CODE ENFORCEMENT

Canada Thistle Identification and Management

Background Information

History and Impacts

Canada thistle (Cirsium arvense) is native to Europe and northern Asia and was brought to the United States in the early 1600's as a contaminant in grain. Natural plant communities that are threatened by Canada thistle include prairies, pastures, fields and meadows that have been impacted by disturbance. Canada thistle is an aggressive competitor. This weed has a long creeping root system that will steal precious nutrients and water from native vegetation. The height of this weed also shades the ground below making it very difficult for grasses and forbs to grow.

Habitat

Canada thistle grows in meadows, prairies, fields, pastures, and waste places. It does best in disturbed upland areas and also invades wet areas with fluctuating water levels such as stream bank meadows and wet prairies. It can be found in clay to gravely soils.

Identification

Plant: Canada thistle is a herbaceous perennial in the aster family (asteraceae) with erect stems 1 to 4 feet tall, prickly leaves and an extensive creeping root system. Fibrous tap roots may extend 6 feet deep while horizontal roots stemming from the tap roots produce new shoots. Plants are either male or female.

Leaves: Leaves are attached alternately or singly along the stem; they are lance-shaped, lobed and spine-tipped. The leaves get gradually smaller as they progress up the stem.

Stems: The stem is branched and sometimes hairy, but unlike most thistles it lacks spines.

Flowers: Flowers are usually purple to lavender or sometimes white. They appear from June through October, and occur in rounded, umbrella shaped clusters with each flower being ½ to ¾ inch in diameter.

Seeds: Small light brown seeds break off easily, and are wind dispersed. One plant can produce 1,500 to 5,000 seeds that are capable of germinating eight to ten days after flowers open. The seeds remain viable in the soil for up to 20 years, however a low percentage of the seeds are actually viable.

Reproduction and Spread

The main method for reproduction and spread is new sprouting from the extensive creeping root system. It also spreads by windborne seeds.

Control Information

Integrated Pest Management

The preferred approach for weed control is Integrated Pest Management (IPM). IPM involves selecting from a range of manual, mechanical, chemical, cultural and biological control methods to match the management requirements of a specific site. Successful management will require dedication over a number of years, and allow for flexibility of methods used as appropriate to the current situation. Plan to revisit the site to control plants that have survived or sprout after initial control efforts. Persistence is necessary.

Control practices should be selected to minimize soil disturbance or efforts. Minimizing disturbance also avoids creating more opportunities for germination of weed seeds. Whenever possible, control should be done before plants are flowering to prevent seed production.

Early Detection and Prevention

Early detection and prevention is the key to weed control. Prevent plants from spreading away from existing populations by washing tools and boots and cleaning vehicles, equipment and animals that have been in infested areas. Off-road vehicles create disturbances and carry weeds. Clean off-road equipment and avoid driving in infested areas. Communicate weed control needs with neighbors and persons working in infested areas, awareness will increase prevention.

Manual

Hand pulling is ineffective because of the extensive root system that re-sprouts when disturbed.

Mechanical

Small infestations can be repeatedly cut or mowed with the intent of exhausting the energy supply of the roots. A successful mechanical control program requires multiple seasons, and multiple treatments within a season, otherwise a singular disturbance will simply stimulate more growth.

Cultural

Planting competitive crops or grasses can be effective in controlling an infestation of Canada thistle if used with other control practices.

Chemical

Herbicide application is an effective control method for Canada thistle. The most important opportunity for control is the fall when Canada thistle is recharging its root system for the next growing season. Fall is the ideal time to maximize injury to the thistle's root system because systemic herbicides move through plants with the sugars being sent to the roots.

Aminopyralid (Milestone), chlorsulfuron (Telar), clopyralid + 2,4-D (Curtail) are all effective selective broadleaf herbicides. Glyphosate is also effective but is not selective.

Precautions: Herbicides should only be applied at the rates and for the site conditions and/or land usage specified on the label of the product being used. Follow all label directions, the label is the law. For your personal safety, at a minimum wear gloves, long sleeves, long pants, closed toe shoes, and appropriate eye protection. Follow label directions for any additional personal protection equipment needed.

Biological

Approved biocontrol agents including a seed head weevil, a crown weevil, and a stem gall fly are established in Oregon.

Summary of Best Management Practices

- Apply herbicides in the fall before the first killing frost.
- Be committed to repeated treatments due the extensive root system.

If you have any questions or need additional assistance or would like to make a complaint, please contact Julie Craig, Code Enforcement Officer at (541)388-5527 or visit our website at www.bendoregon.gov/weeds

Thank you to Deschutes County for providing the information above.