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### MEADOW KNAPWEED MANAGEMENT TIPS

Meadow knapweed, a member of the Sunflower family, is a perennial forb with a deep, stout taproot. Flowers are pinkish-purple, with bracts that have a tan to dark-brown bushy fringe. Mature plants usually grow two to four feet tall. Reproduction is only by seed, but root and crown fragments can re-sprout. Meadow knapweed displaces native vegetation, reducing forage for wildlife and livestock.



**Management must be planned over several consecutive growing seasons at a site and should focus on preventing seed production and dispersal. The area should be monitored for new growth until the seed bank is depleted and any new plants that emerge from seeds should be controlled appropriately.**

## Effective control measures for the management of meadow knapweed include:

- 1. Mechanical (hand pulling & digging):** Hand pulling and digging can be very effective for small infestations if the area is monitored and new plants are removed for several seasons. Remove as much of the root as possible and place flowering plants in bags to prevent seed dispersal. Wear gloves when hand pulling.
- 2. Herbicide: Always follow directions on the label. The label is the law!** Calibrate your equipment to ensure that you are adding the proper amount of herbicide to your tank. The following herbicides are commonly used to control meadow knapweed. **DO NOT use these herbicides on lawns, turf or ornamental sites - read the label.** *For the most effective control, apply herbicides in the rosette stage up to the early bolting stage.*

### Mixing rates in small backpack or hand sprayers are as follows:

Tordon 22K (restricted use herbicide):	1 oz herbicide to 1 gallon of water.
Curtail:	1 - 2 oz herbicide to 1 gallon of water.
Milestone:	1 – 1.25 teaspoons herbicide to 1 gallon of water.
GrazonNext HL:	1 oz herbicide to 1 gallon of water.
*Opensight:	1/2 - 2/3 teaspoon herbicide to 1 gallon of water.
*Chaparral:	1/2 – 2/3 teaspoon herbicide to 1 gallon of water.
Duracor:	0.5 oz herbicide to 1 gallon of water.
2,4-D:	2 oz herbicide to 1 gallon of water.

### Rates in large sprayers are as follows:

Tordon 22K (restricted use herbicide):	1 quart herbicide per acre.
Curtail:	1 – 2 quarts herbicide per acre.
Milestone:	5 - 7 oz herbicide per acre.
GrazonNext HL:	1 quart herbicide per acre.
*Opensight:	2.5 – 3.3 oz herbicide per acre.
*Chaparral:	2.5 – 3.3 oz herbicide per acre.
DuraCor:	12 oz herbicide per acre.
2,4-D:	2 quarts herbicide per acre.

**NOTE:** Adding a surfactant to your tank mix may enhance the performance of your herbicide and is required for certain herbicides (read the label). Add 0.5 - 1 oz per gallon of water for backpack sprayers or 1 – 2 pints per 100 gallons for large sprayers.

**\* denotes that a surfactant is required for the herbicide to be effective**

- 3. Cultural (revegetation):** Planting and maintaining desirable plant species to compete with meadow knapweed in susceptible areas, such as areas that have been disturbed, is highly recommended.
- 4. Biological (insects):** Some of the insects that feed on other knapweeds will feed on meadow knapweed as well.
- 5. Grazing:** Sheep and goats can be used to reduce meadow knapweed seed production and biomass.
- 6. Integrated management:** Management of meadow knapweed is more effective when more than one strategy is used.

**Reference to commercial products or trade names does not imply discrimination or endorsement by the Gallatin County Weed District.**