Rangeland-Pasture Recommendations

Scotch thistle Identification and Management

Scotch thistle (*Onopordum acanthium*) is a non-native biennial forb that reproduces solely by seed. A biennial is a plant that completes its lifecycle within two years. During the first year of growth, Scotch thistle appears as a rosette in spring or fall. During the second year in mid to late spring – the stem bolts, flowers, sets seed, and the plant dies. A prolific seed producer, Scotch thistle can produce up to 14,000 seeds per plant. Therefore, the key to managing this plant is to prevent seed production.

Scotch thistle can grow up to 12 feet tall. Stems are numerous, branched, and have broad, spiny wings. The leaves are large, green, spiny, and covered with fine dense hair giving the leaf a woolly appearance. The flowers are violet to reddish in color, numerous (70-100/plant), and are surrounded by spine-tipped bracts. You can expect to see flowers from mid-June to September.

Due to the robust, spiny nature of Scotch thistle, this plant can act as a living barbed wire fence, making areas impassible for wildlife, livestock, and people. Scotch thistle invades rangeland, overgrazed pastures, roadsides, and irrigation ditches. It also prefers moist areas adjacent to creeks and rivers.

On the backside of this sheet are Scotch thistle management recommendations. If you have any questions, please contact the Weld County Public Works Dept., Weed Division at (970) 304-6496 ext. 3770. Please visit our website www.weldweeds.org.

Recommended management methods:

Cultural – Establishment of selected, aggressive grasses can be an effective cultural control of Scotch thistle. Contact your local CSU Extension office or Natural Resources Conservation Service office for seed mix recommendations. Good grazing management will stimulate grass growth and keep pastures healthy. Healthy pastures may be more resistant to Scotch thistle invasion. Bare spots caused by overgrazing are prime habitat for weed infestations.

Mechanical – Any mechanical or physical method that severs the root below the soil surface will kill Scotch thistle. Mowing or chopping is most effective when Scotch thistle plants are at full-bloom. Be sure to properly dispose of the flowering cut plants, since seeds can mature and become viable after the plant has been cut down.

Biological – There are no biological control insects available that will control Scotch thistle.

Herbicides – The following are recommendations for herbicides that can be applied to range and pasturelands. Always read, understand, and follow label directions. The herbicide label is the LAW!

Herbicide	Rate	Application Timing/Comments
2,4-D Amine	1 qt./acre or 1 oz/gal water	Spring/fall rosette – before flowering stalk lengthens. DO NOT apply when outside temperatures will exceed 85 degrees. Add non-ionic surfactant @ 0.32 oz/gal water or 1 qt/100 gal water.
Curtail	1.5 – 2 qts./acre or 1.5-2.0 oz/gal water	Spring rosette to pre-bud stage and/or fall rosette. Add non-ionic surfactant @ 0.32 oz/gal water or 1 qt/100 gal water.
Clarity	1 qt./acre or 1.0 oz/gal water	Spring rosette – before flowering stalk lengthens and/or late fall treatment of rosettes. DO NOT apply near or under trees and/or shrubs or when outside temperatures will exceed 85 degrees. Add a non-ionic surfactant @ 0.32oz/gal water or 1 qt/100 gal water.
Milestone	3 to 5 oz/ acre	Apply to plants in the spring and early summer at rosette or bolting stage or to the fall rosette. It is permissible to treat seasonally dry wetlands and transitional areas between upland and lowland sites. DO NOT rotate to a broadleaf crop within 1 year of application. Add a non-ionic surfactant @ 0.32oz/gal water or 1 qt/100 gal water.