

Generic Triclopyr (Griffin) for Control of Mesquite

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SUMMARY

Control trials were established in Coleman, Lampasas, Llano and Shackelford counties during the summer of 2001 to evaluate a new generic triclopyr, for mesquite control and also to compare control and costs to grub mesquite with a skid steer loader. The herbicide trials included comparisons of generic triclopyr (Griffin L.L.C.) with Remedy, when applied as the BrushBusters stem spray, leaf spray or cut stump spray.

As evaluated 2 years after treatment, the generic triclopyr provided comparable results as compared to Remedy (Dow AgroScience, triclopyr) when used as either a leaf spray, stem spray or cut stump application.

Power grubbing which was included as a control option in Lampasas and Llano counties, averaged 168 mesquite (less than 6 ft tall) grubbed/hr, at a cost of 30 cents each. Kill, based on severing the main basal stem below the first lateral root averaged 92%.

PROBLEM/INTRODUCTION

Triclopyr is one of the most commonly used herbicides to control woody plants on rangeland. Sold under the trade name Remedy, this herbicide can be mixed with diesel or vegetable oil and applied to the basal stems or cut surfaces of target plants. Triclopyr can also be combined with Reclaim (active ingredient clopyralid) and applied as a leaf spray to mesquite. As of this date, the only source of triclopyr labeled for Texas rangelands is Remedy. Griffin L.L.C recently obtained a generic triclopyr they may market for Texas rangelands in the future. A comparison of the efficacy of this generic triclopyr as compared to the Remedy label would be helpful when making future purchasing decisions.

Herbicides are not the only option for control of mesquite. Mechanical control, specifically power grubbing can effectively kill mesquite. In recent years there has been an increase in the interest and use of skid steer loaders as platforms for either grubbing or shearing mesquite. These loaders are less expensive to own and operate as compared to bulldozers and can be equipped with a variety of implements. The question is if they have the horsepower and the traction to grub mesquite, and if they do, how does the cost of grubbing compare to using herbicides.

OBJECTIVES

The objectives of these trials are to:

- 1) Compared efficacy of the Griffin generic triclopyr to Remedy when applied as the Brush Busters stems spray, leaf spray and cut stump spray for control of mesquite.
- 2) Document cost and efficacy of using grubber equipped skid steer loader to control small mesquite.

MATERIALS/METHODS

Table 1 shows location, date of establishment and treatments applied for the 4 study sites. A description of the treatments follow:

Brush Busters Leaf Spray The spray mix consisted of 1/2% Remedy or generic triclopyr combined with 1/2% Reclaim, mixed with water. Surfactant and spray marking dye were added at a concentration of 1/4% each to the spray tank. A 4 wheel ATV, equipped with 14 gallon spray tank, 12 volt pump and spray wands (X8 nozzles) was used to apply the spray mix. Mesquite leaves were sprayed to glisten.

Brush Busters Stem Spray The spray mix consisted of 15% Remedy or generic triclopyr plus 85% diesel. Application was made with a "Solo" backpack sprayer and a 5500 X1 conejet nozzle. The basal stems of each mesquite treated was sprayed to wet, but not to the point of runoff, from ground line to a height of 12 inches, on all sides of the trunk.

Brush Busters Cut-Stump Spray Mesquite was cut at ground level using skid steer loader and hydraulic shears. The cut stump was sprayed to wet using the same concentration of generic triclopyr or Remedy mixed with diesel and equipment as described for the Brush Busters stem spray.

Table 1. County, ranch, application dates and treatments applied for the 4 control sites.

County	Ranch	Application Date	Treatments Applied
Coleman	Jack Horn Ranch	June 27, 2001	Leaf Spray & Stem Spray
Lampasas	Haner Ranch	July 26, 2001	Leaf Spray, Cut-Stump Spray & Grub
Llano	Bob Harrison Ranch	June 29, 2001	Leaf Spray, Cut-Stump Spray & Grub
Shackelford	Winkler Ranch	August 8, 2001	Leaf Spray & Stem Spray

Power Grub The grubber was a LS190 New Holland (83 hp) skid steer loader equipped with the Mesquite Terminator grubber manufactured by Grace. To determine costs, plants grubbed in a 15 minute period were counted. Cost figures were then based on a \$50/hr operating cost (Labor plus machine). To determine kill, each plant grubbed was examined. If the trunk of the plant was sheared below the first lateral root, that plant was rated as being killed.

RESULTS/DISCUSSION/ECONOMIC IMPACT

Power grubbing was included as a control option in Lampasas and Llano counties. Averaged across the two sites, 168 mesquite (less than 6 ft tall) were grubbed/hr, at a cost of 30 cents each. Kill, based on severing the main basal stem below the first lateral root averaged 92%. Based on previous herbicide trials, the Brush Busters leaf and stem spray averaged 80% kill, at a cost of 8 cents and 11 cents/plant, respectively.

Evaluated 2 years after treatment, there was no significant difference between mesquite control when using Remedy or the Griffin generic triclopyr (Table 2).

Table 2. Percent apparent mortality of mesquite two years after treatment.

County	Leaf Spray		Stem Spray		Cut Stump Spray	
	Remedy + Reclaim	Generic + Reclaim	Remedy	Generic Triclopyr	Remedy	Generic Triclopyr
Coleman	66	88	78	67		
Lampasas	64	49			92	76
Llano	a	a			a	a
Shackelford	63	55	51	92		
Average	65	64	65	79	92	76

a - Area was grubbed. Second year evaluation not possible.

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