

Meadow knapweed

Colorado Department of
Agriculture

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Key ID Points

1. Flowers are pink to purple and are about the size of a nickel.
2. Leaves are up to 6 inches long and 1 inch wide.
3. Bracts have papery-fringed margins.

Meadow knapweed Identification and Management



Identification and Impacts

Meadow knapweed (*Centaurea pratensis*) is a perennial that grows from a woody crown. The upright stems, grow from 20 to 40 inches tall and branch near the middle. Flower heads are solitary at tips of the branches, pink to purple in color, and 3/4 of an inch in size. Bracts are light to dark brown with papery-fringed margins. Lower leaves are lobed and upper leaves are linear. The leaves grow up to 6 inches long and more than 1 inch wide.

Meadow knapweed primarily reproduces by seed, but root and crown fragments re-sprout when disturbed by heavy equipment or cultivation. Meadow knapweed seeds are carried in rivers, streams, or irrigation water, in hay or by vehicles along roadsides. It is an attractive plant which some people plant as a garden ornamental. The seed viability for meadow knapweed is unknown. The site must be monitored for at least 10 years after the last flowering adult plants have been eliminated and treatments repeated when necessary.

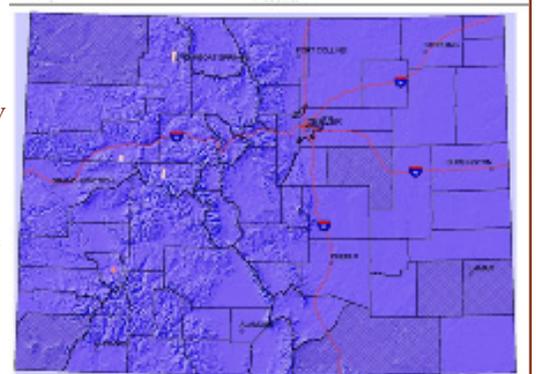
Habitat for meadow knapweed include moist sites, irrigated pastures, moist meadows, river banks, streams, irrigation ditches, roadsides, and openings in forested areas. The plant is native to Europe where

originally it was introduced (a cross between black and brown knapweed) as a potential forage species, but it has low palatability to grazing animals. Meadow knapweed outcompetes native plants and pasture species and reduces available forage for wildlife and livestock. It is not palatable or nutritionally sufficient for livestock and disrupts wetland habitat by displacing native plant species.

The key to effective control of meadow knapweed is preventing the establishment of plant communities by maintaining healthy native plant populations. If meadow knapweed is present, using a combination of control methods including; mechanical and herbicides to eradicate populations is effective.

Meadow knapweed is designated as a "List A" species in the Colorado Noxious Weed Act. It is required to be eradicated wherever found in the State. For more information visit www.colorado.gov/ag/weeds and click on the Noxious Weed Management Program. Or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.

Map of meadow knapweed infestation.



Photos © Above: Eric Coombs, Oregon Dept. of Agriculture; all others: Kelly Uhing, Colorado Department of Agriculture; map: Crystal Andrews, Colorado Department of Agriculture.

Centaurea pratensis

**CULTURAL**

Preventing the establishment of the Meadow knapweed is crucial, so maintaining healthy native plant communities is a priority. Contact your local Natural Resources Conservation Service for seed mix recommendations. Bare ground is prime habitat for weed invasion, so prevent bare spots caused by overgrazing.

**BIOLOGICAL**

Biocontrol agents are not included in the prescribed management plans by the State for List A Species. Eradication is the management objective of all List A's. For more information on biocontrol in Colorado, please contact the Palisade Insectary of the Colorado Department of Agriculture at 970-464-7916.

**MECHANICAL**

Hand pulling or digging is an effective control method when populations are small. Hand pulling should occur when soil is moist and be certain to pull all the roots. It is important to bag specimens carefully so as to not scatter seeds if the plant is flowering.

Integrated Weed Management:

Since Meadow knapweed has been identified in small quantities around Colorado, preventing the populations from spreading is important in management of the weed. Eradication requires intensive and persistent control efforts to effectively eliminate weed infestations and soil seed reserves. If populations occur, utilize hand pulling, cultural, and herbicide control methods for effective eradication.

HERBICIDES

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

Herbicide	Rate	Application Timing
Aminopyralid (Milestone)	7 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply in spring to early summer during bolting to bud growth stages or in fall. Add 1 qt./acre 2,4-D when plants are treated in the bolt to flowering phase.
Aminocyclopyrachlor + chlorsulfuron (Perspective)	4.75-8 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply from the seedling to the rosette growth stages. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not permitted for use in the San Luis Valley.
Additional herbicide recommendations for this and other species can be found at: www.colorado.gov/agconservation/CSUHerbicideRecommendations.pdf		

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