

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

P SOLUBILITY TRIAL

Catalogue No: 89
This Crop: P
Site: Ntchango, Sinembe
Altitude: 600'
Soil Series: Cartref
Design: Random blocks, 6 reps.
Variety: N.50/211
Fertilizer: See below
Water regime: Dryland

Soil Analysis:

<u>pH</u>	<u>OM%</u>	<u>Clay%</u>	
5.7	1.88	13.2	
<u>ppm</u>			
<u>P</u>	<u>K</u>	<u>Ca</u>	<u>Mg</u>
6	179	188	70

Age: 16 mths. 2/63 - 6/64
Rainfall: 44.8"

Object:

To compare P carries of different solubility with a control and normal field practice.

Fertilizer:

1. Control, 15 x 0 x 15
2. 10 x 10 x 10, 100% P sol.
3. 14 x 14 x 14, 33% P sol.
4. 8 x 16 x 16, 3% P sol. + A.N. up to 16 x 16 x 16
5. Normal field treatment.

Results:

Treatment	T.C.A.	Sucrose % Cane.	T.S.A.
1	36.5	12.90	4.71
2	43.8	11.33	4.96
3	41.5	11.86	4.92
4	38.3	12.21	4.68
5	44.2	12.84	5.68

SOUTH AFRICAN SUGAR INDUSTRY.

AGRONOMISTS' ASSOCIATION.

COMPLEX FERTILIZER EXPERIMENT.

Catalogue No: 89
This crop: 2nd Ratoon.
Site: Nchango, Sinembe
Altitude: 600 ft.
Soil series: Cartref.
Design: Random block,
6 reps.
Variety: N.50/211
Fertilizer: N. P. K.
Urea 200 - 200
Water regime: Dry Land.

Soil Analysis:

	<u>pH</u>	<u>OM%</u>	<u>Clay%</u>
2R	5.49	1.89	-
	<u>p.p.m.</u>		
	<u>P</u>	<u>K</u>	<u>Ca</u>
	4	130	205
			<u>Mg</u>
			57

Age: 18 mths 11/65 - 5/67
Rainfall: 44.67"
Irrigation:

Treatments:

1. Control = 15. 0.15
2. 10X10X10 = 100% water sol. P₂O₅
3. 14X10X10 = 33% " " " " 5
4. 8X16X16 = 3% " " " " + Amm.Nitrate to
make up (16X16X16)
5. Normal Field Treatment L.A.N. 500 lbs./a
Supers 600 lbs./a
Mur.of Potash 300 lbs./a

Results:

TREATMENTS	T.C.A.	% SUCROSE	T.S.A.
1	30.0	13.6	4.07
2	29.7	13.6	4.02
3	29.6	13.6	4.04
4	27.5	13.8	3.78
5	24.8	13.7	3.41
S.E. Single yield =		6.96	T.C.A.
C.V.		24.56%	

Comments: There has been no response to the treatments and no change has been effected on the Phosphate status of the soil.