



Texas Agricultural Extension Service  
The Texas A&M University System

# Result Demonstration Report

## Witchgrass Control with Chloroacetamides in Grain Sorghum - 1999

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### Summary

In 1999 a study was conducted to evaluate pre treatments of various chloroacetamide herbicides in grain sorghum for witchgrass control. Dual II Magnum, Frontier, Frontier X2, Bicep Lite II Magnum, Guardsman, and Lariat provided approximately 85% control of witchgrass 4 weeks after treatment application. The non-chloroacetamide, Milo-Pro, only provided 60% control.

### Introduction and Objectives

Witchgrass or as it is often called 'ticklegrass' is one of the most difficult grasses to control in sorghum. Witchgrass is especially a problem in dryland sorghum. This study was established to compare and contrast different formulations of chloroacetamide herbicides for control of witchgrass in non-seed safened grain sorghum.

### Materials and Methods

In 1999 applications of various chloroacetamide herbicides were made five days after planting DeKalb 44 grain sorghum, which was not chloroacetamide safened seed. Shortly after the pre treatments were applied, the study site received a large amount of rainfall which saturated the soil. All applications were made with a tractor mounted CO<sub>2</sub> sprayer at 3 mph and 10 GPA. Ratings for weed control and crop injury were taken at approximately 2,4, and 8 weeks after treatment application (WAT). Ratings were based on a 0 to 100% scale with 0 = no control or injury and 100 = complete control and crop kill. Plot size was 15 by 25 feet and all treatments were replicated 4 times.

### Results

*See following table.*

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**Table 1. Preemergence control of witchgrass with chloroacetamide herbicides.**

Treatments	Rate Prod./Ac	% Witchgrass Control			% Crop Injury		
		2 WAT <sup>1)</sup>	4 WAT	8 WAT	2 WAT	4 WAT	8 WAT
Dual II Magnum	20.3 oz	85	83	83	20	11	5
Frontier	15 oz	84	85	86	10	6	3
Frontier X2	9 oz	88	85	79	23	13	5
Frontier X2	12 oz	88	85	85	36	23	9
Frontier X2	15 oz	88	88	80	41	25	10
Bicep II Magnum	32.5 oz	90	90	86	41	24	6
Bicep Lite II Magnum	36 oz	91	90	88	44	26	10
Guardzman	35.2 oz	89	91	85	49	28	18
Lariat	48 oz	91	89	88	29	11	5
Milo-Pro	1.2 qt	68	63	60	10	3	1
Milo-Pro + Dual II Magnum	1.2 qt + 20.3 oz	81	84	83	29	15	6

<sup>1)</sup>WAT = Weeks after pre treatments were applied.

### Conclusions

At 2 weeks after treatment, crop injury ranged from 10% for Frontier to nearly 50% for Guardsman. Injury consisted mainly of stunting and some stand reduction. Witchgrass control was fair to good with Milo-Pro alone having the lowest at 68% and all others being in the 81 to 91% range.

At 4 weeks after treatment, crop injury was reduced and ranged from 3% for Milo-Pro alone to over 28% for Guardsman. Plants began to grow out of the stunting but the stand reduction remained the same. Weed control remained the same for the most part with all treatments being the same except Milo-Pro alone which was still lower.

At 8 weeks after treatment, crop injury was still evident as stunting but at a decreased level. Weed control was slightly reduced for some treatments as some escapes began to grow out of injury, though no new weed emergence was seen.