space applications equally around the plant. Apply each 2 ml dose to a single spot on the soil surface. On slopes, apply most of the herbicide on the uphill side of the stem.

Keep these points in mind:
- Follow herbicide label directions.
- Do not use on marshy or poorly drained sites.
- Do not use on clay soils.
- Do not apply to snow-covered or frozen ground.
- Do not apply within three times the height or canopy diameter (whichever is greater) of desirable trees such as oaks or pecans.
- Rainfall is required to “activate” Velpar L™ in the soil. Plants will begin to show symptoms within 3 to 6 weeks of initial rainfall. One to three growing seasons may be required before plants die, and during this time cedars usually sprout new leaves several times.
- Grasses and weeds will be killed where each spot of Velpar L™ is applied. Recovery may take 2 to 3 years.
- The cost of treatment escalates rapidly as the density and size of the cedar increase.

Brush Busters Soil Spot Spray Method

Works Best: On blueberry or redberry cedars less than 3 feet tall.

When to Apply: Late winter to mid-spring (ideally, before expected rainfall).

1 Prepare the Equipment
Soil spot sprays should be applied with an exact-delivery handgun. This equipment is available from most herbicide retail outlets. The handgun delivers a thin stream of predetermined volume when triggered. Adjust the handgun to deliver 2 ml (cc) for each pull of the trigger. If only a few plants are to be treated, a disposable syringe can be used. Thoroughly clean all spray equipment immediately after use.

2 Prepare the Herbicide
Velpar L™ is the recommended herbicide for soil spot sprays to control cedar. The herbicide is used undiluted, by attaching an exact-delivery handgun or syringe to the herbicide container.

3 Apply the Herbicide
Apply undiluted Velpar L™ to the soil surface midway between the cedar stem and the canopy edge. Apply 2 ml for every 3 feet of plant height or every 3 feet of plant canopy diameter (whichever is greater). If the plant’s size requires more than a single 2 ml application, apply each 2 ml dose to a single spot on the soil surface. On slopes, apply most of the herbicide on the uphill side of the stem.

How to Master Cedar
Three safe and effective ways to control small cedar (juniper)

Individual Plant Treatment Series

Blueberry cedar: Remove the plant top at or near the ground line with a chain saw, pruner, axe, etc. Seedlings (plants less than 2 feet tall) can be killed easily by hand grubbing.

Redberry cedar: Since redberry cedar resprouts, top removal will not effectively control plants that are over 8 to 10 years old. Redberry cedar seedlings (plants less than 2 feet tall) can be easily killed if they are grubbed below the basal “knob,” located at or slightly beneath the soil surface.

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Cedars are very aggressive and damaging woody plants on Texas rangelands. There are two major cedar species west of Interstate Highway 35, redberry cedar and blueberry cedar. It is important to know which species you have because the treatments vary. As the names imply, blueberry cedar has blue berries and redberry cedar has red berries. In addition, redberry cedar has small specks of white wax on its leaves and twigs. Blueberry cedar is more common in central and south-central Texas, while redberry cedar is more common in west, west-central and north-central Texas. It is not uncommon for the two species to occur together.

Controlling cedar is not a one-time job. Livestock and wildlife spread the seeds easily, so you’ll need to check your land occasionally and treat unwanted seedlings.

It is very important to control cedar as seedlings and saplings. Controlling mature cedars requires heavy equipment or large amounts of herbicides and is usually very expensive. Using these Brush Busters methods, you’ll be able to keep the plants you want and get rid of those you don’t.

Brush Busters recommends three ways to control cedar. Two herbicide treatments—leaf spray and soil spot spray—work best on cedar less than 3 feet tall. The top removal method, which involves cutting the tree at ground level, will control blueberry cedar, but redberry cedar must be grubbed (cut) below the soil surface.

These three methods are easy, inexpensive, environmentally responsible, and effective. Your results may vary with the weather and other conditions, but you should be able to knock out more than seven of ten cedars treated.

### Brush Busters Leaf Spray Method

**Works Best:** On blueberry or redberry cedars that are less than 3 feet tall.

**When to Apply:** Spring through summer, when cedar is actively growing.

1. **Prepare the Equipment**
   Small pump-up garden sprayers, backpack sprays, cattle sprayers, or sprayers mounted on four-wheel-drive all-terrain vehicles (ATVs) work well.

   Garden sprayers are best for treating a few plants, and backpack sprayers are usually more efficient for larger acreages or higher cedar densities. ATV sprayers become more efficient on very large acreages or as the distance between plants increases.

   Make sure your spraygun has an adjustable cone nozzle (X6 to X8 orifice size) that can deliver a coarse spray (large droplets).

2. **Mix the Herbicide Spray**
   You can achieve 76 to 100 percent rootkill of small cedar by spraying with the herbicide Tordon 22K™. Prepare the spray mix as a 1 percent concentration of Tordon 22K™ in water (see table). To ensure a thorough coating of the cedar leaves, add commercial surfactant or liquid dishwashing detergent to the spray mix. It may be helpful to add a dye, such as Hi-Light Blue Dye™, to mark plants that have been sprayed.

   **Recommended leaf spray for cedar.**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration in spray solution</th>
<th>Tank size (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tordon 22K™</td>
<td>1%</td>
<td>3 gal  4 oz  18 oz  32 oz</td>
</tr>
<tr>
<td>Surfactant or dishwashing detergent</td>
<td>1⁄2 %</td>
<td>1 oz  3 oz  8 oz</td>
</tr>
<tr>
<td>Hi-Light Blue Dye™</td>
<td>1⁄4–1⁄2 %</td>
<td>1–2 oz  5–9 oz  8–16 oz</td>
</tr>
</tbody>
</table>

3. **Spray the Cedar**
   Thoroughly wet all the leaves of each cedar plant to the point of runoff.

**Keep these points in mind:**

- To buy Tordon 22K™, you must have a Pesticide Applicator License from the Texas Department of Agriculture. See your county Extension agent for license information.
- Follow the herbicide label directions.
- Do not spray within 100 feet of known sinkholes or fractures that would allow the herbicide to enter underground water aquifers.
- Do not spray if the cedar foliage is wet.
- Do not spray immediately upwind of desirable trees, shrubs, or susceptible crops.
- The cost of treatment increases rapidly as the density and size of cedars increase.
- Large, mature blueberry cedar may be a nesting habitat for the endangered golden-cheeked warbler. If in doubt, contact the U.S. Fish and Wildlife Service before treating.
- Do not treat large numbers of cedars beneath the canopies or within three times the height or diameter of desirable trees such as oaks or pecans.

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