

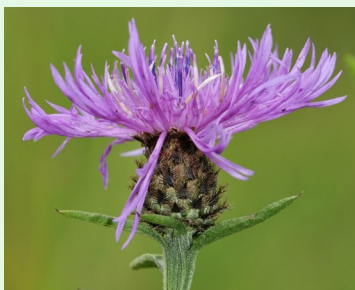
Landowners Guide to Controlling Meadow Knapweed

Lewis County Noxious Weed Control

Meadow knapweed *Centaurea x moncktonii* is classified as a Class B noxious weed and is included on the Washington States quarantine list. This herbaceous perennial, native to Europe, is thought to have been introduced to the U.S. as a contaminate in alfalfa seed, or intentionally introduced as a forage plant labeled “bull clover”. A hybrid of brown and black knapweeds (*C. jacea* and *C. nigra*), the adaptable nature of the meadow knapweed results in its ability to grow in a multitude of habitats such as wet meadow and pasture areas, forested areas, and along drainages or railroads. These types of habitats abound in Lewis County, making our lands vulnerable to widespread infestation. Once established, meadow knapweed outcompetes desirable forage plants, reducing grazing forage by as much as 63 percent. Meadow knapweed is also *alleopathic*, inhibiting the growth of other plants, further accelerating the development of dense populations. If meadow knapweed continues to spread, an estimated 209,000 acres of productive rangeland and an additional 662,000 acres of timberland would be directly affected. Potential impacts to Washington economic output could amount to \$34.6 million.



Identification. As a hybrid, meadow knapweed can have variable characteristics between the parent plants. Meadow knapweed is a perennial in the composite (sunflower) family. The upright branching stems are commonly 1 to 3 feet tall. The showy flowers are commonly purple, pink, and occasionally white. The solitary flowering heads are surrounded by light to dark brown bracts with papery, fringed margins. Bracts have a metallic gold sheen when plants are flowering. Meadow knapweed is usually found growing in the heavier clay soils typical of much of the county. Positive identification is difficult. Please contact Lewis County Weed Control if you need any assistance in identifying this plant.



black knapweed



brown knapweed



meadow knapweed



meadow knapweed rosette

Prevention and Early Detection. Purchasing weed free hay, and pasture seed will go a long way toward preventing the introduction of meadow knapweed on your property. Identifying and controlling a new infestation is always easier and more desirable than allowing it to go untreated. An early infestation will be a handful of young plants or “rosettes” that can be difficult to identify, as they are low to the ground, obscured by surrounding vegetation and likely will not flower the first year. Once established, knapweed can be very difficult to control and will typically take a number of years of repeated control efforts and monitoring.

Cultural Control. Good land management practices can reduce and even eliminate some populations of meadow knapweed. Timely seeding of an appropriate grass, or other crops, and fertilization are key components in a successful land management plan that will improve soil health and favor desirable crop growth over the meadow knapweed. Frequent cultivation of the infested ground and incorporating a fallow program prior to pasture reseeding can also help to control and eliminate populations. Long-term grazing can provide some effective control, but timing is critical, as flowering buds should be prevented from maturing and going to seed.

Mechanical Control. Like grazing, mowing can be used as a control method, but timing is critical. Mowing should occur 2-3 times in a season, eliminating seed production of the meadow knapweed by not allowing the plant to flower. Manual removal by hand pulling or digging is possible, but the long tap root can make the task arduous. Manual removal is best done in the spring, when moisture remains in the soil, and the population is relatively small.

Chemical Control. Herbicide can also be used as an effective control method as part of an Integrated Weed Management Plan. Herbicide selection must be made based upon the habitat (and intended land use) in which the chemical is to be applied, i.e. pasture, forestry, landscape, etc. Replanting of the treated area after chemical treatment is also important, as exposed soil only invites more unwanted weedy species. Select a competitive cover crop, or a perennial grass to revegetate the space.

[PNW Weed Management Handbook](#) identifies multiple chemicals that are effective in controlling meadow knapweed, but as with all control methods, re-treatment will be required for multiple years.

[Lewis County Noxious Weed Control](#) is available to make site specific recommendations for the chemical treatment of meadow knapweed.

Biological Control. The blunt knapweed flower weevil, *Larinus obtusus*, feeds on the plant in both the larval and adult stages. As with any biological control, this will NOT result in eradication of the plant. For more information about the biological control of meadow knapweed, please visit the [WSU Extension Integrated Weed Control Project](#).

Sources:

<https://www.nwcb.wa.gov/weeds/meadow-knapweed>

<https://kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/weed-identification/meadow-knapweed.aspx>

https://bcinvasives.ca/documents/Knapweed_TIPS_Final_08_06_2014.pdf

<https://invasivespecies.wa.gov/wp-content/uploads/2019/07/EconomicImptsRpt.pdf>



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