

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

Variety Trial

Catalogue No. 112
This crop: 2nd Ratoon
Site: Ottawa - N.E.L. - Paddock
Altitude: 200'
Soil series: Windermere
Design: Random Block
Variety: See treatments
Fertiliser:
 N P K
 138 25 150

Water regime: Irrigated.

Soil Analysis

pH	p.p.m.			
	P	K	Ca	Mg
7.7	19	57	7342	333
<u>Age:</u> 15 months (9/11/65-30/1/67)				
<u>Rainfall:</u> 41.23"				
<u>Irrigation:</u> 19.00"				

Object: To test variety performance under irrigation.

- Treatments:
1. N:Co 310
 2. N:Co 376
 3. N:Co 382
 4. N50/211
 5. N51/539
 6. N51/168

Results:

Variety	T.C.A.	S % C	T.S.A.
N:Co 310	45.5	14.05	6.40
N:Co 376	52.6	13.45	7.07
N:Co 382	42.9	13.83	5.94
N50/211	44.7	12.98	5.77
N51/539	41.7	12.83	5.43
N51/168	40.4	13.42	5.45
Mean	44.6	13.43	5.99
S.E. Variety Mean	2.42	0.419	0.392
L.S.D. (0.05)	7.3	1.26	1.18
(0.01)	10.1	1.75	1.63
C.V.	10.8%	6.2%	13.0%

There are significant differences in T.C.A. & T.S.A., but not in Sucrose % Cane.

8th March, 1968.

SOUTH AFRICAN SUGAR INDUSTRY

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IRRIGATED VARIETY TRIAL

Catalogue No: 112
This crop: 1st Ratoon
Site: Ottawa Section, Natal Est.
 Ltd. Paddock field
Altitude: 200'
Soil series: Ecca Windermere
Design: Random Block
Variety: See treatments
Fertilizer:
 All plots
 4 : 1 : 6 1,200 lb./acre
Water regime: Irrigated trial
 29.0" applied

Soil Analysis:

pH	p.p.m.			
	P	K	Ca	Mg
7.7	19	57	7342	333

Age: 12 months (11/64 - 11/65)

Rainfall: 28.87"

Object: To test variety performances under irrigation.

- Treatment:
1. N:Co.310
 2. N:Co.376
 3. N:Co.382
 4. N50/211
 5. N51/539
 6. N51/168

Results:

Variety	T.P.A.	Suc. %	T.S.A.	1	2	Rank	
				T.C.A.M.	lb./S.A.M.	1	2
310	43.58	14.21	6.193	3.632	1024	3	3
376	49.43	13.05	6.451	4.119	1076	1	1
382	42.24	13.36	5.643	3.520	940	4	4
211	47.76	13.49	6.443	3.980	1074	2	2
539	39.56	13.70	5.420	3.297	904	6	5
168	40.34	13.31	5.369	3.362	894	5	6

S.E. = \pm 4.890

C.V. = 11.157%

Differences between treatments not
 Statistically significant.

Conclusions: N:Co376 & N50/211 were still the top varieties followed by the other varieties none of which were significantly inferior, even though 6 to 9 tons cane separated them from the two top varieties.

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IRRIGATED VARIETY TRIAL

<p><u>Catalogue No:</u> 112 <u>This crop:</u> Plant <u>Site:</u> Ottawa section, Natal Est. Ltd. Paddock field <u>Altitude:</u> 200' <u>Soil series:</u> Ecca Windermere <u>Design:</u> Random Block <u>Variety:</u> See treatments: <u>Fertilizer:</u> All Amm.Nitrate 31%N 400lb./acre Plots Supers 8.3% P 600lb./acre M. Potash 50% K 300lb./acre</p> <p><u>Water regime:</u> Irrigated trial 23.28" applied</p>	<p><u>Soil Analysis:</u></p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td colspan="4" style="text-align: center; border-bottom: 1px solid black;">p.p.m.</td> </tr> <tr> <td style="border-bottom: 1px solid black;">pH</td> <td style="border-bottom: 1px solid black;">P</td> <td style="border-bottom: 1px solid black;">K</td> <td style="border-bottom: 1px solid black;">Ca</td> <td style="border-bottom: 1px solid black;">Mg</td> </tr> <tr> <td style="text-align: center;">7.7</td> <td style="text-align: center;">19</td> <td style="text-align: center;">57</td> <td style="text-align: center;">7342</td> <td style="text-align: center;">333</td> </tr> </table> <p><u>Age:</u> 14 months (8/63 - 11/64)</p> <p><u>Rainfall:</u> 35.76"</p>		p.p.m.				pH	P	K	Ca	Mg	7.7	19	57	7342	333
	p.p.m.															
pH	P	K	Ca	Mg												
7.7	19	57	7342	333												

Object: To test variety performances under irrigation.

- Treatments:
1. N:Co.376
 2. N51/168
 3. N50/211
 4. N51/539
 5. N:Co.382
 6. N:Co.310

Results:

Variety	Suc. %	T.C.A.	T.C.A.M.	T.S.A.	lb./S.A.M.	Rank	
						Cane	Suc.
376	15.32	39.69	2.833	6.077	872	1	1
168	14.66	39.37	2.812	5.771	824	2	2
211	15.00	35.26	2.518	5.289	756	3	3
539	14.95	30.35	2.182	4.567	652	4	4
382	14.90	29.71	2.122	4.427	632	5	5
310	16.28	27.02	1.930	4.399	628	6	6

S.E. = \pm 4.77

C.V. = 14.2%

Treatment differences highly significant.
 L.S.D. between treatments = 7.16 T.P.A. @ 5 %
 = 9.86 T.P.A. @ 1 %

Conclusions: N:Co.376, N50/211, and N51/168 were superior to the other varieties and significantly so to N:Co.382 and N:Co.310 both of which were disappointing.

Profuse flowering in N:Co.310 was an important factor contributing to this variety's poor performance.