

FC Noxious Weed Control Best Management Practices



Physical: 502 Boeing St Pasco WA
Mail: 1016 N 4th Ave Pasco WA 99301
Phone: 509-545-3847
Email: fcwb@co.franklin.wa.us
Website: fcweedboard.com

Scotch thistle

Onopordum acanthium

Family: Asteraceae

Class B Noxious Weed
Control & Containment

Background Information

Scotch thistle was introduced into the United States as an ornamental in the late 19th century. It is a member of the Asteraceae (Sunflower) family. This plant invades disturbed roadsides, ditch banks, rangeland and pastures. Scotch thistle is a branched, robust biennial that often grows 8 feet or more in height and 6 feet in width. Winged stems may be up to 4 inches wide at the base. As a biennial, Scotch thistle typically lives for 2 growing season. Seeds usually germinate in late fall, but germination can occur at other times as well. During its first year, Scotch thistle produces a rosette with a taproot that may extend down a foot or more. Early in the second year the plant bolts with flowering occurring mid June to October. Violet globe-shaped flowers are borne in clusters of 2 or 3 on branch tips. Flower heads have stiff needlelike bracts at the base. Seeds are dispersed locally by wind, humans, water, livestock, and over longer distances by wildlife.

Impacts

Scotch thistle is a serious problem in rangeland. Infestations of Scotch thistle reduce forage production, prohibiting land utilization for livestock. Sharp spines on the leaves, stems and seed heads discourage livestock and wildlife from grazing. Dense stands create a natural barrier that prevents movement by livestock, wildlife, and humans and may exclude animals from access to water. The seeds of Scotch thistle plants contain a water-soluble germination inhibitor that causes a high percentage of seeds to remain dormant in the soil. Populations expand rapidly on infested land during wet years as large amounts of seed break dormancy.



If untreated, Scotch thistle forms impenetrable barriers, impeding livestock and wildlife movement as well as depriving animals access to forage and water.

Key Identifying Traits



Winged spiny stems increase the hazard to animals and humans.

- ◆ Stems are erect, branching, sharp spiny leaf wings extend down to the stem.
- ◆ Basal leaves may be over 2 foot long and a foot wide.
- ◆ Leaves are coarsely lobed, fine hairs on both sides with sharp margins.
- ◆ Hairy leaf surface causes a grayish-green appearance.
- ◆ Flowers are dark pink to violet, 1 to 2 inches in diameter.



Upper and lower leaf surfaces are covered with a thick mat of woolly hairs giving the plant a gray-green appearance.

Biology and Ecology

- ◆ Biennial forb that reproduces solely by seed.
- ◆ Each plant may produce up to 40,000 seeds, viable up to 40+ years.
- ◆ Water-soluble coating on seeds serves as a germination inhibitor requiring moisture to break dormancy.



Infestations of Scotch thistle are rapidly gaining a foothold.

Control Measures

Prevention: Preventing the establishment of populations through best management practices is the most cost effective method of control. Discontinue soil disturbance activities that can spread seed.

Biological: None available at this time.

Cultural: Healthy competitive vegetation reduces open spaces which lessens the chance for invasion. Do not allow animals to overgraze rangeland and pasture as this opens areas to invasion.

Mechanical: Plants can be dug up but the entire root ball must be destroyed to avoid regrowth.

Chemical: Any of the following herbicides can be used in the rosette stage or for fall regrowth 2,4-D + Dicamba (Weedmaster), Aminopyralid (Milestone), Aminopyralid and Metsulfuron (Chaparral or Opensight). Always add a surfactant to penetrate the hairy leaf surface. Established infestations will require repeated applications and follow up. Survey your land as often as possible to determine the extent to which Scotch thistle has infested or re-infested your ground or property.

ALWAYS FOLLOW LABEL INSTRUCTIONS, THE LABEL IS THE LAW

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Photos: James Parks, WA State NWCB, and Rich Old, XID Services Inc.

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