



Generic Triclopyr (Griffin) for Control of Mesquite

Haner Ranch 2002

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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 Brush Busters stem spray, leaf spray or cut-stump spray.

One year after treatment, the generic triclopyr provided excellent and comparable results as compared to Remedy[®] (Dow AgroSciences 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%.

These treatment plots will be evaluated again in 2003 to document any re-sprouting from treated plants.

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, do 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) Compare efficacy of the Griffin generic triclopyr to Remedy[®] when applied as the Brush Busters stem 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 and Methods:

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

Brush Busters Leaf Spray The spray mix consisted of ½ % Remedy[®] or generic triclopyr combined with ½ % Reclaim[®], mixed with water. Surfactant and spray marking dye were added at a concentration of ¼ % each to the spray tanks. 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 stem 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 and Discussion:

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.

All of the herbicide treatments provided excellent first year apparent mortality of mesquite, averaging 82% or greater control (Table 2). At this time there are no observable differences between control for generic triclopyr from Griffin as compared to Remedy[®]. All treatments will be reevaluated in 2003 to document any re-sprouting or other changes in control.

Table 2. Percent apparent mortality of mesquite one year after treatment.

County	Leaf Spray		Stem Spray		Cut-stump Spray	
	Remedy [®] + Reclaim [®]	Generic + Reclaim [®]	Remedy [®]	Generic Triclopyr	Remedy [®]	Generic Triclopyr
Coleman	88	94	88	80		
Lampasas	92	91			100	100
Llano	89	85			86	93
Shackelford	69	79	88	85		

Average	84	87	88	82	93	96
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Trade names of commercial products used in this report are included only for better understanding and clarity. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas A&M University System is implied. Readers should realize that results from one experiment do not represent conclusive evidence that the same response would occur where conditions vary.