

March 31, 2015

MUSK THISTLE CONTROL

The musk thistle control season is now upon us. First found in Nebraska in the 1930's, this statewide noxious weed is alive and doing well this spring. Musk thistle is a foreign invader which has caused serious infestation problems in pastures and roadside areas of Nebraska. The species is known to occur on many sites, including rangeland, pasture, old alfalfa stands, fallow ground, fields, vacant lots, roadsides, railroad right-of-ways, and areas of disturbance.

Musk thistle is primarily a biennial or winter annual species. As a biennial, seed will germinate in the spring and plants remain as rosettes during the entire growing season. Upon surviving a winter, plants will bolt, flower, and produce seeds, thus taking parts of two growing seasons to complete their life cycle. Winter annuals emerge in the late fall with moisture. These plants will go through the winter and produce seed the following year.

The stem is erect, branched, with spiny leaves extending down the stem to give a winged appearance. The leaves are dark green with light green midribs. The leaf margins are mostly whitish in color. Musk thistle reproduces only by seed. Thus, the goal is to reduce and/or eliminate seed production. Control options include, biological, cultural, mechanical, and chemical methods.

Two predator weevils, the flower head weevil, (*Rhinocyllus conicus*), and the rosette weevil, (*Trichosiromus horridus*) were purposely introduced from Europe and have become established in Nebraska and at least ten other states. The main flower turning from pink to white early in the flowering process is a key indication that these weevils are at work. These biological control agents aid in reducing populations of the thistle. In areas of Nebraska where the weevils are present an 80- to 90-percent reduction in thistle population has occurred. These weevils are increasing and continuing to disperse naturally. While they don't eliminate musk thistle, they have made it more like a native thistle with varying populations contributing to our biological diversity as much a taking away.

Cultural control practices include good grazing management in pastures and care of grass covered roadsides and lawns. The competition keeps musk thistle populations at reduced levels. Proper grazing maintains and/or improves the vigor of competing grasses and forbs.

Mowing at the bloom stage will prevent seed production, but it usually takes two or three mowing's at 2-3 week intervals to kill musk thistle. Another option is to cut off individual plants 2-4 inches below the soil with a tile spade and leather gloves. It is best to remove any heads that have bloomed and destroy them in a controlled fire.

Musk thistle plants can be controlled by herbicides applied during the seedling and rosette stages of growth in the fall or before April 1. Common herbicides such as 2,4-D, dicamba, Milestone and Grazon P+D are very effective on rosettes before bolting. Treat musk thistle before it starts to bloom. Although some herbicides such as Ally have been shown to reduce seed viability when applied at the bloom stage it is unlikely that all seed production will be eliminated. It only takes one seed to keep the population going.

Always read the label with particular attention to precautionary statements, grazing/haying restrictions, and rates of application.

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