

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

SPACING TRIAL

Catalogue No: 194
 Code: A.S. 4/59
 This crop: Plant
 Site: Chaka's Kraal
 Altitude: 300'
 Soil series: Waldene
 Design: Split-split-plot
 Variety: N:Co.334, N:Co.376,
 N.50/211
 Fertilizer: lb/ac. N P K
 0 0 0
 200 62 167
 400 124 333
 Water regime: Irrigated

Soil Analysis:

pH OM% Clay%
 5.51 0.66 -

ppm
 P K Ca Mg
 14 45 - -

Age: N.50/211 12 months (12/59-12/60)
 N:Co.334) 17 months (12/59-7/61)
 N:Co.376)

Rainfall: 66.7"
 Irrigation: 14.0"

Object:

To compare three row spacings for three varieties at three levels of fertilization.

Treatments:

S₁ = 1' 6" spacing
 S₂ = 3' 0" spacing
 S₃ = 4' 6" spacing

Results:

Variety	Spacing	T.C.A.	Suc. %	T.S.A.
N.50/211	S ₁	57.2	11.99	6.84
	S ₂	52.4	11.52	6.03
	S ₃	49.8	11.01	5.49
C.V. %		6.80	3.13	-
L.S.D. 0.05		3.70	0.37	-
0.01		5.19	0.51	-

Highly significant linear increase in yield with closer spacings.

Variety	Spacing	T.C.A.	Suc. %	T.S.A.	Sticks/plot	Length of stick/plot
N:Co.334 N:Co.376	S ₁	96.0	12.48	11.98	1469	11,356
	S ₂	87.3	11.59	10.10	1299	9,752
	S ₃	83.3	11.34	9.45	1184	8,584
C.V. %		7.4		10.2	5.3	7.5
L.S.D. 0.05		4.49		0.74	48	511
0.01		6.08		1.00	65	692

Highly significant linear increase in yield, number of sticks and length of stick per plot with closer spacings.