

STEVE'S Weed of the Month

Scotch Thistle

Also Known As: woolly thistle, cotton thistle, heraldic thistle.

Scotch Thistle is a **Class B Weed**. In regions where a Class B species is already abundant, control is decided at the local level, with containment as the primary goal.

Scotch Thistle (*Onopordum acanthium* L.), a member of the Aster (sunflower) family, was introduced to this country from Europe or eastern Asia. In the plant's first year, it forms a rosette, with basal leaves that grow up to 2 feet long and 1 foot wide and a stout, fleshy taproot that can extend down a foot or more. In its second year, the plant bolts. Its main stem can be 4 inches wide at the base. The plant's upper leaves are deeply lobed with long, stiff spines along the margins, extending alternately down the stems as spiny wings. Scotch thistle, with its extensive branches, can grow to 5 feet in diameter and often reaches 8 feet in height. The plant appears grayish-green in color due to a covering of fine white hairs. The plant produces purple flowerheads, 1-2 inches in diameter, in mid-summer. The globe-shaped flowerheads are borne in groups of 2 or 3 on branch tips, with stiff spiny bracts at



the base. The flowerheads remain upright, rather than nodding as is the case with Musk thistle flowers, and the stems below the flowerheads are leafy. Scotch thistle is often found in disturbed areas, such as along roadsides, waste areas and burned areas. The weed thrives on river and stream banks, but poses a particular problem in pastures, grain fields, and rangelands. Infestations of Scotch thistle reduce

forage production, and dense colonies of the large, spiny plants create impenetrable barriers to livestock, wildlife, and people.

Scotch thistle is a prolific seed producer. Seed production per plant varies widely from 8,400 to 50,000 seeds, depending largely on the number of flowers, each head having a potential of over 100 seeds. A large percentage of the seeds will be viable for 5 years, and some up to 15 years. Seed dispersal is typically by water, wind, animals, and human activities. Scotch thistle is usually a biennial, although it can behave as an annual or short-lived perennial, depending on time of germination. Seedlings that produce during late fall behave as true biennials.

Control Methods

Cultural Control: *Control of Scotch thistle starts with inhibiting its establishment in the first place.* Proper management of perennial grasses using good grazing practices and attending to disturbed areas by seeding them with competitive native perennials will hinder the weed's establishment. Healthy pasture is particularly important in the fall when most Scotch thistle seeds germinate. ***For existing infestations, whichever control method is used, every effort should be made to prevent the established plants from going to seed.*** Eradication of infestations requires at least six years of controlling all germinating seedlings.

Mechanical Control: Small areas can be controlled by digging if the plants are severed below the soil surface and all leaves are removed in the process, otherwise the plants will grow back. Likewise, cultivation can be effective if done properly. Mowing's effectiveness in controlling Scotch thistle is limited in that it does not kill the plant and only reduces seed production if timed so that seed heads are prevented from maturing. Mowing should occur immediately before flowering or when the plants are just starting to flower. Mowing too early may only serve to delay flowering, while mowing too late may allow viable seed to continue to develop even after cutting. With the wide variety of plant maturity, a single mowing will probably not be sufficient. Regardless, reducing vegetative matter by mowing will allow fall herbicide use to be more effective.

Chemical Control: Herbicides effective in controlling Scotch thistle include picloram, dicamba, 2,4-D, dicamba + 2,4-D, chlorsulfuron, metsulfuron, clopyralid and aminopyralid. Herbicide treatments should be applied in the spring before the plants bolt, or to rosettes in the fall.



Rosette

Note: Some of these active ingredients are only registered on a subject of the sites listed above.

**More information can be found in the
[PNW Weed Management Handbook](#)**

Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

Biological Control: No biological agents are currently available in the United States for Scotch thistle control, although insects are being evaluated for release. Young plants can be grazed with sheep. Goats will also graze Scotch thistle, reducing plant numbers and preventing seed production.

Questions: contact [Steve Van Vleet](#) or by phone, (509) 397-6290