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SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION

Code : N14 x Ripener 6/85/Sw SIS Zw
Cat. No.: 1502

TITLE : RIPENER FOR MID-SEASON RIPENING OF N14 IN SWAZILAND

1. PARTICULARS OF PROJECT

This crop	: 1st ratoon	Spray Dates	: Ethrel 24/4/1985 Fusilade 11/6/1985
Site	: S.I.S. Ricelands S2-1	Spray Method	: CO ₂ constant pressure knapsack with hand held 'T' boom. Delivery rate ± 30 L/ha at 250 kpa through two TK 1,5 nozzles
Region	: Northern irrigated Swaziland	Conditions Of Spray	: Calm - early morning
Soil Set/Series	: 'Z'/Zwide	Age	: 12 months
Design	: Randomised Blocks (5 replications)	Dates	: 31/7/1984 - 24/7/1985
Variety	: N14	Irrigation	: 643 mm (nett)
Fertilizer	: 213 kg N + 125 kg K/ha	Rainfall	: 486 mm (nett)
		Total Water	: 1129 mm

2. OBJECTIVES

- * To determine the ripening effect of a standard rate of Fusilade, various rates of Ethrel and combination of the two for mid season N14.
- * To determine any carry over effect to the regrowth of the following ratoon.

3. TREATMENTS

- * Control
- * Ethrel @ 0,50 L product/ha
- * Ethrel @ 1,00 L product/ha
- * Ethrel @ 1,50 L product/ha
- * Fusilade Super @ 0,30 L product/ha (PP005 125 ec - 37,5 gm a.i./ha)
- * Ethrel @ 0,50 L + Fusilade @ 0,30 L product/ha
- * Ethrel @ 1,00 L + Fusilade @ 0,30 L product/ha
- * Ethrel @ 1,50 L + Fusilade @ 0,30 L product/ha

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Notes On Treatments

- * Ethrel was sprayed at ± 8,8 months of age on 24th April, 13 weeks before harvesting.
- * Fusilade was sprayed at 11,2 months of age on 11th June, 6 weeks before harvesting.
- * Cane juice purity at 8,8 months of age was 68,6% and sucrose % cane 8,3.

4. SAMPLING METHOD

- * Composite treatment samples were taken 6 days before Ethrel spraying to determine the suitability of the cane.
- * Plots were sampled at 3,75, 6,50, 10,75 and 13,00 weeks after spraying Ethrel. 16 Stalks were sampled from each net plot (i.e. 4 stalks from 4 sites per plot).

5. RESULTS

Table I Harvest Results

TREATMENT	TONS C/HA	JUICE PURITY %	D.M. % CANE	ERC % CANE	TONS ERC/HA	% DIFF TONS ERC/HA
Control	120	87,7	28,7	13,6	16,4	-
Ethrel 0,5 L/ha	110	83,5	27,6	12,3	13,6	-17,0
Ethrel 1,0 L/ha	113	91,1	29,3	14,5	16,3	- 0,6
Ethrel 1,5 L/ha	106	87,4	27,7	13,2	14,0	-14,6
Fusilade 0,3 L/ha	100*	85,3	28,6	12,5	12,4*	-24,4
Eth 0,5 + Fus 0,3	105	86,7	27,7	13,2	14,0	-14,6
Eth 1,0 + Fus 0,3	117	89,0	28,1	13,8	16,1	- 1,8
Eth 1,5 + Fus 0,3	111	88,9	28,6	14,1	15,6	- 4,9
MEAN	110	87,5	28,3	13,4	14,8	-
CV %	14,3	5,2	4,4	9,8	19,3	-
LSD (0,05)*	18	5,4	1,5	1,5	3,3	-
LSD (0,01)**	25	7,2	2,0	2,1	4,5	-

6. COMMENTS

- * The cane just prior to Ethrel spraying was suitable for chemical ripening and yield improvements were expected.
- * As is normally the case on these soils, cane yields were variable and CV % were high. Cane that was treated with Fusilade alone produced the lowest cane yields which were only just significantly less than the control at the 5% level.
- * Juice purity, DM % cane and Erc % cane were non-significantly effected by any of the treatments. A statistical analysis was not carried out for each sampling.
- * The low Tc/ha yield from the Fusilade only treated plots coupled with a lack of response in Erc % cane caused a significant ($P = 0,05$) depression in T Erc/ha for this treatment.
- * None of the remaining treatments increased T. Erc/ha yields significantly but there was a slight interaction between Fusilade and Ethrel rates.
- * The lack of response to ripeners at this site can only be attributed to good natural ripening conditions. This was generally the case for much of the commercially ripener cane in this area last year.

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