

<b>AS 68:</b>	<b>Impact of integrated application of organics and inorganics in improving soil health and sugarcane productivity</b>
<b>Year of initiation</b>	2014-15
<b>Design</b>	RBD
<b>Treatments</b>	9
<b>Replication</b>	3
<b>Variety</b>	Co Or 08346
<b>Recommended fertilizer dose</b>	250:100:60 N: P <sub>2</sub> O <sub>5</sub> : K <sub>2</sub> O kg /ha
<b>Plot size</b>	6x 4.8 m <sup>2</sup>
<b>Date of ratooning</b>	24.2.2016
<b>Date of harvest</b>	15.01.2017

**Treatment details:**

	Ratoon – II
T <sub>1</sub>	Application of trash at 10 tonnes/ha + 50 % RDF
T <sub>2</sub>	Application of trash at 10 tonnes/ha + 100 % RDF
T <sub>3</sub>	Application of trash at 10 tonnes/ha+ soil test basis fert (NPK) application
T <sub>4</sub>	Application of FYM/Compost @ 20t/ha+ 50% RDF (inorganic source)
T <sub>5</sub>	Application of FYM/Compost @ 20t/ha+ 100% RDF (inorganic source)
T <sub>6</sub>	Application of FYM/Compost @ 20t/ha+ inorganic nutrient application based on soil test(rating chart)
T <sub>7</sub>	Application of FYM/Compost @ 10t/ha+ biofertilizer (Azotobactor/Acetobactor + PSB) +50% RDF (inorganic source)
T <sub>8</sub>	Application of FYM/Compost @ 10t/ha+ biofertilizer (Azotobactor/Acetobactor + PSB) +100% RDF (inorganic source)
T <sub>9</sub>	Application of FYM/Compost @ 10t/ha+ biofertilizer (Azotobactor/Acetobactor + PSB) + Soil test based fert application (NPK)

**AS 68.1 Impact of integrated application of organics and in-organics on germination and shoot count at various stages of cane growth**

Treatments		Germination %		No of shoots (000/ha)		Length of cane (cm)	Girth of cane (cm)	Weight of cane (kg)	Brix %	NMC (000/ha)	Cane yield (t/ha)
		30 DAP	45 DAP	120 DAP	150 DAP						
T <sub>1</sub>	50% RDF	28.70	30.13	44.26	46.01	2.48	1.58	1.18	18.65	53.75	58.22
T <sub>2</sub>	100% RDF	30.68	31.28	52.25	53.29	2.72	1.94	1.28	19.11	59.76	65.63
T <sub>3</sub>	Soil test based fert. application (NPK)	32.12	33.78	52.82	54.58	2.96	2.03	1.36	18.90	62.22	67.21
T <sub>4</sub>	Application of FYM/Compost @ 20t/ha+ 50% RDF	30.72	30.88	53.77	53.88	2.27	2.14	1.22	18.76	60.84	65.44
T <sub>5</sub>	Application of FYM/Compost @ 20t/ha+ 100% RDF	31.50	33.68	54.34	54.77	2.78	2.28	1.36	18.43	62.87	68.72
T <sub>6</sub>	Application of FYM/Compost @ 20t/ha+ Soil test based fert. application (NPK)	32.24	34.36	56.56	56.82	2.91	2.33	1.40	19.23	63.46	70.46
T <sub>7</sub>	Application of FYM/Compost @ 10t/ha+(Azotobactor+PSB)+50% RDF	34.65	37.15	57.29	58.11	3.12	2.38	1.28	19.13	65.88	71.75
T <sub>8</sub>	Application of FYM/Compost @ 10t/ha+(Azotobactor+PSB)+100% RDF	35.07	39.29	61.94	62.62	3.06	2.44	1.43	20.10	68.42	75.03
T <sub>9</sub>	Application of FYM/Compost @ 10t/ha + Azotobactor + PSB + Soil test based fert application (NPK)	36.44	41.23	62.88	64.98	2.96	2.57	1.42	20.42	69.85	75.93
SEm ±		1.26	1.84	1.64	2.29	1.46	0.09	0.09	0.06	0.44	2.25
CD at 5 %		5.571	4.72	5.19	7.25	3.93	0.27	0.27	NS	5.64	6.65
CV%		6.18	7.66	8.22	6.45	5.38	5.36	5.36	4.57	4.49	7.18

Results obtained from second ratoon crop indicated that application of FYM/Compost @ 10t/ha+(Azotobactor+PSB)+100% RDF (T<sub>8</sub>) and Application of FYM/Compost @ 10t/ha + Azotobactor + PSB + Soil test based(NPK) fertilizer application (T<sub>9</sub>) recorded higher percentage of germination at 45 DAR i.e. 39.29 and 41.23%, respectively. These treatments subsequently performed better than other treatment combinations leading to higher yield parameters and cane yield. The length and girth of the cane were also higher 3.06 & 2.44 cm in T<sub>8</sub> and 2.96 & 2.57 cm in T<sub>9</sub>, respectively. The NMC and Cane yield were 68.42'000 & 75.03 t/ha in T<sub>8</sub> and 69.85'000 & 75.93 t/ha in T<sub>9</sub>, respectively. This exhibits the positive effect of organic manures and bio fertilizers on cane yield.

#### AS 68.2 Impact of integrated application of organics and in-organics on soil fertility status

Treatments		BD (g cm <sup>-3</sup> )	pH	EC (dsm <sup>-1</sup> )	OC%	Available Nutrient (kg/ha)		
						N	P	K
T <sub>1</sub>	50% RDF	1.32	5.8	0.206	0.43	220	14.0	125.0
T <sub>2</sub>	100% RDF	1.35	5.6	0.24	0.45	228	18.8	132.6
T <sub>3</sub>	Soil test based fert. application (NPK)	1.34	5.6	0.278	0.47	238	20.2	135.7
T <sub>4</sub>	Application of FYM/Compost @ 20t/ha+ 50% RDF	1.41	5.8	0.305	0.497	241	21.6	128.2
T <sub>5</sub>	Application of FYM/Compost @ 20t/ha+ 100% RDF	1.40	5.9	0.33	0.512	244	22.5	130.5
T <sub>6</sub>	Application of FYM/Compost @ 20t/ha+ Soil test based fert. application (NPK)	1.42	5.8	0.328	0.519	245	23.4	132.6
T <sub>7</sub>	Application of FYM/Compost@ 10t/ha +(Azotobactor+PSB) + 50% RDF	1.45	5.8	0.322	0.526	251	23.9	130.2
T <sub>8</sub>	Application of FYM/Compost@ 10t/ha +(Azotobactor+PSB)+100% RDF	1.44	6.0	0.311	0.528	255	25.2	134.1
T <sub>9</sub>	Application of FYM / Compost @ 10t/ha + Azotobactor + PSB + Soil test based fert application (NPK)	1.43	6.0	0.314	0.516	253	24.8	135.2

The soil physico-chemical parameters like BD, pH , EC, organic carbon content as well as available N, P and K content exhibited marked improvement upon application of organic source of plant nutrients.

<b>AS 69:</b>	<b>Use of plant growth regulators for enhanced yield and quality of sugarcane</b>
<b>Year of initiation</b>	2015-16
<b>Design</b>	RBD
<b>Treatments</b>	8
<b>Replication</b>	3
<b>Variety</b>	Co Or 03151
<b>Recommended fertilizer dose</b>	250:100:60 N: P <sub>2</sub> O <sub>5</sub> : K <sub>2</sub> O kg /ha
<b>Plot size</b>	6x 4.8 m <sup>2</sup>
<b>Date of ratooning</b>	24.1.2016
<b>Date of harvest</b>	10.01.2017

#### Treatment details:

1. Conventional planting/ Farmers practice (3 bud setts).
2. Planting of setts after overnight soaking in water.
3. Planting of setts after overnight solution in 50 PPM ethrel solution.
4. Planting of setts after overnight solution in 100 PPM ethrel solution.
5. T<sub>1</sub> + GA<sub>3</sub> spray at 90, 120 & 150 DAP.
6. T<sub>2</sub> + GA<sub>3</sub> spray at 90, 120 & 150 DAP.
7. T<sub>3</sub> + GA<sub>3</sub> spray at 90, 120 & 150 DAP.
8. T<sub>4</sub> + GA<sub>3</sub> spray at 90, 120 & 150 DAP.

#### AS 69.1 Effect of plant growth regulators on germination and shoot count at various stages of cane growth

Treatments		Germination%			Plant height (cm)		No of shoots (000/ha)	
		20 DAP	30 DAP	40 DAP	120 DAP	At harvest	120 DAP	180 DAP
T <sub>1</sub>	Conventional planting/ Farmers practice (3 bud setts)	11.17	39.47	49.96	121.70	278.90	79.03	83.57
T <sub>2</sub>	Planting of setts after overnight soaking in water	10.84	40.03	52.23	119.67	279.40	80.03	82.90
T <sub>3</sub>	Planting of setts after overnight solution in 50 PPM ethrel solution	11.60	43.93	54.67	123.63	278.37	79.00	82.43
T <sub>4</sub>	Planting of setts after overnight solution in 100 PPM ethrel solution	12.30	43.33	55.18	129.97	286.20	76.13	83.10
T <sub>5</sub>	T <sub>1</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	11.23	44.70	56.79	123.93	294.80	85.73	85.93
T <sub>6</sub>	T <sub>2</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	11.43	41.03	55.37	126.07	296.30	84.27	87.10
T <sub>7</sub>	T <sub>3</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	12.41	44.80	57.87	132.37	309.27	85.03	84.83
T <sub>8</sub>	T <sub>4</sub> + GA <sub>3</sub> spray at 90,	12.80	48.30	58.18	136.53	312.07	86.07	86.37

	120 & 150 DAP							
	SEm±	0.408	1.646	1.611	3.018	5.387	2.094	0.988
	CD at 5 %	1.237	4.993	4.885	9.154	16.34	6.351	2.996
	CV%	6.03	6.60	5.07	4.12	3.20	4.43	3.42

#### AS 69.2 Effect of plant growth regulators on yield parameters of cane

Treatments		Length of cane (cm)	Girth of cane (cm)	Weight of cane (kg)
T <sub>1</sub>	Conventional planting/ Farmers practice (3 bud setts)	278.22	2.51	1.32
T <sub>2</sub>	Planting of setts after overnight soaking in water	276.87	2.58	1.37
T <sub>3</sub>	Planting of setts after overnight solution in 50 PPM ethrel solution	284.31	2.47	1.49
T <sub>4</sub>	Planting of setts after overnight solution in 100 PPM ethrel solution	288.60	2.63	1.62
T <sub>5</sub>	T <sub>1</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	290.80	2.78	1.52
T <sub>6</sub>	T <sub>2</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	290.30	2.55	1.54
T <sub>7</sub>	T <sub>3</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	307.77	2.94	1.58
T <sub>8</sub>	T <sub>4</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	<b>312.40</b>	2.88	1.65
	SEm±	4.58	0.194	0.066
	CD at 5 %	13.89	0.588	0.201
	CV%	5.92	12.59	7.60

### AS 69.3 Effect of plant growth regulators on juice quality and yield of cane

	Treatments	Brix %	Sucrose %	Purity %	NMC (000/ha)	Cane yield (t/ha)	CCS %	CCS (t/ha)
T <sub>1</sub>	Conventional planting/ Farmers practice (3 bud setts)	18.03	16.8	86.8	69.83	92.15	10.87	11.76
T <sub>2</sub>	Planting of setts after overnight soaking in water	18.09	17.0	87.3	70.83	96.79	10.70	11.54
T <sub>3</sub>	Planting of setts after overnight solution in 50 PPM ethrel solution	18.48	17.5	86.47	71.50	106.47	11.60	12.12
T <sub>4</sub>	Planting of setts after overnight solution in 100 PPM ethrel solution	17.95	17.8	85.16	74.33	117.14	11.37	12.58
T <sub>5</sub>	T <sub>1</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	16.98	16.6	85.2	73.80	111.87	11.58	12.42
T <sub>6</sub>	T <sub>2</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	18.31	16.8	83.55	74.37	115.51	11.35	12.18
T <sub>7</sub>	T <sub>3</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	17.71	17.5	86.14	78.87	118.43	11.78	12.74
T <sub>8</sub>	T <sub>4</sub> + GA <sub>3</sub> spray at 90, 120 & 150 DAP	18.76	18.2	85.77	81.20	121.40	11.90	12.82
	SEm±	0.553	0.37	2.78	2.014	4.329	0.407	0.32
	CD at 5 %	NS	NS	NS	6.108	13.130	NS	1.52
	CV%	5.31	5.26	6.12	4.69	6.80	6.18	3.72

Out of the eight treatments, Planting of setts after soaking in 100 PPM ethrel solution along with GA<sub>3</sub> spray at 90, 120 & 150 DAP proved to be the best with highest number of net millable canes (81.20 th/ha), cane (121.4 t/ha) and CCS yield (12.82.t/ha). The treatment next in order was T<sub>7</sub> where Planting of setts after soaking in 50 PPM ethrel solution along with GA<sub>3</sub> spray at 90, 120 & 150 DAP produced NMC of 78.87 ('000 /ha) with cane and CCS yield of 118.43 and 12.74 t/ha, respectively. Planting of setts after overnight soaking in water along with GA<sub>3</sub> spray at 90, 120 & 150 DAP produced NMC of 74.33 ('000 /ha) cane and CCS yield of 115.5 and 12.18 t/ha, respectively. These three treatments were at par. The higher yield parameters i.e. number of shoots/ha, length and girth of cane in the above mentioned treatments were the factors of higher cane and CCS yield.

<b>AS 70:</b>	<b>Scheduling irrigation with mulch under different sugarcane planting methods</b>
<b>Year of initiation</b>	2016-17
<b>Design</b>	Strip plot
<b>Replication</b>	3
<b>Treatments (12)</b>	Planting methods : 4 Irrigation regime : 3
<b>Variety</b>	CoOr 12346
<b>Recommended fertilizer dose</b>	250:100:60 N :P <sub>2</sub> O <sub>5</sub> : K <sub>2</sub> O kg /ha
<b>Plot size</b>	6m width x 8m length
<b>Date of planting</b>	25.01.16
<b>Date of harvest</b>	15.01.17

**Treatment (A): Combination of planting methods and mulch practices**

P1 : Furrow planting (120 cm row spacing) without mulching

P2 : Furrow planting (120 cm row spacing) with brown mulching.

P3 : Furrow planting (120 cm row spacing) with alternate skip furrow irrigation\* after earthing-up without mulching.

P4 : Furrow planting (120 cm row spacing) with alternate skip furrow irrigation\* after earthing-up + brown mulching.

**Treatment**

**Irrigation schedule (IW/CPE)**

**(B):**

I<sub>1</sub> : 0.60

I<sub>2</sub> : 0.80

I<sub>3</sub> : 1.00

**Irrigation water depth : 7.5 cm**

**AS 70.1: Sugarcane yield and quality under different planting methods and irrigation schedule**

Treatments	Germination % at 45 DAP	No of tillers (000/ha) at 90 DAP	No of tillers (000/ha) at 120 DAP	NMC (000/ha)	Cane yield (t/ha)	Juice Brix %	Juice Sucrose%	CCS %	CCS yield (t/ha)
<b>Planting methods and mulch practices</b>									
<b>P<sub>1</sub></b>	52.26	76.97	87.68	88.48	101.93	21.59	17.95	12.04	11.14
<b>P<sub>2</sub></b>	53.83	90.08	90.75	92.68	103.36	20.69	17.56	11.90	11.63
<b>P<sub>3</sub></b>	51.66	83.83	85.94	86.83	102.05	20.25	17.23	11.69	11.39
<b>P<sub>4</sub></b>	50.92	88.41	88.46	92.92	103.93	19.45	16.85	11.54	12.12
<b>SEm ±</b>	5.48	3.400	2.82	2.54	2.24	1.05	0.45	0.29	0.25
<b>CD at 5 %</b>	NS	6.97	5.68	6.92	NS	NS	NS	NS	NS

Irrigation schedule									
<b>I<sub>1</sub></b>	52.86	82.34	79.82	83.62	98.94	20.82	17.54	11.84	11.33
<b>I<sub>2</sub></b>	51.96	85.72	82.26	87.75	103.34	21.44	17.84	11.97	11.88
<b>I<sub>3</sub></b>	50.24	92.29	90.68	96.22	106.17	19.75	17.25	11.86	12.46
<b>SEm<sub>±</sub></b>	4.52	2.74	2.74	2.68	1.94	1.22	0.41	0.24	0.255
<b>CD at 5 %</b>	NS	7.636	8.63	6.41	5.69	NS	NS	NS	0.68

### AS 70.2

### Mean table

	<b>I<sub>1</sub></b>	<b>I<sub>2</sub></b>	<b>I<sub>3</sub></b>	<b>Mean</b>
<b>P<sub>1</sub></b>	98.677	102.587	104.523	101.929
<b>P<sub>2</sub></b>	99.080	103.723	107.280	103.361
<b>P<sub>3</sub></b>	97.807	102.800	105.543	102.050
<b>P<sub>4</sub></b>	100.200	104.240	107.350	103.930
<b>Mean</b>	98.941	103.338	106.174	102.818
	<b>P</b>	<b>I</b>	<b>P x I</b>	
<b>Sem<sub>±</sub></b>	2.240	1.940	3.880	
<b>CD at 5%</b>	NS	5.689	NS	
<b>CV</b>	6.54			

### AS 70.3 Sugarcane yield and Water use efficiency of sugarcane under different planting methods and irrigation schedule

<b>Treatments</b>	<b>Cane yield (t/ha)</b>	<b>Quantity of water applied (ha-cm)</b>	<b>Water use efficiency (kg/ha-cm)</b>
<b>Planting method</b>			
<b>P<sub>1</sub></b>	101.93	142.6	714.8
<b>P<sub>2</sub></b>	103.36	133.8	772.5
<b>P<sub>3</sub></b>	102.05	130.7	780.8
<b>P<sub>4</sub></b>	103.93	126.8	819.6
<b>Irrigation schedule</b>			
<b>I<sub>1</sub></b>	98.94	120.7	819.7
<b>I<sub>2</sub></b>	103.34	135.2	764.3
<b>I<sub>3</sub></b>	106.17	150.4	705.9

The experiment was laid out in strip plot design with three replications. Furrow planting (120 cm row spacing) with alternate skip furrow irrigation after earthing-up + brown mulching method produced higher NMC and cane yield of 92.93'000/ha and 103.93t/ha respectively which is closely followed by furrow planting



(120 cm row spacing) with brown mulching (NMC and cane yield 92.68'000/ha and 103.36 t/ha respectively). Irrigating the crop at IW/CPE ratio of 1.0 produced highest NMC and sugarcane yield of 96.22'000/ha and 106.17 t/ha respectively which is significantly different from irrigating the crop at IW/CPE ratio of 0.6 (NMC and cane yield 82.62'000/ha and 98.94 t/ha respectively). Planting method x irrigation schedule interaction was found not significant. However maximum water use efficiency was recorded with IW/CPE of 0.6 (819.7 kg/ha-cm) followed by IW/CPE ratio of 0.8 (764.3 kg/ha-cm). Furrow planting (120 cm row spacing) with alternate skip furrow irrigation after earthing-up + brown mulching treatment recorded higher water use efficiency (819.6 kg/ha-cm) than other planting methods.

AS 71:	Carbon sequestration assessment in sugarcane based cropping system
Year of initiation	2016-17
Design	RBD
Treatments	8
Replication	3
Variety	Co Or 10346
Recommended fertilizer dose	250:100:60 N: P <sub>2</sub> O <sub>5</sub> : K <sub>2</sub> O kg /ha
Plot size	6 rows of 6 meter length
Date of planting	24.01.2016
Date of harvest	20.01.2017

**Treatments** :  
(Cropping system)

T1 : Cowpea-Sesame – Cowpea - Sesame

T2 : Sugarcane-Ratoon-cowpea

T3 : Sugarcane – Ratoon (trash mulching without Trichoderma) - Cowpea

T4 : Sugarcane – Ratoon (trash removal without Trichoderma) - Cowpea

T5 : Sugarcane – Ratoon (trash mulching with Trichoderma) - Cowpea

T6 : Sugarcane – Ratoon – Cowpea (trash incorporation through rotavator and Trichoderma incorporation before sowing of Cowpea)

T7 : Sugarcane – Ratoon- Cowpea (Zero tilled) without Trichoderma

T8 : Sugarcane – Ratoon-Cowpea (Zero tilled) with Trichoderma

#### AS – 71.1

Treatment s	Germination % at 45 DAP	No of tillers (000/ha) at 120 DAP	NMC (000/ha)	Cane yield (t/ha)	Juice Brix %	Juice Sucrose%	CCS %
T <sub>2</sub>	53.83	88.68	89.45	100.45	20.69	17.56	11.90
T <sub>3</sub>	54.66	87.94	88.83	97.64	19.25	17.23	11.69
T <sub>4</sub>	56.92	85.46	89.92	99.85	19.45	16.85	11.54
T <sub>5</sub>	54.48	87.43	90.7	95.78	20.22	17.65	11.34
T <sub>6</sub>	55.34	88.45	89.6	102.34	18.82	16.87	11.12
T <sub>7</sub>	53.86	88.25	88.62	97.32	20.42	17.54	11.84

T <sub>8</sub>	54.96	86.85	87.75	100.91	19.44	17.84	11.97
<b>CD at 5 %</b>	NS	NS	NS	NS	NS	NS	NS

### AS – 71.2 Initial soil fertility status

Treatments	0-30 cm			30-60 cm			60-90 cm			Total SOC
	OC%	B.D	SOC	OC%	B.D	SOC	OC%	B.D	SOC	
T <sub>1</sub>	0.43	1.36	17.54	0.35	1.45	15.22	0.28	1.51	12.68	45.44
T <sub>2</sub>	0.45	1.35	18.22	0.41	1.45	17.83	0.34	1.5	15.3	51.35
T <sub>3</sub>	0.47	1.34	18.89	0.42	1.46	18.4	0.30	1.52	13.68	50.97
T <sub>4</sub>	0.46	1.41	19.46	0.38	1.47	16.76	0.32	1.5	14.4	50.62
T <sub>5</sub>	0.51	1.40	21.42	0.45	1.50	20.25	0.29	1.62	14.09	55.76
T <sub>6</sub>	0.50	1.42	21.3	0.43	1.48	19.74	0.31	1.59	14.79	55.83
T <sub>7</sub>	0.52	1.45	22.62	0.40	1.53	18.36	0.30	1.58	14.85	55.83
T <sub>8</sub>	0.49	1.44	21.17	0.44	1.5	19.8	0.33	1.65	16.33	57.3

Cowpea yield : 170 kg/ha

Sesame yield : 542 kg/ha

This experiment was conducted using the variety CoOr 10346. Initial soil organic carbon was calculated by taking observations of Organic carbon % and bulk density of different depths. In the first treatment cowpea and sesame crop was grown to compare with sugarcane based cropping system. The observations on growth parameters and yield and yield attributes were analysed but there were no significant difference among the treatments.

<b>AS 72:</b>	<b>Agronomic performance of elite sugarcane genotypes</b>
<b>Year of initiation</b>	2016-17
<b>Design</b>	RBD
<b>Genotypes</b>	8
<b>Replication</b>	3
<b>Recommended fertilizer dose</b>	125% of the recommended dose of NPK for the zone (RD- 250:100:60 N: P <sub>2</sub> O <sub>5</sub> : K <sub>2</sub> O kg /ha)
<b>Plot size</b>	5 rows of 6 meter length
<b>Date of planting</b>	23.01.2016
<b>Date of harvest</b>	15.01.2017

Early maturing varieties (5) : CoA 12321, CoA 12322, CoA 12323, CoOr 12346 and CoV 12356

Zonal Check (3) : Co 6907, CoC 01061 and CoA 92081

### AS-72.1

Treatments		Germination % at 45 DAP	No of tillers (000/ha) at 120 DAP	NMC (000/ha)	Cane yield (t/ha)	Juice Brix %	Juice Sucrose%	CCS %
T <sub>1</sub>	CoA 12321	54.66	87.94	88.83	97.64	19.25	17.23	11.69
T <sub>2</sub>	CoA 12322	53.83	88.68	89.45	100.45	20.69	17.56	11.90
T <sub>3</sub>	CoA 12323	54.34	88.22	88.48	98.64	20.15	17.43	11.68
T <sub>4</sub>	CoOr 12346	56.92	88.45	94.92	102.34	20.42	17.85	12.14
T <sub>5</sub>	CoV 12356	50.48	83.43	86.7	95.78	18.22	16.65	11.24
T <sub>6</sub>	Co 6907	54.34	82.45	85.6	93.45	18.82	16.87	11.12
T <sub>7</sub>	CoC 01061	53.86	85.25	82.62	91.32	18.42	17.54	11.84
T <sub>8</sub>	CoA 92081	54.96	86.85	87.75	94.68	19.44	17.84	11.97
SEm±		1.22	2.68	2.24	2.75	1.78	1.16	0.54
CD at 5 %		NS	NS	5.46	6.64	NS	NS	NS
CV%		4.67	3.75	4.35	5.62	6.32	3.64	3.12

The experiment was laid out in randomized block design with five genotypes from AVT namely CoA 12321, CoA 12322, CoA 12323, CoOr 12346 and CoV 12356 along with three standard check *i.e.* Co 6907, CoC 01061 and CoA 92081 on red laterite soil of the experimental farm of Sugarcane Research Station, Nayagarh. The soil was acidic (pH 5.33) in reaction with electrical conductivity of 0.206 dsm<sup>-1</sup>. Available N content was in lower range (155 kg/ha), but the soil was medium in available P (19.6 kg/ha) and (K 164 kg/ha) content. Analysis of variance suggested that there is significant variations among the genotypes with respect to cane yield, sucrose %, CCS%, germination %, number of tillers at 120 days and number of millable canes ('000/ha). The genotype CoOr 12346 produced the highest average cane yield of 102.34 t/ha with application of 125 % RD of fertiliser and was closely followed by CoA 12322 (100.45 t/ha) and CoA 12323 (98.64 t/ha).

**ALL INDIA CO-ORDINATED RESEARCH PROJECT ON SUGARCANE  
SUGARCANE RESEARCH STATION  
(ORISA UNIVERSITY OF AGRICULTURE & TECHNOLOGY)  
AT: PANIPOILA , PO :BALUGAON , Dist : NAYAGARH**

No. 155 / SRS Dt. 30.05.2017

From :

Dr. P. K. Nayak, Ph.D.  
Officer-in-Charge

To

The Principal Scientist & Principal Investigator (Crop Production)  
ICAR- Indian Institute of Sugarcane Research,  
Lucknow-226002 (UP)

Sub : Submission of data sheet 2016-17 (Crop Production)

Sir,

In inviting a kind reference to the subject cited above I am herewith submitting the data sheet 2016-17 of crop Production discipline of AICRP on Sugarcane, S.R.S. Nayagarh along with soft copy for your kind perusal and inclusion in the Annual Report.

This is for favour of your kind information and necessary action

With regards

Yours faithfully

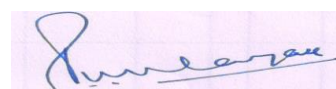


Encl. : As above

( P.K.Nayak )  
OFFICER-IN-CHARGE  
AICRP(S) S.R.S., NAYAGARH

Memo No. 156 / SRS Dt 30.05. 2017

Copy along with data sheet and C.D. submitted to the Project Coordinator, AICRP(S), IISR , Lucknow ,UP for favour of information and necessary action .



( P.K.Nayak )  
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