

**SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION**

Code : HM 254
Cat. No.: 1425

Title: CYNODON DACTYLON CONTROL

1. Particulars of the project:

This crop : Ratoon cane	Soil analysis:	Date: 14/9/83
Site : Hillhead, N Estates	pH	OM%
Region : North Coast Coastal	8,3	0,51
Soil system : Berea		CLAY %
Soil form/series: Hutton (Clansthal)		6 (adjacent field)
Design : Randomised blocks		
Variety : N8		

2. Objectives:

To test chemicals for their ability to control Cynodon dactylon.

3. Treatments:

Chemical	Rate l or kg prod/ha	Vol l/ha
1. TCA	5	359
2. TCA	10	359
3. Dalapon	2,5	359
4. Dalapon	5	359
5. Dalapon	10	359
6. Roundup	6	359
7. Roundup (low volume)	6	13
8. Control (untreated)	-	-
9. Fusilade	5	359
10. Gramuron	5	359

4. **Experimental:**

Treatment application:

Date : 8.4.83

Applicators : Gas operated knapsack sprayer. APM Green floodjet.
(T7 - Monsanto low volume applicator)

Method : Directed between cane rows onto C. dactylon.

Weather conditions:

Temperature (°C) 8 am: 19,4
2 pm: 25,4

Relative humidity (%) 8 am: 87
2 pm: 75

Sunshine hours : 9,3

Rainfall (mm) : 0

Dew : Fair for first two treatments (TCA 2,5 and 5)

General : Overcast and cool to clear and warm

The site used had a very poor, low population, N8 ratoon crop which was extremely severely infested with C. dactylon. Plot size was 4 m x 4 interrows of 1,2 m with an unsprayed control strip 1 m wide left at the end of each plot for the purposes of comparison.

5. **Results:**

Table 1: Visual ratings of percent kill of C. dactylon

Treatments	Rate product kg or /ha	% Kill				
		13	45	81	117	235
1. TCA	5	54	30	40	5	0
2. TCA	10	44	58	40	15	0
3. Dalapon	2,5	38	51	65	36	0
4. Dalapon	5	41	68	81	63	15
5. Dalapon	10	58	75	76	56	0
6. Roundup	6	100	96	98	98	94
7. Roundup (low volume)	6	45	18	24	11	13
8. Control (untreated)	-	30	0	0	0	1
9. Fusilade	5	89	85	77	46	0
10. Diuron + paraquat	2,0 + 2,5	98	31	20	6	7

6. **Comments:**

- Only Roundup provided a long term kill of C. dactylon.
- The low volume applicator was only effective on a very narrow band and therefore ratings indicate a poor result.

- Dalapon at 5 and 10 kg/ha provided a fair degree of control for a long period as did Fusilade.
- TCA showed only a mediocre effect and both rates were similar.
- Diuron + paraquat gave an effective, very short-lived knockdown.
- The trial was conducted during winter when C. dactylon in the unsprayed strips was not growing vigorously.
- Damage to cane was difficult to assess due to the very poor and sparse nature of the crop.

7. Conclusions:

All the treatments provided some setback to C. dactylon growth and thus depending on timing in relation to cane growth could provide some benefit. However, the known phytotoxic effects of Roundup and to a lesser extent Dalapon make these two chemicals highly dangerous for use in sugarcane.

PETT/HDN
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