

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

UREA X AMMONIUM SULPHATE TRIAL

Catalogue No.: 23  
 This crop: P 1R 2R  
 Site: Waterloo - Muckleneuk  
 Altitude: 300'  
 Soil series: -  
 Design: Random Block  
 Variety: N:Co.382  
 Fertilizer:    N       P       K  
           P    see   500   100  
           1R   treat- 500   250  
           2R   ment   500   100

Soil Analysis:

	pH	OM%	Clay%
P	6.29	3.87	-
1R	6.20	5.04	-
2R	6.04	6.36	-

  

	p.p.m.			
	P	K	Ca	Mg
P	17	136	-	2000
1R	23	120	4060	1202
2R	39	196	1660	856

Age: P 22 months Oct. 1960 - Aug 1962  
 1R 17 months Aug. 1962 - Jan. 1964  
 2R 17 months Jan. 1964 - June 1965

Water regime: Dryland

Rainfall: P 70.39"  
 1R 55.86"  
 2R 41.89"

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

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	-	52.8	46.5	49.7	-	78.0	72.3	75.2	-	36.9	37.6	37.3
Urea	-	47.3	48.5	47.9	-	68.2	74.7	71.5	-	34.9	39.1	37.0
Mean	47.4	50.0	47.5	-	54.8	73.1	73.5	-	27.1	35.9	38.4	-

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Sucrose % cane

	P				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	-	14.8	14.8	14.8	-	14.5	14.5	14.5	-	15.2	14.7	15.0
Urea	-	14.5	14.7	14.6	-	14.8	14.6	14.7	-	15.1	14.8	15.0
Mean	14.7	14.7	14.8	-	14.1	14.7	14.6	-	14.9	15.1	14.8	-

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	-	7.80	6.90	7.35	-	11.3	10.5	10.9	-	5.60	5.53	5.57
Urea	-	6.96	7.14	7.07	-	10.1	10.9	10.5	-	5.28	5.80	5.54
Mean	6.95	7.38	7.02	-	7.74	10.7	10.7	-	4.05	5.44	5.67	-

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