

SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION

24

DRY LAND NITROGEN AND POTASH TRIAL

Catalogue No: 115
This Crop: Plant
Site: Ottawa Section, Natal
Estates, Paddock Field
Altitude: 200'
Soil Series: Windermere clay
Design: 2 x 2 factorial
Variety: N:Co.376
Fertilizer: See treatments
Water Regime: Dry land

Soil Analysis: (Beater)
ppm.
pH. P. K. Ca. Mg.
7.6 18 66 1748 370
Age: 14 months (8/63 - 12/64)
Rainfall this crop: 35.76"

Object:

To test fertilizer response under dry land conditions in comparison with adjacent irrigated fertilizer trial.

<u>Treatments:</u>	Amm. Nitrate	Nil lbs/acre	<u>All Plots</u>
	31% N	400 " "	Supers 600 lbs/ac
	M. Potash	Nil " "	8.3% P
	50% K	300 " "	

Results:

lb. Muriate of Potash/ac	lb. K /ac	Sucrose %	T.C.A.	T.C.A.M.	T.S.A.	Lbs. S.A.M.	Purity
00	0	13.89	25.5	1.82	3.54	506	89.8
300	150	14.04	27.9	1.99	3.92	560	93.3

S.E. = ± 3.60

C.V. = 13.9 %

Comment:

No significant response to K and no significant N X K interaction.

25th November, 1966.

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Catalogue No.: 115
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 Paddock Field.
Altitude: 200'
Soil Series: Windermere clay
Design: 2 x 2 Factorial
Variety: N:Co.376
Fertilizer: See treatments.
Water Regime: Dryland

Soil Analysis: (Beater)
 P.P.M.
 pH. P. K. Ca. Mg.
Age: 12 months (12/64 - 11/65)
Rainfall this crop: 28.87"

Object: To test fertilizer response under dryland conditions in comparison with adjacent irrigated fertilizer trial.

Treatments:

L.A.N.	600 lbs/acre
20% N	900 " "
M. Potash	0 " "
50% K	300 " "

Results:

Lb. Muriate of Potash/ac.	Lb. K /ac.	T.C.A.	Suc. %	T.S.A.	T.C.A.M.	Lb. S.A.M.
0	0	10.93	9.74	1.06	0.91	178
300	150	12.55	9.71	1.22	1.05	203

S.E. = \pm 1.50

C.V. = 12.8%

Comment: A significant response to K.
 No N x K interaction.

28th November, 1966.

35

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31% N	400 " "	Supers 600 lbs/acre
M. Potash	Nil " "	8.3% P
50% K	300 " "	

Results:

lb. Ammon. Nitrate/ac	lb. N /ac	Sucrose %	T.C.A.	T.C.A.M.	T.S.A.	Lb. S.A.M.	Purity
0	0	13.96	27.3	1.95	3.82	546	90.0
400	124	13.96	26.0	1.86	3.64	520	93.0

S.E. = ± 3.60

C.V. = 13.9 %

Comment: No response to nitrogen and no significant N X K interaction.

25th November, 1966.

28

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 50% K 300 " "

Results:

Lb. L.A.N. /ac.	Lb. N /ac.	T.C.A.	Suc. %	T.S.A.	T.C.A.M.	Lb. S.A.M.
600	120	11.75	9.75	1.14	0.98	191
900	180	11.74	9.71	1.14	0.98	190

S.E. = \pm 1.50

C.V. = 12.8%

Comment:

No response to N.
 No significant N x K interaction.

28th November, 1966.