

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

PHOSPHATE SOLUBILITY TRIAL

Catalogue No: 109
This Crop: Plant
Site: Holwood Section,
 Darnall. School Field
Altitude: 900'
Soil Series: Cartref/Trevanian
Design: Random Block
Variety: N:Co.376
Fertilizer: See treatments
Rainfall this
 Crop: 74.18"
Water Regime: Dry land

Soil Analysis:

p.p.m.					
pH	O.M.%	P	K	Ca	Mg
4.6	-	8	78	350	75

Age: 28 Months (12/62 - 11/64)

Object: To evaluate P solubility in phosphate carriers.

<u>Treatments:</u>		Lbs./Acre		
		N	P	K
1.	15:0:15	200	-	166
2.	10:10:10 (100% W.S. P2 O5)	200	88	166
3.	14:14:14 (33% W.S. P2 O5)	200	88	166
4.	8:16:16 (3% W.S. P2 O5)	200	88	166
5.	Normal Practice (L.A.N.; B.S.; M.P.)	200	88	166

Results:

Treatment	T.C.A.	% Sucrose	T.S.A.	A T.C.A.M.	B Lbs S.A.M.	Rank	
						A	B
1	66.56	14.96	9.957	2.894	866	4	4
2	75.67	14.62	11.063	3.290	962	1	1
3	71.14	15.41	10.963	3.093	954	2	2
4	64.82	15.81	10.248	2.818	892	5	3
5	66.76	14.93	9.967	2.903	866	3	4

S.E. = 8.55
 C.V. = 12.3%

Difference between treatments not statistically significant.

Comment:

There is a general trend showing that yields increase with the percentage of W.S. phosphate, but this advantage was not statistically significant.

26th November, 1966.