

SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

EXPERIMENT REPORT

CODE : N14 x Ripener 11/86/Sw HURL R/T
CAT NO. : 1552

TITLE : RATES OF FUSILADE SUPER FOR MID-SEASON RIPENING OF N14 IN SWAZILAND

1. PARTICULARS OF PROJECT

Table with 2 columns: Field details (This Crop, Site, Region, Soil Set, Design, Variety, Fertilizer) and Spray details (Spray Date, Spray Method, Conditions at Spraying, Age, Dates, Irrigation, Rainfall, Total Water).

2. OBJECTIVES

- To determine the ripening effects of varying rates of Fusilade Super sprayed on mid-season harvested N14.
To establish the optimum rate of Fusilade for this variety and to compare responses for similar early and late season trials.

3. TREATMENTS

- Control
Fusilade @ 300 ml product/ha (PP005 125 e.c. - 37,5 g.m. a.i./ha)
Fusilade @ 450 ml product/ha (PP005 125 e.c. - 56,3 g.m. a.i./ha)
Fusilade @ 600 ml product/ha (PP005 125 e.c. - 75,0 g.m. a.i./ha)
Fusilade @ 750 ml product/ha (PP005 125 e.c. - 93,8 g.m. a.i./ha)

Notes on Treatments

- * All rates of Fusilade were sprayed at 8 weeks before harvesting.
- * At spraying (11 months of age) the average for juice purity was 87%, sucrose 12,5% and moisture 76%.
- * The trial was harvested 2-3 weeks prematurely due to an uncontrolled fire.

4. SAMPLING METHODS

- * Composite samples were taken just prior to spraying to establish the suitability of the cane for chemical ripening.
- * Plot samples comprising 12 stalks/sample were taken at 2, 4, 6 and 8 weeks after spraying.
- * Each sampling was carried out in the two nett rows and consisted of 3 stalks from 4 localities. One stalk was cut from the centre and one from each side of the row at each position.

5. RESULTS

Table I Harvest Results

TREATMENTS	TC/HA	JUICE PURITY	MOISTURE % CANE	ERS % CANE	TONS ERS/HA	SUC % CANE	TONS SUC/HA	% DIFF TS/HA
Control	124	89,2	69	14,5	18,1	16,1	20,1	-
F1 (300 ml/ha)	128	90,3	69	15,0	19,2	16,5	21,1	+5,0
F2 (450 ml/ha)	123	89,7	70	14,6	18,0	16,1	19,9	-1,0
F3 (600 ml/ha)	130	89,8	69	15,1	19,5	16,6	21,6	+2,5
F4 (750 ml/ha)	119	90,0	69	15,4	18,2	16,9	20,0	-0,5
LSD (0,05)*	18	1,8	-	0,7	3,2	0,9	3,5	
(0,01)**	25	2,6	-	1,0	4,5	1,2	4,8	
SIGNIFICANCE	N.S	N.S	N.S	*	N.S	N.S	N.S	
CV %	9,4	1,3	-	3,3	11,1	3,4	10,9	
MEAN	125	89,8	69	14,9	18,6	16,5	20,5	-

Table II Treatment effects on sucrose % cane from time of spraying to harvest.

TREATMENT	SUCROSE % CANE				
	WEEKS AFTER SPRAYING				
	0	2	4	6	8
Control	11,9	13,2	14,3	15,7	16,1
F1 (300 ml/ha)	13,1	13,5	14,7	15,9	16,5
F2 (450 ml/ha)	13,2	13,8	14,6	15,6	16,1
F3 (600 ml/ha)	12,1	13,7	14,4	15,7	16,6
F4 (750 ml/ha)	12,4	13,3	14,4	15,9	16,9
LSD (0,05)*	-	0,8	1,0	0,9	0,9
(0,01)**	-	1,1	1,4	1,2	1,2
SIGNIFICANCE	-	-	-	-	-
CV %	-	3,9	4,3	3,6	3,4
MEAN	12,5	13,5	14,5	15,8	16,5

6. COMMENTS

- * Although this trial was sprayed one month after mid-winter, the condition of the cane at the time was ideal for chemical ripening.
- * Leaf damage was more evident at the highest Fusilade Super rates but increasing levels had no significant effect on final cane yields.
- * Fusilade did not effect juice properties.
- * Except for the F2 results, increasing rates of Fusilade Super appeared to cause a corresponding increase in Ers % cane and Sucrose % cane. This trend agrees with results from both early and late season trials. Responses were minimal possibly because of the natural mid-season peak in sucrose % cane.
- * The change in sucrose % cane from time of spraying to harvesting did not differ much from the control until \pm 8 weeks after spraying when the highest rates approached significance. This response is similar to results from other trials where better responses were recorded with longer delay periods for Fusilade treated N14.
- * Although the responses were minimal, the ripening trend did complement those for early and late season Fusilade ripened N14 trials.

NFL/gj

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