

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

IRRIGATION X FERTILIZATION TRIAL

Catalogue No.: 74.
This crop: P, 1R.
Site: Godden, Klipfontein.
Altitude: 300'
Soil Series: Fernwood.
Design: Observational.
Variety: N:Co.382.
Fertilizer:

	<u>N</u>	<u>P</u>	<u>K</u>
P.	106	25	100
1R.	184	-	125

Water regime: Irr. vs. dryland.

Soil Analysis:

	<u>pH.</u>	<u>OM%</u>	<u>Clay %</u>
P.	6.18	0.81	-
1R.	6.39	0.81	-

	<u>p.p.m.</u>			
	<u>P</u>	<u>K</u>	<u>Ca</u>	<u>Mg</u>
P.	36	33	780	141
1R.	25	47	1240	316

Age: P. 14 mths. (4/60 - 6/61)
 1R. 24 mths. (6/61 - 6/63)
Irrigation: P : 8.00"
 1R : 18.00"

Object: To compare the effects of organic and inorganic fertilizer with and without irrigation.

Treatments: A : Irrigation + N. P. K.
 B : Irrigation + molasses (1000 g.p.a.) + filter cake (40 T.P.A.)
 C : Dryland, N.P.K.
 D : Dryland, molasses (1000 g.p.a.) + filter cake (40 Y.P.A.)

Results:

Treatment	Plant			1R.		
	T.C.A.	Suc. %	T.S.A.	T.C.A.	Suc. %	T.S.A.
A	57.4	13.2	7.55	42.7	13.2	5.64
B	73.3	12.3	9.01	46.3	13.5	6.23
C	61.1	13.1	7.64	34.8	12.9	4.49
D	57.2	13.2	7.54	35.2	13.9	4.88

60/61

62/3.

14th May, 1966.

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Irrigated Organic vs. Inorganic Fertilizer Trial

Catalogue No.: 74
 This Crop: P., 1R.
 Site: Godden, Klipfontein.
 Altitude:
 Soil series: Fernwood
 Design: Observation Plots
 Variety: N:Co.382.
 Fertilizer: N P K
 P Urea 225 300 200
 1R " 400 - 250
 Water Regime: Irrigated

Soil Analysis:	pH	OM,%	Clay %	
P =	6.18	0.81	-	
1R =	6.39	0.81	-	
	p.p.m.			
	P	K	Ca	Mg
P =	36	33	780	141
1R =	25	47	1240	316

Age: P = 14 mths. April, 1960 - June, 1961
 1R = 24 mths. June, 1961 - June, 1963
 Irrigation:
 P = 8.00"
 1R = 18.00"

Object: To compare various organic manures with inorganic fertilization.

Treatments: Lime 20 T.P.A. 50% moisture
 Filter press 40 T.P.A.
 Molasses 1000 G.P.A.
 Chicken manure 5 or 2 T.P.A.

Results:

Treatments	T.C.A.		Suc. %		T.S.A.	
	Mean P.	Mean 1R.	Mean P.	Mean 1R.	Mean P.	Mean 1R.
Irrigation + N.P.K.	51.4	33.3	13.5	12.9	6.89	4.32
Irrigation + Mol + F.Press	69.4	39.5	12.8	13.0	8.82	5.14
Molasses.	61.9	31.7	12.4	12.7	7.62	4.02
Filter press	56.8	27.6	13.3	12.8	7.47	3.54
Molasses + Filter press	53.2	27.2	13.5	12.8	7.13	3.56
Control 18" Line	60.0	25.4	12.8	13.5	7.61	3.46
Chicken Manure 2 T.P.A.	57.7	25.0	13.4	12.2	7.77	3.06
Lime	55.2	27.5	13.3	12.2	7.35	3.37
Mol. + F.Press + Lime	62.9	32.8	13.6	12.8	8.51	4.23
Chicken manure 5 T.P.A.	60.2	22.0	13.3	12.8	7.95	2.80
Chicken manure 2 T.P.A. + Lime + F. Press + Molasses	66.9	24.7	13.4	13.3	8.92	3.28
Control	56.9	27.0	13.1	12.5	7.28	3.40

6th June, 1966.