

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

2 x 2 x 2 NPK FACTORIAL

Catalogue No.: 18  
This crop: Plant, 1 Ratoon  
Site: 91 Chisholm, Mwawine  
Altitude: 300'  
Soil series: Recent Sand  
Design: NPK 2 x 2 x 2. 3 reps.  
Variety: N:Co.376  
Fertilizer: See below  
Water regime: Dryland

Soil Analysis:

	p.p.m.						
	pH	OM%	Clay	P	K	Ca	Mg
P	5.82	.68	-	38	64	1019	34
LR	5.91	.89	7.1	95	58	2754	37

Age: P = 23 mths. March '61 - Feb. '63  
 LR = 16 mths. Feb. '63 - June '64

Rainfall: P = 70.36"  
 LR = 47.82"

Object: To compare two levels of K in a plant crop and one ratoon.

Fertilizer:

Urea            N<sub>1</sub> 69 lbs N/ac  
                   N<sub>2</sub> 138     "  
 S. Phos.       P<sub>1</sub> 16.6 lbs P/ac  
                   P<sub>2</sub> 33.2     "  
 Mur. of Pot. K<sub>1</sub> 100 lbs K/ac  
                   K<sub>2</sub> 200     "

Treatments:

K<sub>1</sub> 100 lbs K/ac  
 K<sub>2</sub> 200     "

Results:

	Treatment	T.C.A.	% Suc.	T.S.A.
P	K <sub>1</sub>	19.6	12.37	2.42
	K <sub>2</sub>	19.6	12.49	2.48
LR	K <sub>1</sub>	25.1	12.49	3.13
	K <sub>2</sub>	19.4	13.05	2.52

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Fertilizer: See below  
Water regime: Dryland

Soil Analysis:

	pH	OM%	Clay%	p.p.m.			
				P	K	Ca	Mg
P	5.82	.68	-	38	64	1019	34
1R	5.91	.89	7.1	95	58	2754	37

Age: P = 23 mths. March '61 - Feb. '63  
 1R = 16 mths. Feb. '63 - June '64

Rainfall: P = 70.36"  
 1R = 47.82"

Object: To compare two levels of N in a plant crop and first ratoon.

Fertilizer:

Urea	N <sub>1</sub>	69 lbs N/ac
	N <sub>2</sub>	138 "
S. Phos.	P <sub>1</sub>	16.6 lbs P/ac
	P <sub>2</sub>	33.2 "
Mur. of Pot.	K <sub>1</sub>	100 lbs K/ac
	K <sub>2</sub>	200 "

Treatments:

lb N/acre

N<sub>1</sub>: 69  
 N<sub>2</sub>: 138

Results:

	Treatment	T.C.A.	% Suc.	T.S.A.
P	N <sub>1</sub>	20.4	12.46	2.57
	N <sub>2</sub>	18.8	12.39	2.30
1R	N <sub>1</sub>	23.7	12.60	2.97
	N <sub>2</sub>	20.8	12.93	2.68