ,Buralikson)

Memo No. AAU/SRS/Tech.-1/

/dated 31/05/16

To
The Principal Investigator
Crop Improvement-AICRP(S)
Sugarcane Breeding Institute
Coimbatore-641007
Tamil Nadu

Sub: AICRP(S) data (2015-16) of Crop Improvement, Buralikson Centre

Sir,

I am sending herewith the required statistically analyzed data of Crop Improvement, AICRP on sugarcane ,Sugarcane Research Station ,Buralikson for your necessary action.
With kind regards.

Yours faithfully

P.K.Goswami
Principal Scientist(PB)

Copy to:
The Project Coordinator
AICRP on sugarcane
Indian Institute of Sugarcane Research
Lucknow,P.O.Dilkhusa
UP-226002

Yours faithfully

P.K.Goswami
Principal Scientist(PB)

**ALL INDIA COORDINATED RESEARCH PROJECT ON
SUGARCANE**

**TECHNICAL DATA FOR 2015-2016
DISCIPLINE: CROP IMPROVEMENT**



NORTH CENTRAL AND NORTH EAST ZONE

**SUGARCANE RESEARCH STATION
ASSAM AGRICULTURAL UNIVERSITY
P.O. BARUABAMUNGAON
BURALIKSON – 785 618
ASSAM**

North Central and North East Zones

1. Initial Varietal Trial (Early)

S. No.	Entry	CCS (t/ha)	Cane yield (t/ha)	CCS % (10m)	Sucrose % (10 m)	Brix % (10 m)	Purity % (10m)	Pol % cane (10 m)	Extraction % (10 m)	Fibre % (10 m)	NMC at 10 months ('000/ha)
1	CoLk 12207	6.11	48.90	12.51	17.23	18.2	92.63				61.13
2	CoLk 12208	5.62	44.61	12.61	17.16	18.0	95.33				55.77
3	CoP 12436	6.49	52.73	12.31	17.16	19.00	90.31				65.92
4	CoP 12437	6.64	53.04	12.51	17.20	20.0	92.63				66.30
5	CoSe 12451	5.46	45.54	11.96	16.93	19.4	87.26				56.93
Stds											
1	BO 130	5.51	44.80	12.31	17.16	19.4	90.31				56.00
2	CoSe 95422	7.09	53.66	13.21	18.30	20.0	91.50				67.08
	SE	0.36	1.08	0.06	0.07	0.25	0.68				1.82
	CD	1.10	3.35	0.21	0.22	0.79	2.10				5.63
	CV	10.40	11.23	3.60	2.50	2.30	3.70				10.53

S. No.	Entry	Stalk Length (cm)	Stalk Diameter (cm)	Single cane weight (kg)	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	CoLk 12207	2.1	2.0	0.750	10.69	15.38	17.20	89.41	54.02	44.35	39.33
2	CoLk 12208	2.1	2.5	0.880	10.79	15.47	17.17	87.40	51.10	39.50	33.64
3	CoP 12436	2.2	2.3	0.663	11.11	15.93	17.68	90.10	63.00	53.22	41.57
4	CoP 12437	2.0	2.0	0.800	10.40	15.07	17.10	88.12	60.98	58.63	40.38
5	CoSe 12451	2.2	2.0	0.960	11.86	16.44	16.90	97.27	54.28	40.66	36.09
Stds											
1	BO 130	2.35	1.8	0.650	11.56	16.55	18.33	90.28	50.75	45.32	33.61
2	CoSe 95422	2.15	2.0	0.960	12.12	17.15	18.50	92.70	54.48	48.50	33.49
	SE	NS.	NS.	0.02	0.14	0.19	0.15	0.47	1.82	1.79	1.46
	CD			0.08	0.45	0.56	0.45	1.45	5.60	5.50	4.50
	CV			4.50	1.86	2.14	1.96	2.65	13.50	14.23	15.00

2. Advanced Varietal Trial (Early- I Plant)

S. No.	Entry	CCS (t/ha)	Cane yield (t/ha)	CCS % (10m)	Sucrose % (10 m)	Brix % (10 m)	Purity % (10m)	Pol % cane (10 m)	Extraction % (10 m)	Fibre % (10 m)	NMC at 10 months ('000/ha)
1	CoP 11436	5.86	47.07	12.45	17.65	19.33	88.77				56.84
2	CoP 11437	8.99	66.33	13.56	19.56	21.32	85.00				77.13
3	CoP 11438	10.97	80.49	13.64	19.23	20.10	88.23				89.44
4	CoSe 11451	7.45	53.82	13.80	20.00	22.11	86.33				59.80
Stds											
1	BO 130	5.03	40.61	12.40	17.66	19.00	89.77				45.13
2	CoSe 95422	9.68	70.94	13.65	19.33	20.10	88.22				78.83
	SE	0.38	1.78	0.07	0.08	0.24	0.64				2.11
	CD	1.20	5.50	0.23	0.26	0.75	2.00				6.50
	CV	10.53	11.40	3.65	2.50	2.30	3.50				10.53

S. No.	Entry	Stalk Length (cm)	Stalk Diameter (cm)	Single cane weight (kg)	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	CoP 11436	1.53	1.93	0.750	9.99	14.98	18.2	82.30	56.76	41.36	37.67
2	CoP 11437	2.07	2.03	0.750	12.35	17.23	18.0	95.72	62.40	50.69	42.00
3	CoP 11438	2.03	1.86	1.250	10.18	15.22	18.4	82.71	66.12	55.63	44.00
4	CoSe 11451	2.07	1.63	1.000	9.62	14.56	18.0	80.88	56.94	45.82	28.33
Stds											
1	BO 130	1.88	1.60	1.000	10.37	15.29	18.0	84.94	41.98	34.56	30.00
2	CoSe 95422	1.65	1.90	1.000	9.71	14.93	19.0	78.57	56.20	47.52	36.33
	SE	0.16	0.08	0.03	0.11	0.14	0.11	0.76	3.11	1.82	1.50
	CD	0.20	0.25	0.08	0.33	0.44	0.35	2.35	9.60	5.63	4.65
	CV	10.58	5.34	5.40	2.00	1.50	1.44	3.40	8.23	11.00	12.23

3. Initial varietal Trial (Midlate)

S. No.	Entry	CCS t/ha	Cane yield t/ha	CCS % (12 m)	Sucrose % (12 m)	Brix % (12 m)	Purity % (12 m)	Pol % cane (10m)	Extraction % (12 m)	Fibre % (12 m)	NMC at 12 m ('000/ha)
1	CoLk 09204	5.09	42.07	12.12	17.52	19.8	88.48				47.83
2	CoLk 12209	5.90	48.41	12.20	17.57	19.7	89.18				54.6
3	CoP 12438	9.38	73.73	12.73	18.40	20.8	88.46				83.75
4	CoP 12439	8.43	72.83	11.58	16.90	19.5	86.66				82.72
5	CoSe 12452	6.21	53.90	11.53	16.88	19.6	86.12				59.98
6	CoSe 12453	5.55	44.51	12.48	17.75	19.4	91.49				50.17
Std											
1	BO 91	4.97	43.45	11.44	16.80	19.6	85.71				48.30
2	CoP 9301	8.47	66.92	12.66	17.90	19.3	92.74				83.65
3	CoSe 92423	8.79	71.30	12.34	17.50	19.0	92.10				89.13
	SE	0.40	2.75	0.16	0.45	0.47	0.81				2.11
	CD	1.23	8.50	0.50	1.40	1.45	2.50				6.50
	CV	9.65	12.40	2.15	2.53	3.23	4.63				13.63

S. No.	Entry	Stalk Length (cm)	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	CoLk 09204	2.10	2.20	1.04	19.4	15.47	79.74	10.14	45.27	38.53	30.32
2	CoLk 12209	1.90	2.20	1.02	19.4	15.47	79.74	10.14	52.50	43.60	33.17
3	CoP 12438	2.10	2.40	1.10	20.2	16.44	81.38	10.90	86.45	65.36	56.71
4	CoP 12439	2.10	2.00	1.40	19.0	14.98	78.84	9.76	78.75	68.70	52.54
5	CoSe 12452	2.15	2.30	1.38	19.2	14.98	78.02	9.70	56.58	45.32	35.88
6	CoSe 12453	1.00	2.0	1.20	19.2	15.47	80.57	10.20	48.53	42.11	32.09
Std											
1	BO 91	1.05	2.10	1.00	19.4	14.98	77.21	9.64	76.28	50.32	33.01
2	CoP 9301	2.30	2.40	1.23	19.0	15.95	83.94	10.75	81.67	65.23	53.23
3	CoSe 92423	2.10	2.20	1.04	19.2	15.47	80.57	10.20	84.35	71.34	58.87
	SE	NS.	NS.	NS.	0.13	0.18	0.84	0.19	1.84	2.17	2.18
	CD				0.40	0.55	2.53	0.56	5.53	6.50	6.55
	CV				2.65	2.23	3.60	2.54	10.40	11.00	14.23

4. Advanced varietal Trial (Midlate - I Plant)

S. No.	Entry	CCS t/ha	Cane yield t/ha	CCS % (12 m)	Sucrose % (12 m)	Brix % (12 m)	Purity % (12 m)	Pol % cane (10m)	Extraction % (12 m)	Fibre % (12 m)	NMC at 12 m ('000/ha)
1	BO 155	7.37	59.62	12.37	17.82	20.00	89.10				74.53
2	CoSe 11453	8.22	66.14	12.43	18.22	21.2	85.94				82.68
3	CoSe 11454	6.73	53.05	12.70	18.26	20.4	89.50				66.31
4	CoSe 11455	8.31	67.74	12.27	17.78	20.20	88.01				84.67
Std											
1	BO 91	6.84	57.13	11.99	17.74	21.00	84.47				71.41
2	CoP 9301	8.00	67.94	11.78	17.30	20.20	85.64				84.93
3	CoSe 92423	7.43	62.88	11.82	17.34	20.20	85.84				78.60
	SE	0.31	2.21	0.15	0.11	0.16	0.75				NS
	CD	0.95	6.63	0.45	0.33	0.50	2.30				
	CV	8.63	12.36	3.23	3.10	4.50	5.55				

S. No.	Entry	Stalk Length (cm)	Stalk Diameter (cm)	Single cane weight (kg)	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	BO 155	1.56	2.03	0.85	11.52	16.23	17.33	93.65	66.91	54.67	44.67
2	CoSe 11453	2.52	2.43	1.05	12.64	17.54	18.10	96.90	74.97	60.21	50.05
3	CoSe 11454	2.22	2.40	1.00	11.94	16.67	17.45	95.53	58.84	48.69	39.29
4	CoSe 11455	1.88	2.10	0.85	11.86	16.70	17.80	93.82	80.34	78.60	53.64
Std											
1	BO 91	1.37	2.10	0.75	12.50	17.44	18.23	95.66	63.53	55.34	43.27
2	CoP 9301	2.37	2.66	1.00	11.84	16.67	17.80	93.65	77.13	67.26	51.50
3	CoSe 92423	2.08	2.53	0.88	11.29	16.32	18.45	88.45	74.62	66.55	49.82
	SE	0.16	NS.	0.18	0.32	0.15	0.17	NS.	1.47	2.02	2.37
	CD	0.52		0.55	0.98	0.45	0.53		4.53	6.23	7.30
	CV	9.36		8.36	3.23	4.23	5.32		12.33	11.54	12.00

5. Advanced Varietal Trial (Midlate II Plant)

S. No.	Entry	CCS (t/ha)	Cane yield (t/ha)	CCS % (12 m)	Sucrose % (12 m)	Brix % (12 m)	Purity % (12 m)	Pol % cane (12 m)	Extraction % (12 m)	Fibre % (12 m)	NMC at 12 months ('000/ha)
1	CoSe 10451	6.66	52.20	12.76	18.20	20.00	91.00				42.58
2	CoSe 10452	8.54	64.34	13.28	19.30	22.05	87.52				64.30
3	CoSe 10453	6.29	48.50	12.97	18.50	20.30	91.13				59.10
Std											
1	BO 91	7.77	59.26	13.11	18.63	20.30	91.77				57.37
2	CoP 9301	6.93	53.47	12.96	18.26	19.5	93.64				70.89
3	CoSe 92423	6.69	50.98	13.13	18.37	19.3	95.18				80.80
	SE	0.31	1.75	0.14	0.13	0.52	0.78				2.11
	CD	0.96	5.40	0.43	0.40	1.60	2.40				6.50
	CV	10.42	13.67	3.60	3.30	5.23	5.60				12.03

S. No.	Entry	Stalk Length (cm)	Stalk Diameter (cm)	Single cane weight (kg)	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	CoSe 10451	1.25	2.83	1.05	10.47	15.11	17.00	88.88	40.33	38.80	26.92
2	CoSe 10452	1.22	2.27	1.15	10.63	15.95	19.40	82.21	59.45	55.43	39.69
3	CoSe 10453	1.38	2.06	0.55	9.45	14.68	19.00	77.26	51.46	50.12	34.14
Std											
1	BO 91	1.40	2.23	0.95	10.64	16.13	20.00	80.65	55.03	54.39	37.48
2	CoP 9301	1.98	2.13	1.00	10.54	15.17	17.00	89.23	67.68	62.66	45.19
3	CoSe 92423	1.82	2.20	0.80	10.82	16.19	19.6	82.60	59.80	58.63	39.90
	SE	NS.	NS.	0.10	0.33	0.11	0.35	0.81	2.11	2.01	1.47
	CD			0.31	1.02	0.35	1.12	2.50	6.50	6.20	4.53
	CV			3.00	3.40	3.30	3.00	3.50	10.40	12.52	11.23

6. Advanced Varietal Trial (Midlate - Ratoon)

S. No.	Entry	CCS (t/ha)	Cane yield (t/ha)	CCS % (11 m)	Sucrose % (11 m)	Brix % (11 m)	Purity % (11 m)	Pol % cane (11m)	Extraction % (11 m)	Fibre % (11 m)
1	CoSe 10451	7.08	51.43	13.78	19.20	20.00	95.00			
2	CoSe 10452	8.37	59.60	14.05	20.10	22.20	90.54			
3	CoSe 10453	6.62	47.93	13.81	19.30	20.24	95.35			
Stds										
1	BO 91	7.13	50.80	14.05	19.55	20.30	96.30			
2	CoP 9301	8.69	62.67	13.87	19.15	19.50	98.20			
3	CoSe 92423	7.36	56.07	13.14	18.50	19.00	97.36			
	SE	0.30	1.17	0.15	0.11	0.13	0.08			
	CD	0.91	3.63	0.45	0.35	0.40	0.24			
	CV	10.30	11.45	3.00	2.65	3.20	3.22			

S. No.	Entry	NMC at 11 months ('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	CoSe 10451	49.45	2.50	2.40	1.04	55.36	35.40
2	CoSe 10452	54.75	2.40	2.42	1.09	63.68	42.70
3	CoSe 10453	50.46	2.40	2.44	0.95	48.53	39.80
Std							
1	BO 91	67.85	2.55	2.30	0.75	70.36	50.30
2	CoP 9301	57.5	2.54	2.46	1.09	58.35	38.33
3	CoSe 92423	52.9	2.60	2.44	1.06	55.66	37.12
	SE	1.50	N.S.	N.S.	N.S.	1.49	1.43
	CD	4.63				4.60	4.43
	CV	12.44				11.23	12.00

National Hybridization and Fluff Programme

No. of crosses/GCs and PCs

BPC=11 ,PC=8,GC=17

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

Sl. No.	Crosses	Quantity of fluff(g)	Total No. of seedlings planted	Germination per g of fluff	
1.	Co1158X Co62198	18.5	17	0.92	
2.	CoJ83XCoH70	13	30	2.3	
3.	CoP06436 XCoPant97222	14.5	200	13.79	
4.	CoLk94184X Bo91	13.5	14	1.03	
5.	CoSe 95422XCo62198	13.5	200	14.81	
6.	CoSe 95422XCoSe92423	13	90	6.92	
7.	CoS 8436X Co1148	8	60	7.5	
8.	CoSe8436X Co0233	13	90	6.92	
9.	CoSe95422X CoS8436	13	80	6.15	
10.	CoSe96436X Co 0233	11	15	1.36	
11.	Co0233X CoS8436	17	20	1.17	
	Poly crosses				
	Male				
1.	CoSe92423	CoS767	10.5	50	5
2.	Co7201	Co7314	10	9	1
3.	CoV89101	CoPant97222	14.5	108	7.44
4.	CoJ88	Co89003	2.5	9	3.6
5.	CoSe95422	ISH229	1.0	4	4
6.	CoS8436	Co775	7.0	4	0.57
7.	ISH100	Bo91	1.5	0	
8.	CoJ83	CoSe92423	2.0	2	1
	GCs				
1.	CoBln05501	18.5	150	8.10	
2.	CoC671	14			
3.	CoBln04174	88.5	6	0.06	
4.	Co0232	40.7			
5.	CoH104	44			
6.	Co0235	49			
7.	LG05610	54.5	110	2.01	
8.	CoS87216	48			
9.	CoH128	37	350	9.46	
10.	CoPant 90224	55.5			
11.	LG 95123	35	170	4.85	
12.	CoS 92263	43.5	9	0.02	
13.	CoLk 8102	58			
14.	LG 96115	46.5			
15.	LG 04602	43	100	2.32	
16.	Co09021	44.5			
	Total weight(g)	918	1683		

Meteorological data-2015-16

Month/year	Temperature (0c)		Average RH(%)	Rain Fall (mm)	Pest and disease incidence
	Max.	Min.			
February,15	31	4.5	83.0	20.2	
March./15	34	20.6	75.9	34.4	Termite
April/15	36	17.2	69.6	236.4	Early shoot borer
May,15	36	20.5	87.9	293.8	Top borer,stem borer
June,15	36.6	22.2	89.9	224.3	Stem borer,top borer
July,15	37.4	24	89.3	233	Top borer,stem borer, ring leaf spot,eye leaf spot
August,15	36.6	23.6	91.3	183.6	Plassy borer,stem borer, top borer, and ring leaf spots
Sptember,15	35.6	23.1	92.5	245.4	Stem borer,plassy borer, eye and ring leaf spots
October,15	35.6	22.6	87.8	245.4	Stem borer, top borer,ring and eye leaf spots
November.15	30	17.3	57.4	21.8	Stem borer, top borer,ring and eye leaf spots
December,15	28	17.6	85.9	28.2	Stem borer and top borer
January,16	26	21.8	85.1	25.1	Early shoot borer and termite
February,16	30	12.2	84.0	0.2	Top borer and termite