

# Canada thistle

Colorado Dept. of  
Agriculture  
Conservation  
Services Division  
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## Key ID Points

1. Purple flowers form in clusters of 1-5 per branch.
2. Floral bracts are spineless.
3. Small heads, vanilla scent.

## Canada thistle Identification and Management



Canada thistle during the flowering stage. This stage typically occurs in the early summer. Seed production will follow and effective management options will then become limited.

## Identification and Impacts

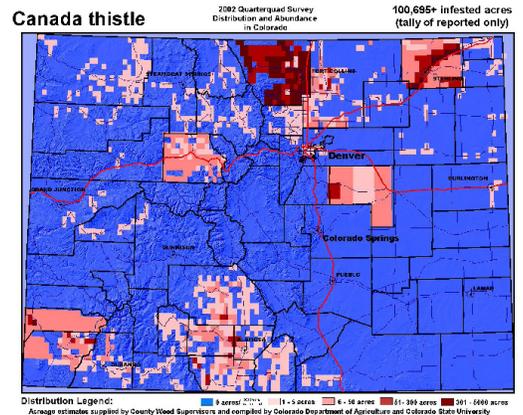
Canada thistle (*Cirsium arvense*) is a non-native deep-rooted perennial that spreads by seeds and aggressive, creeping, horizontal roots (rhizomes). Canada thistle can grow 2 to 4 feet in height. The leaves are oblong, spiny, bright green in color, and are only slightly hairy on the undersurface. Flowers occur in small clusters that form on the ends of branches. They are about 1 cm in diameter, tubular shaped, and vary from white to purple in color with a strong vanilla scent (female flowers).

Canada thistle emerges from its root system from late April through May. It begins to flower in late spring to early summer with increase in day length. Canada thistle only produces about 1,000 to 1,500 seeds per plant. Typically, it reproduces vegetatively through a creeping root system, and can quickly form dense stands. Every piece of root, from 1/2 to 1 inch in length, is capable of forming new plants. The key to controlling Canada thistle is to eliminate seed production and also to reduce the plant's nutrient reserves in its root system through persistent, long-term management.

Canada thistle is one of the most feared noxious weeds in the U.S. as it can infest many land types, from roadsides, ditch banks, riparian zones, pastures, irrigated cropland, to the most productive dryland cropland. Forage production is severely reduced because cattle will not graze near infestations.

The key to effective control of Canada thistle is combining control methods. These weeds need to be continually stressed, forcing it to exhaust root nutrient stores and eventually die. Of all control methods, prevention is most important. Maintain healthy pastures and rangeland and continually monitor your property for new infestations. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Canada thistle is designated as a "List B" species on the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local infestations. For more information visit [www.colorado.gov/ag/csd](http://www.colorado.gov/ag/csd) and click on the Noxious Weed Program link or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.



All photos © Kelly Uhing, Infestation map above, Crystal Andrews, Colorado Department of Agriculture.

*Cirsium arvense*

**CULTURAL**

Establishment of selected grasses can be an effective cultural control of Canada thistle. Contact your local Natural Resources Conservation Service for seed mix recommendations. Maintain healthy pastures and prevent bare spots caused by overgrazing. Bare ground is prime habitat for weed invasions.

**BIOLOGICAL**

Cattle, goats, and sheep will graze on Canada thistle when plants are young and succulent in the spring. Follow up grazing with a fall herbicide application. Insects are available but have not been effective. Insects can be obtained at no charge from the Colorado Department of Agriculture. Please call 970-464-7916 or visit [www.colorado.gov/ag/csd](http://www.colorado.gov/ag/csd) for more information.

**MECHANICAL**

Due to extensive root system, hand-pulling this plant is not a viable option. Mowing can be effective if done every 10 to 21 days throughout the growing season. Combining mowing with herbicides will further enhance control of Canada thistle.

*Integrated Weed Management:*

*Combining control methods for Canada thistle is imperative. This weed needs to be continually stressed, forcing it to exhaust root nutrient stores and eventually die.*

*Of all control methods, prevention is most important. Maintain healthy pastures and rangeland and continually monitor your property for new infestations.*

**HERBICIDES**

The following are recommendations for herbicides that can be applied to range and pasturelands. Always read, understand, and follow the label directions. Rates are approximate and based on equipment with an output of 30 gallons per acre. Please read label for exact rates. **The herbicide label is the LAW!**

HERBICIDE	RATE	APPLICATION TIMING
Aminopyralid (Milestone)	5-7 ounces/acre or 1 teaspoon/gal water	Apply in spring at the pre-bud growth stage and/or to fall regrowth. Add non-ionic surfactant 0.32oz/gal water or 1 qt/100 gal water.
Chlorsulfuron (Telar DF)	1-3 ounces/acre or 0.50 grams/1 gal water	Apply in spring during bud to bloom stage and/or to fall regrowth. Add non-ionic surfactant 0.32oz/gal water or 1 qt/100 gal water.
Clopyralid + 2,4-D (Redeem R&P)	3 pints/acre or 1.25 oz/gal water	Apply from rosette to bud stage when all plants have emerged. Add non-ionic surfactant @ 0.32oz/gal water or 1 qt/100 gal water. (Spring or Fall)
Picloram (Tordon 22K *This is a Restricted Use Pesticide*)	1 qt/acre or 1.0 oz/gal water	Spring - early bud stage and/or fall regrowth. DO NOT apply near or under trees or where soils have rapid permeability or where water level is high. Add a non-ionic surfactant @ 0.32oz/gal water or 1 qt/100 gal water.

Photos © Kelly Uhing, Colorado Department of Agriculture

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