

(13)

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

NITROGEN TRIAL

<p>Catalogue No.: 26 This crop: P, 1R, 2R Site: 98 Naidoo, Frosterley Altitude: 400' Soil series: Dwyka Design: Random block 4 reps. Variety: N:Co.376 Fertilizer: See below Water regime: Dryland</p>	<p>Soil Analysis: p.p.m.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">pH</td> <td style="text-align: center;">OM%</td> <td style="text-align: center;">Clay%</td> <td style="text-align: center;">P</td> <td style="text-align: center;">K</td> <td style="text-align: center;">Ca</td> <td style="text-align: center;">Mg</td> </tr> <tr> <td>P 5.7</td> <td>7.04</td> <td>-</td> <td>P 14</td> <td>173</td> <td>7521</td> <td>277</td> </tr> <tr> <td>1R 5.7</td> <td>2.40</td> <td>-</td> <td>1R 20</td> <td>160</td> <td>6452</td> <td>213</td> </tr> <tr> <td>2R 5.6</td> <td>3.16</td> <td>19</td> <td>2R 28</td> <td>145</td> <td>5403</td> <td>260</td> </tr> </table> <p>Age: P 28 mths. Mar. '60 - July '62 1R 17 mths. July '62 - Dec. '63 2R 17 mths. Dec. '63 - May, '65</p> <p>Rainfall: P = 82.96" 1R = 59.80" 2R = 48.68"</p>	pH	OM%	Clay%	P	K	Ca	Mg	P 5.7	7.04	-	P 14	173	7521	277	1R 5.7	2.40	-	1R 20	160	6452	213	2R 5.6	3.16	19	2R 28	145	5403	260
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Object: To compare five levels of N with a control in a plant crop and two ratoons.

Fertilizer:

Plant	1st Ratoon		2nd Ratoon	
Urea N ₀ -	N ₀ -		N ₀ -	lbs N/ac
N ₁ 46	N ₁ 46		N ₁ 115	"
N ₂ 92	N ₂ 92		N ₂ 230	"
N ₃ 138	N ₃ 138		N ₃ 345	"
N ₄ 184	N ₄ 184		N ₄ 460	"
N ₅ 230	N ₅ 230		N ₅ 575	"
(S.P.) 830	(S.P.) 830	(S.P.)	415	lbs P/ac
(M.P.) 300	(M.P.) 250	(M.P.)	100	lbs K/ac

Treatments:

16 N/acre

Plant	1 Ratoon	2 Ratoon
N ₁ : 46	46	115
N ₂ : 92	92	230
N ₃ : 138	138	345
N ₄ : 184	184	460
N ₅ : 230	230	575

Results:

Treatment	T.C.A.	Suc. %	T.S.A.	
P	N ₀	50.1	14.91	7.46
	N ₁	62.7	14.98	9.43
	N ₂	66.9	15.12	10.10
	N ₃	63.3	15.45	9.15
	N ₄	63.8	14.51	9.26
	N ₅	52.1	14.27	7.48
1R	N ₀	26.0	14.99	3.90
	N ₁	43.3	15.36	6.65
	N ₂	43.0	15.46	6.65
	N ₃	49.9	15.35	7.66
	N ₄	43.5	15.23	6.63
	N ₅	47.1	15.56	7.33
2R	N ₀	17.0	15.15	2.58
	N ₁	24.0	14.68	3.52
	N ₂	28.5	14.80	4.22
	N ₃	26.4	14.61	3.86
	N ₄	22.7	14.47	3.28
	N ₅	22.2	15.20	3.37