



# HOW TO AVOID LUMPS WHEN TREATING CUT STUMPS:

## Individual Plant Treatment Cut Stump Applications

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Woody plants are an important component of most Texas rangelands, providing food and cover for livestock and wildlife. However, if an area is too dense with woody plants, they compete with more desirable vegetation. Most woody plant species resprout profusely from belowground crowns or roots if aboveground growth is damaged or removed.

Here is an easy, inexpensive, and environmentally responsible method to control many species of woody plants using cut stump spray treatments. It involves spraying a small but potent concentration of herbicide directly onto cut stumps. Remember, controlling woody plants is not a one-time job. Both livestock and wildlife spread seeds, so monitor your land regularly to control unwanted seedlings.

This Brush Buster control method was developed and approved by professionals with Texas A&M AgriLife Extension Service and Texas A&M AgriLife Research, both agencies of the Texas A&M University System. Your results may vary, but you should usually be able to kill 76 to 100 percent of the trees you treat with little or no damage to desirable vegetation.

Brush Busters recommends two different spray mixes for cut stump applications depending on the target brush species. One spray mix is for many species of hardwoods, while the other is for redberry cedar. After treatment, you may leave the cut stems and branches on the soil as mulch or stack and burn them.

## BRUSH BUSTERS CUT STUMP METHOD

**When to apply:** Anytime during the year, although best results occur during the growing season.

### 1. Prepare the Equipment

Almost any type of pump-up hand sprayer can be used, but the most efficient way to apply the stem spray to many trees is with a backpack sprayer.

Make sure the sprayer's nozzle has a small orifice. One such nozzle is called the ConeJet™ 5500-X1 (or X2-X3).

To cover the stump adequately with a sprayer attached to hydraulic shears (skid/steer loader), use an adjustable cone nozzle with a relatively large orifice, such as a ConeJet™ 5500-X12 nozzle.

### 2. Mix the Herbicide Spray

Select the appropriate spray mixture in the "Spray Mix" section on the next page according to which brush species will be treated.

### 3. Cut and Spray the Stump

Remove top growth using pruning shears, a sharp ax, brush cutter, chainsaw, hydraulic shears, loppers, etc.

Make a flat cut on every plant stem as close as possible to the soil surface, but not below the soil surface. Before spraying, brush any soil or sawdust off the cut stump surface.

Spray the stump immediately after cutting. Adjust the spray nozzle to deliver a coarse mist in a cone-shaped pattern. Hold the nozzle within 1 or 2 inches of the stump and spray the entire cut surface until it is wet, especially the outer edges. Spray any remaining stem from the cut to the ground level, almost to the point of runoff.

When using a spray system attached to hydraulic shears, position the spray nozzle directly over the cut stump, high enough to ensure all of the stump is within the spray pattern. Using the dye as an indicator, spray the entire cut surface of the stump almost to the point of runoff.

#### Keep These Points in Mind:

- ▶ Follow herbicide label directions.
- ▶ This method is best for plants with a single stem or a few stems growing from the base (redberry juniper never has single basal stems).
- ▶ Do not spray when basal stems are wet.
- ▶ After mixing the herbicide into the carrier (diesel or water), shake or agitate the solution vigorously.
- ▶ Cost of treatment rises rapidly as the number of woody plants and stems per acre increases. Download the Brush Busters Cost Calculator app to easily estimate treatment costs.

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# BRUSH BUSTERS CUT STUMP SPRAY MIX OPTIONS

## A. Spray Mix with Triclopyr Ester for Hardwoods

**Works well on:** Algerita (agarito), baccharis, blackbrush, bois d'arc, bumelia, catclaw acacia, catclaw mimosa, Chinese tallow tree, elm, hackberry, huisache, lotebush (bluethorn), mesquite, all oaks, pricklyash (Hercules' club), saltcedar, Texas persimmon, winged elm, and yaupon.

**Mixing instructions:** A mixture of 15 percent triclopyr ester herbicide (trade names: Remedy Ultra, Clear Pasture, Triclopyr R&P, and Triclopyr 4EC) and 85 percent diesel fuel oil or vegetable oil is recommended (see mixing table below). Diesel fuel oil or vegetable oil act as coating agents and penetrants to ensure good herbicide coverage and absorption. Using vegetable oil instead of diesel fuel oil increases cost but may be desirable in some situations.

Pour the required amount of herbicide into a mixing container or spray tank, then bring to final volume with diesel fuel oil or vegetable oil. Vigorously shake or agitate to ensure thorough mixing. One ounce of Hi-Light™ blue dye can be added for each gallon of spray mix to help identify treated plants.

| RECOMMENDED CUT STUMP SPRAY MIX FOR HARDWOODS<br>HERBICIDE MIX OPTION (IN DIESEL OR BASAL OIL) |                                    |           |       |         |
|--|------------------------------------|-----------|-------|---------|
| Ingredient   | Concentration in<br>Spray Solution | Tank Size |       |         |
|  |                                    | 1 gal     | 5 gal | 10 gal  |
| Triclopyr ester herbicide  | 15%                                | 19 oz     | 96 oz | 1.5 gal |
| Hi-Light™ blue dye   | 1 oz/gal                           | 1 oz      | 5 oz  | 10 oz   |

## B. Spray Mix with Picloram for Redberry Cedar

**Works well on:** Redberry cedar (juniper). You do not need to spray the stumps with herbicide to kill blueberry cedar (Ashe juniper) or eastern red cedar.

**Mixing instructions:** A mixture of 4 percent picloram herbicide (trade names: Tordon 22K, Triumph 22K, Picloram 22K) in water is recommended for redberry cedar (see mixing table below). A high-quality (80 to 90 percent active ingredient) non-ionic surfactant ensures good herbicide coverage and absorption. Add a spray marking dye such as Hi-Light™ blue dye to mark the stumps that have been sprayed.

When mixing, add half the desired quantity of water to the spray tank. Then add the picloram herbicide, surfactant, and dye to the tank. Finally, use water under pressure to agitate and mix the spray, filling the tank to the final volume.

| RECOMMENDED CUT STUMP SPRAY MIX FOR<br>REDBERRY CEDAR HERBICIDE MIX OPTION (IN WATER) |                                    |           |        |
|---|------------------------------------|-----------|--------|
| Ingredient  | Concentration in<br>Spray Solution | Tank Size |        |
|   |                                    | 1 gal     | 4 gal  |
| Picloram herbicide  | 4%                                 | 5 oz      | 21 oz  |
| Non-ionic surfactant  | 0.25%                              | 0.32 oz   | 1.5 oz |
| Hi-Light™ blue dye  | 0.25%                              | 0.32 oz   | 1.5 oz |