



New Mexico State University
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The Weed Warrior

It's TIME.....to TACKLE Invasives!

This Weed Warrior is dedicated to the control of invasive weeds and features the various controls of the most prevalent invasive weeds in the county.



Cost Share is Available-

Our Grazing Land Conservation grant is still available for you to apply for and will pay 75% of your chemical cost or 75% of the cost of a commercial applicator for the control of invasive weeds. Take advantage of this opportunity for the good of your land and your pocket book! Find attached a cost share form for the program.....Do it today!



Russian Olive and Salt Cedar Chemical Control Fact Sheet

Foliar Application

Arsenal Herbicide- 1% solution (1.28 ounces per gallon of water)

Glyphosate - 5% solution (6.4 ounces per gallon of water)

Spray entire foliage till the solution starts to drip. Application may be made from June till frost.

Cut Stump Treatment

Garlon 4 or Tahoe 4 Herbicide

Cut tree down and paint herbicide full strength on fresh cut within 15 minutes of making the cut. For application with a back pack mix 50-50 Herbicide with Crop Oil or Diesel. Application may be done anytime with the exception of about 30 days in the spring when the sap is coming up in the tree.

Basal Bark Treatment

Garlon 4 Herbicide or Tahoe + Ag. Oil or Diesel

Mix 70% Ag. Oil or Diesel with 30% Garlon Herbicide

Apply anytime of year with a sprayer to the bottom 12 to 18 inches of trunk.

Russian Knapweed

Quick Facts...

- Russian knapweed is a creeping perennial that reproduces from seed and vegetative root buds.
- Russian knapweed emerges in early spring, bolts in May to June, and flowers through the summer into fall.
- Russian knapweed is toxic to horses.
- The key to Russian knapweed control is to stress the weed and cause it to expend nutrient stores in its root system.
- The best management plan includes cultural controls combined with mechanical and/or chemical control techniques



Russian Knapweed

Results from Russian Knapweed Fall Herbicide Applications

Farmington, NM 2004-2005

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Introductions:

Russian knapweed is an invasive herbaceous perennial that has been invading a wide range of habitats throughout New Mexico. This project evaluated the effectiveness of fall applications of several herbicides that have been shown to be effective on Russian knapweed. Fall applications have improved effectiveness and can limit damage to desirable annual plants as they have already senesced before applications. Herbicides were applied in September, October and November to areas heavily infested with Russian knapweed. Above ground tissue of Russian knapweed begins to senesce in the fall, and while foliage was green in September and October, shoots were completely senesced by the November application. For information on rates please see table 1.

Results:

Plots were evaluated on 6/20/2005 and percent visual control was estimated. While controls had no growth reductions observed, Russian knapweed growth was reduced with each herbicide used in this experiment. Grazon, Tordon, and Reclaim provided greater than 90 % control regardless of when applications were made. Both Arsenal and Redeem control was improved as applications were made later in the growing season, thus October or November applications can enhance control. Plateau provided 20-33 percent control and was consistently lowest compared to the other treatments.

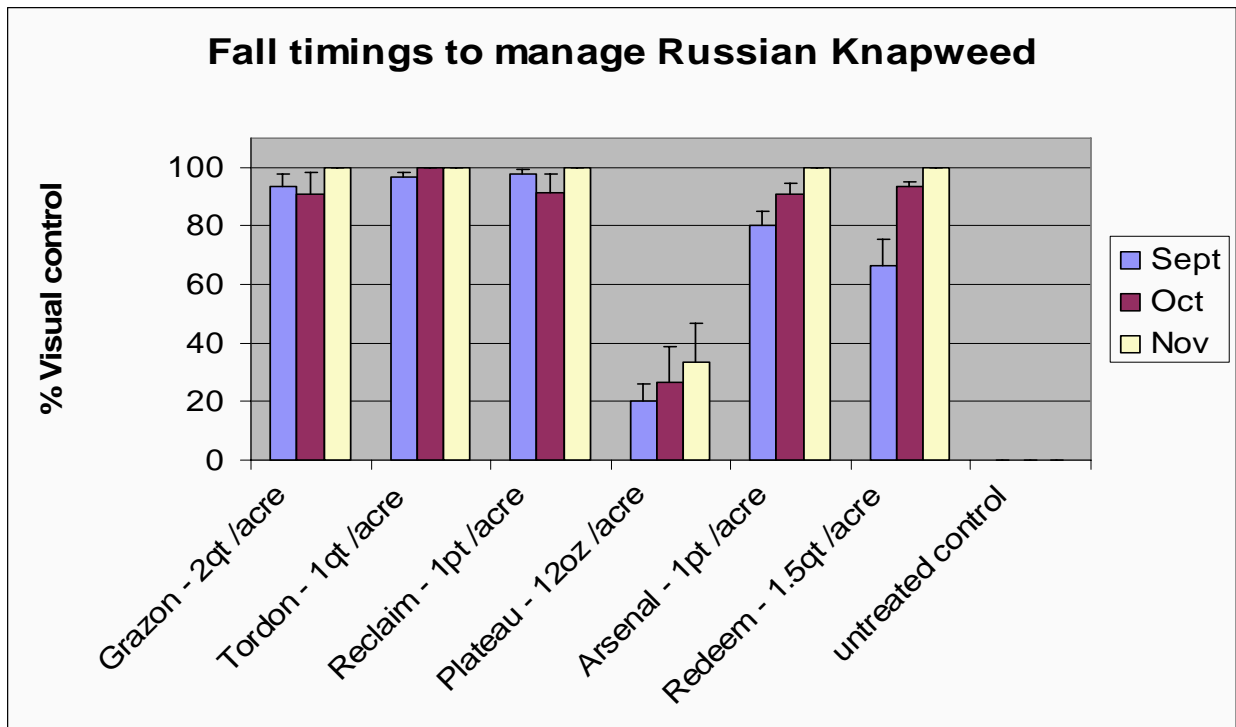


Table 1. Herbicides used in study

Active Ingredient	A.I. rate (lbs/A)	Product	Product rate	\$/Acre	Comments
Picloram + 2,4-D*	0.27 1.0	Grazon P + D*	2 qt/A ^{NI}	\$23	Selective, long residual
Picloram*	0.5	Tordon*	1 qt/A ^{NI}	\$13	Selective, long residual
Clopyralid	0.375	Reclaim / Transline	1 pts/A ^{NI}	\$23	Selective, short residual
Imazapic Methlyated	0.1875 -	Plateau MSO	12 fl oz/A 1 qt/A	\$32	Selective, short residual

Seed Oil					
Imazapyr	0.5	Arsenal/ Habitat	1.0 pts/A ^{NI}	\$35	Nonselective, long residual
Triclopyr + Clopyralid	0.84375 + 0.28125	Redeem	3 pts/A ^{NI}	???	Selective, short residual
Untreated control	-	-	-	\$0	Selective, short residual

* Indicates this product is a restricted use pesticide in New Mexico

All applications will be made at 10-20 GPA.

^{NI} addition of nonionic surfactant at 1%

Conclusions:

Excellent control of Russian knapweed can be expected with fall applications of select herbicides in September, October, and November. While variations exist in effectiveness, herbicide selection should consider environmental restrictions with each herbicide, desirable plant species present, land use objective, and cost. Grazon, Tordon, Reclaim/Transline, Plateau, and Redeem are selective herbicides that do not harm many grass species, therefore these would be preferred in rangelands where grasses are desirable. For areas near or in water, Habitat is the only herbicide registered for this use. Each of the herbicides has specific requirements and restrictions, so please read the label before making applications.

Musk Thistle Control

Quick Facts...

- Musk thistle is a biennial weed that reproduces only from seed.
- The key to successful musk thistle control is to prevent seed production.
- Apply herbicides such as Tordon, Vanquish/Clarity or 2,4-D to musk thistle rosettes in spring or fall. Apply Ally or Telar up to the early flower growth stage.

Management

Cultural control. Maintaining pastures and rangeland in good condition is a primary factor for musk thistle management. To favor pasture and rangeland grass growth, do not overgraze. Fertilize only when necessary and according to soil testing recommendations. To successfully manage musk thistle, prevent seed formation.

Mechanical control. Musk thistle will not tolerate tillage and can be removed easily by severing its root below ground with a shovel or hoe. Mowing can effectively reduce seed output if plants are cut when the terminal head is in the late-flowering stage. Gather and burn mowed debris to destroy any seed that has developed.

Chemical control. Several herbicides are registered in pasture, rangeland and noncrop areas to control musk thistle. Tordon 22K (picloram), Curtail (clopyralid + 2,4-D), Banvel/Vanquish/Clarity

(dicamba), 2,4-D, or Banvel/Vanquish/Clarity plus 2,4-D are commonly used. Apply these herbicides in spring or fall to musk thistle rosettes.

Apply Tordon at 0.5 to 1 pint per acre (A), Curtail at 2 quarts/A, Banvel/Vanquish/Clarity at 0.5 to 2 quarts/A, 2,4-D at 1.5 to 2 quarts/A, or Banvel/Vanquish/Clarity plus 2,4-D at 0.5 plus 1 quart/A. Cool temperatures (below 50 degrees F), particularly in fall, may adversely affect 2,4-D control of musk thistle; therefore, use 2,4-D in spring. Tordon is largely unaffected by cool temperatures. Banvel/Vanquish/Clarity can be adversely affected but less than 2,4-D. Banvel/Vanquish/Clarity plus 2,4-D works well in spring or fall. Apply any of these herbicides before musk thistle bolts or seed production still will occur.

Ally-Escort (metsulfuron) or Telar (chlorsulfuron) also can be used. Use Telar in noncrop areas only and Ally-Escort in pastures, rangeland or noncrop areas. Research shows that Telar or Ally-Escort prevents or dramatically reduces viable seed formation when applied in spring, up to early flower growth stages. The latest time to apply these herbicides is when developed terminal flowers have opened up to the size of a dime.

Canada Thistle

Quick Facts...

- Canada thistle is a creeping perennial that reproduces from vegetative buds in its root system and from seed.
- It is difficult to control because its extensive root system allows it to recover from control attempts.
- Combining control methods is the best form of Canada thistle management.

Persistence is imperative so the weed is continually stressed, forcing it to exhaust root reserves.

Management

The key principle to Canada thistle control is to stress the plant and force it to use stored root nutrients. Canada thistle can recover from almost any stress, including control attempts, because of root nutrient stores. Therefore, returning infested land to a productive state occurs only over time. Success requires a sound management plan implemented over several years.

Cultural control. Grasses and alfalfa can compete effectively with Canada thistle if their growth is favored by good management. Maintain fertility and, if possible, moisture at optimum levels to favor grass or alfalfa growth. Soil analysis can easily determine fertility needs. Be cautious with nitrogen fertilizers, because excess available soil nitrogen may favor weed growth.

These are essential management steps to ensure optimum desirable plant growth and competition. However, competition alone seldom is effective against Canada thistle.

Chemical control. Read the label, follow directions and use precautions. Research shows that Tordon 22K (picloram), Curtail (clopyralid plus 2,4-D), Transline (clopyralid), Banvel/Vanquish/Clarity (dicamba), 2,4-D and Telar (chlorsulfuron) are effective against Canada



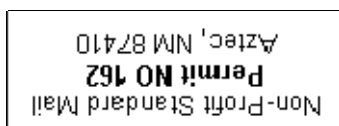
thistle. These herbicides are most effective when combined with cultural and/or mechanical control.

Banvel/Vanquish/Clarity, and 2,4-D may be used on pastures, rangeland and non-crop areas. Tordon, Curtail, Telar and Transline may be applied on noncrop areas only. Apply 2,4-D, 2 quarts per acre (A), in spring when Canada thistle is 10 to 15 inches tall, in pre-bud to early bud growth stages. Re-treat in fall with Banvel/Vanquish/Clarity (2 quarts/A) or Telar (1 ounce/A) to re-growth. Use a surfactant (0.25 percent to 0.5 percent v/v) with Telar for adequate control. Banvel/Vanquish/Clarity also may be applied in early spring at 2 quarts/A when Canada thistle is in the rosette stage. Tordon (1 quart/A) or Tordon plus 2,4-D (1 quart + 1 quart/A) is effective whenever Canada thistle is actively growing. Fall applications are especially effective.

Curtail and Transline are effective when applied in spring after all Canada thistle plants have emerged. Apply Curtail (2 to 3 quarts/A) when the oldest Canada thistle plants are entering the bud growth stage and the youngest are in the rosette to bolting growth stages. Apply Transline (2/3 to 1 pt/A) when Canada thistle is in the rosette to bud growth stages. Transline at 1 pt/A also is effective when applied in fall

Sincerely,

Gary Hathorn
County Program Director, Agriculture Agent



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