

MUSK THISTLE

and its control

**Agricultural Extension Service
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Musk thistle is spreading rapidly in areas of eastern Idaho, especially in counties bordering Wyoming and Montana. At the present time there are localized infestations extending from Bear Lake to the Lolo Pass in northern Idaho. It threatens to create a serious weed problem for landowners and operators by infesting pastures, meadows, fields, forests, roadsides and waste areas. It reduces forage quality and yields. The plant's long, sharp, thick spines limit the use of infested areas by livestock or for recreational purposes.

Recognize It

Musk thistle, *Carduus nutans* L., is also known as nodding or plumeless thistle. The flower heads are large, reddish purple and solitary at the ends of the stem. These heads nod or hang down as the plant reaches maturity. There may be as many as 50 heads to a plant and up to 1,000 seeds per head. The seeds do not have a plume or parachute like the seeds of bull thistle or Canada thistle. The attractive flowers make this thistle very spectacular and aid in its identification.

The plant's spines are prominent on the leaves and stems. The dark-green leaves are deeply cut and have a light-green midrib. The outer edge of each spine-tipped leaf segment is



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grayish green. The leaf bases extend around and beyond the stem giving the leaves a winged or finned appearance. The plant may grow 7 feet tall.

Musk thistle is classed as a biennial. However, it often performs as a winter annual since the seeds may germinate late in the summer and the plant then develops flowers and seeds the following season.

Where Did It Come From?

Musk thistle is a native of Europe and Asia. It has been present in the eastern United States for perhaps 75 years. Since its introduction it has moved westward steadily. In recent years it has become a serious problem in Nebraska and

other midwestern states. It apparently has been in Idaho for several years since it is listed in "Flora of Idaho" published in 1952 by R. J. Davis. The thistle first became prominent and of concern to eastern Idaho landowners about 5 years ago. It is prevalent in Bear Lake, Caribou and Jefferson counties, and is probably present in surrounding counties. Recently it was found along the Lolo Highway where several adjacent pastures are badly infested. It spreads readily and rapidly by seed.

Control With 2,4-D

Like most biennial or winter annual plants, *musk thistle* is most susceptible to control when it is in the rosette stage of growth. Work by the University of Nebraska and the Agricultural Research Service of USDA shows that 1 to 2 pounds of 2,4-D acid in the low volatile ester formulation give 100 percent control when applied on the young rosettes. September or October applications give better results than spring applications.

Spring treatment with 2,4-D must be made before the flower stalk is 6 inches tall and preferably before it is visible. Musk thistle is one of the earliest thistles to bloom. Flower stalk elongation starts about a month before bloom. Spring application should be made from mid-May to early June in order to kill the plant before the flower stalk begins to elongate.

Repeat sprayings are necessary to eliminate the thistle from an infested area. Most of the

seeds germinate the first year, but some of them remain dormant and may not germinate for 3 to 4 years. In heavily infested areas it may be necessary to make a 2,4-D application both fall and spring for several years. Never let a plant go to seed.

Cultural Control

Like all biennials and winter annuals, musk thistle can be controlled by cultural means. It does not become a problem in spring planted crops because cultivation kills the young seedlings. For scattered plants, cutting the plant off below the crown with a shovel or hoe will kill it.

Grasslands that are well fertilized and not over-grazed will effectively resist invasion by musk thistle. However, all adjacent infestations must be destroyed since even the best managed grasslands are not immune to devastating invasions.

Be Aware

Musk thistle is a . . .

prolific seed producer

spreads rapidly

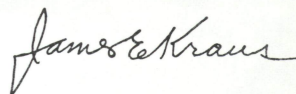
acts as a biennial or winter annual

is most troublesome in pasture and waste areas

must be sprayed before the flowering stalk

develops

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