



Brush Busters Stem Spray Method

Works Best: For control of relatively young mesquite trees that have smooth bark and few basal stems, those slim trunks emerging from the ground. The method has been known for years as the low-volume, basal stem treatment technique. What's new is that research has shown excellent results using much less herbicide making it much more economical.

When to Apply: Any time during the year, although best results occur during the spring-summer growing season.

① Prepare Equipment

Almost any type of pump-up hand sprayer can be used, but the most efficient way to apply the spray to many trees is with a backpack sprayer. Make sure the sprayer's nozzle has a small orifice. One such nozzle, called the Conejet® 5500-X1, is available from Spraying Systems Company. This nozzle can reduce the quantity of spray applied by 80 percent over standard nozzles — for a much more cost-effective use of chemicals.

② Mix Herbicide with Diesel

A mixture of the herbicide Remedy™ and diesel fuel oil is very effective for this method. Diesel acts as a coating agent to ensure good coverage and absorption. The recommended concentration of Remedy™ will vary depending on the size and age of the mesquite.

Recommended concentration of Remedy™ to mix with diesel fuel oil.

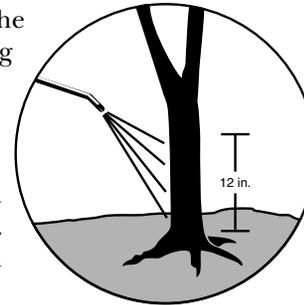
Mesquite Type	% Remedy™	Amount/Gallon Mixed
Smooth bark:		
•1.5 in. diameter or less	15 %	19 oz.
•1.5-4 in. diameter	25 %	1 quart
Rough bark	25 %	1 quart

Pour the required quantity of Remedy™ into mixing container, then bring to total volume desired with diesel fuel oil. Vigorously shake or stir to ensure thorough mixing.

Rough-bark mesquites (usually older trees) are much more difficult to control than smooth-bark mesquites.

③ Spray the Mesquite

Stem applications are effective throughout the year but the best time to spray is during the growing season when temperatures are high.



Be sure to adjust the sprayer nozzle to deliver a narrow, cone-shaped mist. Holding the nozzle within 1 to 2 inches of the mesquite stem, spray the mixture on the plant's stem or trunk from the ground line to a height of 12 inches. Apply the mixture to all sides of the trunk, wetting almost to the point of runoff.

Keep these points in mind:

- Follow herbicide label directions.
- Cost of treatment escalates rapidly as density of brush increases or number of basal stems per plant increases.
- Multiple-stemmed plants or rough-barked plants are more difficult to control with this method.
- Do not spray when basal stems are wet.
- After mixing herbicide with diesel, shake or agitate the solution vigorously.
- Dense grass around basal stems reduces efficiency of this method.

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How to Beat Mesquite

A safe and effective three-step way to control mesquite on small or large acreages.

Individual Plant Treatment Series

Allan McGinty, Professor and Extension Range Specialist
Darrell Ueckert, Professor, Rangeland Ecology and Management
The Texas A&M University System

The mesquite tree is one of the toughest, most invasive species of brush in the world. It thrives across the western two-thirds of Texas, both in rural pastures and on urban lots.

Here's a three-step way to control mesquite that's easy, inexpensive, environmentally responsible, and effective. Using these Brush Busters methods, which involve spraying a small but potent concentration of herbicide directly on each plant, you'll be able to keep the mesquites and other shrubs and trees you want and get rid of those you don't.

Just keep in mind that controlling mesquite is not a one-time job. Livestock and wildlife do an excellent job spreading seeds, so you'll need to go over your land regularly to get rid of unwanted seedlings.

Professionals with the Texas Agricultural Experiment Station and The Texas Agricultural Extension Service, both agencies of The Texas A&M University System, have developed and approved these three-step Brush Busters methods of mesquite control. Your results may vary with weather and other conditions, but you should be able to knock out more than seven of ten mesquites treated.

Brush Busters recommends two ways to control mesquite, depending upon tree shape. If most of your mesquites have a few well-defined stems or trunks coming out of the ground, you'll find the Stem Spray Method works best for you. If your mesquites are bushy, have many stems at ground level, and are less than 6 to 8 feet tall, try the Leaf Spray Method. Whichever way you choose, with these simple directions, you'll find you can successfully control your mesquites the 1-2-3 Brush Busters way.

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service or Texas Agricultural Experiment Station is implied.

Brush Busters Leaf Spray Method

Works Best: On mesquites that are bushy, have many stems at ground level, and are less than 8 feet tall. This method has also been known as high-volume foliar spraying.

When to Apply: Begin in spring, when mesquite leaves change color from a light pea green to a uniform dark green, and continue through September. Allow mesquite that has been topkilled by hand cutting, fire, mechanical methods or herbicide treatment to grow for two full growing seasons before using the Brush Busters leaf spray.

① Prepare Equipment

Small pump-up garden sprayers, backpack sprayers, cattle sprayers or sprayers mounted on 4-wheel all-terrain vehicles (ATVs) work well. Garden sprayers are best for small acreages. Backpack sprayers are usually the most efficient in dense mesquite, while ATV sprayers become more efficient in large acreages or as the distance between plants increases. Make sure your sprayer has an adjustable cone nozzle, such as a Conejet® 5500-X6 or -X8 capable of delivering a coarse spray (large droplets) to the top of an 8-foot tree.

② Mix Herbicides

You can usually achieve 76 to 100 percent root kill by spraying with a mixture of the herbicides Reclaim™ and Remedy™.

To prepare the spray mix, add Remedy™ and Reclaim™ at concentrations of 1/2 % each to water. To ensure a thorough coating of the foliage, add either liquid dishwashing detergent or a non-ionic surfactant to the spray mix (see table top right). It may be helpful to add a dye such as HiLite™ Blue Dye to mark plants that have been sprayed.

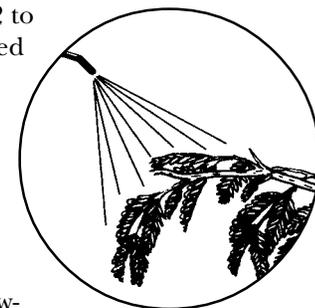
Recommended spray mixture.*

Ingredient	Concentration in spray solution	Tank size		
		3 gal.	14 gal.	25 gal.
Reclaim™	1/2 %	2 oz.	9 oz.	16 oz.
Remedy™	1/2 %	2 oz.	9 oz.	16 oz.
Surfactant	1/4 %	1 oz.	5 oz.	8 oz.
Hi-Lite™ Blue Dye	1/4-1/2 %	1 - 2 oz.	5 - 9 oz.	8 - 16 oz.

* All spray solutions are mixed in water.

③ Spray the Mesquite

Begin spraying in the spring after the soil temperature at 12 to 18 inches deep has reached 75 degrees and after the mesquite foliage has changed from a light pea green color to a uniform dark green color. The spray period will last through September. (In East and South Texas, however, the suggested cutoff date for leaf spraying is July 31). Wet all the foliage of each mesquite plant until the leaves are almost to the point of dripping.



Keep these points in mind:

- Follow herbicide label directions.
- For best results, don't spray when:
 - rains have stimulated light green new growth in tree tops.
 - mesquite leaves are wet.
 - mesquite foliage shows damage from hail, insects or disease.
 - you are working upwind of desirable trees, shrubs or crops.
- Your cost of treatment increases rapidly as the density and size of brush increases. Also, controlling mesquite is not a one-time job. You'll need to go over your land now and then to get rid of unwanted mesquite sprouts.