

SOUTH AFRICAN SUGAR INDUSTRY

42

AGRONOMISTS' ASSOCIATION

NPK FACTORIAL EXPERIMENT

Catalogue No: 162
This crop: Plant, 1R, 2R.
Site: M. Meyer, Wartburg
Altitude: + 2,500'
Soil Series: Dolerite
Design: 4 x 2 x 3
Variety: N:Co.293
Fertilizer: See treatments
Water regime: Dryland

Soil Analysis:

pH	OM%	Clay%	ppm			
			P	K	Ca	Mg
4.59	5.09	-	66	345	-	-

Age: P - 25 mths.
 1R - 24 mths.
 2R - 25 mths.
Rainfall: Not recorded
Irrigation: -

Object:

To measure the effects of N, P and K on cane yield

Treatments:

N1 = 100 lbs N P1 = Nil K1 = Nil
 N2 = 200 " " P2 = 200 lbs P₂O₅ K2 = 150 lbs K₂O
 N3 = 300 " " K3 = 300
 N4 = 400 " "

Results:

Nitrogen: Plant

	T.C.A.	Suc. %	T.S.A.	Purity	Fibre %
N1	85.8	15.53	13.35	92.4	10.41
N2	86.1	15.91	13.69	92.9	10.48
N3	82.2	16.17	13.45	94.1	10.51
N4	82.8	15.57	12.90	93.8	10.46
Mean	84.2	15.80	13.35	93.3	10.47

1st Ratoon

	T.C.A.	Suc. %	T.S.A.	Purity	Fibre %
N1	80.14	17.20	13.78	93.50	12.10
N2	84.11	16.75	14.09	92.02	11.90
N3	70.68	16.69	11.79	92.08	12.10
N4	76.01	17.09	12.99	93.15	11.60
Mean	77.74	16.93	13.16	92.69	11.93

2nd Ratoon

	T.C.A.	Suc. %	T.S.A.	Purity	Fibre %
N1	47.02	14.88	7.00	86.63	12.01
N2	45.73	14.39	6.58	85.12	12.01
N3	45.03	15.32	6.90	89.13	12.55
N4	43.68	14.82	6.47	87.16	11.73
Mean	45.37	14.85	6.74	87.01	12.08

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

NPK FACTORIAL EXPERIMENT

Catalogue No: 162
 This Crop: Plant, 1R, 2R
 Site: M. Meyer, Wartburg
 Altitude: 2,500'
 Soil Series: Dolerite
 Design: 4 x 2 x 3
 Variety: N:Co.293
 Fertilizer: See Treatments
 Water regime: Dryland

Soil Analysis:

pH	OM%	Clay%	ppm			
			P	K	Ca	Mg
4.59	5.09	-	66	345	-	-
Age:	P	-	25 mths.			
	1R	-	24 mths.			
	2R	-	25 mths.			
Rainfall:	Not recorded					
Irrigation:	-					

Object:

To measure the effects of N, P and K on cane yield.

Treatments:

N1 = 100 lbs. N	P1 = Nil	K1 = Nil
N2 = 200 " "	P2 = 200 lbs P ₂ O ₅	K2 = 150 lbs. K ₂ O
N3 = 300 " "		K3 = 300 " "
N4 = 400 " "		

Results:

Potash: Plant

	T.C.A.	Suc. %	T.S.A.	Purity	Fibre %
K1	83.9	16.08	13.49	94.1	10.72
K2	84.8	15.91	13.48	92.7	10.45
K3	84.8	15.40	13.05	93.2	10.23
Mean	84.5	15.80	13.34	93.3	10.47

1st Ratoon

	T.C.A.	Suc. %	T.S.A.	Purity	Fibre %
K1	81.4	16.89	13.75	92.4	12.30
K2	76.0	16.89	12.84	93.5	11.90
K3	76.4	17.12	13.08	92.9	11.60
Mean	77.9	16.97	13.22	92.9	11.93

2nd Ratoon

	T.C.A.	Suc. %	T.S.A.	Purity	Fibre %
K1	43.6	14.49	6.32	85.9	12.25
K2	44.0	14.95	6.58	87.3	12.12
K3	48.5	15.19	7.37	87.9	12.08
Mean	45.4	14.88	6.76	87.0	12.15