

SOUTH AFRICAN SUGAR INDUSTRY

: AGRONOMISTS' ASSOCIATION

Spacing Trial

<p>Catalogue No.: 197          Code No.: A.S.7/60          This Crop: P, 1R, 2R.          Site: W.E. Robarts, Empangeni.          Altitude: 100'          Soil series: Alluvium          Design: 3 x 3 Factorial, 3 reps.          Variety: N.50/211          Fertilizer: See treatments.          Water regime: Dryland.</p>	<p><u>Soil Analysis:</u></p> <table border="0"> <tr> <td></td> <td></td> <td></td> <td align="center" colspan="4"><u>P.P.M.</u></td> </tr> <tr> <td>pH</td> <td>OM%</td> <td>Clay %</td> <td>P</td> <td>K</td> <td>Ca</td> <td>Mg</td> </tr> <tr> <td>5.56</td> <td>2.95</td> <td>17.1</td> <td>41</td> <td>127</td> <td>825</td> <td>275</td> </tr> </table> <p>Age: P : 18 months (12/60 - 7/62)          1R : 14 " ( 7/62 - 9/63)          2R : 14 " ( 9/63 - 11/64)</p> <p><u>Rainfall:</u> P 4.6" 1R 28.4" 2R 52.3"</p>				<u>P.P.M.</u>				pH	OM%	Clay %	P	K	Ca	Mg	5.56	2.95	17.1	41	127	825	275
			<u>P.P.M.</u>																			
pH	OM%	Clay %	P	K	Ca	Mg																
5.56	2.95	17.1	41	127	825	275																

Object: To compare three row spacings at three levels of fertilization.

Treatments:

Fertilizer:

	Plant			1R			2R		
	F <sub>0</sub>	F <sub>1</sub>	F <sub>2</sub>	F <sub>0</sub>	F <sub>1</sub>	F <sub>2</sub>	F <sub>0</sub>	F <sub>1</sub>	F <sub>2</sub>
N	0	250	400	0	200	400	0	200	400
P	0	65	130	0	0	0	0	0	0
K	0	166	333	0	166	333	0	166	333

Spacing:

- S<sub>1</sub> = 1'6" rows
- S<sub>2</sub> = 3'0" rows
- S<sub>3</sub> = 4'6" rows

Results:

Plant Cane

Tons cane/ac.	Treat	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	Mean
	F <sub>0</sub>	102.3	91.7	97.0	97.0
	F <sub>1</sub>	126.2	103.2	110.3	113.3
	F <sub>2</sub>	118.8	119.6	114.0	117.5
	Mean	115.8	104.8	107.2	109.3

C.V.% : 11.5

L.S.D. .05 : Spacing 12.94 Fertilizer 17.64

.01 : 18.14 29.25

Tons suc./ac.	Treat	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	Mean
	F <sub>0</sub>	13.97	13.05	11.20	12.74
	F <sub>1</sub>	15.66	12.08	13.08	13.60
	F <sub>2</sub>	13.42	14.81	13.09	13.77
	Mean	14.35	13.31	12.46	13.37

61/2  
197(18)

C.V.% = 13.9

L.S.D. .05 : Spacing 1.91 Fertilizer 1.91

.01 : 2.67 2.67

1st Ratoon

Tons cane/ac.	Treat	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	Mean
	F <sub>0</sub>	46.9	40.0	44.7	43.9
	F <sub>1</sub>	62.0	58.9	50.0	57.0
	F <sub>2</sub>	60.5	66.2	68.0	64.9
	Mean	56.5	55.0	54.2	55.3

C.V.% = 16.1

L.S.D. .05 Spacing 9.19 Fertilizer 9.19

.01 12.88 12.88

Tons suc./ac.	Treat	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	Mean
	F	6.22	5.81	6.23	6.09
	F	8.34	8.01	6.94	7.77
	F	8.04	8.22	9.64	8.64
	Mean	7.54	7.35	7.61	7.50

197(14)  
61/3

C.V.% = 16.5

L.S.D. .05 Spacing 1.27 Fertilizer 1.27

.01 1.78 1.78

2nd Ratoon

Tons cane/ac.	Treat	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	Mean
	F <sub>0</sub>	55.8	56.4	57.8	56.6
	F <sub>1</sub>	60.3	56.6	60.0	61.0
	F <sub>2</sub>	67.5	66.6	74.1	69.4
	Mean	63.2	59.9	63.9	62.3

C.V.% = 17.5

L.S.D. .05 : Spacing 11.2 Fertilizer 11.2  
 .01 : 15.7 15.7

Tons suc./ac.	Treat	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	Mean
	F <sub>0</sub>	8.15	8.53	7.58	8.09
	F <sub>1</sub>	9.53	7.76	8.63	8.65
	F <sub>2</sub>	9.51	9.28	10.77	9.85
	Mean	9.06	8.55	8.99	8.81

63/4  
197 (14)

C.V.% = 15.6

L.S.D. .05 : Spacing 1.42 Fertilizer 1.42  
 .01 : 1.99 1.99