

SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION

Code: R91/82
Cat. No.: 1328

TITLE: Ripener Screening at Pongola

1. Particulars of the crop:

<u>This crop</u>	: 1st ratoon	<u>Spray method:</u> Overhead boom with two TK1 floodjet nozzles and CP 3 knapsack
<u>Site</u>	: Blk 139 Pongola Field Station	<u>Pressure:</u> 200 kPa
<u>Region</u>	: Northern irrigated	<u>Volume/ha:</u> 70 l
<u>Soil system</u>	: Komatipoort	<u>Weather at spraying:</u> Slight breeze, Cloudy & Cool: Temp: 19°C
<u>Soil form/series</u>	: Hutton/Makatini	<u>Condition of cane at spraying:</u> Well grown with ^c 14 green leaves Av Juice Purity: 87%
<u>Design</u>	: Randomised block- 5 reps	<u>Sampling technique:</u> 5 stalks taken from 4 predetermined points (2 m apart) in two net rows. Sampling points advanced with each sampling occasion
<u>Plot size</u>	: 8m x 2 rows x 1,4 m spacing	
<u>Variety</u>	: NCo 376	
<u>Date & age at spraying:</u>	: 10.11.82 - 11 months	
<u>Date & age at harvest</u>	: 7.12.82 - 12 months	
<u>Sampling dates</u>	: 10.11.82, 24.11.82, 7.12.82	
<u>Irrigation</u>	: 915 mm	
<u>Rainfall</u>	: 475 mm	

2. Objectives:

1. To assess the ripening potential of Fusilade and to compare the responses with those from Polado.
2. To determine the residual effects of Fusilade on the following crop.

3. Treatments:

1. Control - untreated
2. Fusilade - 560 ml product/ha = 140 g a.i./ha
3. Fusilade - 300 ml product/ha = 75 g a.i./ha
4. Fusilade - 140 ml product/ha = 35 g a.i./ha
5. Polado - 500 g product/ha = 375 g a.i./ha

4. Results (from samples taken at 0,2 and 4 weeks after spraying)

Dates & Weeks after spray	Ers % Cane			Stalk mass (g)			Ers g/stalk		
	10.11 0	24.11 2	7.12 4	10.11 0	24.11 2	7.12 4	10.11 0	24.11 2	7.12 4
Control	12,5	12,0	12,2	839	807	782	104,6	97,1	95,5
Fusilade 140	12,3	11,5	11,9	793	882	845	97,5	101,3	100,7
Fusilade 75	12,1	11,3	12,3	798	838	780	96,3	95,2	95,4
Fusilade 35	12,3	11,3	12,0	828	803	747	102,3	91,1	89,7
Polado	12,3	11,8	12,2	809	859	827	99,7	100,9	100,6
Mean	12,3	11,6	12,1	814	838	796	100,1	97,1	96,4
C.V %	5,2	5,7	7,3	9,5	12,5	13,0	9,1	14,6	12,6
L.S.D. (P=0,05)	0,86	0,88	1,9	104	141	139	12,2	19,0	16,3
L.S.D. (P=0,01)	1,2	1,2	1,6	143	193	191	16,7	26,1	22,4
	<u>Juice purity %</u>								
Control	88	86	87						
Fusilade 140	87	85	86						
Fusilade 75	87	85	87						
Fusilade 35	87	85	85*						
Polado	86	85	86						
Mean	87	85	86						
C.V.%	2,1	2,3	1,5						
L.S.D. (0,05)	2,5	2,7	1,8						

5. Comments

- Neither Polado nor Fusilade had any effect on cane quality.
- Despite severe constrictions in the upper internodes of Fusilade treated stalks and death of spindles, stalk mass was not affected. The constrictions were less pronounced on stalks treated with Fusilade at 35 g a.i./ha.
- There were no signs of ripening symptoms in Polado treated cane 3 weeks after spraying.

Regrowth

There were no residual effects on cane treated with either Polado or Fusilade during the first four weeks of growth of the following ratoon.

RAD/IS
8 March 1983