

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

Code: RIP2/81/SW.UBO
Cat. No.: 1316

TITLE: Ripping in ratoon cane in a Rondsring series soil

1. Particulars of project

<u>This crop</u>	: 3rd ratoon	<u>Ripping method</u> :	R.S.E. tyne
<u>Site</u>	: Ubombo Ranches Cascades 1	<u>Chisel with John Deere</u>	3130
<u>Region</u>	: Northern Irrigated (Swaziland)	<u>Depth</u>	: 30 cm
<u>Soil set/series</u> :	R/Rondsring	<u>Soil condition</u> :	Very dry-shattered by implement
<u>Design</u>	: Randomised blocks 8 replications	<u>Age</u>	: 11 mths
<u>Variety</u>	: NCo 376	<u>Dates</u>	: 5.8.81 - 6.7.82
<u>Fertilizer</u>	: <u>N</u> <u>P</u> <u>K</u> kg/ha 167 30 -	<u>Rainfall (Net)</u> :	475 mm
150 DAP + 400 am.nit. kg/ha		<u>Irrigation (Net)</u>	1572 mm
		<u>Total</u>	: 2047 mm

2. Objectives

To determine the effect of ripping the inter-row of winter cycle ratoon on a Rondsring series soil.

3. Treatments

3.1 Control

3.2 Ripping to 300 mm in the inter-row with a six tyne chisel

4. Results

TABLE 1 Yield at Harvest

Treatment	Tc/ha	Suc. % cane	Ts/ha
Control	141	13,5	19,0
Ripped	143	13,7	19,7
C.V. %	6,6	5,4	7,9
L.S.D. (0,05)	11,0	0,87	1,8

TABLE 11 Treatment Effect on stalk height

Treatment	Months after ripping 5
Control	1,95
Ripped	1,94

5. Comments

- Severe lodging at about eight months of age prevented height measurements being taken prior to harvest
- No benefit from ripping could be detected in yields or growth measurements.
- The treatment has been reapplied to the subsequent ratoon crop.

NBL/IS
17 November 1982

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Cat. No.: 1316

TITLE: Ripping in ratoon cane in a Rondspring series soil

1. Particulars of project

<u>This crop</u>	: 4th ratoon	<u>Ripping method:</u>	RSE 6 tine chisel
<u>Site</u>	: Ubombo Ranches Cascades I		with John Deere 3130
<u>Region</u>	: Northern irrigated/ Swaziland	<u>Depth:</u>	30 cm
<u>Soil set/series:</u>	R/Rondspring	<u>Soil condition:</u>	Dry
<u>Design</u>	: Randomised blocks 8 replications	<u>Age:</u>	11,5 months
<u>Variety</u>	: NCo 376	<u>Dates:</u>	6 July 1982 - 21 June 1983
<u>Fertilizer</u>	: <u>N</u> <u>P</u> <u>K</u> 164 - - (475 kg Am nitrate/ha)	<u>Rainfall:</u>	533 mm
		<u>Irrigation:</u>	959 mm (effective)
		<u>Total:</u>	1 492 mm

2. Objective

To determine the effect of repeated ripping of the interrows of a winter cycle ratoon on a Rondspring series soil, having ripped the interrows in the previous crop.

3. Treatments

- . Control
- . Ripped

4. Results

Table 1 Treatment effects on stalk heights (cm to TVD)

Treatment	6 Months after ripping
Control	193
Ripped	191

Table 2 Yield results

Treatment	Tons cane/ha	Sucrose % cane	Tons sucrose/ha
Control	145	12,9	18,6
Ripped	142	12,6	17,9
CV %	8,9	7,2	13,8
LSD (0,05)	15,0	1,1	3,0

5. Comments

As in the previous crop lodging was severe, especially after about eight months of age.

For the second year yields showed no response to ripping and height measurements indicated no significant growth differences between treatments.

Results from two consecutive crops indicate that the operation does not benefit the crop in any way.

This trial has been terminated.