

Management of *Cirsium arvense* (Canada thistle)



Lewis and Clark County Noxious
Weed Control District
3402 Cooney Dr Helena | MT 59602

Montana Priority 2B Noxious Weed

Plant Description

Cirsium arvense, Canada thistle, is a perennial plant that reproduces through rhizomatous roots and seeds. The flowers are a pinkish purple color that can also be white. Canada thistle leaves are lance-shaped, shallow-lobed, prickly and waxy. The roots are extensive vertically and creeping horizontally, reaching depths of up to 500 cm. Canada thistle grows 30-100 cm tall.

Mechanical Control

Hand removal or excavation can provide effective control for small infestations, but must be repeated as new stems emerge. Dispose of plants in bags as Canada thistle can regenerate from root fragments. Mowing can reduce seed production through the suppression of flower formation and depletion of root nutrient reserves, but must be repeated multiple times throughout the growing season.

Wear protective gloves during hand removal to prevent injury from prickly leaves and spines.

Biological Control

There are multiple biocontrol insects that are released to control Canada thistle, however they are not always effective. These insects are; *Ceutorhynchus litura* (Canada thistle stem weevil), *Larinus planus* (Canada thistle bud weevil), and *Urophora cardui* (Canada thistle stem gall fly). There is also a fungal pathogen that exists in the roots called *Puccinia punctiformis* (thistle rust). For more information on how to collect and release these spores see the Montana State University publication titled; *Thistle Rust: A Potential Biocontrol Agent to Help in the Management of Canada Thistle*.

Cultural Control

Re-establishment of plant communities provides competition, which will reduce and prevent Canada thistle spread.



Recommended Treatment Timeline

Control Type	Spring	Summer	Fall
Mechanical	Hand pull or Dig, bag and dispose, Mow before bloom	Hand pull or Dig, bag and dispose, Repeated mowing	Hand pull or Dig, bag and dispose
Biological	Contact local Noxious Weed District		
Cultural	Revegetation		Revegetation
Chemical	Foliar spray		Foliar spray

Chemical Control

Follow the directions on herbicide labels, the label is the law. Calibrate equipment for accurate application. Commonly used herbicides are listed below, order of listing is not reflective of efficacy or recommendation.

Personal protective equipment must be worn when applying herbicides. Only apply herbicides in appropriate weather conditions.^a

Use appropriate surfactants as listed in the product label.^a

^aRead and follow all instructions in the label of the herbicide.

Chemical Control Table							
Use Site	Herbicide (Active Ingredient - Trademark)	Pre-emergent or Soil Residual Activity	Post-emergent (Foliar Applied)	Large Sprayer Rate per Acre	Spot Treatment Rate for Every 1 Gallon of Water	Restricted Entry Interval (Hours)	Application Notes and Environmental Advisories*
Turfgrass	2,4-D Amine - Gordon's ^b	no	yes	2 qt (1.9 a.e./A)	1 fl oz per 1,000 sq ft for turfgrass (Gordon's 2,4-D Amine). Consult product label for other trade names	48	Control is only temporary. Toxic to fish and aquatic invertebrates. Groundwater and surface water advisories.
	2,4-D Amine, Dicamba, MCPA - Gordon's Trimec Broadleaf Herbicide ^b	no	yes	Consult label	Consult label	48	Do not broadcast apply when air temperatures exceed 90°F. Apply before the flowering stage to prevent seed production; best applied to young plants from the rosette to bolting stage. Toxic to fish and aquatic invertebrates. Groundwater and surface water advisories.
Rangeland, Permanent Grass Pasture, CRP, Natural Areas	Aminopyralid + metsulfuron methyl - Chaparral ^b	no	yes	2.5 - 3.3 oz	0.7 - 1 gram	48	Use while actively growing with optimal application being after all plants have emerged or in the fall before a killing frost. Higher rate recommended for older/dense stands. Non-target organism advisory. Windblown soil particle advisory.
Forest	Clopyralid - Transline ^b , Sonora ^b	no	yes	1/3 - 1 1/3 pt	Consult label	12	Use before bud stage, fall application can also be effective. Groundwater and surface water advisories. Non-target organism advisory.
Rangeland, Non-cropland, ROW	Aminopyralid - Milestone ^b	no	yes	5 - 7 oz	Calibration necessary, consult label for conversion	48	Use a lower rate in the fall, right after flowering but before dormancy. Use higher rate in spring for pre-bud to early bud stages. Groundwater and surface water advisories.
	Aminopyralid + metsulfuron methyl - Opensight ^b	no	yes	2.5 - 3.3 oz	0.7 - 1 gram	48	Use while actively growing with optimal application after all plants have emerged or in the fall before a killing frost. Higher rates recommended for older/dense stands. Non-target organism advisory. Windblown soil particle advisory.
Ornamentals	Glyphosate - Roundup ProMax ^b	no	yes	2 qt (Roundup ProMax ^b)	2% v/v solution (Roundup ProMax ^b)	4	Use while actively growing with optimal application after all plants have emerged or in the fall before a killing frost. Higher rates are recommended for older/dense stands. Surface water advisory.

^aLewis and Clark County Noxious Weed Control Division does not endorse any trademarks or commercial names listed above.

This table summarizes selected registered use sites and is not intended to represent all approved uses. Pesticide applicability, use sites, and restrictions vary by product and formulation. Applicators must consult and follow the most current product label, which takes precedence over this document.

References

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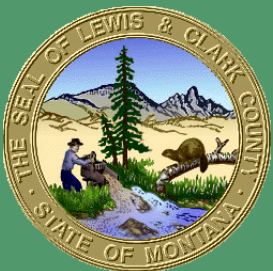
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PBI Gordon Corporation. *Gordon's Amine 400 2,4-D Weed Killer*. U.S. Environmental Protection Agency Registration No. 2217-2.

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