

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

UREA X AMMONIUM SULPHATE TRIAL

Catalogue No.: 24  
This crop: P 1R 2R  
Site: Lower Compound, Frosterley  
Altitude: 300'  
Soil series: Cartref  
Design: Random Block  
Variety: N:Co.382  
Fertilizer: N P K  
P see 500 100  
1R treat- 500 250  
2R ment 500 200

Soil Analysis:

	pH	OM%	Clay%
P	4.87	.50	-
1R	4.85	.62	-
2R	4.90	1.56	-

	p.p.m.			
	P	K	Ca	Mg
P	6	38	-	134
1R	5	61	430	364
2R	16	55	166	64

Age: P 21 months Oct. 1960 - July 1962  
1R 17 months July 1962 - Dec. 1963  
2R 11 months Dec. 1963 - Nov. 1964

Water regime: Dryland

Rainfall: P 70.39"  
1R 55.86"  
2R 29.18"

Object: To compare urea and ammonium sulphate, each at two levels, with a control without nitrogen.

Treatments:

	P	1R	2R
Control	- No nitrogen	No nitrogen	No Nitrogen
Urea	- 100 lb. N per acre	100 lb. N per acre	100 lb. N per acre
Urea	- 200 lb. N per acre	200 lb. N per acre	200 lb. N per acre
S/A	- 80 lb. N per acre	100 lb. N per acre	100 lb. N per acre
S/A	- 160 lb. N per acre	200 lb. N per acre	200 lb. N per acre

Results:

Tons cane per acre

	Plant				1st Ratoon				2nd Ratoon			
	0 lb.N	100 lb.N	200 lb.N	Mean	0 lb.N	100 lb.N	200 lb.N	Mean	0 lb.N	100 lb.N	200 lb.N	Mean
S/A	-	46.4	52.1	49.3	-	27.7	27.3	27.5	-	13.9	14.8	14.4
Urea	-	45.2	50.4	47.8	-	31.2	31.8	31.5	-	17.6	18.3	18.0
Mean	41.2	45.8	51.3	-	20.9	29.5	29.6	-	13.8	15.8	16.6	-

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Sucrose % Cane

	Plant				1st Ratoon				2nd Ratoon			
	0 lb.N	100 lb.N	200 lb.N	Mean	0 lb.N	100 lb.N	200 lb.N	Mean	0 lb.N	100 lb.N	200 lb.N	Mean
S/A	-	15.3	15.6	15.5	-	14.2	14.1	14.2	-	12.7	13.5	13.1
Urea	-	15.0	15.7	15.4	-	14.4	14.7	14.6	-	12.6	13.1	12.9
Mean	15.2	15.2	15.7	-	14.3	14.3	14.4	-	13.6	12.7	13.3	-

Tons sucrose per acre

	Plant				1st Ratoon				2nd Ratoon			
	0 lb.N	100 lb.N	200 lb.N	Mean	0 lb.N	100 lb.N	200 lb.N	Mean	0 lb.N	100 lb.N	200 lb.N	Mean
S/A	-	7.11	8.11	7.61	-	3.93	3.86	3.90	-	1.77	2.00	1.89
Urea	-	6.76	7.93	7.35	-	4.50	4.67	4.59	-	2.22	2.39	2.31
Mean	6.25	6.94	8.02	-	2.98	4.22	4.27	-	1.88	2.00	2.20	-

Note: In plant stage, S/A treatments received only 80 and 160 lb. N instead of 100 and 200 lb. N/acre.

520