

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

LEVELS OF PHOSPHATE TRIAL

Catalogue No.: 47  
This crop: P, 1R.  
Site: 87 Pullen, Mwawine.  
Altitude: 300'  
Soil series: Grey Sand.  
Design: Random block 4 Reps.  
Variety: N:Co.382.  
Fertilizer: See below.  
Water regime: Dryland.

Soil Analysis:

	pH	OM%	Clay%
P	5.9	.44	-
1R	6.3	.65	6.0

  

	p.p.m.			
	P	K	Ca	Mg
P	58	103	3451	-
1R	70	25	2206	47

Age: P = 16 mths. Oct. '62 - Jan. '64.  
 1R = 17 mths. Jan. '64 - June '65.  
Rainfall: P = 55.94"  
 1R = 48.72"

Object: To compare five levels of P with a control in a plant crop and first ratoon.

<u>Fertilizer:</u>	<u>Plant</u>	<u>1st Ratoon</u>
	(Urea) 115 lbs. N/ac.	(LAN) 88.4 lbs. N/ac.
	(SP) P <sub>0</sub> Nil	(SP) P <sub>0</sub> Nil
	P <sub>1</sub> 16.6 lb P/ac.	P <sub>1</sub> 14.6 lb P/ac.
	P <sub>2</sub> 33.2 "	P <sub>2</sub> 29.3 "
	P <sub>3</sub> 49.8 "	P <sub>3</sub> 43.9 "
	P <sub>4</sub> 67.4 "	P <sub>4</sub> 58.6 "
	P <sub>5</sub> 83.0 "	P <sub>5</sub> 73.3 "
	(MP) 100 lbs. K/ac.	(MP) 88.5 lbs. K/ac.

Treatment: lb. P/acre.

	<u>Plant</u>	<u>1st Ratoon</u>
	P <sub>0</sub> : Nil	Nil
	P <sub>1</sub> : 16.6	14.6
	P <sub>2</sub> : 33.2	29.3
	P <sub>3</sub> : 49.8	43.9
	P <sub>4</sub> : 67.4	58.6
	P <sub>5</sub> : 83.0	73.3

Results:

	Treatment	T.C.A.	% Suc.	T.S.A.
Plant	P <sub>0</sub>	32.6	14.63	4.77
	P <sub>1</sub>	31.6	14.51	4.59
	P <sub>2</sub>	26.8	14.84	3.98
	P <sub>3</sub>	26.8	14.72	3.94
	P <sub>4</sub>	32.2	14.55	4.69
	P <sub>5</sub>	32.7	14.76	4.83
1st Ratoon	P <sub>0</sub>	25.2	14.29	3.60
	P <sub>1</sub>	29.8	14.38	4.29
	P <sub>2</sub>	23.2	14.29	3.30
	P <sub>3</sub>	22.9	14.10	3.23
	P <sub>4</sub>	24.4	14.40	3.51
	P <sub>5</sub>	24.0	14.41	3.46