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Control Musk Thistle Rosettes This Spring
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If landowners saw purple musk thistle blooms last May or June, now is the time to plan control strategies for the noxious weed while it is in the vulnerable rosette stage. Musk thistle was first identified in Payne County in 1944 and was declared a noxious weed by the state of Oklahoma in 1994. All landowners whose land is infested with musk thistle are required to develop a "Plan of Action" for musk thistle control.

The musk thistle is a biennial beginning its life cycle as a rosette in September and remaining in the rosette stage for 90% of its life until the following March or April when plants "bolt" or begin their upright reproductive growth stage. Musk thistle reproduces only by seed (10,000 seeds per plant); therefore the best strategy for control is to prevent seed development. An integrated approach using several control methods may be used to achieve this goal. The best time to control biennial thistles with herbicides is late fall or early spring in the rosette stage, when it is more susceptible to herbicides. Since herbicides used to kill musk thistle may kill pasture legumes, spot or patch spraying is advised. Rosette leaves may be identified by their deeply lobed margins, lack of hairs, and dark green color with a light green mid-rib. Leaf margins are silver gray with a spine on each lobe. Sprays are effective even after light frosts as long as active rosette foliage is still present. Spring spraying should be accomplished when air temperature is at least 50 degrees. A general rule of thumb is to use indicator plants like forsythia shrubs. When forsythia starts blooming bright yellow, then ambient temperatures are high enough to initiate growth or herbicide susceptibility in musk thistle or other broadleaved weeds. Recommended herbicides may be found in the OSU Extension Fact sheet #7318 or Musk Thistle Management Action List L-308.

Mechanical methods of control may also be used, including mowing and tillage or hand cutting and digging. These methods prevent viable seed formation. Flower head formation occurs 45-55 days after bolting in March or April with seed dispersal following seven to ten days after blooming. Therefore mowing, hand cutting, or digging must occur before the appearance of pink in the flower heads. Up to 80% of musk thistle control was realized by performing a second mowing.

Biological control using both head weevils and rosette weevils are proving successful especially in environmentally sensitive areas. Thistle populations in these weevil-released areas have shown 90-95% reductions but success is measured over 8-10 year periods. Head weevils feed on flower heads, reducing the potential seed formation. Rosette weevils feed on foliage of young rosettes, weakening the plants.

Landowners may also reduce the introduction of musk thistle in their pastures by planting weed free seed, feeding hay free of musk thistle seed and cleaning equipment before leaving infested areas.

For more information or technical assistance in controlling musk thistle and other invasive plant species such as eastern red cedar, bois d' arc trees, or sericea lespedeza, landowners may contact the NRCS/Kay County Conservation District at 580-362-2438 or 580-362-3362.

Photo caption (Musk thistle.jpg): Flower heads of musk thistle seen blooming last May would indicate control measures are needed this fall or next spring while plants are in the vulnerable rosette stage.

(Musk rosette with keys.jpg): Herbicide vulnerable musk thistle rosette (shown to scale with keys) should be controlled in fall or early spring before elongated reproductive growth or “bolting” occurs.

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