

# **INTEGRATED WEED MANAGEMENT of SCOTCH THISTLE**

**The mature plant can be eight feet high**



**Scotch thistle rosettes can be very large**



**Seedling rosettes are about the size of a quarter**

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## **SCOTCH THISTLE**

### ***(Onopordum acanthium)***

A single Scotch thistle is imposing enough, but an entire colony can ruin a pasture or destroy a park or campsite. Besides creating an impenetrable barrier to man or beast, Scotch thistle nearly eliminates forage use by livestock and big game species such as deer and elk. Known infestations include most of the Pacific Northwest along with Colorado, Wyoming, Nebraska, and South Dakota.

Scotch thistle is a biennial, producing a large rosette of spiny leaves the first year. The second year the weed transforms into a coarse branching plant up to eight feet tall and five feet in diameter. Under poor growing conditions, the plants may stand less than a foot tall, but can produce nearly as many seeds as the larger plant.

Scotch thistle leaves are deeply lobed with long, stiff spines along the margins. The leaves have winged appearance that continues down the stems of the plant. Fine hairs give the plant a grayish appearance. Purple flowers, more than an inch in diameter, are produced in the summer. Flower heads remain upright, rather than nodding as Musk thistle flowers do. Stocks supporting the flowers are leafy.

Infestations of Scotch thistle often start in disturbed areas such as roadways, campsites, burned areas, and ditch banks. The weed adapts best to areas along rivers and streams, but can be a serious problem in pastures, grain fields, and range areas.

No single control method should be used in managing weeds. A combination of methods (IPM) should be used. An integrated pest management plan deals with prevention as well as control. Eradication of weed species is often not a practical goal but in most cases reducing infestation to manageable levels should be the objective.

Control of Scotch thistle starts with good grazing management and attention to disturbed areas where the plants can become established. Small infestations should be eradicated before they spread.

### **Cultural**

Plant competition is an effective way to prevent the invasion of musk thistle. Proper management of perennial grasses will inhibit the establishment of this weed.

Overgrazing is a major cause of perennial weed invasion. In Douglas County, one horse requires 35 to 40 acres of pastureland if no supplemental feed is provided. Residents should consider the above facts when planning recreational or hobby activities as it pertains to horses. A general rule of thumb to prevent overgrazing, is the take-half, leave-half principle. A stand of grass will maintain or even improve its condition if no more than one-half of its annual production is used. In other words, animals could graze until, on average, fifty percent of the grass has been utilized. Animals would then be removed until the vegetation recovers its original height.

Other cultural methods include:

- fertilization when necessary  
(A soil test is the best way to determine fertilization on a site. Contact the Douglas County Extension Office for soil test kits.)
- water management
- where the perennial vegetation has been depleted, reseeding adapted varieties is recommended
- disturbed areas should be revegetated as soon as possible to prevent weed invasions

## **Biological**

No biocontrols are currently operational at this time.

## **Mechanical**

Mowing will not kill the plant but will lessen the seed production if it keeps the seed heads from maturing. Small areas can be eradicated if the landowner digs all the plants on his property. The plants must be cut off below the soil surface and no leaves can remain attached or it will grow back. In addition, reduced vegetative matter from mowing will allow fall herbicide use to be more effective. Besides encouraging competing vegetation where possible, every effort should be made to prevent established plants from going to seed.

## **Herbicidal Treatments**

Because of their shorter life cycle, Scotch thistle plants can be effectively treated with herbicides. All herbicide treatments should be applied at the rosette stage of the plant. Generally, herbicide applications would be in early spring or fall.

**Always read and follow the label!**

### **Homeowners should use:**

Corsair @ 1 gram + 2,4-D amine @ 1.5 tablespoons /1000 sqft. in the spring at the bloom stage or in the fall.

Roundup @ 3tbs/1000 sqft. as a spot treatment. (will kill grass & should be followed by reseeding).

### **Ranchers and large lot owners can use the following:**

**Marshy areas and areas adjacent to water:** 2,4-D 2qt/acre, Rodeo 4.5 pt/acre.

**Shallow water table & in root zone of desirable trees:** Curtail 2qts/acre, Transline (2/3 pt/acre).

**Non-sensitive rangeland roadside areas:** 1pt of Tordon 22K in the fall (Restricted Use Pesticide)/acre add 1qt of 2,4-D in the spring; or Banvel in the spr. at 1pt/acre+1qt of 2,4-D.

**Small Grains:** 1/10oz of Ally(ag label for Escort) + 1/4 pt of Banvel or Stinger(ag label for Transline) @ 1/3pt/acre.

Other products are in the development stage at this time.

