SOUTH AFRICAN SUGAR INDUSTRY

AGRONOMISTS' ASSOCIATION

Code: HW 231/81

Cat. No.: 1311

Title: Weed control - Physalis viscosa

1. Particulars of the project

This crop	:	Cane verge
Site	:	Empangeni - D Benningfield
Region	:	Zululand
Soil system	:	Umzinto/ coast lowlands
Soil form/series	:	Hutton/Hutton
Design	:	random blocks
Variety	:	
Spraying date	:	29.10.81
Conditions at spray:		
Time	:	± 10 - 11am
General	:	warm and windy
Temperature °C 8am	:	24,0
2pm	:	26,0

Rainfall (mm)

2 weeks prior to spray	:	16,4
on the day of spray	:	0
2 weeks after spay	:	16,2

2. Objectives

To test treatments for the control of Physalis viscosa (sticky gooseberry)

3. Treatments

4. Experimental

Treatments were applied by means of either a gas-operated knapsack fitted with a Spraying Systems TK5 floodjet or a rope wick applicator (Roundup treatment). Output from the knapsack sprayer was 227 ℓ/ha.

Roundup (as a 50% solution) was placed into the applicator. For each plot (3 replications) slight adjustments were made.

Plot 1 Filler cap was loosened (to prevent a vacuum forming) and weeds were wiped thoroughly. The rope became dirty from contact with the soil in between weed plants.

Plot 2 The filler cap was removed completely to provide a better flow rate.

Plot 3 The rubber gromments holding the rope into the T-piece were loosened substantially to try and further improve the flow rate.

The rate of Roundup actually used was between 10 and 20 ml for the three plots which totalled an area of 45 m^2 ie a rate of about 2 to 4 ℓ of Roundup/ha.

5. Results

Ratings of degree of kill of Physalis viscosa taken 7, 14, 33, 55 and 97 days after spraying are presented in table 1.

Treatments	Rate in kg or ℓ prod/ha	Ratings/days after spray				
		[1] 7	14	33	55	[2] 97
Tordon 101 + S	3	3	5	8,3	9	0
Tordon 101 + S	6	2,7	5,7	8,3	8,7	0,5
Diuron + paraquat	2 + 2,5	8	7,7	1	1	33
Bimate +S	5	5,3	6,3	2,3	1	18
Actril DS	3	6,7	8	1,8	1	21
Roundup	50% soln	4,7	8,2	3,3	2	13

1 Ratings 1-9 where 1= no effect 9 = dead

2 Ratings 0-100 as percent ground cover afforded by Physalis viscosa plants

Comments

1. Initial scorch effects on Physalis viscosa were most pronounced from diuron + paraquat and in descending order Actril DS, Bimate and Roundup. Tordon 101 was slow to show effects.

2. Regrowth from scorched plants was fairly vigorous after 33 days from all treatments except Tordon 101 which although slow to act, killed virtually all the plants in the plot.

3. Ninety seven days after spraying no regrowth had occured in Tordon 101 plots and it thus appears that plants were completely killed.

4. There was no difference between Tordon 101 rates.

5. Roundup treatment in the last plot appeared to have less growth than the other two plots and some plants may have been killed. In general however, regrowth from Roundup plots was completely healthy.

Conclusion

1. Tordon 101 at 3 ℓ/ha was adequate to provide a good kill of Physalis viscosa
2. No other treatments tested have any potential for the control of this weed.