

Individual Plant Leaf Spray Method

Works Best: If you have only a few or scattered Western horsenettle plants to control or do not have a ground broadcast sprayer.

When to Apply: Western horsenettle should be sprayed in the spring when the plants begin to flower.

① Prepare the Equipment

To properly apply the herbicide using this method, you only need a pump-up garden sprayer, backpack sprayer, cattle sprayer or a sprayer mounted on an ATV. If there are many plants to spray, backpack and ATV sprayers are more efficient. Your sprayer needs an adjustable cone nozzle (X6 to X8 orifice size) or a flat fan nozzle that can deliver a coarse spray (large droplets).

② Prepare the Herbicide Mixture

You can expect 76 to 100 percent control of Western horsenettle by spraying with a mixture of 1 percent Grazon P + D™, GunSlinger™, Weedmaster™ or Range Star™ in water.

To prepare the spray mixture, fill the spray tank half full of water. Add the desired amount of herbicide and surfactant. Then continue to fill the tank with water to the desired level.

Add a color dye to the mixture to mark the plants that have been sprayed.

The following table of recommended spray mixtures shows the amounts of ingredients for typical tank sizes.

Mixing table for leaf spray applications.

Ingredient	Concentration in Spray Solution	Amount of ingredient for varying spray tank sizes (gallons)		
		3	5	25
Grazon P+D, Gunslinger, Weedmaster or Range Star	1%	4 ounces	7 ounces	32 ounces
Surfactant	¼%	1 ounce	2 ounces	8 ounces
Dye	¼%	1 ounce	2 ounces	8 ounces

All spray solutions are mixed in water.

③ Spray the Western Horsenettle

Spray Western horsenettle plants when they begin to flower in the spring. Wet all foliage of the plant thoroughly until the leaves glisten – but not to the point of dripping. Do not mow or disturb the plants for at least 90 days after treatment.

Do not spray directly on desirable forbs or brush. In addition, do not spray when winds exceed 10 mph, when temperatures exceed 90 degrees F or when the humidity is below 10 percent.

Keep these points in mind:

- Follow the herbicide label directions.
- The treatment cost escalates rapidly as number of Western horsenettle per acre increases.
- Do not spray when the plants are wet.
- Avoid spray contact on desirable forbs and shrubs.
- Controlling Western horsenettle is not a one-time job. You may need to re-treat the land periodically.



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How to take the Kick out of Western Horsenettle

Safe and effective three-step ways to control Western horsenettle

Weed Treatment Series

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Western horsenettle, or “treadsalve,” is a weedy perennial in the nightshade family. Its leaves, petioles and branched stems carry sharp spines. Most specimens of this perennial are less than 2 feet tall, but some grow up to 3 feet. The oval, five- to seven-lobed leaves can be as long as 6 inches. Flowers are bluish-purple to violet and are rarely white. They grow in terminal clusters, producing spherical fruits that are yellow at maturity and can be toxic to grazing livestock. The plant is widely distributed on loamy prairies of Texas except in the far west, Panhandle and extreme eastern parts of the state.

All parts of the Western horsenettle contain varying amounts of glycoalkaloids and calystegines. The highest concentrations are in the ripe fruits. Low-level intake of calystegines over several months is probably responsible for “Crazy Cow Syndrome,” a nervous condition occurring in two limited geographical areas. These include Real County with parts of surrounding counties; and the larger area, which is roughly bounded by Glasscock, Menard and Taylor counties. When cattle, sheep, goats or horses consume larger amounts, the glycoalkaloids produce signs of classical nightshade poisoning.

Professionals with Texas Cooperative Extension and the Texas Agricultural Experiment Station have developed, tested and approved two three-step ways to control Western horsenettle. The methods are easy to use, environmentally responsible and effective.

The *ground broadcast* method was developed to treat large areas with heavy infestations. The *individual plant* method is used for scattered or smaller infestations.

Remember that controlling Western horsenettle is not a one-time job. Because the plant reproduces from seed, you will need to go over your land until you get it under control and then periodically treat it to eliminate new seedlings.

Although your results may vary, you should be able to kill about seven of every 10 plants treated.

Ground Broadcast Spray Method

Works Best: On larger or heavily infested areas.

When to Apply: Western horsenettle should be sprayed in the spring when the plants begin to flower.

① Prepare the Equipment

The herbicide can be applied with a boom or boomless broadcast sprayer able to deliver a total spray volume of 10 to 30 gallons per acre. Many types of broadcast sprayers are available, including those mounted on trailers or on four-wheel all-terrain vehicles (ATVs). Check your sprayer for consistency of application and then calibrate it properly for the application. See Extension publication L-5465, *Weed Busters Sprayer Calibration Guide*, for detailed instructions on calibrating ground broadcast sprayers.

② Prepare the Herbicide Mix

Use Grazon P + D™, GunSlinger™ Weedmaster™, Range Star™ or Cimarron Max™ to control Western horsenettle. Grazon P + D™ and GunSlinger™ contain picloram and 2,4-D. Weedmaster™ and Range Star™ contain dicamba and 2,4-D. Cimarron Max™ contains metsulfuron, dicamba and 2,4-D. For broadcast treatments, you should use a 90 percent active ingredient, non-ionic surfactant in the mixture. To mix, first fill the spray tank half full of water. Then measure and add appropriate amounts of herbicide and surfactant. Continue filling the spray tank with water to the proper level with agitation.

Ground broadcast applications rate table.

Herbicide option	Rate/acre	Surfactant	Spray volume
Grazon P+D	1-1.5 quarts	1-2 quarts per 100 gallons of water	10-30 gallons/acre
GunSlinger	1-1.5 quarts		
Weedmaster	1 quart		
Range Star	1 quart		
Cimarron Max	Rate II		

③ Spray the Western Horsenettle

Spray Western horsenettle plants when they begin to flower in the spring. We recommend that the sprayer be equipped with flat fan spray nozzles delivering at least 20 gallons per acre of total spray volume and that the boom be elevated about 18 inches above the plant being treated. Care should be taken to make the application in a manner that reduces extreme overlap in spray swaths and minimizes spray drift. Do not use this method if you are close to susceptible crops. In addition, do not mow or disturb the plants for at least 90 days after treatment. Do not spray when winds exceed 10 mph, when temperatures exceed 90 degrees F or when the humidity is below 10 percent.

Keep these points in mind:

- Follow the herbicide label directions.
- Treatment cost with this method remains constant regardless of number of Western horsenettle per acre.
- Do not spray when the plants are wet.
- Avoid spray contact on desirable forbs and shrubs.
- Controlling Western horsenettle is not a one-time job. You may need to re-treat periodically.

