

1. SEASONAL FEATURE AND CROP CONDITION

YEAR: 2012-13

RAINFALL:-

The monsoon commenced from 1st week of June (23rd std week) at Navsari. The total rainfall received during the season was 1267.2 mm. in 66 days. The monsoon withdrawn during the first week of October-2012. The total rainfall received was slightly less than average (1400.mm.)

TEMPERATURE:-

The highest maximum temperature was recorded during the month of March 2012 (37.6 °C) and the lowest minimum temperature was recorded in the month of January 2012 (11.6 °C) and January 2013 (9.9 °C) at Navsari.

CROP CONDITION:-

In general weather parameters *viz.* Temperature (Maxi. and mini.), and relative humidity, remained comparatively favorable for normal growth of sugarcane crop. Water logging was observed in lowland plots. Hence early flowering was observed in many varieties as such crop yield remained some what low than the non flowering crops.

The mean weekly meteorological data recorded during the crop year-reporting year (2012-13) at Navsari are given in Table: A.

Table: A The meteorological data recorded at Meteorological observatory College farm, N.M.C.A., N.A.U., Navsari for the crop year 2011, 2012-2013.

Std. Week No.	Metoro-logical week	Temperature C ⁰		Relative Humidity %		Rain-Fall (mm)	No. of rainy days	Evaporation
		Maxi.	Mini.	Morning	Evening			
1	2	3	4	5	6	7	8	9
October-2011								
40	1-7	33.8	23.4	87	54	1.0	1	3.6
41	8-14	36.6	24.1	85	41	0.0	0	3.8
42	15-21	36.2	23.7	87	47	0.0	0	3.8
43	22-28	35.9	23.7	86	46	0.2	1	3.7
44	29-4	36..0	21.1	78	46	0.0	0	3.8
November-2011								
45	5-11	35.5	18.1	73	27	0.0	0	3.8
46	12-18	34.4	17.3	78	31	0.0	0	3.9
47	19-25	34.6	20.5	81	33	0.0	0	5.1
48	26-2	34.6	20.5	71	36	0.0	0	5.7
December-2011								
49	3-9	33.9	17.2	82	33	0.0	0	5.3
50	10-16	32.1	14.3	75	34	0.0	0	4.8
51	17-23	32.8	15.2	76	30	0.0	0	4.3
52	24-31	30.6	12.1	83	29	0.0	0	4.0
January-2012								
1	1-7	29.2	12.2	83	41	0.0	0	3.2
2	8-14	28.0	11.9	75	51	0.0	0	3.0
3	15-21	28.0	11.6	86	64	0.0	0	3.7
4	22-28	29.6	13.0	83	75	0.0	0	3.9
5	29-4	30.7	14.4	73	32	0.0	0	3.8
Feb. -2012								
6	5-11	28.0	12.0	60	24	0.0	0	4.2
7	12-18	30.4	12.9	77	28	0.0	0	4.5
8	19-25	35.1	15.1	70	23	0.0	0	4.8
9	26-4	32.3	14.5	85	34	0.0	0	5.4
Mar.- 2012								
10	5-11	31.5	15.4	83	40	0.0	0	5.4
11	12-18	35.6	15.6	71	19	0.0	0	6.0
12	19-25	37.6	15.9	73	17	0.0	0	6.9
13	26-1	37.4	20.3	85	30	0.0	0	7.1
Apr.-2012								
14	2-8	35.4	23.1	91	49	0.0	0	6.9
15	9-15	34.4	22.6	90	45	0.0	0	6.7
16	16-22	37.1	23.7	75	37	0.0	0	6.7
17	23-29	37.0	22.8	84	41	0.0	0	6.8
18	30-6	33.5	25.7	82	59	0.0	0	6.7
May -2012								
19	7-13	34.0	25.0	84	56	0.0	0	6.5

1	2	3	4	5	6	7	8	9
20	14-20	34.8	25.7	80	52	0.0	0	6.7
21	21-27	33.6	27.1	81	58	0.0	0	6.5
22	28-3	33.6	28.2	75	60	0.0	0	6.2
June -2012								
23	4-10	33.7	27.1	84	67	32.0	2	5.8
24	11-17	34.1	26.7	85	67	7.0	1	5.7
25	18-24	33.0	27.1	85	72	51.0	3	5.3
26	25-1	32.0	26.5	89	72	65.0	3	4.5
July -2012								
27	2-8	31.1	26.1	93	83	130	4	3.6
28	9-15	31.0	25.8	94	83	55	7	3.5
29	16-22	30.8	26.8	91	83	39	4	3.8
30	23-29	30.1	27.0	90	86	19	2	3.5
31	30-5	29.7	25.8	91	86	50.4	5	3.4
Aug.-2012								
32	6-12	30.0	25.8	94	88	95.0	2	3.8
33	13-19	29.6	25.5	90	81	35.0	5	3.3
34	20-26	30.1	25.0	79	25	43.0	2	3.3
35	27-2	30.7	25.6	93	79	15.6	6	3.4
Sep. -2012								
36	3-9	29.3	24.9	97	91	301.0	6	2.4
37	10-16	29.1	24.8	92	85	168.0	6	2.1
38	17-23	30.4	24.8	93	70	12.0	2	2.6
39	24-30	31.7	23.4	92	60	136.0	2	3.1
Oct. -2012								
40	1-7	33.6	24.4	90.0	67.0	12	2	3.8
41	8-14	34.3	22.5	88.0	47.0	0	0	3.8
42	15-21	35.9	21.6	81.0	51.0	0	0	4.0
43	22-28	35.8	21.1	72.0	33.0	0	0	4.7
44	29-4	34.1	18.1	62.0	31.0	0	0	4.1
Nov. -2012								
45	5-11	33.9	16.8	70.0	33.0	0	0	4.7
46	12-18	33.8	20.0	82.0	38.0	0	0	4.9
47	19-25	32.4	14.2	70.0	23.0	0	0	3.8
48	26-2	32.2	13.8	84.0	33.0	0	0	4.1
Dec. -2012								
49	3-9	33.5	19.2	68.0	33.0	0	0	4.3
50	10-16	30.7	15.3	86.0	38.0	0	0	4.2
51	17-23	32.1	17.4	66.0	31.0	0	0	4.5
52	24-31	31.0	14.5	66.0	33.0	0	0	4.5
Jan. -2013								
1	1-7	28.2	9.9	87	41.0	0	0	3.1
2	8-14	30.6	12.7	73	38.0	0	0	4.7
3	15-21	29.04	11.86	87.74	48.21	0	0	4.7
4	22-28	30.43	14.04	75.92	36.18	0	0	4.8
						1267.2	66	

FORM C

Name of the Coordinated Project: All India Coordinated Research Project on
Sugarcane

Discipline : Agronomy **State** : Gujarat **Location** : Navsari
Year : 2012-2013 **Zone** : Peninsular

Trial series: AS 42: Agronomic evaluation of promising new sugarcane genotypes (early and midlate group)

General Information about the Trial:

1. **Design of the experiment** : R.B.D. (Factorial)
2. **Number of treatments** : 12

A. Variety -Genotypes

- V₁ – Co 0403
- V₂ – CoN 07072
- V₃ – Co 6015
- V₄ – CoN 9073

B. Fertilizer levels:

- F₁ - 75 % of recommended dose of N kg/ha
- F₂ - 100 % of recommended dose of N "
- F₃ - 125 % of recommended dose of N "

(Recommended dose: 250-125-125 kg NPK/ha)

3. **No. of replications:** 3
4. **Plot size :**
 - (a) Distance between rows : 100cm
 - (b) Length of rows in gross plot : 6m
 - (c) No. of rows in gross plot : 6
 - (d) Gross plot size : 6.00m x 6.00m
 - (e) Length of rows in net plot : 4m
 - (f) No. of rows in net plot : 4
 - (g) Net plot size : 4.00m x 4.00m
5. **Date of Planting** : 14-12-2011
6. **Date of transplanting** : Not applicable
7. **Date of harvesting** : 16-01-2013

8. **Crop grown in previous year** : Paddy
9. **Soil type** : Heavy black soil
10. **pH value** : 8.11
11. **Soil fertility status at the time of planting:**
- | Nutrient | Value | Status |
|--|-------|--------|
| Avail. N (kg/ha) | 354 | Medium |
| Avail. P ₂ O ₅ (kg/ha) | 28.59 | Medium |
| Avail. K ₂ O (kg/ha) | 358 | High |
12. **Fertilizer applied** : As per treatment
- | Nutrient | Basal | Top dressing |
|----------|-------|--|
| N | 15 % | 85% (In 3 splits 30, 20 & 35 % of RDN) |
| P | 100% | - |
| K | 100% | - |
13. **No. of irrigation given** : Irrigations were given at an interval of 3 weeks in winter and 2 weeks in summer
15. **No. of weedings given** : 4
16. **Other cultural operations measures adopted:**
- Earthing up** :28-03-2012 and 28-05-2012
17. **Plant protection measures adopted** : Nil
19. **Damage to the crop due to pest disease** : No significant damage caused due to various pests and diseases.
20. **Is the experiment reliable** : Yes
21. **Name of Co-operators** : Ms. Darpana Patel
22. **Signature of the Scientist in charge of the experiment** :
23. **Name and designation** : Prof. H. C.Patel
Asst. Research Scientist

FORM C

Name of the Coordinated Project: All India Coordinated Research Project on
Sugarcane

Discipline: Agronomy **State :** Gujarat **Location:** Navsari

Year : 2012-13 **Zone** : Peninsular

Title: AS 42 Agronomic evaluation of promising new sugarcane genotypes
(Early and Midlate)

Table 1 - Mean data of Germination percentage (at 30 and 45 DAP)

Treatment	Germination (%) at 30 days after planting	Germination (%) at 45 days after planting
V ₁ F ₁	46.33	68.85
V ₁ F ₂	47.00	71.62
V ₁ F ₃	49.67	70.24
V ₂ F ₁	61.00	72.56
V ₂ F ₂	56.67	74.33
V ₂ F ₃	54.67	75.82
V ₃ F ₁	51.33	59.62
V ₃ F ₂	52.67	64.51
V ₃ F ₃	50.00	68.47
V ₄ F ₁	58.67	66.53
V ₃ F ₂	55.67	61.72
V ₃ F ₃	51.33	63.52

Results :-**1. Number of tillers :**

The results are given in table 1 to 3.

Variety (Genotypes):

Number of tillers were significantly influenced due to various varieties at 90, 120 and 180 days after planting (DAP). Significantly higher number of tillers were counted with variety CoN 07072 (V_2) being at par with variety CoN 09073 (V_4) followed by V_3 and V_1 at 90, 120 and 180 DAP.

Fertilizer levels:

The fertilizer levels F_3 (125% recommended dose of N kg/ha) and F_2 (100% recommended dose of N kg/ha) resulted in significantly higher tillers population and remained at par with each other over F_1 (75% recommended dose of N kg/ha) fertilizer level in all the three stages after planting.

2. Number of millable canes (NMC ha⁻¹) at harvest

The results are given in table 4 and 4a.

Variety (Genotypes):

Though the highest number of millable canes (112430.56 ha⁻¹) were recorded with variety CoN 07072 (V_2), but was at par with variety CoN 09073 (V_4) followed by V_3 and V_1 .

Fertilizer levels:

The fertilizer levels F_3 (125% recommended dose of N kg/ha) and F_2 (100% recommended dose of N kg/ha) resulted in significantly higher number of millable canes ha⁻¹ (109687.50 and 107187.50 ha⁻¹, respectively) and remained at par with each other over F_1 (95104.17 ha⁻¹) fertilizer level.

3. Cane yield (t/ha) :-

The Results are given in Table 5 and 5a.

Variety (Genotypes) :-

Highest cane yield (135.34 t/ha) was recorded by the variety CoN 07072 (V_{12}) and remained at par with CoN 09073 (V_4). Lowest cane yield (121.88 t/ha) was recorded by variety V_3 (Co 06015).

Fertilizer levels:-

The fertilizer level 125% recommended dose of N kg/ha and 100% recommended dose of NPK kg/ha resulted in significantly the highest cane yield (134.11 and 128.85 t ha⁻¹ respectively) and remained at par with each other over F₁ (75% recommended dose of N kg/ha) level.

Interaction:-

Interaction effect between varieties and fertilizers levels was failed to get the level of significance.

4. C.C.S. t/ha:-

The results are given in Table 6 and 6 a.

Variety (Genotypes) :-

Significantly highest C.C.S. (17.87 t/ha) was recorded by variety CoN 07072(V₂), which was statistically at par with variety Co 0403(V₁). The lowest C.C.S. t/ha was recorded in variety CoN 09073 (V₄) and Co 6015 (V₃).

Fertilizer levels:

The fertilizer level 125% recommended dose of N kg/ha recorded significantly highest C.C.S. (17.75 t/ha).

Interaction:-

Interaction effects were found non-significant.

5. Quality parameters :-

The results are given in summary Table-10.

Varieties :- (Genotypes):-

Significantly higher c.c.s.%, pol % juice and pol % cane were recorded with variety V₁-Co 0403 and V₂-CoN 07072 and remained at par with each other while purity % and fibre % did not show any significant differences among the genotype.

Fertilizer levels:-

Different fertilizer levels failed to show significant results on quality parameters.

Interaction:-

Interaction effect on variety into fertilizer levels was failed to show the level of significant.

FORM D

Name of the Coordinated Project: All India Coordinated Research Project on Sugarcane

Discipline : Agronomy **State** : Gujarat **Location:** Navsari
Year : 2012-2013 **Zone** : Peninsular

Title : AS 42 : Agronomic evaluation of promising new sugarcane genotypes
(Early and not mid late group)

Table: 1 characters : Number of tillers at 90 DAP
Net plot size 4.00 m x 4.00m.

Sr. No.	Treatment	Replication			Total	Mean	tillers/ha
		I	II	III			
1	V ₁ F ₁	238	207	237	682	227.33	142083.33
2	V ₁ F ₂	217	258	271	746	248.67	155416.67
3	V ₁ F ₃	277	265	252	794	264.67	165416.67
4	V ₂ F ₁	265	247	256	768	256.00	160000.00
5	V ₂ F ₂	302	272	262	836	278.67	174166.67
6	V ₂ F ₃	276	286	292	854	284.67	177916.67
7	V ₃ F ₁	233	223	216	672	224.00	140000.00
8	V ₃ F ₂	244	274	268	786	262.00	163750.00
9	V ₃ F ₃	254	281	272	807	269.00	168125.00
10	V ₄ F ₁	250	208	271	729	243.00	151875.00
11	V ₄ F ₂	288	277	243	808	269.33	168333.33
12	V ₄ F ₃	278	272	293	843	281.00	175625.00
Total		2422	2417	2432	9325	-	-

Table : 1a. Mean Table of number of tillers at 90 DAP /ha

Treatment	Number of tillers at 90 DAP /ha
Variety (Genotypes)	
V ₁ -Co 0403	154305.56
V ₂ - CoN 07072	170694.44
V ₃ - Co 6015	157291.67
V ₄ -CoN 09073	165277.78
S.Em. _±	3951.17
C.D. at 5%	11588.27
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	148489.58
F ₂ -100 % of recommended dose of N kg/ha	165416.67
F ₃ -125 % of recommended dose of N kg/ha	171770.83
S.Em. _±	3421.81
C.D. at 5%	10035.74
C.V. %	7.32
Interaction	NS

Table 2: Number of tillers at 120 DAP

Sr. No.	Treatment	Replication			Total	Mean	tillers/ha
		I	II	III			
1	V ₁ F ₁	252	125	253	630	210.00	131250.00
2	V ₁ F ₂	248	265	272	785	261.67	163541.67
3	V ₁ F ₃	284	278	260	822	274.00	171250.00
4	V ₂ F ₁	278	261	267	806	268.67	167916.67
5	V ₂ F ₂	316	286	277	879	293.00	183125.00
6	V ₂ F ₃	288	299	298	885	295.00	184375.00
7	V ₃ F ₁	241	253	225	719	239.67	149791.67
8	V ₃ F ₂	256	287	281	824	274.67	171666.67
9	V ₃ F ₃	267	293	286	846	282.00	176250.00
10	V ₄ F ₁	261	220	281	762	254.00	158750.00
11	V ₄ F ₂	294	286	258	838	279.33	174583.33
12	V ₄ F ₃	289	280	304	873	291.00	181875.00
Total	-	3274	3133	3262	9669	-	-

Table : 2 a. Mean Table of Number of tillers at 120 DAP

Treatment	Number of tillers at 120 DAP
Variety (Genotypes)	
V ₁ -Co 0403	155347.22
V ₂ - CoN 07072	178472.22
V ₃ - Co 6015	165902.778
V ₄ -CoN 09073	171736.111
S.Em.±	5571.23
C.D. at 5%	16339.69
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	151927.08
F ₂ -100 % of recommended dose of N kg/ha	173229.17
F ₃ -125 % of recommended dose of N kg/ha	178437.50
S.Em. ±	4824.82
C.D. at 5%	14150.59
C.V. %	9.96
Interaction	NS

Table 3: Number of tillers at 180 DAP

Sr. No.	Treatment	Replication			Total	Mean	tillers/ha
		I	II	III			
1	V ₁ F ₁	208	192	215	615	205.00	128125.00
2	V ₁ F ₂	196	222	202	620	206.67	129166.67
3	V ₁ F ₃	224	212	234	670	223.33	139583.33
4	V ₂ F ₁	204	198	224	626	208.67	130416.67
5	V ₂ F ₂	234	239	250	723	241.00	150625.00
6	V ₂ F ₃	229	240	247	716	238.67	149166.67
7	V ₃ F ₁	198	206	224	628	209.33	130833.33
8	V ₃ F ₂	206	223	231	660	220.00	137500.00
9	V ₃ F ₃	213	243	186	642	214.00	133750.00
10	V ₄ F ₁	196	216	213	625	208.33	130208.33
11	V ₄ F ₂	244	228	226	698	232.67	145416.67
12	V ₄ F ₃	227	236	255	718	239.33	149583.33
Total	-	2579	2579	2655	7941	-	-

Table : 3a. Mean Table of Number of tillers at 180 DAP

Treatment	Number of tillers at 180 DAP
Variety (Genotypes)	
V ₁ -Co 0403	132291.67
V ₂ - CoN 07072	143402.78
V ₃ - Co 6015	134027.78
V ₄ -CoN 09073	141736.11
S.Em.±	2813.61
C.D. at 5%	8251.96
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	129895.83
F ₂ -100 % of recommended dose of N kg/ha	140677.08
F ₃ -125 % of recommended dose of N kg/ha	143020.83
S.Em. ±	2436.66
C.D. at 5%	7146.40
C.V. %	6.12
Interaction	NS

Table 4: Number of millable cane at harvest

Sr. No.	Treatment	Replication			Total	Mean	NMC/ha
		I	II	III			
1	V ₁ F ₁	136	145	150	431	143.67	89791.67
2	V ₁ F ₂	144	153	156	453	151.00	94375.00
3	V ₁ F ₃	150	175	164	489	163.00	101875.00
4	V ₂ F ₁	131	170	190	491	163.67	102291.67
5	V ₂ F ₂	199	162	182	543	181.00	113125.00
6	V ₂ F ₃	180	210	195	585	195.00	121875.00
7	V ₃ F ₁	127	157	120	404	134.67	84166.67
8	V ₃ F ₂	156	184	169	509	169.67	106041.67
9	V ₃ F ₃	180	162	151	493	164.33	102708.33
10	V ₄ F ₁	151	207	142	500	166.67	104166.67
11	V ₄ F ₂	184	182	187	553	184.33	115208.33
12	V ₄ F ₃	160	184	195	539	179.67	112291.67
Total	-	1898	2091	2001	5990	-	-

Table : 4 a. Mean Table of Number of millable cane at harvest

Treatment	Number of millable cane at harvest
Variety (Genotypes)	
V ₁ -Co 0403	95347.22
V ₂ - CoN 07072	112430.56
V ₃ - Co 6015	97638.89
V ₄ -CoN 09073	110555.56
S.Em.±	3609.24
C.D. at 5%	10585.45
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	95104.17
F ₂ -100 % of recommended dose of N kg/ha	107187.50
F ₃ -125 % of recommended dose of N kg/ha	109687.50
S.Em. ±	3125.70
C.D. at 5%	9167.27
C.V. %	10.41
Interaction	NS

Table 5: Cane yield (t/ha)

Sr. No.	Treatment	Replication			Total	Mean	t/ha
		I	II	III			
1	V ₁ F ₁	180	195	186	561	187.00	116.88
2	V ₁ F ₂	206	193	222	621	207.00	129.38
3	V ₁ F ₃	202	222	210	634	211.33	132.08
4	V ₂ F ₁	184	210	193	587	195.67	122.29
5	V ₂ F ₂	208	223	217	648	216.00	135.00
6	V ₂ F ₃	251	233	230	714	238.00	148.75
7	V ₃ F ₁	195	189	200	584	194.67	121.67
8	V ₃ F ₂	183	192	206	581	193.67	121.04
9	V ₃ F ₃	198	182	210	590	196.67	122.92
10	V ₄ F ₁	194	208	192	594	198.00	123.75
11	V ₄ F ₂	217	196	211	624	208.00	130.00
12	V ₄ F ₃	213	202	222	637	212.33	132.71
Total	-	2431	2445	2499	7375	-	-

Table: 5 a. Mean Table of Cane yield (t/ha)

Treatment	Cane yield (t/ha)
Variety (Genotypes)	
V ₁ -Co 0403	126.16
V ₂ - CoN 07072	135.34
V ₃ - Co 6015	121.88
V ₄ -CoN 09073	128.82
S.Em.±	2.25
C.D. at 5%	6.58
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	121.15
F ₂ -100 % of recommended dose of N kg/ha	128.85
F ₃ -125 % of recommended dose of N kg/ha	134.11
S.Em. ±	1.94
C.D. at 5%	5.70
C.V. %	5.26
Interaction	NS

Table 6: CCS yield (t/ha)

Sr. No.	Treatment	Replication			Total	Mean	t/ha
		I	II	III			
1	V ₁ F ₁	23.91	27.12	27.51	78.53	26.18	16.36
2	V ₁ F ₂	28.54	25.24	31.84	85.62	28.54	17.84
3	V ₁ F ₃	27.62	30.95	29.99	88.57	29.52	18.45
4	V ₂ F ₁	26.05	26.88	24.30	77.23	25.74	16.09
5	V ₂ F ₂	28.09	30.17	26.71	84.98	28.33	17.70
6	V ₂ F ₃	35.68	30.56	28.87	95.11	31.70	19.81
7	V ₃ F ₁	24.82	23.35	22.37	70.54	23.51	14.70
8	V ₃ F ₂	24.71	24.62	22.57	71.90	23.97	14.98
9	V ₃ F ₃	27.51	25.12	25.53	78.16	26.05	16.28
10	V ₄ F ₁	22.39	25.47	22.72	70.58	23.53	14.70
11	V ₄ F ₂	24.99	22.96	24.90	72.85	24.28	15.18
12	V ₄ F ₃	27.25	25.05	26.74	79.04	26.35	16.47
Total	-	321.55	317.51	314.04	953.10	-	-

Table : 6a. Mean Table of CCS yield (t/ha)

Treatment	CCS yield (t/ha)
Variety (Genotypes)	
V ₁ -Co 0403	17.55
V ₂ - CoN 07072	17.87
V ₃ - Co 6015	15.32
V ₄ -CoN 09073	15.45
S.Em.±	0.42
C.D. at 5%	1.22
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	15.46
F ₂ -100 % of recommended dose of N kg/ha	16.42
F ₃ -125 % of recommended dose of N kg/ha	17.75
S.Em. ±	0.36
C.D. at 5%	1.06
C.V. %	7.56
Interaction	NS

Table 7: CCS %

Sr. No.	Treatment	Replication			Total	Mean
		I	II	III		
1	V ₁ F ₁	13.28	13.91	14.79	41.98	13.99
2	V ₁ F ₂	13.85	13.08	14.34	41.27	13.76
3	V ₁ F ₃	13.67	13.94	14.28	41.90	13.97
4	V ₂ F ₁	14.16	12.80	12.59	39.55	13.18
5	V ₂ F ₂	13.50	13.53	12.31	39.35	13.12
6	V ₂ F ₃	14.21	13.12	12.55	39.88	13.29
7	V ₃ F ₁	12.73	12.36	11.18	36.27	12.09
8	V ₃ F ₂	13.50	12.83	10.96	37.28	12.43
9	V ₃ F ₃	13.89	13.80	12.16	39.85	13.28
10	V ₄ F ₁	11.54	12.24	11.83	35.62	11.87
11	V ₄ F ₂	11.52	11.71	11.80	35.03	11.68
12	V ₄ F ₃	12.79	12.40	12.04	37.24	12.41
Total	-	158.66	155.72	150.84	465.22	-

Table : 7a. Mean Table of CCS %

Treatment	CCS %
Variety (Genotypes)	
V ₁ -Co 0403	13.91
V ₂ - CoN 07072	13.20
V ₃ - Co 6015	12.60
V ₄ -CoN 09073	11.99
S.Em.±	0.23
C.D. at 5%	0.68
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	12.78
F ₂ -100 % of recommended dose of N kg/ha	12.74
F ₃ -125 % of recommended dose of N kg/ha	13.24
S.Em. ±	0.20
C.D. at 5%	NS
C.V. %	5.38
Interaction	NS

Table 8: Purity %

Sr. No.	Treatment	Replication			Total	Mean
		I	II	III		
1	V ₁ F ₁	94.02	92.45	92.61	279.08	93.03
2	V ₁ F ₂	93.09	92.17	92.00	277.26	92.42
3	V ₁ F ₃	93.56	93.52	90.52	277.60	92.53
4	V ₂ F ₁	92.67	90.87	92.42	275.96	91.99
5	V ₂ F ₂	92.24	93.91	91.11	277.26	92.42
6	V ₂ F ₃	93.01	90.00	92.00	275.01	91.67
7	V ₃ F ₁	90.06	91.52	92.53	274.11	91.37
8	V ₃ F ₂	90.00	89.96	91.56	271.52	90.51
9	V ₃ F ₃	93.00	91.90	92.20	277.10	92.37
10	V ₄ F ₁	93.62	91.89	90.22	275.73	91.91
11	V ₄ F ₂	91.17	92.63	90.12	273.92	91.31
12	V ₄ F ₃	91.15	91.65	90.32	273.12	91.04
Total	-	1107.59	1102.47	1097.61	3307.67	-

Table : 8a. Mean Table of purity %

Treatment	Purity %
Variety (Genotypes)	
V ₁ -Co 0403	92.66
V ₂ - CoN 07072	92.03
V ₃ - Co 6015	91.41
V ₄ -CoN 09073	91.42
S.Em.±	0.39
C.D. at 5%	NS
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	92.07
F ₂ -100 % of recommended dose of N kg/ha	91.66
F ₃ -125 % of recommended dose of N kg/ha	91.90
S.Em. ±	0.34
C.D. at 5%	NS
C.V. %	1.27
Interaction	NS

Table 9: Pol % juice

Sr. No.	Treatment	Replication			Total	Mean
		I	II	III		
1	V ₁ F ₁	19.56	19.89	19.9	59.35	19.78
2	V ₁ F ₂	20.12	19.36	19.89	59.37	19.79
3	V ₁ F ₃	19.66	19.64	19.12	58.42	19.47
4	V ₂ F ₁	19.85	19.09	18.03	56.97	18.99
5	V ₂ F ₂	19.21	19.52	18.04	56.77	18.92
6	V ₂ F ₃	20.19	19.4	18.56	58.15	19.38
7	V ₃ F ₁	17.31	17.8	17.22	52.33	17.44
8	V ₃ F ₂	17.5	18.26	17.28	53.04	17.68
9	V ₃ F ₃	18.74	18.65	17.32	54.71	18.24
10	V ₄ F ₁	16.15	17.69	17.4	51.24	17.08
11	V ₄ F ₂	16.41	17.17	17.17	50.75	16.92
12	V ₄ F ₃	18.23	18.13	17.55	53.91	17.97
Total	-	222.93	224.60	217.48	665.01	-

Table : 9a. Mean Table of Pol % juice

Treatment	Pol % juice
Variety (Genotypes)	
V ₁ -Co 0403	19.68
V ₂ - CoN 07072	19.10
V ₃ - Co 6015	17.79
V ₄ -CoN 09073	17.32
S.Em.±	0.18
C.D. at 5%	0.53
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	18.32
F ₂ -100 % of recommended dose of N kg/ha	18.33
F ₃ -125 % of recommended dose of N kg/ha	18.77
S.Em. ±	0.16
C.D. at 5%	NS
C.V. %	2.93
Interaction	NS

Table 10: Fibre %

Sr. No.	Treatment	Replication			Total	Mean
		I	II	III		
1	V ₁ F ₁	14.01	14.03	14.40	42.44	14.15
2	V ₁ F ₂	14.44	14.00	14.00	42.44	14.15
3	V ₁ F ₃	14.04	14.41	15.12	43.56	14.52
4	V ₂ F ₁	14.81	14.82	14.43	44.06	14.69
5	V ₂ F ₂	14.03	13.80	14.02	41.85	13.95
6	V ₂ F ₃	14.02	14.00	14.03	42.05	14.02
7	V ₃ F ₁	14.42	15.62	15.24	45.28	15.09
8	V ₃ F ₂	15.20	14.03	14.03	43.26	14.42
9	V ₃ F ₃	14.03	14.43	14.80	43.26	14.42
10	V ₄ F ₁	14.43	14.43	14.04	42.90	14.30
11	V ₄ F ₂	14.84	14.02	14.00	42.85	14.28
12	V ₄ F ₃	14.02	14.42	14.03	42.46	14.15
Total	-	172.28	172.00	172.13	516.40	-

Table : 10a. Mean Table of fibre %

Treatment	Fibre %
Variety (Genotypes)	
V ₁ -Co 0403	14.27
V ₂ - CoN 07072	14.22
V ₃ - Co 6015	14.64
V ₄ -CoN 09073	14.25
S.Em.±	0.13
C.D. at 5%	NS
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	14.56
F ₂ -100 % of recommended dose of N kg/ha	14.20
F ₃ -125 % of recommended dose of N kg/ha	14.28
S.Em. ±	0.12
C.D. at 5%	NS
C.V. %	2.81
Interaction	NS

Table 11: Pol % cane

Sr. No.	Treatment	Replication			Total	Mean
		I	II	III		
1	V ₁ F ₁	14.86	15.11	15.04	45.02	15.01
2	V ₁ F ₂	15.20	14.71	15.12	45.03	15.01
3	V ₁ F ₃	14.93	14.85	14.32	44.10	14.70
4	V ₂ F ₁	14.93	14.35	13.62	42.90	14.30
5	V ₂ F ₂	14.59	14.87	13.71	43.18	14.39
6	V ₂ F ₃	15.34	14.74	14.10	44.18	14.73
7	V ₃ F ₁	13.08	13.24	12.87	39.20	13.07
8	V ₃ F ₂	13.09	13.87	13.13	40.09	13.36
9	V ₃ F ₃	14.24	14.09	13.02	41.36	13.79
10	V ₄ F ₁	12.20	13.37	13.22	38.79	12.93
11	V ₄ F ₂	12.33	13.05	13.05	38.43	12.81
12	V ₄ F ₃	13.85	13.70	13.33	40.89	13.63
Total	-	168.66	169.96	164.54	503.16	

Table : 11a. Mean Table of pol % cane

Treatment	Pol % cane
Variety (Genotypes)	
V ₁ -Co 0403	14.91
V ₂ - CoN 07072	14.47
V ₃ - Co 6015	13.40
V ₄ -CoN 09073	13.12
S.Em.±	0.14
C.D. at 5%	0.42
Fertilizer levels	
F ₁ -75 % of recommended dose of N kg/ha	13.83
F ₂ -100 % of recommended dose of N kg/ha	13.89
F ₃ -125 % of recommended dose of N kg/ha	14.21
S. Em. ±	0.12
C.D. at 5%	NS
C.V. %	3.06
Interaction	NS

Table 12 :- Summary : Quality parameters :-

Treatment	Pol (%) juice	Purity (%)	Fibre (%)	Pol (%) cane	C.C.S. (%)
Variety(Genotypes)					
V ₁ -Co 0403	19.68	92.66	14.27	14.91	13.91
V ₂ - CoN 07072	19.10	92.03	14.22	14.47	13.20
V ₃ - Co 6015	17.79	91.41	14.64	13.40	12.60
V ₄ -CoN 09073	17.32	91.42	14.25	13.12	11.99
S. Em.±	0.18	0.39	0.13	0.14	0.23
C.D. at 5%	0.53	NS	NS	0.42	0.68
Fertilizer levels:					
F ₁ -75 % of recommended dose of N kg/ha	18.32	92.07	14.56	13.83	12.78
F ₂ -100 % of recommended dose of N kg/ha	18.33	92.07	14.20	13.89	12.74
F ₃ -125 % of recommended dose of N kg/ha	18.77	92.07	14.28	14.21	13.24
S. Em. ±	0.16	0.34	0.12	0.12	0.20
C.D. at 5%	NS	NS	NS	NS	NS
C.V. %	2.93	1.27	2.81	3.06	5.38
Interaction	NS	NS	NS	NS	NS

FORM – B

Name of the Coordinated Project: All India Coordinated Research Project on Sugarcane

Discipline : Agronomy **State** : Gujarat **Location** : Navsari
Year : 2012-2013 **Zone** : Peninsular

Trial series: AS 63: Plant geometry in relation to mechanization in sugarcane

General Information about the Trial:

1. **Design of the experiment** : Split plot
2. **Number of treatment** : 12
 - A. **Plant geometry**
 - P₁ – 120 cm
 - P₂ – 150 cm
 - P₃ – 30:150 cm
 - B. **Variety**
 - V₁ – CoN 05071
 - V₂ – CoN 04131
 - V₃ – Co 86032
 - V₄ – Co 99004
3. **No. of replications:** 3
4. **Plot size** :
 - (a) Distance between rows : As per treatment
 - (b) Length of rows in gross plot : 8m
 - (c) No. of rows in gross plot : P₁:5, P₂:4, P₃:4 twin row
 - (d) Gross plot size : 8.00 m x 6.0 m for P₁, P₂, P₃
 - (e) Length of rows in net plot : 7m
 - (f) No. of rows in net plot : P₁:3, P₂:2, P₃:2 twin row
 - (g) Net plot size : 7.0m x 3.6 m – P₁
7.0m x 3.0 m – P₂& P₃
5. **Date of Planting** : 22-12-2011
6. **Date of transplanting** : Not applicable
Seed rate : 50000 two eye bud setts/ha
7. **Date of harvesting** : 05-01-2013
8. **Crop grown in previous year** : T. P. Paddy
9. **Soil type** : Heavy black soil
10. **pH value** : 8.00

11. **Soil fertility status at the time of planting** :

Nutrient	Value	Status
Avail. N (kg/ha)	336	Medium
Avail. P ₂ O ₅ (kg/ha)	28.36	Medium
Avail. K ₂ O (kg/ha)	355	High

12. **Fertilizer applied** :

Nutrient	Basal	Top dressing
N	15 %	85% (in 3 splits : 30,20 and 35 % of RDN)
P	100%	-
K	100%	-

13. **No. of irrigation given** : Irrigations were given at an interval of 3 weeks in winter and 2 weeks in summer

14. **No. of weedings given** : 2

15. **Other cultural operations measures adopted**

Interculturing : 28-03-2012 and 25-05-2012

Ridging : 17-05-2012

16. **Plant protection measures adopted:** Nil

17. **Damage to the crop due to pest disease** : No significant damage caused due to various pests and diseases.

18. **Is the experiment reliable** : Yes

19. **Name of Co-operators** : Ms. Darpana Patel

20. **Signature of the Scientist in charge of the experiment** :

21. **Name and designation** : Prof. H.C. Patel
Asst. Research Scientist

FORM C

Name of the Coordinated Project: All India Coordinated Research Project on
Sugarcane

Discipline: Agronomy

State : Gujarat

Location: Navsari

Year : 2012-13

Zone : Peninsular

Title: AS 63 Plant geometry in relation to mechanization in sugarcane

Table 1 - Mean data of Germination percentage (at 30 and 45 DAP)

Treatment	Germination (%) at 30 days after planting	Germination (%) at 45 days after planting
P ₁ V ₁	70.06	74.30
P ₁ V ₂	76.82	81.69
P ₁ V ₃	66.20	74.11
P ₁ V ₄	68.45	72.26
P ₂ V ₁	71.62	77.18
P ₂ V ₂	62.53	67.39
P ₂ V ₃	64.29	72.65
P ₂ V ₄	70.12	75.22
P ₃ V ₁	70.64	76.85
P ₃ V ₂	69.33	75.21
P ₃ V ₃	72.96	78.77
P ₃ V ₄	63.24	72.90

Results :-**1. Number of tiller at 90 days after planting (DAP) :-**

The Results are given in Table 1a.

Plant geometry:-

Various plant geometry treatments did not show any significant effect on number of tillers at 90 days after planting. However, highest numbers of tillers were recorded in plant geometry P₁ (181894.84).

Variety:-

Higher number of tillers (189868/ha) were recorded with the variety Co 86032 (V₃) being remained at par with CoN 04131 (V₂) and CoN 05071 (V₁).

Interaction:-

Interaction effect between plant geometry and varieties was failed to get the level of significance.

2. Number of tillers at 120 DAP

The results are presented in Table 2a.

Plant geometry:-

Plant geometry P₁ recorded significantly the highest number of tillers while lowest number of tillers were observed with plant geometry P₂ followed by P₃.

Variety:-

Higher numbers of tillers were recorded with variety Co 86032 (V₃) and being at par with variety CoN 04131 (V₂).

Interaction:-

Interaction effects of plant geometry and varieties found to be significant. Interaction P₁V₂ recorded significantly higher number of tillers and remained at par with P₁V₃, P₂V₃, P₃V₁ and P₃V₃.

3. Number of tillers at 180 DAP:-

The results are given in Table 3a.

Plant geometry:-

Various plant geometry treatments failed to get the level of significance. However, highest and lowest numbers of tillers were found in plant geometry P₁ and P₂, respectively.

Variety:-

Different varieties failed to show significant increased in number of tillers at 180 DAP. However highest and lowest number of tillers were found in variety V₃ and V₁, respectively.

Interaction:-

Interaction effects between plant geometry and varieties were found to be significant. Highest numbers of tillers were observed with interaction P₁V₂ which remained at par with treatment combination of P₁V₃, P₂V₃, P₃V₁ and P₃V₃.

4. Plant height at 120 DAP

The Results are given in Table 4 a.

Plant geometry:-

Significantly the highest and lowest plant height was recorded with plant geometry P₁ and P₃, respectively.

Variety:-

Higher plant height (439.50 cm) was recorded with the variety Co 86032 (V₃) being at par with CoN 04131 (V₂) and CoN 05071 (V₁).

Interaction:-

Interaction effect between plant geometry and varieties was failed to get the level of significance.

5. Plant height at 180 DAP

The Results are given in Table 5a.

Plant geometry:-

Significantly the highest plant height (452.13 cm) was noticed with plant geometry P₁ (120 cm) over P₂ and P₃.

Variety:-

Variety (V₃) Co 86032 recorded higher plant height and being remained at par with CoN 04131 (V₂) and CoN 05071 (V₁).

Interaction:-

Interaction effect between plant geometry and varieties was found significant. Significantly the highest and lowest plant height was recorded with treatment combination of P₁V₃ and P₂V₄.

6. Number of millable canes/ha

The Results are given in Table 6a.

Plant geometry:-

Significantly higher number of millable canes (114756.94/ha) were recorded with plant geometry P₁. Lowest NMC ha⁻¹ were recorded with plant geometry P₃.

Variety:-

Higher number of millable canes was recorded with variety (V₃) Co 86032 and remained at par with variety CoN 05071(V₁).

Interaction:-

Interaction effect between plant geometry and different varieties showed significant results. Interaction P₁V₃ recorded significantly highest NMC ha⁻¹ and remained at par with interaction P₁V₁, P₁V₂ and P₂V₃.

7. Millable length at harvest

The Results are given in Table 7a.

Plant geometry:-

Significantly higher millable length recorded with plant geometry P₁ (278 cm) and P₂ (266.94 cm) being at par with each other followed by plant geometry P₃.

Variety:-

Higher millable length was recorded with variety CoN 05071 (V₁) and remained at par with variety Co 99004 (V₄).

Interaction:-

Interaction effect between plant geometry and varieties was found non significant in increasing millable cane length.

8. Millable girth at harvest

The Results are given in Table 8a.

Plant geometry:-

There was no significant difference was observed due to various plant geometry.

Variety:-

Significantly higher millable girth was recorded with variety CoN 05071 (V₁) and remained at par with Co 99004 (V₄).

Interaction:-

Interaction effect between plant geometry and varieties was failed to get the level of significance for plant girth.

9. Cane yield**Plant geometry:-**

Higher cane yield (125.02 t/ha) was recorded with plant geometry P₁ (120 cm) and remained at par with plant geometry P₃ (30:150 cm) than P₂ (Table 9a).

Variety:-

Higher cane yield was recorded with variety CoN 05071 (134.15 t/ha) being at par with variety Co 99004 (123.04 t/ha).

Interaction:-

Interaction effect between plant geometry and varieties did not show any significant improvement in cane yield /ha.

10. CCS t/ha**Plant geometry:-**

Plant geometry P₁ recorded significantly highest ccs yield (16.87 t/ha) followed by plant geometry P₂ and P₃.

Variety:-

Higher CCS yield was recorded with variety CoN 05071 (17.31 t/ha) being at par with variety Co 86032 (15.64 t/ha).

Interaction:-

Interaction effect between plant geometry and varieties failed to get level of significance.

11. Quality parameters**Plant geometry:-**

There was no significant difference observed due to various plant geometry on almost all the quality parameters except fibre % (Table 11-15). Significantly lowest fibre % was recorded with plant geometry P₁.

Variety:-

Various quality parameters were not significantly influenced due to different varieties except purity %. Higher purity % was recorded with variety Co 86032 (V₃) and remained at par with variety Co 99004 (V₄).

Interaction:-

Interaction effects of plant geometry and variety was show significant effect on purity % . Significantly highest purity % (93.57) was noticed with interaction P₁V₃, P₂V₂, P₃V₁ and being at par with almost all the interaction except P₁V₁ and P₃V₄.

FORM D

Name of the Coordinated Project : All India Coordinated Research Project on Sugarcane

Discipline : Agronomy **State** : Gujarat **Location:** Navsari
Year : 2012-2013 **Zone** : Peninsular

Title : AS 63 Plant geometry in relation to mechanization in sugarcane

Table: 1 characters : Number of tillers at 90 days (kg/net plot and t/ha)

Sr. No.	Treat-ment	Replication				Total	Mean	tillers/ha
		I	II	III	IV			
1	P ₁ V ₁	504	446	470	429	1849	462.25	183432.54
2	P ₁ V ₂	470	486	430	520	1906	476.50	189087.30
3	P ₁ V ₃	416	523	557	462	1958	489.50	194246.03
4	P ₁ V ₄	408	417	407	389	1621	405.25	160813.49
5	P ₂ V ₁	418	294	382	397	1491	372.75	177500.00
6	P ₂ V ₂	430	417	295	408	1550	387.50	184523.81
7	P ₂ V ₃	420	362	411	388	1581	395.25	188214.29
8	P ₂ V ₄	351	376	257	354	1338	334.50	159285.71
9	P ₃ V ₁	415	410	284	425	1534	383.50	182619.05
10	P ₃ V ₂	452	380	334	392	1558	389.50	185476.19
11	P ₃ V ₃	386	340	405	441	1572	393.00	187142.86
12	P ₃ V ₄	354	340	327	317	1338	334.50	159285.71
Total	-	4867	4812	4787	4796	19296	-	-

Table : 1a. Mean Table of number of tillers/ha

Treatment	Number of tillers/ha
Plant geometry	
P ₁	181894.84
P ₂	177380.95
P ₃	178630.95
S.Em.±	5088.94
C.D. at 5%	NS
C.V. %	10.47
Variety	
V ₁	181183.90
V ₂	186362.40
V ₃	189868.00
V ₄	159794.97
S.Em. ±	5884.24
C.D. at 5%	17482.80
C.V. %	11.37
Interaction	NS

Table 2 : Number of tillers at 120 days /net plot and per hectare

Sr. No.	Treatment	Replication				Total	Mean	tillers/ha
		I	II	III	IV			
1	P ₁ V ₁	404	529	473	483	1889	472.25	187400.79
2	P ₁ V ₂	512	585	534	568	2199	549.75	218154.76
3	P ₁ V ₃	478	480	495	545	1998	499.5	198214.29
4	P ₁ V ₄	443	465	506	434	1848	462.00	183333.33
5	P ₂ V ₁	348	418	372	420	1558	389.50	185476.19
6	P ₂ V ₂	324	340	442	433	1539	384.75	183214.29
7	P ₂ V ₃	386	479	373	446	1684	421.00	200476.19
8	P ₂ V ₄	390	348	406	373	1517	379.25	180595.24
9	P ₃ V ₁	358	395	444	468	1665	416.25	198214.29
10	P ₃ V ₂	366	400	432	372	1570	392.50	186904.76
11	P ₃ V ₃	441	414	472	469	1796	449.00	213809.52
12	P ₃ V ₄	321	358	371	311	1361	340.25	162023.81
Total		4771	5211	5320	5322	20624	-	-

Table : 2a. Mean Table of Number of tillers at 120 days /ha

Treatment	Number of tiller/ha
Plant geometry	
P ₁	196775.79
P ₂	187440.48
P ₃	190238.10
S.Em.±	2932.24
C.D. at 5%	NS
C.V. %	6.13
Variety	
V ₁	190363.76
V ₂	196091.27
V ₃	204166.67
V ₄	175317.46
S.Em. ±	4755.92
C.D. at 5%	13800.24
C.V. %	8.60
Interaction	Sig.

Table : 3 b. Interaction effect of plant geometry and variety on number of tillers at 120 days /ha

Treatment	Variety			
Plant geometry	V ₁	V ₂	V ₃	V ₄
P ₁	187400.79	218154.76	198214.29	183333.33
P ₂	185476.19	183214.29	200476.19	180595.24
P ₃	198214.29	186904.76	213809.52	162023.81
S.Em.±	8237.49			
C.D. at 5%	23902.71			
C.V. %	8.60			

Table : 3 Number of tillers at 180 days /net plot and per hectare

Sr. No.	Treatment	Replication				Total	Mean	tillers/ha
		I	II	III	IV			
1	P ₁ V ₁	390	426	386	440	1642	410.50	162896.83
2	P ₁ V ₂	376	411	395	448	1630	407.50	161706.35
3	P ₁ V ₃	420	510	500	355	1785	446.25	177083.33
4	P ₁ V ₄	318	392	433	338	1481	370.25	146924.60
5	P ₂ V ₁	336	378	345	310	1369	342.25	162976.19
6	P ₂ V ₂	276	370	316	385	1347	336.75	160357.14
7	P ₂ V ₃	328	406	318	355	1407	351.75	167500.00
8	P ₂ V ₄	355	285	305	266	1211	302.75	144166.67
9	P ₃ V ₁	308	250	352	406	1316	329.00	156666.67
10	P ₃ V ₂	292	376	317	325	1310	327.50	155952.38
11	P ₃ V ₃	400	341	352	318	1411	352.75	167976.19
12	P ₃ V ₄	351	318	297	375	1341	335.25	159642.86
Total	-	4150	4463	4316	4321	17250	-	-

Table : 3 a. Mean Table of Number of tillers at 180 days /ha

Treatment	Number of tillers/ha
Plant geometry	
P ₁	162152.78
P ₂	158750.00
P ₃	160059.52
S.Em.±	4806.39
C.D. at 5%	NS
C.V. %	11.99
Variety	
V ₁	160846.56
V ₂	159338.62
V ₃	170853.17
V ₄	150244.71
S.Em. ±	5931.40
C.D. at 5%	NS
C.V. %	12.82
Interaction	NS

Table. 4 : Plant height (cm) at 120 days after planting

Sr. No.	Treatment	Replication				Total	Mean
		I	II	III	IV		
1	P ₁ V ₁	529	475	431	505	1940	485.00
2	P ₁ V ₂	449	556	485	496	1986	496.50
3	P ₁ V ₃	486	495	580	496	2057	514.25
4	P ₁ V ₄	420	364	405	430	1619	404.75
5	P ₂ V ₁	382	361	419	370	1532	383.00
6	P ₂ V ₂	415	437	312	410	1574	393.50
7	P ₂ V ₃	430	418	425	398	1671	417.75
8	P ₂ V ₄	285	356	372	302	1315	328.75
9	P ₃ V ₁	449	380	338	364	1531	382.75
10	P ₃ V ₂	435	433	315	382	1565	391.25
11	P ₃ V ₃	375	470	369	332	1546	386.50
12	P ₃ V ₄	380	276	366	395	1417	354.25
Total		5035	5021	4817	4880	19753	-

Table : 4 a. Mean Table of Plant height (cm) at 120 days after planting

Treatment	Plant height (cm)
Plant geometry	
P ₁	475.13
P ₂	380.75
P ₃	378.69
S.Em.±	8.73
C.D. at 5%	30.20
C.V. %	8.48
Variety	
V ₁	416.92
V ₂	427.08
V ₃	439.50
V ₄	362.58
S.Em. ±	13.81
C.D. at 5%	40.07
C.V. %	11.63
Interaction	NS

Table : 5. Plant height (cm) at 180 days after planting

Sr. No.	Treatment	Replication				Total	Mean
		I	II	III	IV		
1	P ₁ V ₁	397	530	484	428	1839	459.75
2	P ₁ V ₂	491	482	395	498	1866	466.50
3	P ₁ V ₃	428	528	449	518	1923	480.75
4	P ₁ V ₄	350	373	452	431	1606	401.50
5	P ₂ V ₁	416	364	396	372	1548	387.00
6	P ₂ V ₂	331	467	353	395	1546	386.50
7	P ₂ V ₃	423	377	422	385	1607	401.75
8	P ₂ V ₄	369	283	378	296	1326	331.50
9	P ₃ V ₁	415	362	405	357	1539	384.75
10	P ₃ V ₂	420	385	391	354	1550	387.50
11	P ₃ V ₃	346	412	412	472	1642	410.50
12	P ₃ V ₄	337	321	295	376	1329	332.25
Total	-	4723	4884	4832	4882	19321	-

Table : 5 a. Mean Table Plant height (cm) at 180 days after planting

Treatment	Plant height (cm)
Plant geometry	
P ₁	452.13
P ₂	376.69
P ₃	378.75
S.Em.±	10.28
C.D. at 5%	35.59
C.V. %	10.22
Variety	
V ₁	410.50
V ₂	413.50
V ₃	431.00
V ₄	355.08
S.Em. ±	13.35
C.D. at 5%	38.73
C.V. %	11.49
Interaction	NS

Table 6. Number of millable canes/ha at harvest (/net plot and /ha)

Sr. No.	Treatment	Replication				Total	Mean	NMC/ha
		I	II	III	IV			
1	P ₁ V ₁	335	330	321	320	1306	326.50	129563.49
2	P ₁ V ₂	322	310	232	315	1179	294.75	116964.29
3	P ₁ V ₃	295	312	379	322	1308	327.00	129761.90
4	P ₁ V ₄	196	220	215	203	834	208.50	82738.10
5	P ₂ V ₁	185	235	219	245	884	221.00	105238.10
6	P ₂ V ₂	236	212	210	231	889	222.25	105833.33
7	P ₂ V ₃	266	259	215	276	1016	254.00	120952.38
8	P ₂ V ₄	209	183	196	209	797	199.25	94880.95
9	P ₃ V ₁	240	224	229	210	903	225.75	107500.00
10	P ₃ V ₂	236	211	235	222	904	226.00	107619.05
11	P ₃ V ₃	210	216	240	245	911	227.75	108452.38
12	P ₃ V ₄	220	185	195	209	809	202.25	96309.52
Total	-	2950	2897	2886	3007	11740	-	-

Table : 6 a. Mean Table Number of millable canes/ha at harvest

Treatment	NMC/ha
Plant geometry	
P ₁	114756.94
P ₂	106726.19
P ₃	104970.24
S.Em. ±	2119.22
C.D. at 5%	7333.39
C.V. %	7.79
Variety	
V ₁	114100.53
V ₂	110138.89
V ₃	119722.22
V ₄	91309.52
S.Em. ±	2882.86
C.D. at 5%	8365.18
C.V. %	9.18
Interaction	Sig.

Table : 6 b. Interaction effect of plant geometry and variety on number of millable canes/ha

Treatment	Variety			
	V ₁	V ₂	V ₃	V ₄
Plant geometry				
P ₁	129563.49	116964.29	129761.90	82738.10
P ₂	105238.10	105833.33	120952.38	94880.95
P ₃	107500.00	107619.05	108452.38	96309.52
S.Em.±	4993.25			
C.D. at 5%	14488.91			
C.V. %	9.18			

Table : 7. Millable Cane length (cm) at harvest

Sr. No.	Treatment	Replication				Total	Mean
		I	II	III	IV		
1	P ₁ V ₁	290	275	296	316	1177	294.25
2	P ₁ V ₂	285	245	272	269	1071	267.75
3	P ₁ V ₃	230	258	262	252	1002	250.50
4	P ₁ V ₄	320	286	290	302	1198	299.50
5	P ₂ V ₁	290	270	279	279	1118	279.50
6	P ₂ V ₂	252	230	256	245	983	245.75
7	P ₂ V ₃	238	240	260	226	964	241.00
8	P ₂ V ₄	266	279	292	256	1093	273.25
9	P ₃ V ₁	270	289	293	275	1127	281.75
10	P ₃ V ₂	279	261	228	275	1043	260.75
11	P ₃ V ₃	230	196	296	266	988	247.00
12	P ₃ V ₄	255	290	312	256	1113	278.25
Total	-	3205	3119	3336	3217	12877	-

Table : 7 a. Mean Table Millable length at harvest

Treatment	Millable Cane length (cm)
Plant geometry	
P ₁	278.00
P ₂	259.87
P ₃	266.94
S.Em. _±	3.63
C.D. at 5%	12.56
C.V. %	5.41
Variety	
V ₁	285.17
V ₂	258.08
V ₃	246.17
V ₄	283.67
S.Em. ±	5.99
C.D. at 5%	17.37
C.V. %	7.73
Interaction	NS

Table. 8 : Millable girth (cm) at harvest

Sr. No.	Treatment	Replication				Total	Mean
		I	II	III	IV		
1	P ₁ V ₁	2.6	2.41	2.67	2.68	10.36	2.59
2	P ₁ V ₂	2.42	2.39	2.45	2.42	9.68	2.42
3	P ₁ V ₃	2.56	2.49	2.46	2.51	10.02	2.51
4	P ₁ V ₄	2.47	2.58	2.56	2.46	10.07	2.52
5	P ₂ V ₁	2.41	2.57	2.48	2.54	10.00	2.50
6	P ₂ V ₂	2.39	2.43	2.46	2.43	9.71	2.43
7	P ₂ V ₃	2.43	2.48	2.42	2.51	9.84	2.46
8	P ₂ V ₄	2.5	2.48	2.41	2.52	9.91	2.48
9	P ₃ V ₁	2.44	2.49	2.62	2.53	10.08	2.52
10	P ₃ V ₂	2.48	2.34	2.39	2.4	9.61	2.40
11	P ₃ V ₃	2.46	2.52	2.45	2.4	9.83	2.46
12	P ₃ V ₄	2.41	2.53	2.55	2.42	9.91	2.48
Total	-	29.57	29.71	29.92	29.82	119.02	-

Table : 8 a. Mean Table of millable girth (cm) at harvest

Treatment	Millable Cane girth (cm)
Plant geometry	
P ₁	2.51
P ₂	2.47
P ₃	2.46
S.Em.±	0.017
C.D. at 5%	NS
C.V. %	2.75
Variety	
V ₁	2.54
V ₂	2.42
V ₃	2.47
V ₄	2.49
S.Em. ±	0.019
C.D. at 5%	0.05
C.V. %	2.60
Interaction	NS

Table : 9 Cane yield (kg/plot and t/ha)

Sr. No.	Treatment	Replication				Total	Mean	t/ha
		I	II	III	IV			
1	P ₁ V ₁	324	319	375	392	324	319	139.88
2	P ₁ V ₂	338	330	327	315	338	330	129.96
3	P ₁ V ₃	254	336	382	283	254	336	124.50
4	P ₁ V ₄	330	302	295	316	330	302	123.31
5	P ₂ V ₁	277	265	302	282	277	265	134.05
6	P ₂ V ₂	217	230	205	234	217	230	105.48
7	P ₂ V ₃	237	219	247	264	237	219	115.12
8	P ₂ V ₄	250	259	245	216	250	259	115.48
9	P ₃ V ₁	271	254	261	242	271	254	122.38
10	P ₃ V ₂	226	242	202	253	226	242	109.88
11	P ₃ V ₃	220	235	243	240	220	235	111.67
12	P ₃ V ₄	210	269	182	245	210	269	107.86
Total	-	3154	3260	3266	3282	3154	3260	-

Table : 9 a. Mean Table of Cane yield (t/ha)

Treatment	Cane yield (t/ha)
Plant geometry	
P ₁	129.41
P ₂	117.53
P ₃	112.95
S.Em.±	2.65
C.D. at 5%	9.18
C.V. %	8.84
Variety	
V ₁	132.10
V ₂	115.11
V ₃	117.10
V ₄	115.55
S.Em. ±	3.40
C.D. at 5%	9.86
C.V. %	9.81
Interaction	NS

Table 10 CCS t/ha (kg/net plot and t/ha)

Sr. No.	Treatment	Replication				Total	Mean	t/ha
		I	II	III	IV			
1	P ₁ V ₁	42.41	38.30	44.22	51.02	175.95	43.99	17.45
2	P ₁ V ₂	45.60	43.87	43.75	42.30	175.51	43.88	17.41
3	P ₁ V ₃	33.02	45.18	51.57	36.18	165.96	41.49	16.46
4	P ₁ V ₄	44.41	38.18	37.44	42.69	162.73	40.68	16.14
5	P ₂ V ₁	36.83	35.81	40.88	37.78	151.30	37.83	18.01
6	P ₂ V ₂	27.83	29.29	25.91	30.15	113.18	28.30	13.47
7	P ₂ V ₃	29.63	32.40	36.60	32.60	131.23	32.81	15.62
8	P ₂ V ₄	33.49	32.12	29.88	29.11	124.59	31.15	14.83
9	P ₃ V ₁	37.18	33.17	34.57	33.38	138.30	34.57	16.46
10	P ₃ V ₂	28.37	30.99	25.91	31.11	116.38	29.09	13.85
11	P ₃ V ₃	28.93	31.48	32.45	31.72	124.59	31.15	14.83
12	P ₃ V ₄	28.96	31.20	20.94	34.25	115.35	28.84	13.73
Total	-	416.66	422.00	424.12	432.29	1695.07	-	-

Table : 10 a. Mean Table of CCS (t/ha)

Treatment	CCS (t/ha)
Plant geometry	
P ₁	16.87
P ₂	15.49
P ₃	14.72
S.Em.±	0.34
C.D. at 5%	1.18
C.V. %	8.70
Variety	
V ₁	17.31
V ₂	14.91
V ₃	15.64
V ₄	14.90
S.Em. ±	0.51
C.D. at 5%	1.48
C.V. %	11.26
Interaction	NS

Table 11 CCS %

Sr. No.	Treatment	Replication				Total	Mean
		I	II	III	IV		
1	P ₁ V ₁	13.09	12.48	12.09	13.01	50.67	12.67
2	P ₁ V ₂	13.49	13.29	13.38	13.43	53.59	13.40
3	P ₁ V ₃	13.00	13.45	13.50	12.78	52.73	13.18
4	P ₁ V ₄	13.46	12.64	12.69	13.51	52.30	13.08
5	P ₂ V ₁	13.29	13.51	13.54	13.40	53.74	13.44
6	P ₂ V ₂	12.83	12.73	12.64	12.89	51.08	12.77
7	P ₂ V ₃	12.50	14.80	14.82	12.35	54.46	13.62
8	P ₂ V ₄	13.39	12.40	12.20	13.48	51.47	12.87
9	P ₃ V ₁	13.72	13.06	13.25	13.79	53.82	13.45
10	P ₃ V ₂	12.55	12.80	12.83	12.30	50.48	12.62
11	P ₃ V ₃	13.15	13.40	13.36	13.22	53.12	13.28
12	P ₃ V ₄	13.79	12.62	12.16	13.98	52.55	13.14
Total	-	158.27	157.19	156.43	158.13	630.02	-

Table : 11 a Mean Table of CCS %

Treatment	CCS %
Plant geometry	
P ₁	13.08
P ₂	13.17
P ₃	13.12
S.Em.±	0.11
C.D. at 5%	NS
C.V. %	3.32
Variety	
V ₁	13.19
V ₂	12.93
V ₃	13.36
V ₄	13.03
S.Em. ±	0.18
C.D. at 5%	NS
C.V. %	4.74
Interaction	NS

Table. 12 : Pol % juice

Sr. No.	Treatment	Replication				Total	Mean
		I	II	III	IV		
1	P ₁ V ₁	18.66	17.35	17.11	18.73	71.85	17.96
2	P ₁ V ₂	18.77	18.72	18.66	18.85	75.00	18.75
3	P ₁ V ₃	18.29	18.87	18.78	18.22	74.16	18.54
4	P ₁ V ₄	18.88	18.08	18.13	18.79	73.88	18.47
5	P ₂ V ₁	18.72	19.22	19.1	18.68	75.72	18.93
6	P ₂ V ₂	18.26	18.17	18.22	18.32	72.97	18.24
7	P ₂ V ₃	17.66	20.76	20.64	17.65	76.71	19.18
8	P ₂ V ₄	18.96	17.56	17.5	18.9	72.92	18.23
9	P ₃ V ₁	19.42	18.49	18.53	19.35	75.79	18.95
10	P ₃ V ₂	17.71	18.24	18.26	17.6	71.81	17.95
11	P ₃ V ₃	18.58	18.82	18.78	18.5	74.68	18.67
12	P ₃ V ₄	19.35	17.49	17.18	19.39	73.41	18.35
Total	-	223.26	221.77	220.89	222.98	888.9	-

Table : 12 a. Mean Table of pol % juice

Treatment	Pol % juice
Plant geometry	
P ₁	18.43
P ₂	18.65
P ₃	18.48
S.Em.±	0.16
C.D. at 5%	NS
C.V. %	3.53
Variety	
V ₁	18.61
V ₂	18.32
V ₃	18.80
V ₄	18.35
S.Em. ±	0.23
C.D. at 5%	NS
C.V. %	4.29
Interaction	NS

Table. 13 Purity %

Sr. No.	Treatment	Replication				Total	Mean
		I	II	III	IV		
1	P ₁ V ₁	91.02	89.94	90.13	91.19	362.28	90.57
2	P ₁ V ₂	93.12	93.6	92.26	92.53	371.51	92.88
3	P ₁ V ₃	93.79	94.35	93.86	92.28	374.28	93.57
4	P ₁ V ₄	94.40	90.40	91.1	93.63	369.53	92.38
5	P ₂ V ₁	93.60	91.52	91.22	93.45	369.79	92.45
6	P ₂ V ₂	91.30	90.85	91.01	90.86	364.02	91.01
7	P ₂ V ₃	92.94	94.36	93.89	92.76	373.95	93.49
8	P ₂ V ₄	92.48	92.42	91.89	91.83	368.62	92.16
9	P ₃ V ₁	92.48	92.45	92.38	92.75	370.06	92.51
10	P ₃ V ₂	93.21	91.20	90.86	93.46	368.73	92.18
11	P ₃ V ₃	92.09	94.10	93.45	91.70	371.34	92.84
12	P ₃ V ₄	94.39	91.61	91.20	93.87	371.07	92.77
Total	-	1114.82	1106.8	1103.25	1110.31	4435.18	-

Table : 13 a. Mean Table of purity %

Treatment	Purity %
Plant geometry	
P ₁	92.35
P ₂	92.27
P ₃	92.58
S.Em.±	0.11
C.D. at 5%	NS
C.V. %	1.48
Variety	
V ₁	91.84
V ₂	92.02
V ₃	93.30
V ₄	92.44
S.Em. ±	0.32
C.D. at 5%	0.92
C.V. %	1.19
Interaction	Sig.

Table : 6 b. Interaction effect of plant geometry and variety on purity %

Treatment	Variety			
	V ₁	V ₂	V ₃	V ₄
Plant geometry				
P ₁	90.57	92.88	93.57	92.38
P ₂	92.88	93.57	92.38	92.45
P ₃	93.57	92.38	92.45	91.01
S.Em.±	0.55			
C.D. at 5%	1.59			
C.V. %	1.19			

Table. 14 Fibre %

Sr. No.	Treatment	Replication				Total	Mean
		I	II	III	IV		
1	P ₁ V ₁	14.02	14.00	14.30	14.04	56.36	14.09
2	P ₁ V ₂	14.02	13.97	14.09	14.00	56.08	14.02
3	P ₁ V ₃	13.86	14.02	14.00	13.77	55.65	13.91
4	P ₁ V ₄	13.61	13.64	13.66	13.60	54.51	13.63
5	P ₂ V ₁	15.16	15.00	15.20	15.12	60.48	15.12
6	P ₂ V ₂	14.40	15.62	15.46	14.46	59.94	14.99
7	P ₂ V ₃	14.80	14.35	14.48	14.75	58.38	14.60
8	P ₂ V ₄	13.98	14.02	14.13	15.50	57.64	14.41
9	P ₃ V ₁	15.66	13.29	13.42	15.60	57.96	14.49
10	P ₃ V ₂	14.00	14.44	14.40	14.02	56.86	14.22
11	P ₃ V ₃	13.61	14.84	14.85	13.60	56.90	14.23
12	P ₃ V ₄	14.84	14.77	14.68	15.57	59.86	14.96
Total	-	171.96	171.96	172.66	174.03	690.62	-

Table : 14 a. Mean Table of Fibre %

Treatment	Fibre %
Plant geometry	
P ₁	13.91
P ₂	14.78
P ₃	14.47
S.Em.±	0.07
C.D. at 5%	0.24
C.V. %	1.95
Variety	
V ₁	14.33
V ₂	14.57
V ₃	14.41
V ₄	14.24
S.Em. ±	0.17
C.D. at 5%	NS
C.V. %	4.18
Interaction	NS

Table. 15 Pol % cane

Sr. No.	Treatment	Replication				Total	Mean
		I	II	III	IV		
1	P ₁ V ₁	14.18	13.19	12.95	14.23	54.54	13.64
2	P ₁ V ₂	14.26	14.23	14.17	14.33	56.99	14.25
3	P ₁ V ₃	13.93	14.34	14.27	13.89	56.42	14.11
4	P ₁ V ₄	14.42	13.81	13.84	14.36	56.42	14.11
5	P ₂ V ₁	14.01	14.42	14.29	13.99	56.70	14.18
6	P ₂ V ₂	13.80	13.52	13.58	13.84	54.74	13.68
7	P ₂ V ₃	13.28	15.70	15.59	13.28	57.85	14.46
8	P ₂ V ₄	14.41	13.34	13.28	14.08	55.11	13.78
9	P ₃ V ₁	14.44	14.18	14.19	14.40	57.21	14.30
10	P ₃ V ₂	13.46	13.78	13.80	13.37	54.42	13.60
11	P ₃ V ₃	14.19	14.15	14.11	14.13	56.59	14.15
12	P ₃ V ₄	14.54	13.16	12.94	14.43	55.07	13.77
Total	-	168.93	167.81	167.01	168.32	672.07	-

Table : 15 a. Mean Table of pol % cane

Treatment	Pol % cane
Plant geometry	
P ₁	14.02
P ₂	14.03
P ₃	13.96
S.Em.±	0.12
C.D. at 5%	NS
C.V. %	3.42
Variety	
V ₁	14.04
V ₂	13.85
V ₃	14.24
V ₄	13.88
S.Em. ±	0.17
C.D. at 5%	NS
C.V. %	4.20
Interaction	NS

FORM – B

Name of the Coordinated Project : All India Coordinated Research Project on sugarcane

Discipline : Agronomy **State :** Gujarat **Location:** Navsari

Year : 2012-2013 **Zone :** Peninsular

Trial series: AS-64 Response of sugarcane to different plant nutrients in varied agro ecological situations

General Information about the Trial

1. **Design of the experiment** : R.B.D.
2. **No. of treatments** : 14
 - T₁ Control (No fertilizer)
 - T₂ N
 - T₃ NP
 - T₄ NPK
 - T₅ NPK + S
 - T₆ NPK + Zn
 - T₇ NPK + Fe
 - T₈ NPK + Mn
 - T₉ NPK + S + Zn
 - T₁₀ NPK + S + Zn + Fe
 - T₁₁ NPK + S + Zn + Fe + Mn
 - T₁₂ Soil test based fertilizer application
 - T₁₃ FYM @ 25 t ha⁻¹
 - T₁₄ Biocompost @ 12 t ha⁻¹
3. **No. of replications** : 3
Variety grown : CoN 5071
4. **Plot size :**

Distance between rows (cm) : 90 cm

 - a) Length of rows in gross plot : 8 m
 - b) No. of rows in gross plot : 5
 - c) Gross plot size : 8.00 m x 5.40 m
 - d) Length of rows in net plot : 4 m.
 - e) No. of rows in net plot : 3
 - f) Net plot size : 6.00 m x 2.7 m
5. **Date of planting** : 25-01-2012
6. **Date of Transplanting** : Not applicable

7. **Date of harvesting** : 27-01-2013
8. **Previous Crop grown** : Sugarcane
9. **Soil type** : Heavy black soil
10. **pH value** : 8.34
11. **Fertilizer applied:**
- | Nutrient | Basal | Top dressing |
|----------|-------|---|
| N | 15 % | 85% (in 3 splits: 30, 20 & 35 % of RDN) |
| P | 100% | - |
| K | 100% | - |
12. **No. of irrigations given** : 14 each of 8 cm depth
13. **Date of Irrigation** : Irrigation were given at an interval of 3 weeks in winter and 2 weeks in summer season
14. **No. of weedings given** : 2 times
15. **Other cultural operation measures adopted** :
Earthing up : 25.03.2012 and 19.05.2012
16. **Plant protection measures adopted:** Nil
17. **Damage to the crop due to pest and diseases:**
 No significant damage was observed due to various pest and disease.
18. **Is the experiment reliable** : Yes
19. **Name of the Co-operators** : Ms. Darpana Patel
20. **Signature of Scientist of In charge of the experiment** :
21. **Name and Designation** : Mr. H. C. Patel
 Asstt. Research Scientist (Agro.)

Trial series: AS-64 Response of sugarcane to different plant nutrients in varied agro ecological situations

Initial Soil Analysis:

Parameter	Soil value
pH (1:10)	8.34
EC (1:10) dsm ⁻¹	0.315
Organic carbon (%)	0.570
Available N (kg/ha)	356
Available P ₂ O ₅ (kg/ha)	29.79
Available K ₂ O (kg/ha)	354
Available S (mg/kg)	53.02
Fe (ppm)	23.024
Mn (ppm)	13.62
Zn (ppm)	1.1

Application of Soil test based fertilizer:

1. N - Recommended dose (RD) of nitrogen only i.e. 250 kg N/ha
2. P - Recommended dose (RD) of phosphorus i.e. 125 kg P₂O₅/ha
3. K - Decrease RD by 50 % i.e. 62.5 kg K₂O/ha
4. S - No S application
5. Fe - No Fe application
6. Mn - No Mn application
7. Zn - No Zn application

Result:-

The data pertaining to cane yield, no. of millable canes/ha, tiller population, plant length, girth, quality parameters and nutrient status after harvest of sugarcane are presented in Table 1 to 24.

Number of millable canes (NMC/ha):-

The data presented in (Table-1).

Significantly higher no. of millable canes/ha (115637.90) was noticed under the treatment T₁₂ (soil test based fertilizer application). The lowest number of millable canes/ha (88185.19) was recorded in the control plot (T₁).

Plant height at 180 DAP:

The data presented in (Table-2).

Significantly highest plant height was recorded with treatment T₁₂ (soil test based fertilizer application) but it remained at par with treatment T₄, T₇, T₈ and T₁₀.

Tiller populations at 90 DAP:

The data presented in (Table-3).

Significantly higher tiller population at 90 DAP was observed with treatment T₁₂ (soil test based fertilizer application) but it remained at par with treatment T₁₁.

Tiller populations at 120 DAP:

The data presented in (Table-4).

There was significant difference observed due to various treatments in increasing tiller population 120 days after planting (DAP). Significantly higher tiller population was observed with treatment T₁₂ (soil test based fertilizer application) but it remained at par with almost all the treatment except T₁, T₂, T₆, T₈, T₉, T₁₃ and T₁₄.

Tiller populations at 180 DAP:

The data presented in (Table-5).

Significantly highest tiller population was observed with treatment T₁₂ (soil test based fertilizer application) and remained at par with almost all the treatment except treatment T₁, T₂, T₃, T₁₃ and T₁₄.

Millable length and girth at harvest:

The data presented in (Table-6 to 7).

Significantly higher and lower plant length was recorded with treatment T₁₂ (soil test based fertilizer application) and T₁ (control).

Plant girth failed to get the level of significance.

Cane yield (t/ha):-

The data presented in table 8.

Cane yield (t/ha) was influenced significantly by various nutrient management treatments. Higher cane yield (129.84 t/ha) was recorded with the treatment T₁₂ (soil test based fertilizer application) followed by the treatment T₅ and T₄ as compared to other treatments. Lowest millable cane yield was recorded with control plot.

C.C.S. t/ha:-

The data presented in table 9.

C.C.S. (t/ha) was significantly influenced by various plant nutrients treatments. Soil test based fertilizer application (T₁₂) recorded higher CCS (17.42 t/ha) and remained at par with treatment T₄ and T₆. The lowest C.C.S. (t/ha) was recorded under control plot (T₁).

Quality parameters:-

The data presented in table 10-14.

Various quality parameters viz; c.c.s %, purity %, fibre %, pol % cane and pol % juice were not found significant due to various treatments of plant nutrients.

Soil nutrient status after harvest of crop:

The data presented in table 15-24.

Soil pH, Ec, O.C. % and nutrient status- available N, P₂O₅, K₂O, S, Fe, Mn and Zn was not significantly influenced due to various nutrients.

Table No. 1 : Number of millable cane per plot and ha⁻¹

Treatment	Replication			Total	Mean	NMC ha ⁻¹
	I	II	III			
T ₁	120	136	158	414	138.00	85185.19
T ₂	135	151	156	442	147.33	90946.50
T ₃	165	148	179	492	164.00	101234.60
T ₄	166	155	176	497	165.67	102263.40
T ₅	162	150	167	479	159.67	98559.67
T ₆	148	155	162	465	155.00	95679.01
T ₇	155	167	169	491	163.67	101028.80
T ₈	145	154	170	469	156.33	96502.06
T ₉	152	185	148	485	161.67	99794.24
T ₁₀	159	150	164	473	157.67	97325.10
T ₁₁	150	175	166	491	163.67	101028.80
T ₁₂	182	205	175	562	187.33	115637.90
T ₁₃	152	166	152	470	156.67	96707.82
T ₁₄	150	132	164	446	148.67	91769.55
Total	2141	2229	2306	6676	-	-
S.Em ±	-	-	-	-	-	4290.11
C.D.at 5%	-	-	-	-	-	12471.05
C.V.%	-	-	-	-	-	7.57

Table No. 2 :- Plant height (cm) at 180 DAP

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	136	119	119	374	124.67
T ₂	149	110	121	380	126.67
T ₃	145	130	121	396	132.00
T ₄	169	143	132	444	148.00
T ₅	148	105	140	393	131.00
T ₆	149	127	135	411	137.00
T ₇	139	164	155	458	152.67
T ₈	143	152	165	460	153.33
T ₉	131	133	137	401	133.67
T ₁₀	155	148	169	472	157.33
T ₁₁	150	145	117	412	137.33
T ₁₂	166	147	170	483	161.00
T ₁₃	120	116	125	361	120.33
T ₁₄	110	129	145	384	128.00
Total	2010	1868	1951	5829	-
S.Em ±	-	-	-	-	8.00
C.D.at 5%	-	-	-	-	23.24
C.V.%	-	-	-	-	9.98

Table No: 3: Tiller population at 90 DAP per plot and ha⁻¹

Treatment	Replication			Total	Mean	tillers ha ⁻¹
	I	II	III			
T ₁	190	185	182	557	185.67	114609.05
T ₂	210	184	230	624	208.00	128395.06
T ₃	206	195	231	632	210.67	130041.15
T ₄	225	238	256	719	239.67	147942.39
T ₅	215	203	244	662	220.67	136213.99
T ₆	217	214	249	680	226.67	139917.70
T ₇	249	216	239	704	234.67	144855.97
T ₈	220	244	200	664	221.33	136625.51
T ₉	250	268	223	741	247.00	152469.14
T ₁₀	215	226	245	686	228.67	141152.26
T ₁₁	275	287	269	831	277.00	170987.65
T ₁₂	291	298	288	877	292.33	180452.67
T ₁₃	206	225	245	676	225.33	139094.65
T ₁₄	236	219	251	706	235.33	145267.49
Total	3205	3202	3352	9759	-	-
S.Em ±	-	-	-	-	-	6003.09
C.D.at 5%	-	-	-	-	-	17450.56
C.V.%	-	-	-	-	-	7.25

Table No. 4. Tiller population at 120 DAP per plot and ha⁻¹

Treatment	Replication			Total	Mean	tillers ha ⁻¹
	I	II	III			
T ₁	202	194	202	598	199.33	123045.27
T ₂	235	240	250	725	241.67	149176.95
T ₃	260	243	269	772	257.33	158847.74
T ₄	266	270	262	798	266.00	164197.53
T ₅	237	246	265	748	249.33	153909.47
T ₆	256	236	230	722	240.67	148559.67
T ₇	275	262	244	781	260.33	160699.59
T ₈	254	246	233	733	244.33	150823.05
T ₉	240	251	245	736	245.33	151440.33
T ₁₀	267	260	244	771	257.00	158641.98
T ₁₁	255	253	285	793	264.33	163168.72
T ₁₂	296	315	226	837	279.00	172222.22
T ₁₃	156	190	185	531	177.00	109259.26
T ₁₄	154	193	206	553	184.33	113786.01
Total	3343	3384	3336	10063	-	-
S.Em ±	-	-	-	-	-	6785.17
C.D.at 5%	-	-	-	-	-	19724.02
C.V.%	-	-	-	-	-	7.92

Table No. 5 Tiller population at 180 DAP per plot and ha⁻¹

Treatment	Replication			Total	Mean	tillers ha ⁻¹
	I	II	III			
T ₁	180	155	196	531	177.00	109259.26
T ₂	195	194	225	614	204.67	126337.45
T ₃	230	196	220	646	215.33	132921.81
T ₄	244	208	239	691	230.33	142181.07
T ₅	186	245	236	667	222.33	137242.80
T ₆	250	217	190	657	219.00	135185.19
T ₇	250	182	230	662	220.67	136213.99
T ₈	250	196	231	677	225.67	139300.41
T ₉	190	240	316	746	248.67	153497.94
T ₁₀	214	230	245	689	229.67	141769.55
T ₁₁	245	233	237	715	238.33	147119.34
T ₁₂	266	242	275	783	261.00	161111.11
T ₁₃	182	175	190	547	182.33	112551.44
T ₁₄	190	216	178	584	194.67	120164.61
Total	3072	2929	3208	9209	-	-
S.Em ±	-	-	-	-	-	9348.71
C.D.at 5%	-	-	-	-	-	27176.03
C.V.%	-	-	-	-	-	11.96

Table No. 6 Millable length (cm) at harvest

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	153	230	195	578	192.67
T ₂	249	201	226	676	225.33
T ₃	210	258	257	725	241.67
T ₄	216	240	254	710	236.67
T ₅	205	252	234	691	230.33
T ₆	220	222	252	694	231.33
T ₇	242	226	266	734	244.67
T ₈	221	270	230	721	240.33
T ₉	226	235	250	711	237.00
T ₁₀	264	211	227	702	234.00
T ₁₁	269	226	254	749	249.67
T ₁₂	316	278	285	879	293.00
T ₁₃	210	186	149	545	181.67
T ₁₄	240	194	216	650	216.67
Total	3241	3229	3295	9765	-
S.Em ±	-	-	-	-	14.60
C.D.at 5%	-	-	-	-	42.43
C.V.%	-	-	-	-	10.87

Table - 7 Millable Girth (cm) at harvest

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	2.45	2.75	2.79	7.99	2.66
T ₂	2.70	2.80	2.65	8.15	2.72
T ₃	2.76	2.83	2.63	8.22	2.74
T ₄	2.70	2.62	2.82	8.14	2.71
T ₅	2.77	2.81	2.70	8.28	2.76
T ₆	2.74	2.76	2.81	8.31	2.77
T ₇	2.63	2.84	2.82	8.29	2.76
T ₈	2.58	2.89	2.86	8.33	2.78
T ₉	2.66	2.85	2.78	8.29	2.76
T ₁₀	2.64	2.81	2.81	8.26	2.75
T ₁₁	2.82	2.66	2.84	8.32	2.77
T ₁₂	2.85	2.79	2.70	8.34	2.78
T ₁₃	2.8	2.72	2.70	8.22	2.74
T ₁₄	2.82	2.72	2.76	8.3	2.77
Total	37.92	38.85	38.67	115.44	-
S.Em ±	-	-	-	-	0.06
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	3.64

Table - 8 Cane yield (kg/plot and ha⁻¹)

Treatment	Replication (kg/net plot)			Total	Mean	t/ha
	I	II	III			
T ₁	90	82	73	245	81.67	50.41
T ₂	145	142	162	449	149.67	92.39
T ₃	153	166	172	491	163.67	101.03
T ₄	185	203	174	562	187.33	115.64
T ₅	155	176	195	526	175.33	108.23
T ₆	179	170	185	534	178.00	109.88
T ₇	153	174	179	506	168.67	104.12
T ₈	164	171	166	501	167.00	103.09
T ₉	158	191	157	506	168.67	104.12
T ₁₀	165	182	164	511	170.33	105.14
T ₁₁	162	168	186	516	172.00	106.17
T ₁₂	224	206	201	631	210.33	129.84
T ₁₃	105	115	92	312	104.00	64.20
T ₁₄	119	97	109	325	108.33	66.87
Total	2157	2243	2215	6615	-	-
S. Em ±	-	-	-	-	-	4.48
C.D.at 5%	-	-	-	-	-	13.02
C.V.%	-	-	-	-	-	7.98

Table - 9 CCS t/ha (kg/plot and ha⁻¹)

Treatment	Replication			Total	Mean	t/ha
	I	II	III			
T₁	12.58	11.28	9.78	33.64	11.21	6.92
T₂	19.84	20.16	19.34	59.34	19.78	12.21
T₃	21.97	23.18	21.53	66.68	22.23	13.72
T₄	25.92	29.01	23.07	77.99	26.00	16.05
T₅	20.68	24.42	24.02	69.12	23.04	14.22
T₆	25.05	24.25	26.50	75.80	25.27	15.60
T₇	21.36	24.39	22.20	67.95	22.65	13.98
T₈	23.59	21.60	22.21	67.40	22.47	13.87
T₉	20.89	27.91	21.20	69.99	23.33	14.40
T₁₀	24.32	25.65	20.82	70.79	23.60	14.57
T₁₁	22.50	23.53	25.18	71.22	23.74	14.65
T₁₂	31.21	28.04	25.41	84.65	28.22	17.42
T₁₃	14.64	16.05	12.96	43.66	14.55	8.98
T₁₄	16.93	12.56	15.76	45.24	15.08	9.31
Total	269.90	283.43	261.24	814.57	-	-
S.Em ±	-	-	-	-	-	0.71
C.D.at 5%	-	-	-	-	-	2.06
C.V.%	-	-	-	-	-	10.27

Table - 10 CCS %

Treatment	Replication			Total	Mean
	I	II	III		
T₁	13.98	13.76	13.40	41.13	13.71
T₂	13.69	14.20	11.94	39.82	13.27
T₃	14.36	13.96	12.52	40.84	13.61
T₄	14.01	14.29	13.26	41.55	13.85
T₅	13.34	13.88	12.32	39.53	13.18
T₆	13.99	14.26	14.32	42.58	14.19
T₇	13.96	14.02	12.40	40.38	13.46
T₈	14.39	12.63	13.38	40.40	13.47
T₉	13.22	14.61	13.50	41.33	13.78
T₁₀	14.74	14.10	12.69	41.53	13.84
T₁₁	13.89	14.01	13.54	41.44	13.81
T₁₂	13.93	13.61	12.64	40.18	13.39
T₁₃	13.94	13.96	14.09	41.99	14.00
T₁₄	14.22	12.95	14.46	41.63	13.88
Total	195.66	194.23	184.45	574.34	-
S.Em ±	-	-	-	-	0.36
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	4.60

Table - 11 Pol % juice

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	19.96	19.60	18.82	58.38	19.46
T ₂	19.53	19.89	16.82	56.24	18.75
T ₃	20.33	19.66	17.96	57.95	19.32
T ₄	19.42	19.98	18.54	57.94	19.31
T ₅	19.05	19.29	17.62	55.96	18.65
T ₆	19.69	19.67	19.73	59.09	19.70
T ₇	19.94	19.43	17.42	56.79	18.93
T ₈	19.79	18.07	18.66	56.52	18.84
T ₉	18.93	20.58	18.78	58.29	19.43
T ₁₀	20.99	19.79	18.13	58.91	19.64
T ₁₁	19.59	19.42	19.10	58.11	19.37
T ₁₂	19.63	19.60	18.22	57.45	19.15
T ₁₃	19.64	19.94	19.36	58.94	19.65
T ₁₄	20.20	18.38	19.86	58.44	19.48
Total	276.69	273.30	259.02	809.01	-
S.Em ±	-	-	-	-	0.42
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	3.82

Table - 12 Purity %

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	90.73	91.61	94.10	276.44	92.15
T ₂	90.84	93.11	91.61	275.56	91.85
T ₃	92.41	91.38	91.22	275.01	91.67
T ₄	97.10	93.05	92.80	282.95	94.32
T ₅	90.71	92.10	90.66	273.47	91.16
T ₆	93.76	91.35	92.96	278.07	92.69
T ₇	90.64	92.43	90.13	273.20	91.07
T ₈	92.22	90.29	92.26	274.77	91.59
T ₉	90.14	93.55	93.86	277.55	92.52
T ₁₀	91.26	93.24	91.10	275.60	91.87
T ₁₁	93.29	93.10	91.22	277.61	92.54
T ₁₂	92.24	89.09	91.01	272.34	90.78
T ₁₃	93.52	90.64	92.22	276.38	92.13
T ₁₄	91.82	91.90	92.65	276.37	92.12
Total	1290.68	1286.84	1287.8	3865.32	
S.Em ±	-	-	-	-	0.83
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	1.57

Table – 13 Pol % cane

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	15.09	14.78	14.15	44.01	14.67
T ₂	14.80	15.04	12.65	42.49	14.16
T ₃	15.38	14.81	13.43	43.61	14.54
T ₄	14.59	15.05	14.08	43.72	14.57
T ₅	14.39	14.61	13.12	42.12	14.04
T ₆	14.81	14.75	14.83	44.39	14.80
T ₇	15.03	14.70	13.19	42.92	14.31
T ₈	14.98	13.62	14.17	42.76	14.25
T ₉	14.14	15.47	14.27	43.88	14.63
T ₁₀	15.81	14.95	13.84	44.60	14.87
T ₁₁	14.76	14.67	14.29	43.72	14.57
T ₁₂	14.82	14.73	13.58	43.13	14.38
T ₁₃	14.80	14.99	14.56	44.36	14.79
T ₁₄	15.14	13.78	14.94	43.86	14.62
Total	208.55	205.96	195.08	609.60	
S.Em ±	-	-	-	-	0.33
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	3.95

Table – 14 Fibre %

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	14.40	14.60	14.84	43.84	14.61
T ₂	14.24	14.38	14.77	43.40	14.47
T ₃	14.34	14.69	15.25	44.28	14.76
T ₄	14.85	14.68	14.06	43.58	14.53
T ₅	14.45	14.27	15.54	44.26	14.75
T ₆	14.80	15.00	14.82	44.62	14.87
T ₇	14.60	14.33	14.30	43.23	14.41
T ₈	14.32	14.62	14.09	43.03	14.34
T ₉	15.29	14.84	14.00	44.12	14.71
T ₁₀	14.68	14.44	13.66	42.78	14.26
T ₁₁	14.66	14.45	15.20	44.31	14.77
T ₁₂	14.49	14.85	15.46	44.80	14.93
T ₁₃	14.62	14.80	14.80	44.22	14.74
T ₁₄	15.04	15.03	14.78	44.86	14.95
Total	204.77	204.98	205.58	615.33	
S.Em ±	-	-	-	-	0.24
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	2.82

Table – 15 pH (After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	7.50	8.00	7.90	23.40	7.80
T ₂	8.10	8.30	7.80	24.20	8.07
T ₃	8.20	7.80	8.00	24.00	8.00
T ₄	8.00	7.80	8.10	23.90	7.97
T ₅	8.10	7.40	7.70	23.20	7.73
T ₆	8.10	8.20	8.10	24.40	8.13
T ₇	8.10	8.20	8.00	24.30	8.10
T ₈	7.90	7.40	7.90	23.20	7.73
T ₉	7.40	8.20	7.60	23.20	7.73
T ₁₀	8.00	8.30	8.30	24.60	8.20
T ₁₁	7.80	8.00	8.00	23.80	7.93
T ₁₂	8.20	7.90	8.20	24.30	8.10
T ₁₃	7.40	8.00	8.10	23.50	7.83
T ₁₄	7.70	7.90	7.90	23.50	7.83
Total	110.50	111.40	111.60	333.50	
S.Em ±	-	-	-	-	0.14
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	3.12
Initial	8.34				

Table – 16 EC (1:2.5) (dsm⁻¹) (After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	0.34	0.43	0.32	1.09	0.36
T ₂	0.33	0.55	0.22	1.10	0.37
T ₃	0.38	0.39	0.33	1.10	0.37
T ₄	0.38	0.29	0.28	0.95	0.32
T ₅	0.39	0.41	0.31	1.11	0.37
T ₆	0.40	0.41	0.39	1.20	0.40
T ₇	0.31	0.26	0.30	0.87	0.29
T ₈	0.56	0.28	0.29	1.13	0.38
T ₉	0.28	0.20	0.27	0.75	0.25
T ₁₀	0.36	0.27	0.36	0.99	0.33
T ₁₁	0.34	0.42	0.32	1.08	0.36
T ₁₂	0.46	0.40	0.35	1.21	0.40
T ₁₃	0.26	0.35	0.38	0.99	0.33
T ₁₄	0.32	0.33	0.31	0.96	0.32
Total	5.11	4.99	4.43	14.53	-
S.Em ±	-	-	-	-	0.04
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	21.15
Initial (1:10) dsm⁻¹	0.315				

Table – 17 OC % (After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	0.94	0.66	0.75	2.35	0.78
T ₂	0.46	0.61	0.75	1.82	0.61
T ₃	0.57	0.51	0.60	1.68	0.56
T ₄	0.88	0.81	0.60	2.29	0.76
T ₅	0.57	0.76	0.51	1.84	0.61
T ₆	0.46	0.75	0.51	1.72	0.57
T ₇	0.61	0.79	0.60	2.00	0.67
T ₈	0.52	0.28	0.57	1.37	0.46
T ₉	0.76	0.55	0.72	2.03	0.68
T ₁₀	0.87	0.42	0.54	1.83	0.61
T ₁₁	0.54	0.55	0.67	1.76	0.59
T ₁₂	0.94	0.67	0.45	2.06	0.69
T ₁₃	0.78	0.82	0.64	2.24	0.75
T ₁₄	0.73	0.57	0.51	1.81	0.60
Total	9.63	8.75	8.42	26.80	-
S.Em ±	-	-	-	-	0.08
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	22.48
Initial	0.57				

Table – 18 Available N (kg/ha) (After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	169.00	188.00	176.00	533.00	177.67
T ₂	176.00	194.00	163.00	533.00	177.67
T ₃	188.00	188.00	207.00	583.00	194.33
T ₄	157.00	194.00	182.00	533.00	177.67
T ₅	194.00	175.00	182.00	551.00	183.67
T ₆	220.00	194.00	220.00	634.00	211.33
T ₇	201.00	232.00	188.00	621.00	207.00
T ₈	194.00	176.00	194.00	564.00	188.00
T ₉	207.00	194.00	220.00	621.00	207.00
T ₁₀	194.00	182.00	201.00	577.00	192.33
T ₁₁	188.00	157.00	176.00	521.00	173.67
T ₁₂	220.00	176.00	201.00	597.00	199.00
T ₁₃	207.00	295.00	176.00	678.00	226.00
T ₁₄	201.00	157.00	229.00	587.00	195.67
Total	2716.00	2702.00	2715.00	8133.00	-
S.Em ±	-	-	-	-	14.20
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	12.70
Initial	356 kg/ha				

Table – 19 Available P₂O₅ (kg/ha)(After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	57.00	55.00	65.00	177.00	59.00
T ₂	52.00	44.00	131.00	227.00	75.67
T ₃	50.00	40.00	95.00	185.00	61.67
T ₄	121.00	91.00	134.00	346.00	115.33
T ₅	95.00	40.00	173.00	308.00	102.67
T ₆	92.00	138.00	105.00	335.00	111.67
T ₇	83.00	129.00	127.00	339.00	113.00
T ₈	82.00	105.00	136.00	323.00	107.67
T ₉	107.00	143.00	167.00	417.00	139.00
T ₁₀	118.00	74.00	106.00	298.00	99.33
T ₁₁	132.00	84.00	96.00	312.00	104.00
T ₁₂	88.00	92.00	75.00	255.00	85.00
T ₁₃	71.00	128.00	65.00	264.00	88.00
T ₁₄	167.00	79.00	73.00	319.00	106.33
Total	1315.00	1242.00	1548.00	4105.00	-
S.Em ±	-	-	-	-	19.22
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	34.06
Initial	29.79 kg/ha				

Table – 20 Available K₂O (kg/ha)(After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	510.00	333.00	294.00	1137.00	379.00
T ₂	445.00	418.00	310.00	1173.00	391.00
T ₃	520.00	246.00	268.00	1034.00	344.67
T ₄	457.00	513.00	278.00	1248.00	416.00
T ₅	404.00	272.00	287.00	963.00	321.00
T ₆	323.00	371.00	514.00	1208.00	402.67
T ₇	384.00	311.00	304.00	999.00	333.00
T ₈	423.00	273.00	289.00	985.00	328.33
T ₉	494.00	250.00	315.00	1059.00	353.00
T ₁₀	602.00	262.00	251.00	1115.00	371.67
T ₁₁	474.00	387.00	279.00	1140.00	380.00
T ₁₂	474.00	283.00	345.00	1102.00	367.33
T ₁₃	526.00	298.00	317.00	1141.00	380.33
T ₁₄	714.00	311.00	343.00	1368.00	456.00
Total	6750.00	4528.00	4394.00	15672.00	
S.Em ±	-	-	-	-	49.71
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	23.07
Initial	354 kg/ha				

Table - 21 Available S (ppm) (After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	14.91	13.58	18.38	46.87	15.62
T ₂	14.15	14.60	17.90	46.65	15.55
T ₃	14.44	26.11	21.13	61.68	20.56
T ₄	16.95	15.69	26.27	58.91	19.64
T ₅	14.60	17.11	28.15	59.86	19.95
T ₆	18.06	22.27	19.68	60.01	20.00
T ₇	14.75	27.81	17.27	59.83	19.94
T ₈	25.43	19.99	17.11	62.53	20.84
T ₉	16.86	21.45	27.64	65.95	21.98
T ₁₀	14.44	26.95	18.06	59.45	19.82
T ₁₁	15.38	29.53	18.54	63.45	21.15
T ₁₂	14.91	17.74	25.94	58.59	19.53
T ₁₃	14.91	19.83	18.70	53.44	17.81
T ₁₄	16.79	19.18	18.70	54.67	18.22
Total	226.58	291.84	293.47	811.89	-
S.Em ±	-	-	-	-	2.60
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	23.28
Initial	53.02				

Table – 22 Available Fe (ppm) (After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	48.46	34.98	32.94	116.38	38.79
T ₂	47.98	39.82	31.48	119.28	39.76
T ₃	36.64	30.37	29.52	96.53	32.18
T ₄	31.82	37.87	33.15	102.84	34.28
T ₅	37.04	30.64	39.68	107.36	35.79
T ₆	31.48	35.14	31.38	98.00	32.67
T ₇	33.04	38.26	34.64	105.94	35.31
T ₈	34.20	30.37	34.64	99.21	33.07
T ₉	38.74	30.27	35.14	104.15	34.72
T ₁₀	40.80	32.16	34.06	107.02	35.67
T ₁₁	38.57	33.08	34.27	105.92	35.31
T ₁₂	39.48	30.88	33.38	103.74	34.58
T ₁₃	43.10	36.84	35.96	115.90	38.63
T ₁₄	40.12	31.52	38.30	109.94	
Total	541.47	472.20	478.54	1492.21	
S.Em ±	-	-	-	-	2.27
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	11.06
Initial	23.024				

Table – 23 Available Mn (ppm) (After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	32.24	31.04	23.04	86.32	28.77
T ₂	25.76	20.82	27.07	73.65	24.55
T ₃	13.81	16.97	16.09	46.87	15.62
T ₄	17.08	30.22	16.04	63.34	21.11
T ₅	15.16	17.67	33.05	65.88	21.96
T ₆	14.23	20.07	16.02	50.32	16.77
T ₇	17.48	33.00	20.07	70.55	23.52
T ₈	30.18	14.03	14.07	58.28	19.43
T ₉	19.01	17.02	20.01	56.04	18.68
T ₁₀	18.96	23.01	20.05	62.02	20.67
T ₁₁	19.29	23.04	23.07	65.40	21.80
T ₁₂	18.07	13.00	24.05	55.12	18.37
T ₁₃	32.58	39.05	29.02	100.65	33.55
T ₁₄	26.16	20.01	36.04	82.21	27.40
Total	300.01	318.95	317.69	936.65	
S.Em ±	-	-	-	-	3.53
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	27.39
Initial	13.62				

Table – 24 Available Zn (ppm) (After harvest)

Treatment	Replication			Total	Mean
	I	II	III		
T ₁	2.41	1.19	3.04	6.64	2.21
T ₂	1.13	1.41	1.52	4.05	1.35
T ₃	0.92	1.02	1.17	3.11	1.04
T ₄	1.10	2.04	1.74	4.89	1.63
T ₅	0.85	1.05	1.39	3.29	1.10
T ₆	0.90	2.33	1.92	5.15	1.72
T ₇	1.03	1.80	1.36	4.19	1.40
T ₈	1.48	1.07	1.44	3.99	1.33
T ₉	1.59	1.33	2.88	5.80	1.93
T ₁₀	1.85	1.10	1.24	4.20	1.40
T ₁₁	1.27	1.94	1.63	4.84	1.61
T ₁₂	1.61	1.32	2.06	4.99	1.66
T ₁₃	2.06	1.64	1.45	5.15	1.72
T ₁₄	2.13	1.45	1.69	5.27	1.76
Total	20.34	20.69	24.54	65.57	-
S.Em ±	-	-	-	-	0.27
C.D.at 5%	-	-	-	-	NS
C.V.%	-	-	-	-	30.34
Initial	1.1				

FORM – B

Name of the Coordinated Project : All India Coordinated Research Project on sugarcane

Discipline : Agronomy **State** : Gujarat **Location:** Navsari
Year : 2012-2013 **Zone** : Peninsular

Trial series: AS-66 Priming of cane node for accelerating germination

General Information about the Trial

1. **Design of the experiment** : R.B.D.
2. **No. of treatments** : 6
 - T₁ Un-primed cane node
 - T₂ Treating cane node in hot water in 50⁰ C for 2 hours.
 - T₃ Treating cane node in hot water in (50⁰) urea solution (3%) for 2 hours.
 - T₄ Priming cane node with cattle dung, cattle urine and water in 1:2:5 ratio
 - T₅ Conventional 3 bud sett planting
 - *T₆ Primed and sprouted can node (incubated for four days after priming)

* Put the single cane node in the slurry of cattle dung, cattle urine and water for 15 minutes. Take out the buds and put in decomposed FYM and cover it with sugarcane trash for 4-5 days for sprouting

3. **No. of replications** : 4
Variety grown : CoN 08072
4. **Plot size :**
 - Distance between rows (cm) : 90 cm
 - g) Length of rows in gross plot : 6 m
 - h) No. of rows in gross plot : 6
 - i) Gross plot size : 6.00 m x 5.40 m
 - j) Length of rows in net plot : 4 m.
 - k) No. of rows in net plot : 4
 - l) Net plot size : 4.00 m x 3.6 m
5. **Date of planting** : 20-01-2012
6. **Date of Transplanting** : Not applicable
7. **Date of harvesting** : 07-02-2013
8. **Previous Crop grown** : Sugarcane
9. **Soil type** : Heavy black soil
10. **pH value** : 8.09

11. Soil fertility status at the time of planting:

Nutrient	Value	Status
Avail. N (kg/ha)	359	Medium
Avail. P ₂ O ₅ (kg/ha)	28.59	Medium
Avail. K ₂ O (kg/ha)	358	High

12. Fertilizer applied:

Nutrient	Basal	Top dressing
N	15 %	85% (in 3 splits: 30, 20 & 35 % of RDN)
P	100%	-
K	100%	-

13. No. of irrigations given : 14 each of 8 cm depth. Irrigation were given at an interval of 3 weeks in winter and 2 weeks in summer season

14. No. of weedings given : 2 times

15. Other cultural operation measures adopted :
Earthing up : 25.05.2011

16. Plant protection measures adopted : Nil

17. Damage to the crop due to pest and diseases:
No significant damage was observed due to various pest and disease.

18. Is the experiment reliable : Yes

19. Name of the Co-operators : Ms. Darpana Patel

**20. Signature of Scientist of
In charge of the experiment** :

21. Name and Designation : Mr. H. C. Patel
Asstt. Research Scientist (Agro.)

Result:-

The data pertaining to germination %, shoot count, per clump shoot count, cane yield, no. of millable canes/ha, tiller population, plant length, girth, quality parameters and nutrient status after harvest of sugarcane are presented in Table 1 to 24.

1. Germination %:

The data presented in table 1 to 4.

Significantly highest germination % was recorded with treatment T₆ (Primed and sprouted cane node (incubated for four days after priming) at 10, 20, 30 and 40 days after planting (DAP).

At 10 DAP, primed and sprouted cane node (incubated for four days after priming) (T₆) counted 41.96 %; at 20 DAP 30.07 %; at 30 DAP 30.60% and at 40 DAP 33.65 % higher germination over unprimed cane node plot (T₁).

2. Shoot population:

The data presented in table 5-8.

At 60 DAP

Significantly highest shoot was recorded with treatment of Primed and sprouted cane node (incubated for four days after priming) (T₆) but it remained at par with almost all the treatment except treatment T₁.

At 90 DAP

Primed and sprouted cane node (incubated for four days after priming) -T₆ counted significantly highest number of shoots however it remained at par with treatment T₄ and T₃ while lowest shoot was counted with unprimed cane node (T₁).

At 120 DAP

There was significant difference observed due to various priming treatment.

At 150 DAP

Various priming treatment failed to show any significant results.

3. Per clump shoot:

The data presented in table 9-12.

At 60 DAP

Significantly highest per clump shoot count was observed with primed and sprouted cane node (incubated for four days after priming) -T₆.

At 90 DAP

Significantly higher per clump shoot was found with treatment T₆ (Primed and sprouted cane node (incubated for four days after priming)) and T₄ and remained at par with each other. Lowest per clump shoot was noticed under unprimed cane node.

At 120 DAP

Significantly highest and lowest per clump shoot was observed with Primed and sprouted cane node (incubated for four days after priming) -T₆ and unprimed cane node-T₁ respectively.

At 150 DAP

Significantly highest per clump shoot was recorded with treatment T₆ (Primed and sprouted cane node (incubated for four days after priming) and found at par with the treatment T₄.

4. Number of millable canes (NMC/ha):-

The data presented in (Table-13).

The higher no. of millable canes/ha (114583.33 ha⁻¹) was noticed under the treatment T₄ (Priming cane node with cattle dung, cattle urine and water in 1:2:5 ratio) and remained at par with treatment T₃. The lowest number of millable canes/ha (84201.39 ha⁻¹) was recorded in the control plot (T₁).

5. Cane length at harvest (cm):

The data presented in (Table-14).

There was no any significant difference was observed due to various treatments. However highest and lowest cane length was observed with treatment T₃ and T₂ respectively.

6. Cane girth at harvest:

There was any significant effect observed due to various priming treatment on cane girth.

7. Single cane weight (kg):

Various priming treatment did not show any significant results. However highest and lowest cane weight was recorded with treatment T₄ and T₅ respectively.

8. Cane yield (t ha⁻¹):

Significantly highest and lowest cane yield (118.90 t ha⁻¹ and 87.35 t ha⁻¹) was recorded with treatment T₄ ((Priming cane node with cattle dung, cattle urine and water in 1:2:5 ratio).

9. CCS yield (t ha⁻¹):

There was no any significant difference was observed due to various cane node priming treatment. However highest and lowest ccs yield was recorded with treatment T₄ (13.98 t/ha) and T₅ (9.48 t/ha) respectively.

10. Quality parameters:-

The data presented in table 19-24.

Various quality parameters viz; brix, c.c.s %, pol% juice, purity %, pol % cane and fibre % were not found significant due to various treatments of plant nutrients.

Table No. 1: Germination % at 10 DAP

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	30	28	28	26	112	28.00
T ₂	33	33	29	31	126	31.50
T ₃	38	30	28	35	131	32.75
T ₄	36	37	35	33	141	35.25
T ₅	26	27	25	27	105	26.25
T ₆	49	43	33	34	159	39.75
Total	212	198	178	186	774	-
S.Em ±	-	-	-	-	-	1.62
C.D.at 5%	-	-	-	-	-	4.89
C.V.%	-	-	-	-	-	10.07

Table No. 2: Germination % at 20 DAP

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	47	32	38	36	153	38.25
T ₂	40	46	36	46	168	42.00
T ₃	48	44	35	45	172	43.00
T ₄	46	43	52	39	180	45.00
T ₅	42	37	35	37	151	37.75
T ₆	59	53	43	44	199	49.75
Total	282	255	239	247	1023	-
S.Em ±	-	-	-	-	-	2.59
C.D.at 5%	-	-	-	-	-	7.82
C.V.%	-	-	-	-	-	12.17

Table No. 3: Germination % at 30 DAP

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	50	42	42	46	180	45.75
T ₂	55	50	45	35	185	46.25
T ₃	58	50	54	51	213	50.75
T ₄	56	59	50	45	210	52.50
T ₅	46	40	41	50	177	44.25
T ₆	61	63	60	54	238	59.75
Total	326	304	292	281	1203	-
S.Em ±	-	-	-	-	-	2.39
C.D.at 5%	-	-	-	-	-	7.53
C.V.%	-	-	-	-	-	9.53

Table No. 4. Germination % at 40 DAP

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	60	47	48	56	211	52.75
T ₂	67	66	57	45	235	58.75
T ₃	68	72	59	63	262	65.50
T ₄	66	73	60	55	254	63.50
T ₅	52	46	51	60	209	52.25
T ₆	73	80	65	64	282	70.50
Total	386	384	340	343	1453	-
S.Em ±	-	-	-	-	-	3.32
C.D.at 5%	-	-	-	-	-	10.02
C.V.%	-	-	-	-	-	10.98

Table No. 5 Shoot at 60 DAP (per net plot and /ha)

Treatment	Replication				Total	Mean	Shoot ha ⁻¹
	I	II	III	IV			
T ₁	150	172	152	162	636	159.00	110416.67
T ₂	158	193	205	247	803	200.75	139409.72
T ₃	205	235	193	224	857	214.25	148784.72
T ₄	176	214	202	240	832	208.00	144444.44
T ₅	195	200	211	176	782	195.50	135763.89
T ₆	232	222	196	233	883	220.75	153298.61
Total	1116	1236	1159	1282	4793	-	-
S.Em ±	-	-	-	-	-	-	7102.63
C.D.at 5%	-	-	-	-	-	-	21409.43
C.V.%	-	-	-	-	-	-	10.24

Table No. 6 Shoot at 90 DAP (per net plot and /ha)

Treatment	Replication				Total	Mean	Shoot ha ⁻¹
	I	II	III	IV			
T ₁	167	140	148	156	611	152.75	106076.39
T ₂	175	166	139	145	625	156.25	108506.94
T ₃	168	172	159	163	662	165.50	114930.56
T ₄	166	173	160	155	654	163.50	113541.67
T ₅	152	146	151	160	609	152.25	105729.17
T ₆	180	173	165	164	682	170.50	118402.78
Total	1008	970	922	943	3843	-	-
S.Em ±	-	-	-	-	-	-	3011.21
C.D.at 5%	-	-	-	-	-	-	9076.67
C.V.%	-	-	-	-	-	-	5.42

Table - 7 Shoot at 120 DAP (per net plot and /ha)

Treatment	Replication				Total	Mean	Shoot ha ⁻¹
	I	II	III	IV			
T ₁	232	197	210	164	803	200.75	139409.72
T ₂	166	209	228	268	871	217.75	151215.28
T ₃	217	255	195	237	904	226.00	156944.44
T ₄	198	226	219	249	892	223.00	154861.11
T ₅	221	202	227	211	861	215.25	149479.17
T ₆	249	223	205	249	926	231.5	160763.89
Total	1283	1312	1284	1378	5257	-	-
S.Em ±	-	-	-	-	-	-	9779.84
C.D.at 5%	-	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	-	12.86

Table - 8 Shoot at 150 DAP(per net plot and /ha)

Treatment	Replication				Total	Mean	Shoot ha ⁻¹
	I	II	III	IV			
T ₁	275	199	235	166	875	218.75	151909.72
T ₂	169	225	230	269	893	223.25	155034.72
T ₃	219	257	196	239	911	227.75	158159.72
T ₄	199	227	221	251	898	224.50	155902.78
T ₅	224	205	236	213	878	219.50	152430.56
T ₆	251	225	207	253	936	234.00	162500.00
Total	1337	1338	1325	1391	5391	-	-
S. Em ±	-	-	-	-	-	-	11583.95
C.D.at 5%	-	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	-	14.85

Table - 9 Per clump shoot counting at 60 DAP (5 plant average)

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	1.49	1.62	1.76	1.52	6.40	1.60
T ₂	2.23	2.12	1.90	2.42	8.70	2.17
T ₃	2.36	2.57	2.17	2.85	10.00	2.49
T ₄	1.92	1.88	1.83	1.76	7.40	1.85
T ₅	2.56	2.71	2.64	2.62	10.50	2.63
T ₆	3.08	3.12	2.96	3.01	12.20	3.04
Total	13.6	14.0	13.3	14.2	55.10	-
S. Em ±	-	-	-	-	-	0.08
C.D.at 5%	-	-	-	-	-	0.25
C.V.%	-	-	-	-	-	7.09

Table - 10 Per clump shoot counting at 90 DAP (5 plant average)

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	2.12	2.02	3.15	2.10	9.39	2.35
T ₂	2.20	2.90	2.52	3.01	10.63	2.66
T ₃	3.40	3.22	3.44	4.05	14.11	3.53
T ₄	4.74	4.92	5.07	5.11	19.84	4.96
T ₅	3.66	3.36	3.90	4.11	15.03	3.76
T ₆	4.33	5.47	5.18	4.70	19.68	4.92
Total	20.45	21.89	23.26	23.08	88.68	-
S.Em ±	-	-	-	-	-	0.18
C.D.at 5%	-	-	-	-	-	0.55
C.V.%	-	-	-	-	-	9.85

Table - 11 Per clump shoot counting at 120 DAP (5 plant average)

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	3.12	3.21	3.60	3.40	13.33	3.33
T ₂	3.27	3.60	3.70	4.12	14.69	3.67
T ₃	4.02	3.22	4.29	4.96	16.49	4.12
T ₄	5.47	5.66	5.12	5.24	21.49	5.37
T ₅	5.18	4.47	4.31	5.20	19.16	4.79
T ₆	6.15	6.22	6.02	6.70	25.09	6.27
Total	27.21	26.38	27.04	29.62	110.25	-
S.Em ±	-	-	-	-	-	0.19
C.D.at 5%	-	-	-	-	-	0.57
C.V.%	-	-	-	-	-	8.23

Table – 12 Per clump shoot counting at 150 DAP (5 plant average)

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	1.7	1.61	1.45	1.81	6.57	1.64
T ₂	3.22	3.42	3.11	3.23	12.98	3.25
T ₃	3.33	3.11	3.38	3.52	13.34	3.34
T ₄	4.09	4.22	3.8	4.08	16.19	4.05
T ₅	3.44	3.45	4.27	3.66	14.82	3.71
T ₆	4.22	3.96	4.18	3.91	16.27	4.07
Total	20	19.77	20.19	20.21	80.17	-
S.Em ±	-	-	-	-	-	0.12
C.D.at 5%	-	-	-	-	-	0.35
C.V.%	-	-	-	-	-	6.95

Table – 3 Number of millable canes (per net plot and /ha)

Treatment	Replication				Total	Mean	NMC ha ⁻¹
	I	II	III	IV			
T ₁	110	142	105	120	477	119.25	82812.50
T ₂	122	122	115	145	504	126.00	87500.00
T ₃	140	132	150	121	543	135.75	94270.83
T ₄	150	173	133	172	628	157.00	109027.78
T ₅	144	115	85	132	476	119.00	82638.89
T ₆	146	145	121	115	527	131.75	91493.06
Total	812	829	709	805	3155	-	-
S.Em ±	-	-	-	-	-	-	5779.71
C.D.at 5%	-	-	-	-	-	-	17421.76
C.V.%	-	-	-	-	-	-	12.66

Table – 14 Cane length at harvest

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	211	221	222	230	884	221.00
T ₂	239	182	244	179	844	211.00
T ₃	228	237	251	247	963	240.75
T ₄	236	223	231	264	954	238.50
T ₅	237	230	226	239	932	233.00
T ₆	216	240	214	224	894	223.50
Total	1367	1333	1388	1383	5471	1367.75
S.Em ±	-	-	-	-	-	9.50
C.D.at 5%	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	8.33

Table – 15 Cane girth at harvest

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	1.80	1.93	2.17	2.26	8.16	2.04
T ₂	2.25	2.10	2.14	2.12	8.61	2.15
T ₃	2.29	2.37	2.19	2.29	9.14	2.29
T ₄	2.45	2.21	2.39	2.18	9.23	2.31
T ₅	2.35	2.18	1.92	2.32	8.77	2.19
T ₆	2.32	2.33	2.12	2.19	8.96	2.24
Total	13.46	13.12	12.93	13.36	52.87	-
S.Em ±	-	-	-	-	-	0.075
C.D.at 5%	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	6.79

Table – 16 Single cane weight at harvest

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	1.02	1.01	1.26	0.96	4.25	1.06
T ₂	1.23	1.15	0.98	0.95	4.31	1.08
T ₃	1.08	1.07	1.05	0.86	4.06	1.01
T ₄	1.13	1.10	0.97	1.14	4.34	1.08
T ₅	0.96	1.05	1.01	0.99	4.01	1.00
T ₆	0.98	1.11	1.02	1.01	4.12	1.03
Total	6.402	6.49	6.29	5.91	25.09	-
S.Em ±	-	-	-	-	-	0.05
C.D.at 5%	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	9.25

Table – 17 Cane yield (kg) per net plot and (t/ha)

Treatment	Replication				Total	Mean	Cane yield (t/ha)
	I	II	III	IV			
T ₁	112.20	143.42	132.30	115.20	503.12	125.78	87.35
T ₂	150.06	140.30	112.70	137.75	540.81	135.20	93.89
T ₃	151.20	141.24	157.50	104.06	554.00	138.50	96.18
T ₄	169.50	190.30	129.01	196.08	684.89	171.22	118.90
T ₅	138.24	120.75	85.85	130.68	475.52	118.88	82.56
T ₆	143.37	160.95	123.42	116.15	543.89	135.97	94.43
Total	416.94	432.56	357.24	385.76	3302.23	-	-
S.Em ±	-	-	-	-	-	-	7.13
C.D.at 5%	-	-	-	-	-	-	21.48
C.V.%	-	-	-	-	-	-	14.92

Table – 18 CCS yield (kg) per net plot and (t/ha)

Treatment	Replication				Total	Mean	CCS (t/ha)
	I	II	III	IV			
T ₁	13.66	18.19	16.33	12.62	60.81	15.20	10.56
T ₂	17.89	14.09	12.37	14.80	59.15	14.79	10.27
T ₃	16.97	15.58	18.34	13.10	63.99	16.00	11.11
T ₄	20.69	21.69	15.04	23.10	80.52	20.13	13.98
T ₅	17.59	13.26	9.00	14.79	54.63	13.66	9.48
T ₆	18.28	18.16	13.78	12.92	63.13	15.78	10.96
Total	105.07	100.97	84.86	91.33	382.23	95.56	-
S.Em ±	-	-	-	-	-	-	0.93
C.D.at 5%	-	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	-	16.87

Table – 19 Brix

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	17.00	17.00	18.00	18.00	70.00	17.50
T ₂	17.00	20.00	20.00	20.00	77.00	19.25
T ₃	18.00	20.00	20.00	17.00	75.00	18.75
T ₄	17.00	18.00	18.00	19.00	72.00	18.00
T ₅	15.00	20.00	20.00	20.00	75.00	18.75
T ₆	17.00	20.00	20.00	20.00	77.00	19.25
Total	101.00	115.00	116.00	114.00	446.00	-
S.Em ±	-	-	-	-	-	0.53
C.D.at 5%	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	5.76

Table – 20 CCS %

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	12.18	12.69	12.34	10.96	48.16	12.04
T ₂	11.92	10.04	10.98	10.74	43.68	10.92
T ₃	11.22	11.03	11.64	12.59	46.49	11.62
T ₄	12.21	11.40	11.66	11.78	47.04	11.76
T ₅	12.72	10.98	10.48	11.32	45.50	11.37
T ₆	12.75	11.29	11.16	11.12	46.32	11.58
Total	73.00	67.42	68.27	68.51	277.19	-
S.Em ±	-	-	-	-	-	0.34
C.D.at 5%	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	5.82

Table – 21 Pol % juice

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	16.77	17.27	17.22	15.86	67.12	16.78
T ₂	16.52	15.53	16.45	16.22	64.72	16.18
T ₃	16.12	16.50	17.10	17.18	66.90	16.73
T ₄	16.80	16.29	16.55	16.95	66.59	16.65
T ₅	16.74	16.45	15.96	16.78	65.93	16.48
T ₆	17.33	16.75	16.63	16.59	67.30	16.83
Total	100.28	98.79	99.91	99.58	398.56	-
S.Em ±	-	-	-	-	-	0.24
C.D.at 5%	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	2.90

Table – 22 Purity %

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	91.16	90.79	90.12	91.67	363.74	90.94
T ₂	91.40	90.25	90.21	91.61	363.47	90.87
T ₃	91.36	89.92	92.09	89.94	363.31	90.83
T ₄	91.35	91.30	92.22	90.66	365.53	91.38
T ₅	91.02	91.36	90.52	91.67	364.57	91.14
T ₆	90.23	91.48	92.12	90.40	364.23	91.06
Total	546.52	545.10	547.28	545.95	2184.85	-
S.Em ±	-	-	-	-	-	0.42
C.D.at 5%	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	0.91

Table – 23 Fibre %

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	14.32	14.35	14.11	14.46	57.25	14.31
T ₂	14.44	13.98	14.42	14.04	56.88	14.22
T ₃	14.24	14.40	14.40	13.78	56.82	14.21
T ₄	14.00	14.29	14.04	13.90	56.23	14.06
T ₅	14.05	14.43	14.40	14.02	56.90	14.23
T ₆	14.49	14.00	14.08	13.77	56.33	14.08
Total	85.54	85.45	85.45	83.98	340.42	-
S.Em ±	-	-	-	-	-	0.11
C.D.at 5%	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	1.53

Table – 24 Pol % cane

Treatment	Replication				Total	Mean
	I	II	III	IV		
T ₁	12.69	13.06	13.07	11.98	50.80	12.70
T ₂	12.48	11.81	12.43	12.32	49.04	12.26
T ₃	12.21	12.47	12.93	13.09	50.71	12.68
T ₄	12.77	12.33	12.57	12.90	50.57	12.64
T ₅	12.71	12.43	12.07	12.75	49.96	12.49
T ₆	13.09	12.73	12.63	12.65	51.09	12.77
Total	75.95	74.84	75.69	75.69	302.17	-
S.Em ±	-	-	-	-	-	0.19
C.D.at 5%	-	-	-	-	-	NS
C.V.%	-	-	-	-	-	2.95

