### SOUTH AFRICAN SUGAR INDUSTRY

## ACRONOMSTS' ASSOCIATION

Code: NT 31/82/P

Cat. No.: 2819 1395

# TITLE: Nematicide screening on weak sands

# Particulars of the project

This crop	Plant	Soi 1
Site	Goodhope sugar Estates, Grout- vi 11 e	6,3
Region	North Coast - Coastal	P
Soil system	Berea	34
<u>Soil fa nn/seri es</u>	Fernwood	Age:
<u>Desi gn</u>	Randomis ed block 4 replications	Rain Oct
<u>Vari ety</u>	N8	120
<u>Fertil i zer</u>	N D K	Jun
06.10.82 (kg/ha)	47 47	5
29.11.82 (kg/ha)	70 170	
	11 7 217	
29.11.82: Broadcast 1ine	1 ton/ha Dolomiti c	

Soil analysis: Date: 27 August 1982								
рН		<u>O.M</u> %		<u>□ ay</u> %		<u>P. D. 1.</u>		
6,32	2	0,80		5				
ppm								
P	K		Ca	Mg	$\mathbf{Z}_{1}$	1	Al	
34	50	) 2	29	68	0,	8	1,0	
Age:	13,	l mon	ths D	at es:	6.10	.82-1 C	0.11.83	
Rainfa 11: 796 mm LTM 1 055								
Oct	$N_0 v$	Dec	Jan	Feb	Ma r	<u>Apr</u>	<u>May</u>	
120	90	112	37	70	63	15	18	
Jun	Ju 1	<u>Au g</u>	<u>Se p</u>	Oc t	No v	Dec -		
5	48	59	11	110	38	0		

# 2. Objectives

- To assess the efficacy of a nematicide, produced by Marshal (Carbosulfan), 1. on plant cane.
- To compare the efficacy of a 'slow release' granular fonnulation (12,38%) of Vydate with a previously tested 10G  $\dot{V}$ ydate granule. 2.
- To assess the efficacy of a nematicide (Furacon) from leI at two rates.

## **Treatments**

- Cont rol
- Wdate 10G at 30 kg/ha Slow release Wdate 12,38G at 25 kg/ha Carbosulfan (Marshal) 25 G at 10 kg/ha
- 5.
- Teni k 15G at 20 kg/ha Curat err 10G at 30 kg/ha
- Furacon 10G at 30 kg/ha Furacon 10G at 25 kg/ha

#### 4. Results

Treatment s	Tons cane /ha	Sucrose % cane	Tons sucrose / ha	Stalk heights (em)	Stalk population (x 1 000)
Contra1	62	11 ,3	7,0	168	125
Vydate 10G	82**	12,5**	10,3**	180*	153**
Slow release Vydate	74*	12,5**	9,2**	176	136
Carbosulfan	75**	12,4*	9,2**	174	143**
Temi k	82**	12,5**	10,3**	186**	155**
Curaterr	77**	11,9	9,1**	178	142*
Furacon 25 kg	65	12,3*	8,0	164	129
Furacon 30 kg	73*	12,1*	8,9**	177	141*
Mea n	74	12,2	9,0	175	141
CV%	8,9	5, 0	9,6	4,3	6,4
LSD (P=O, 05)*	9,7	0,89	1,3	11,2	13,2
LSD (P=0,01)**	13,2	1,2	1,7	15,2	17,9

### 5. Comments

Cane yields were increased on average by 14 tons ha-1 (23%) by the nematicides tested.

The responses to 'slow release' Vydate, carbosulfan, Furacon at 30 kg/ha and Curaterr were similar averaging about 13 tons cane ha-1 and two tons sucrose ha-1. All these treatments improved stalk populations significantly (P=0,05) but the responses in terms of stalk heights were smaller.

Furacon applied at 25 kg ha-<sup>1</sup> has no effect on cane yields. Cane quality was however improved significantly (P=0,05) by this treatment and sucrose yields were 1 ton ha-<sup>1</sup> (NS) higher than in untreated cane.

The res ponses to Vydate 10G and Temik were similar and these treatments caused yields to be increased by 5 ton cane ha-1 (8%) more than where cane was treated with Curaterr which was the next best treatment. Vydate 10G and Temik improved stalk heights significantly (P=0,05 and P=0,01 respectively) and stalk populations were increased by about 25% (P=0,01).