

SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION

SPACING TRIAL

Catalogue No: 189
Code No: A.S.8/61
This crop: P, 1R, 2R
Site: Chaka's Kraal
Altitude: 300'
Soil series: Waldene
Design: Random block, 3 reps.
Variety: N.50/211
Fertilizer: See treatments
Water regime: Irrigated

Soil Analysis:

pH	OM%	Clay%
5.84	2.57	-
ppm		
P	K	Ca Mg
88	81	- -

Age: P : 12 mths (8/61-8/62)
1R : 11 mths (8/62-7/63)
2R : 11 mths (7/63-6/64)
Rainfall: P: 32.7" 1R: 45.0" 2R: 27.3"
Irrigation: P: 12.0" 1R: 10.0" 2@ 13.5"

Object:

To compare three row spacings at three levels of fertilization.

Treatments:

Fertilizer:

	Plant			1R			2R		
	Fo	F1	F2	Fo	F1	F2	Fo	F1	F2
N	0	200	450	0	200	400	0	200	400
P	0	65	130	0	26	52	0	26	52
K	0	166	333	0	166	333	0	166	333

Spacing:

S1 : 1' 6" row spacing
S2 : 3' 0" row spacing
S3 : 4' 6" row spacing

Results:

Plant Cane

Tons Cane per acre:

Treatment	S1	S2	S3	Mean
Fo	42.9	44.8	47.1	44.9
F1	56.7	52.5	51.2	53.5
F2	58.1	57.0	55.2	56.7
Mean	52.6	51.4	51.1	51.7

C.V. %		9.6
LSD .05:	Spacing	4.99 Fertilizer
.01:		6.87

Tons Sucrose per acre:

Treatment	S1	S2	S3	Mean
Fo	5.37	5.60	5.70	5.56
F ₁	6.43	5.55	6.22	6.07
F ₂	6.82	6.48	6.82	6.71
Mean	6.21	5.88	6.25	6.11

61/62 (12)

C.V. % 11.4
 LSD .05: Spacing 0.70 Fertilizer 0.70
 .01: 0.96 0.96

1st Ratoon

Tons Cane per acre:

Treatment	S1	S2	S3	Mean
Fo	25.5	27.7	30.5	33.9
F ₁	54.8	55.3	55.4	55.2
F ₂	58.7	57.3	60.8	58.9
Mean	46.2	46.8	48.9	49.3

C.V. % 10.1
 LSD .05: Spacing 4.98 Fertilizer 4.98
 .01: 6.86 6.86

Tons Sucrose per acre:

Treatment	S1	S2	S3	Mean
Fo	4.99	3.54	3.91	4.14
F ₁	5.63	5.69	5.66	5.65
F ₂	5.27	5.29	6.02	5.52
Mean	5.30	4.84	5.20	5.11

61/63 (11)

C.V. % 10.8
 L.S.D. .05 Spacing 0.55 Fertilizer 0.55
 .01 0.76 0.76

2nd Ratoon

Tons Cane per acre:

Treatment	S1	S2	S3	Mean
Fo	23.7	25.0	25.4	24.7
F ₁	53.6	55.7	49.0	52.8
F ₂	49.8	50.7	56.6	52.4
Mean	42.4	43.8	43.6	43.3

C.V. % 13.5
 L.S.D. .05 Spacing 5.83 Fertilizer 5.83
 .01 8.04 8.04

Tons Sucrose per acre:

Treatment	S1	S2	S3	Mean
Fo	2.77	3.00	3.04	2.93
F1	5.08	5.41	4.26	4.91
F2	3.83	3.59	4.12	3.84
Mean	3.89	4.00	3.80	3.90

534(n)

C.V. %			15.1
L.S.D. .05:	Spacing	0.59	Fertilizer 0.59
.01:		0.81	0.81