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MUSK THISTLE MANAGEMENT TIPS

Musk thistle, a member of the Sunflower family, is a biennial forb with a taproot. The numerous flower heads are 1.5 to three inches in diameter with spine-tipped bracts, and are usually bent over. The flowers are deep rose, violet or purple and the stems are spiny. Leaves are dark green with a light green midrib, and are deeply-lobed with spiny margins. Plants usually grow three to six feet tall. Reproduction is only by seed and one plant can produce up to 20,000 seeds. **Seeds can remain viable for up to ten years.** Musk thistle is not very palatable to livestock; therefore, pastures are susceptible to invasion. Livestock will occasionally feed on the flower heads. Due to the spines on this plant, dense infestations are difficult to walk through.



Management and control efforts should focus on reducing seed production and must be planned for many consecutive years at the existing site in order to prevent seed formation/dispersal and to monitor for, and appropriately treat, any new plants that emerge.

Effective control measures for the management of musk thistle include:

- 1. Mechanical (hand pulling, digging & mowing):** Hand pulling and digging can be very effective for small infestations. Remove as much of the root as possible, and place flowering plants in bags to prevent seed dispersal. Repeated mowing when the plant bolts (but before flowering) will help prevent seed formation.
- 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 musk thistle. **Do NOT use these herbicides in lawns, turf or ornamental settings – read the label.** *For the most effective control, apply herbicides when plants are in the rosette stage up to the early bolting stage.*

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

Milestone:	2/3 – 1 teaspoon herbicide to 1 gallon of water.
GrazonNext HL	1 oz herbicide to 1 gallon of water.
*Opensight:	1/2 teaspoon herbicide to 1 gallon of water.
*Chaparral:	1/2 teaspoon herbicide to 1 gallon of water.
DuraCor:	0.5 oz herbicide to 1 gallon of water.

Rates in large sprayers are as follows:

Milestone:	3 - 5 oz herbicide per acre.
GrazonNext HL	1 quart herbicide per acre.
*Opensight:	2 – 2.5 oz herbicide per acre.
*Chaparral:	2 – 2.5 oz herbicide per acre.
DuraCor:	12 oz herbicide per acre.

NOTE: Adding 2,4-D to your tank with any of the above herbicides may improve performance. Add at the rate of 1 – 2 quarts per acre for large sprayers or 1 – 2 ounces per gallon of water for backpack sprayers. GrazonNext HL is a premix of Milestone and 2,4-D.

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 & tilling):** Areas that are heavily infested should be treated with herbicides, followed by a revegetation program using competitive species. Maintaining healthy pastures and rangeland and preventing overgrazing and bare spots will help prevent musk thistle from establishing. Tilling the roots several inches below ground will also help control musk thistle.
- 4. Biological (insects):** There are some insects that feed on the seed head as well as the root crown.
- 5. Integrated management:** Management of musk thistle 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.