

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

Irrigation Trial I

Catalogue No.: 1.

This crop: Plant - 1R. (Second cycle).

Site: Jackson, Umhloti Valley.

Altitude: 150'

Soil: Windermere.

Design: Random Block.

Variety: N:Co.382.

Fertiliser:

	N	P	K
Plant LAN	1000	500	300
1R	"	800	500

Water regime: Irrigated land.

Soil Analysis:

	pH.	OM %	Clay %	P	K	Ca	Mg
Plant =	5.88	3.73		16	118	2868	603
1R =	6.08	6.27	40.2	62	169	1625	886

Age:

Plant = 13 mths. June 1963 - July 1964.

1R = 12 mths. July 1964 - July 1965.

Object:

Treatments:

Plant cane.

W0 = Control. No irrigation.

W1 = 1 Inch irrigation when moisture deficit below F.C. = 1 inch.

W2 = 1 " " " " " " " = 2 "

W3 = 1 " " " " " " " = 3 "

W4 = 1/2 " " " " " " " = 1 "

W5 = 1 " " " " " " " = 1 "

(Except no irrigation between 30th May - 30th September each year).

1st Ratoon.

W0 = Control. No irrigation.

W1 = 1.5 inches irrigation when soil moisture deficit at 1.5 inches.

W2 = 3.0 " " " " " " " 3.0 "

W3 = 4.5 " " " " " " " 4.5 "

W4 = 0.5 " " " " " " " 0.5 "

W5 = 1.0 " " " " " " " 1.0 "

(Except May - September).

Results:

Tons Cane per Acre.

	P	1R
W0	16.9	10.3
W1	30.0	38.0
W2	25.2	31.5
W3	22.1	18.6
W4	36.8	22.6
W5	29.3	27.0

Sucrose % Cane.

	P	1R
W0	11.5	10.3
W1	12.2	13.1
W2	12.3	13.3
W3	12.7	10.5
W4	11.9	12.4
W5	12.3	12.5

Tons Sucrose per Acre.

	63/4	64/5
	P	1R
W0	1.95	1.08
W1	3.65	4.98
W2	3.10	4.17
W3	2.80	1.95
W4	4.36	2.79
W5	3.59	3.37

9th May, 1966.

Tons Sucrose per Acre.

	56/7	57/8	59/60	60/1
	P	1R	2R	3R
W0	4.83	4.22	3.01	4.23
W1	6.97	5.78	6.71	5.30
W2	7.79	6.71	7.56	6.25
W3	7.63	6.61	8.26	5.22
	16.72	14.26	11.82	12.52

9th May, 1966.