

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

SPACING TRIAL

Catalogue No: 196
 Code No: A.S.6/60
This Crop: P, 1R, 2R
Site: W.E. Roberts, Empangeni
 Altitude: 1001
Soil series: Alluvium
Design: 3 x 3 Factorial, 3 reps.
Variety: N:Co.376
Fertilizer: See treatments
Water regime: Dryland

Soil Analysis:

pH 5.00 Clay% 15.9
 ppm -
 P 38 K 120 Ca 749 Mg 256
 Age: P 18 mths (12/60-7/62)
 1R 14 mths (7/62-9/63)
 2R 1½ mths (9/63-11/64)
Rainfall: P:84.6" 1R:28.4" 2R:52.3"

Objec! :

To compare three row spacings at three levels of fertilization.

Treatments:

Fertilizer:

	Plant			1R			2R		
	Fo	F1	F2	Fo	F1	F2	Fa	F1	F2
N	0	200	400	0	200	450	0	200	400
P	0	65	130	0	0	0	0	0	0
K	0	166	333	0	166	333	0	166	333

Spacing:

S1 1' 6" rows
 S2 3' 0" rows
 S3 4' 6" rows

Results:

Plant cane

Tons Cane per acre:

Treatment	S1	S2	S3	Mean
Fa	102.0	111.2	93.4	102.2
F1	112.7	116.4	110.3	113.1
F2	113.8	115.8	119.8	116.5
Mean	109.5	114.4	107.9	110.6

C.V. %

4.6

LSD .05: Spacing
 .01:

5.21
 7.30

Fertilizer

10.39
 17.22

Tons Sucrose per acre:

Treatment	S1	82	S3	Mean
Fa	15.91	15.85	12.98	14.91
F1	16.22	17.42	15.60	16.41
F2	15.73	16.02	15.88	15.38
Mean	15.95	16.43	14.82	15.74

C. V. %

LSD .05: Spacing 0.85 Fertilizer 2.08
1.19 3.45

1st. Ratoon

Tons Cane per acre:

Treatment	S1	S2	S3	Mean
Fa	60.8	58.3	57.3	60.8
F1	85.1	65.6	58.9	70.0
F2	72.2	76.8	67.1	72.1
Mean	74.7	66.8	61.1	67.6

C.V. % 10.2

LSD .05: Spacing 7.10 Fertilizer 14.14
.01: 9.95 23.45

Tons Sucrose per acre:

Treatment	S1	82	S3	Mean
Fa	9.53	8.50	8.14	8.73
F1	9.71	9.16	8.15	9.68
F2	10.04	10.60	9.06	9.90
Mean	10.43	9.42	8.45	9.43

C. V. % 9.5

LSD .05: Spacing 0.92 Fertilizer 1.75
.01: 1.29 2.91

2nd Ratoon

Tons Cane per acre:

Treatment	S1	S2	S3	Mean
Fa	68.0	55.2	65.4	62.9
F1	79.6	72.2	77.0	76.2
F2	75.0	78.6	73.8	77.5
Mean	74.2	68.7	73.7	72.2

2nd Ratoon

Tons Sucrose per acre:

Treatment	32			Mean
Fa		9.03		10.33
		11.36		12.01
F2		12.74		11.96
Mean	11.72	10.97	11.61	11.1f3

C.v. %				7.8
LSD .05:	Spacing	0.92	Fertilizer	2.92
.01:		1.30		4.84