### SOUTH AFRICAN SUGAR INDUSTRY

### AGRONOMISTS' ASSOCIATION

Cat. No.: 1566

Roundup vs water quality (Observation) Title:

1. Particulars of the project

This crop: Ratoon cane

Site: C.F.S.

Region: N. Coast coastal

Soil system: Berea

Soil form/series: Hutton/

Clansthal

Design: -

Variety: NCo376

Fertilizer/

K

Ameliorants 165 165 pН Clay% 8,1 < 14

ppm Р K Ca Mg

> 80 57 >1800 52

June April July Aug Sept May 22,3 Rainfall 51,3 5.0 43,0 49.8 L.T.M. 51,9 55,9 19,7 28,6 47,2 67,3

Irrigation: Nil

0

2

Weather condition at spray:

Date of spray

17.4.86

Raintall: On day of spray (m.m.)

No. days to 1st rain

No. m.m. at 1st rain

1.1

Application details

Applicator : Gas Knapsack

Nozzle

: 8004 E

Pressure

: + 1 Bar

Output

: 216 & ha-1

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Sunshine hours	9,0		T	1
Dew	Nil	Water quality:		
Wind	Nil		Mt Edgecombe	Mtunzini
Temperature (°C) 8 am	21,0	рН	7,25	7,95
2 pm	26,8	SAR	1,76	4,03
Relative humidity(%) 8 am 2 pm	84 68	ASAR	2,4	6,4
		EEC	18,9	20,9
Cane height (cm)		Water quality	Good A	Moderat
Mt. Edgecombe water 60				to poor 8
Mtunzini water 50				U
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# 2. Objectives

To test water from Mtunzini farm for use with Roundup and compare it with good quality water from Mount Edgecombe.

# 3. Motivation

Poor results in cane killing have been observed on Mtunzini farm.

# 4. Note on Treatments

Treatments were applied directly over the cane foliage. Plots were 30  $m^2$  each : 5 rows x 4 m x 1,5 m spacing. There was only one plot per treatment.

5. Results: Table 1 - % Kill of sugarcane foliage taken 26, 41 and 157 days after treatments were applied

	% Kill		
	26	41	157
Mt. Edgecombe water	65	70	70
Mtunzini water	50	60	50

#### Comments

- 1. Unacceptable % kill was obtained by both treatments.
- 2. The % kill obtained with the good quality water from Mt. Edgecombe was superior.

#### Conclusions:

 The difference in results could be attributed to the difference in cane height at the time of spray. However, more data is necessary before poor results with Roundup can be attributed to water quality.