

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

PRE-RELEASE VARIETY TRIAL

Catalogue No.: 143
This crop: Plant
Site: Klipspruit Section, Powers-
court

Altitude: 2500'
Soil series: Cartref
Design: 4 X 4 Latin Square
Varieties: See treatments
Fertilizer:

N	P	K
92	70	100

Water regime: Dryland

Soil Analysis: No samples taken

Age: 26 months (10/62 - 12/64)

Rainfall: 80.53"

Object: To compare N:Co's 293 and 376 with two new varieties.

Treatments: N:Co.293, N:Co.376, CB 36/14, CB 38/22

Results:

Variety	T.C.A.	Suc. %	T.S.A.
N:Co.293	43.8	15.55	6.82
N:Co.376	48.9	15.50	7.60
CB 36/14	34.9	15.01	5.79
CB 38/22	30.3	15.86	5.96

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

PRE-RELEASE VARIETY TRIAL

Catalogue No.: 143
This crop: 1st Ratoon
Site: Klipspruit Section, Powers-
court
Altitude: 2500'
Soil series: Cartref
Design: 4 X 4 Latin Square
Varieties: See treatments
Fertilizer: Not recorded
Water regime: Dryland

Soil Analysis: No samples taken

Age: 13 months (12/64 - 1/66)
Rainfall: 44.20"

Object: To compare N:Co's 293 and 376 with two new varieties,

Treatments: N:Co.293, N:Co.376, CB 36/14, CB 38/22

Results:

Variety	T.C.A.	Suc. %	T.S.A.
N:Co.293	23.8	11.12	2.64
N:Co.376	26.1	11.12	2.90
CB 36/14	30.8	9.65	2.97
CB 38/22	26.0	9.79	2.54

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

VARIETY TRIAL

<u>Catalogue No</u> : 143 <u>This Crop</u> : 2nd Ratoon <u>Site</u> : Klipspruit, Powerscourt Illovo <u>Altitude</u> : 2,300' <u>Soil Type</u> : T.M.S. (Ord). <u>Design</u> : 4 x 4 Latin Square <u>Varieties</u> : As below <u>Fertilizer</u> : 300 Urea, 300 Potash <u>Water Regime</u> : Dryland	<u>Soil Analysis</u> : --- <u>Age</u> : 17 months <u>Rainfall</u> : 51.81 inches.
---	---

OBJECT: : To compare the performance of 4 Varieties listed below.

TREATMENT : NCo 293, NCo 376, CB.36/14, CB.38/22.

RESULTS :

1. CB38/22	2. NCo.376	3. CB36/14	4. NCo.293
TCA 44.9	67.0	39.5	49.6
Suc % 11.91	11.30	12.22	11.94
Pur % 82.64	82.11	85.56	84.15
5. CB36/14	6. CB38/22	7. NCo 376	8. NCo 293
TCA 43.0	38.6	54.3	42.4
Suc % 11.55	11.64	11.30	10.82
Pur % 81.50	81.41	82.88	80.63
9. NCo 293	10. CB38/22	11. CB36/14	12. NCo 376
TCA 48.9	34.3	46.4	61.3
Suc % 11.52	12.29	11.74	11.68
Pur % 84.59	75.56	83.68	83.31
13. NCo 376	14. NCo 293	15. CB36/14	16. CB38/22
TCA 57.3	34.4	36.9	23.6
Suc % 11.19	10.25	11.94	12.52
Pur % 83.15	79.91	84.76	85.23

TABLE OF MEANS

Variety	T. C. A.	Suc. %	Pur. %	T. S. A.	xx Rating
NCo. 376	60.0	11.37	82.86	6.82	1
NCo. 293	43.8	11.13	82.32	4.88	3
CB. 36/14	41.5	11.89	83.88	4.93	2
CB. 38/22	35.4	12.09	83.71	4.28	4

xx Rating is based on T.S.A.

Variety C.B.36/14, on appearance, was outstanding in this trial due to it having long heavy sticks but on yield per unit area N:Co.376 was far superior. The reason for the superiority of 376 was due to a greater population of sticks per plot. This is borne out by the individual stick weights recorded below. Based on the individual stick weights C.B.36/14 was the best variety. This would suggest that, if C.B.36/14 were planted at a greater rate per acre to encourage higher stick populations, the variety might prove to be superior to 376. Naturally, this hypothesis is based on the assumption that a greater seeding rate of 376 would not improve yield due to the existing population being optimum and that of C.B.36/14 not having been optimum at existing seeding rates.

The Mean Weight of 12 Random Sticks per Plot

Key:

Plot No.
Variety.
Mean wt. Grams
Mean wt. Lbs.

1 38/22 1113.91 2.46	2 376 1013.50 2.23	3 36/14 1095.83 2.41	4 293 824.08 1.82
5 36/14 957.50 2.11	6 38/22 857.50 1.89	7 376 877.75 1.93	8 293 894.91 1.97
9 293 875.33 1.93	10 38/22 640.08 1.41	11 36/14 926.83 2.04	12 376 675.33 1.49
13 376 1063.91 2.34	14 293 747.08 1.65	15 36/14 775.60 1.71	16 38/22 572.33 1.26

Table of Means:-

Variety	Mean Lbs	Mean Grams	Rating
376	2.00	907.62	2
293	1.84	835.35	3
36/14	2.07	938.94	1
38/22	1.76	795.96	4

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

Catalogue No.: 143
This Crop: 3rd Ratoon
Site: Klipspruit, Powerscourt,
 Illovo.
Altitude: 2300'
Soil Type: T.M.S. (Ord)
Design: 4 x 4 Latin Square
Varieties: As below
Fertilizer: 300 Urea, 300 Potash
Water Regime: Dryland.

Soil Analysis:
Age: 17 months.
 (Harvested 9/1/69)
Rainfall: 43.46 inches.

Object: To compare the performance of Varieties listed below.

Treatment: N:Co.293, N:Co.376, C.B.36/14, C.B.38/22.

Results:

1. C.B.38/22 T.C.A. 19 Suc. % 12.32 Pur. % 88.24	2. N:Co.376 43 11.50 90.33	3. C.B.36/14 31 12.00 89.76	4. N:Co.293 36 10.63 82.18
5. C.B.36/14 T.C.A. 33 Suc. % 10.67 Pur. % 87.49	6. C.B.38/22 20 11.83 89.49	7. N:Co.376 42 11.17 89.86	8. N:Co.293 29 12.29 91.13
9. N:Co.293 T.C.A. 30 Suc. % 12.26 Pur. % 91.26	10. C.B.38/22 25 13.15 90.88	11. C.B.36/14 29 10.47 91.33	12. N:Co.376 39 11.51 91.74
13. N:Co.376 T.C.A. 37 Suc. % 12.00 Pur. % 90.94	14. N:Co.293 27 11.82 89.57	15. C.B.36/14 21 12.17 90.06	16. C.B.38/22 12 11.84 93.15

TABLE OF MEANS.

Variety	T.C.A.	Suc. %	Pur. %	T.S.A.	Rating*
N:Co.376	40.0	11.55	90.72	4.64	1
N:Co.293	31.0	11.75	88.54	3.57	2
C.B.36/14	29.0	11.33	89.66	3.21	3
C.B.38/22	19.0	12.29	90.44	2.36	4

* Rating is based on T.S.A.

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

VARIETY TRIAL

Catalogue No. : 143	Soil Analysis : Nil
I.S.E. Code : Expt. Plot 52	
This Crop : 4 Ratoon	
Site : F.66 P/Court	Age : 24 months
Altitude : 700m	Jan 69-Jan 71.
Soil Type : T.M.S. Ord.	
Design : Random Blocks 4 x 4	
Varieties : As below	Rainfall : 1790.6 mm
Fertilizer : 300 urea, 300 Mop April, 69.	
Water Regime : Dryland.	

Object: To compare varieties as listed.

Treatment: NCo.293, NCo.376, CB36/14, CB38/22.

Plot No.	1	2	3	4
Variety	38/22	376	36/14	293
t/ha	89.4	127.3	66.1	100.1
Suc.%	12.9	13.3	12.4	13.6
Purity	88.3	90.0	90.8	90.2
Plot No.	5	6	7	8
Variety	36/14	38/22	376	293
t/ha	69.6	65.5	125.9	79.3
Suc.%	12.2	13.4	13.5	13.7
Purity	88.5	89.3	89.9	90.5
Plot No.	9	10	11	12
Variety	293	38/22	36/14	376
t/ha	85.5	51.5	95.2	138.0
Suc.%	13.1	12.9	11.6	13.0
Purity	89.9	86.7	88.2	89.0
Plot No.	13	14	15	16
Variety	376	293	36/14	38/22
t/ha	85.9	110.6	61.8	84.5
Suc.%	13.1	12.8	12.8	13.5
Purity	89.2	89.8	91.2	90.3

Table of Means

Variety	t/ha cane	Suc.%	Purity	t/ha Sucrose	Rating
376	119.3	13.2	89.5	15.75	1
293	93.9	13.3	90.1	12.49	2
36/14	73.2	12.3	89.7	9.00	4
38/22	72.7	13.2	88.7	9.60	3
Mean	89.8	13.0	89.5	11.71	

Notes: This trial has now been ploughed out.