

Individual Plant Leaf Spray Method

Works Best: If you have only a few perennial broomweed plants to control, if plants are widely scattered, or if you do not have a ground broadcast sprayer.

When to Apply: This treatment works best in the fall after the plants have flowered.

① Prepare Equipment

To use this method, all you will need is a pump-up garden sprayer, backpack sprayer, cattle sprayer, or sprayer mounted on a 4-wheel ATV. Backpack sprayers and ATV sprayers will be more efficient if there are many plants to spray. Make sure your sprayer has an adjustable cone nozzle (X6 to X8 orifice size) that can deliver a coarse spray (large droplets).

② Prepare the Herbicide Mixture

You can expect 76 to 100 percent control of perennial broomweed by spraying with a mixture of either 0.5% Tordon 22K®, or 1% Grazon P + D®, Surmount® or Weedmaster® mixed in water.

To prepare the spray mixture, fill the spray tank half full with water, add the desired amount of herbicide and 0.25% to 0.5% surfactant, then continue to fill the tank to the desired level with water. Adding a color dye to the mixture is a good idea because it helps to mark plants that have been sprayed. The following table of recommended spray mixtures shows the amounts of ingredients for typical tank sizes.

Mixing table for individual plant foliar leaf spray applications.

Sprayer tank volume	Concentration of ingredient in mix		
	0.25%	0.5%	1%
4 gallons	1 ¼ ounces	2 ½ ounces	5 ounces
5 gallons	1 ⅔ ounces	3 ½ ounces	6 ½ ounces
15 gallons	5 ounces	10 ounces	20 ounces
25 gallons	8 ounces	1 pint	1 quart

All spray solutions are mixed in water.

③ Spray the Perennial Broomweed

Spray individual perennial broomweed plants in the fall after the plants have flowered. Wet all foliage thoroughly until the leaves glisten, but not to the point of dripping. Do not mow or disturb the plants for one growing season after treatment. Do not spray when wind is stronger than 15 mph, when the temperature is higher than 90 degrees F, or when humidity is less than 10 percent.

Keep these points in mind:

- Follow herbicide label directions.
- The cost of treatment escalates rapidly as the number of perennial broomweed plants per acre increases.
- Do not spray when plants are wet.
- Do not let spray contact desirable forbs and shrubs.
- Controlling perennial broomweed is not a one-time job and retreatments may be necessary from time to time.



How to Sweep Out Perennial Broomweed

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three-step ways
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Weed Treatment Series

Charles R. Hart, Allan McGinty and J.F. Cadenhead
Extension Range Specialists
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Perennial broomweed, or broom snakeweed, is a short-lived, perennial half-shrub that grows from 6 inches to about 2 feet tall. Many unbranched, erect stems originate from a woody base and die back when the plant goes dormant. The leaves are narrow and threadlike. The small, yellow flowers are clustered at the branch tips from August to October.

The plant is widespread on dry ranges and deserts from California to Texas, south to Mexico, and north to Idaho. Extreme infestations do not always indicate that rangeland is overgrazed because broomweed populations fluctuate naturally over time. However, overgrazing can accelerate the plant's growth and propagation.

Perennial broomweed is poisonous to cattle, sheep, goats and swine. Some believe the toxic agent is a steroidal saponin. The plant may also accumulate selenium when it grows in soil that contains a high level of selenium. It is most toxic in early growth stages—usually in late winter or early spring—and when it grows on sandy soils. It is relatively nontoxic when it grows on clay soils. Cattle may abort after eating as little as 20 pounds of fresh broomweed in 7 days. Cattle, sheep and goats have died after eating 10 to 20 percent of their body weight in perennial broomweed over 2 weeks.

Here are two methods of controlling perennial broomweed that are easy to use, environmentally responsible and effective. One method uses a ground broadcast spray to treat larger areas. The other method uses a foliar treatment for individual plants in scattered or smaller infestations. With the individual plant treatment method you will be able to selectively kill unwanted perennial broomweed plants without damaging desirable vegetation.

Keep in mind that with the cyclic nature of perennial broomweed populations, you may need to repeat the treatment periodically.

Professionals with Texas Cooperative Extension and the Texas Agricultural Experiment Station have developed, tested and approved these control methods. Your results may vary, but you should be able to kill about seven of every ten plants treated.

Ground Broadcast Spray Method

Works Best: When you wish to control perennial broomweed on large or heavily infested areas.

When to Apply: This method works best during the fall after plants have flowered.

① Prepare Equipment

Apply the herbicide with a boom-type or boomless sprayer that can deliver 10 to 25 gallons of spray per acre. There are many types of broadcast sprayers available, including trailer-mounted and ATV-mounted (all terrain vehicle). Sprayers should be checked for consistency of application and should be calibrated properly for the application. See Extension publication L-5465, "Weed Busters Calibration Guide," for step-by-step instructions on calibrating ground broadcast sprayers.

② Prepare the Herbicide Mix

Two herbicides are effective with the ground broadcast method. They are Tordon 22K® and Escort® (also sold under the trade name Cimarron®). A non-ionic surfactant should be added to the spray mixture for broadcast treatments. To mix, fill the spray tank half full with water, measure and add the appropriate amount of herbicide and surfactant, then continue filling the spray tank with water to the proper level while agitating the mixture. Rates of application are 1 pint per acre for Tordon 22K® and 0.625 ounce per acre for Escort®.

Herbicide rates for ground broadcast applications.

Herbicide	Rate	Surfactant per 100 gallons spray mix
Tordon 22K®	1 pint/acre	1 to 2 quarts
Escort® or Cimarron®	0.625 ounce/acre	1 to 2 quarts

③ Spray the Perennial Broomweed

Broadcast treatment is most effective in the fall of the year—September and October for most of Texas. We recommend that the sprayer be equipped with flat fan spray nozzles and that the boom be elevated at least 18 inches higher than the perennial broomweed being treated. When making multiple passes to cover an area, use wire flags or wooden stakes placed a boom-width apart on each end of the spray area to help ensure uniform coverage. It may help to mark off large areas into several smaller ones so that swath runs are not too long.

Keep these points in mind:

- Follow herbicide label directions.
- With this method the cost of treatment remains constant, regardless of the number of perennial broomweed plants per acre.
- Spray a minimum total volume of 10 gallons per acre.
- Do not spray when perennial broomweed plants are wet.
- Spray only during the fall of the year
- Take care not to let the herbicide drift to sensitive or nontarget areas.
- Do not spray when wind speed is greater than 10 mph.
- Controlling perennial broomweed is not a one-time job. Retreatments may be necessary from time to time.

