

Spotlight on Agriculture

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Different methods to control Dichapetalum cymosum (Gifblaar)

INTRODUCTION

Dichapetalum cymosum (Gifblaar) is a major problem causing livestock mortalities in the Eastern Communal areas of Namibia. The farmers requested that research should be done in order to control this problem plant. After meetings with the communities of Okamatapati and Oshimati, it was decided to lay out a demonstration trial at Oshimati. The aim of this trial was to test the effect of different herbicides to control Gifblaar against manual removal of the plants. The costs of the different herbicides at different application rates were calculated. The community of Oshimati agreed to assist in the manual removal of the plants.

METHODS

Fifteen 10m x 10m plots were selected randomly in an area of 1500m² with a very high density of Gifblaar plants. Three herbicides, namely Access, Tordon Super and Savana SC were applied. A 1% solution of the herbicides Access and Tordon Super were applied with a rucksack sprayer onto the above ground leaves. A mixture of 1 liter Savana SC to 8.5 liters of water was applied with a syringe at a rate of 2ml/0.5m². In the manual removal treatment, the stems and roots that occur below ground, were excavated to a depth of approximately 15cm. Three replicates of each treatment were laid out. A single control plot where no Gifblaar was treated with herbicide or removed manually, was included. Density surveys were done initially in order to be able to calculate the mortality rate after the treatment. The plants were treated during 1999 and the surveys after treatment were done during the year 2000.

RESULTS

The population densities of all the treatments are the averages of the three replicates and are presented in Table 1. The success rate expressed as a percentage is presented in Table 1 and the costs per treatment are presented in Table 2. The photos show the re-growth of the different treatments.



Control (no treatment).



Re-growth in excavated treatment (18.35% success rate).

Table 1. Population densities of the different treatments for the years 1999 and 2000

Treatments	Years, densities/ha and percentage success rate		
	1999	2000	%
Manually removed	119 200	97 330	18.35
Access	202 833	0	100.00
Tordon Super	135 000	3 000	98.00
Savana SC	153 666	50 330	67.25
Control	109 333	109 000	-

Table 2. Cost per plant and per hectare

Treatment	Costs N\$	
	Cost/plant	Cost/ha (100 000 plants)
Access	0.0105	1050
Tordon Super	0.0209	2090
Savana SC	0.0162	1620



Site treated with Tordon Super (98.00% success rate).



Site treated with Access (100% success rate).



Site treated with Savana SC (67.25% success rate).

CONCLUSIONS

- The success rate of Access was 100% compared to the 98.00%, 67.25% and 18.35% of the Tordon Super, Savanna SC and the excavated treatments respectively.
- The success rates of Savanna SC and the manual removal were too low, therefore it is not recommended to use these treatments.
- The success rate of Tordon Super makes it recommendable, however the costs are very high (N\$ 2 090/ha) compared to that of Access (N\$ 1 050/ha).
- Access would therefore be the most recommendable herbicide to control Gifblaar.

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