



COOPERATIVE EXTENSION SERVICE
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COLLEGE OF AGRICULTURE AND HOME ECONOMICS
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New Mexico State University Cooperative Extension offers new chemical control for Russian Olive.

The Russian olive, with its tendency to spread quickly, is a menace to riparian woodlands, threatening strong, native species like cottonwood and willow trees. They are responsible for out competing a lot of native vegetation, interfering with natural plant succession and nutrient cycling and choking irrigation canals and marshlands. This displacement of native plant species and critical wildlife habitats has undoubtedly affected native birds and other species. The heavy, dense shade of the Russian olive is also responsible for blocking out sunlight needed for other trees and plants in fields, open woodlands and forest edges. It is listed as an invasive species in New Mexico.



After five years of research done in San Juan County using over five different foliar chemical treatments at different rates on Russian Olive a new treatment recommendation has been released by New Mexico State University's Cooperative Extension Service. A 5% solution of glyphosate is now recommended for foliar treatment of Russian Olive. A 1% solution of Arsenal herbicide has long been recommended and still is recommended for foliar application. With glyphosate it gives land managers an alternative and possibly cheaper solution for control of the invasive species that plagues the San Juan Basin. Keith Duncan, Extension Brush and Weed Specialist and Gary Hathorn San Juan County Extension Agent conducted the research and found that glyphosate consistently offered 97%-100% control of Russian Olive with a foliar application rate of 4%-7%.

Glyphosate is the active ingredient used in such products as Round Up, Rodeo (Aquatic Label) Honcho and other generic brands on the market.

RUSSIAN OLIVE SALT CEDAR AND WATERSHED MANAGEMENT STRATEGIC PLAN

A San Juan Basin policy and strategic plan for Russian Olive and Salt Cedar and watershed management is being developed by the newly formed Russian Olive, Salt Cedar Steering Committee. The Strategic Plan will provide guidance for control of Russian Olive and Salt Cedar and identify the necessary template and protocols for monitoring, re-vegetation, rehabilitation, and long-term watershed management activities. It will also contain distinct recommendations and implementation actions in the broad categories of management, planning, funding,

education, monitoring, research, and government action that will aid the basin in improving riparian conditions.

The steering committee is the result of two public hearings conducted. The committee has met twice now and is busy identifying funding sources, exploring educational activities, control methods, and degree of infestation.

The next meeting of the committee will be Thursday, December 1st, 2005 1:00 p.m. at the Civic Center in Farmington. Interested weed managers are invited to attend.

Russian Olive 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 Herbicide

Cut tree down and paint herbicide full strength on fresh cut within 15 minutes of making the cut. 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 + 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.

Results from Russian Knapweed Fall Herbicide Applications

Farmington, NM 2004-2005

Dr. Mark Renz, Extension Weed Specialist, NMSU

Gary Hathorn, San Juan County Agent, NMSU Cooperative Extension

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.

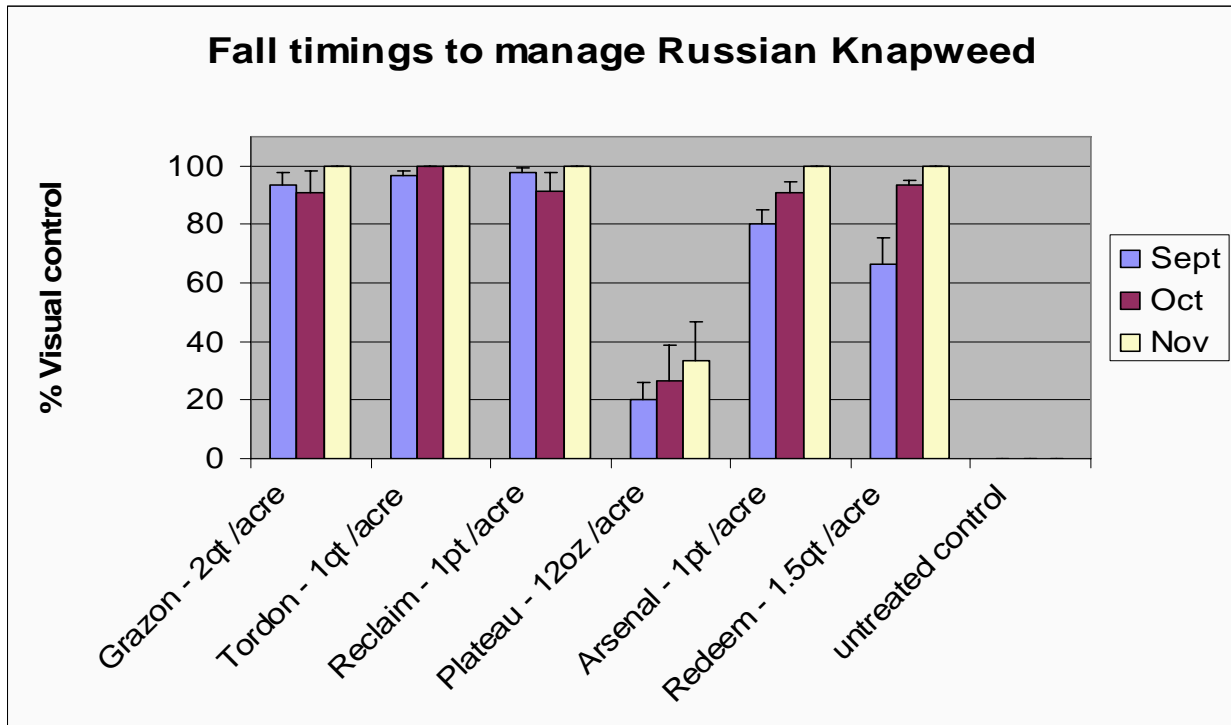


Table 1. Herbicides used in study

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 Seed Oil	0.1875 -	Plateau MSO	12 fl oz/A 1 qt/A	\$32	Selective, short residual
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.

Sincerely,

Gary Hathorn
County Program Director, Agriculture Agent

Happy Holidays

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