



**Gallatin County Weed Control District  
901 N. Black  
Bozeman, MT 59715  
(406) 582-3265**

## **MUSK THISTLE MANAGEMENT TIPS**

Musk thistle is a biennial with a taproot and is a member of the Sunflower family. The flower heads are numerous, 1.5 to 3 inches in diameter with spine-tipped bracts and are usually bent over. The flowers are deep rose, violet or purple. The stems are spiny. The leaves are dark green with a light green midrib, deeply lobed with spiny margins. Plants usually grow 3 to 6 feet tall. Reproduction is only by seed and one plant can produce up to 20,000 seeds. Seeds can remain viable for up to 10 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 make it difficult to walk through.



**Management and control efforts must be planned for several consecutive growing seasons in order to prevent seed formation/dispersal and to monitor the existing sites for any new plants that emerge and to treat them appropriately.**

**Control measures that have been found to be effective for the management of musk thistle include:**

- 1. Mechanical treatment (Hand-pulling, Digging, & Mowing):** Hand pulling and digging can be very effective for small infestations. Try to get as much of the root as you can 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 treatment: Be sure to always follow directions on the label. The label is the law!** Be sure your equipment is calibrated so that you can add the proper amount to your tank. The following herbicides are commonly used to control musk thistle.

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

Milestone:	1/2 – 2/3 teaspoon herbicide to 1 gallon of water
*Chaparral:	1/4 – 1/2 teaspoon herbicide to 1 gallon of water
*Escort:	1/8 teaspoon herbicide to 1 gallon of water
*Telar:	1/8 teaspoon herbicide to 1 gallon of water

**Rates in large sprayers are as follows:**

Milestone:	3 - 5 oz herbicide per acre
*Chaparral:	1 – 2.5 oz herbicide per acre
*Escort:	1/2 - 1 oz herbicide per acre
*Telar:	1/2 - 1 oz herbicide per acre

**NOTE:** Adding 2,4-D to your tank with any of the above herbicides will 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.

**NOTE:** Be sure to add a surfactant to your tank mix, which will enhance the performance of your herbicide and is required for certain herbicides (read the label). (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 will need to be treated using herbicides and then followed up by a revegetation program using competitive species. Maintain healthy pastures and rangeland and prevent overgrazing and bare spots. This will help prevent musk thistle from gaining a foothold. Tilling the roots several inches below ground will 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 management strategy is used.

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