

High Volume Broadcast Control of Shredded Mesquite

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SUMMARY

Recently shredded mesquite is difficult to control with traditional herbicide application techniques. There is simply not sufficient leaf area for uptake of herbicide in a quantity that will kill underground buds. In general, it is recommended that shredded mesquite not be treated with a herbicide leaf spray for two to three years following shredding.

These herbicide trials are designed to evaluate the impact of spray volume and herbicide on control of mesquite shredded to ground level 3 months before. All applications were made by ground broadcast. Preliminary results will not be available until 2004.

PROBLEM/INTRODUCTION

Recently shredded mesquite is very difficult to control with leaf applied herbicides. The quantity of leaf in recent regrowth is not sufficient to absorb the quantity of herbicide needed to kill underground buds. As a general recommendation, mesquite should not be sprayed for 2 to 3 years following shredding.

Unfortunately, there are many circumstances where it is impossible to wait for 2 to 3 years following shredding of mesquite before herbicide applications must be made. One example is along highway rights-of-ways. A second example is adjacent to airport runways. There is some evidence that increasing total spray volume may help increase control of shredded mesquite treated with herbicide leaf sprays.

OBJECTIVES

The objectives of these herbicide trials are to:

- 1) Evaluate the impact of total spray volume on control of recently shredded mesquite.
- 2) Compare mixture of the herbicides Remedy and Reclaim to a spray mixture of Surmount and Reclaim for control of recently shredded mesquite.

MATERIALS/METHODS

All treatments were installed on July 1, 2003 at the San Angelo Regional Airport. Applications were made by ground broadcast to mesquite shredded to ground level 2 to 3 months previously. At the time of herbicide application, regrowth varied from 1 ft to 2 ft tall. The treatment area has been shredded several times a year for over 20 years.

Two herbicide treatments were include in these trials. The first was Remedy (1 pt/ac) + Reclaim (1.33 pt/ac). The second was Reclaim (1.33 pt/ac) + Surmount (2 pt/ac). All herbicide treatments were mixed with water and included the addition of surfactant (Induce) at a rate of 2 pt/ac.

Applications were made using ground broadcast spray equipment and two different total spray volumes. Both herbicide treatments were applied at a total spray volume of 30 gpa using a 4-wheel ATV, 3.9 gpa Flojet Pump, and spray boom (15 ft swath). The Remedy + Reclaim herbicide treatment was also applied at 10 gpa using the same spray platform with a KLC-9 Fieldjet nozzle (15 ft swath). Plot size was 1/2 acre for each treatment. All treatments were replicated twice.

Applications were made between 8 am and 11 am, with 80 degrees F., 65% RH, and a light 0 to 5 mph wind from the south. Treated mesquite had received significant rain 3 weeks prior to spraying, although there was no evidence of new growth in the mesquite canopy.

RESULTS/DISCUSSION/ECONOMIC IMPACT

Preliminary results will not be available until 2004.

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