



MUSK THISTLE (*Carduus nutans*)

Family: Asteraceae (Aster)

Life Cycle: Biennial

Class: B Designate - Control Required

AKA: Nodding thistle

MUSK THISTLE

- Flower droops when blooming, leading to alternate common name: nodding thistle
- Spiny vertical wings on plant stems
- May grow seven feet tall
- Reduces forage availability in pastures and rangeland; most livestock avoid it
- Native to Eurasia

CONTROL METHODS

Mechanical: Digging can be effective on small plants in small infestations. Sever root several inches below soil to remove crown and reduce likelihood of re-sprouting. Wear gloves and long sleeves to protect skin from sharp spines. Repeated mowing can reduce seed production. Cut before flowers begin to bloom.

Cultural: Promote competitive desirable vegetation. Sheep and goats may eat some parts of plants, but are not considered very effective for control. Other livestock will avoid grazing in areas where musk thistle is present.

Biological: There are currently no biological agents approved for release in Washington State.

Chemical*: Most effective in rosette stage (spring or fall). Recommendations are below.

DESCRIPTION

Growth Traits: Biennial or winter annual with showy pink to purple flowers and branching stems. Begins as a basal rosette, bolting tall flowering stems in the spring. Rosette may grow up to four feet in diameter and mature plant may grow seven feet tall.

Leaves and Stems: Leaves dark green, alternate, deeply lobed, spiny and may have hairs on underside. Stems branch, are cottony, and have spiny wings which end below the flower head.

Flowers: Blooms June - August. Flowers pink to purple, one to three inches in diameter, and typically solitary. Flowers droop or 'nod' when mature. Bracts on flowerheads broad and spiny; some spines may point backwards away from flowerhead. Bracts green on immature flowers, turn purple-red as they mature.

Roots and Reproduction: Long, thick, fleshy taproot which may branch. Reproduces by seed. One plant may have fifty to one hundred flowers, producing up to 1,000 seeds per flowerhead. Seeds may remain viable for ten years in soils seed bank. Seeds dispersed by wind over short distances.

Habitat: Typically found in neutral to acidic soil. Invades pastures, rangeland, meadows, roadsides, stream banks, forests and disturbed areas. Does not tolerate very wet or shady conditions.

Toxicity: Not known to be toxic.

***ALWAYS read herbicide labels and follow instructions for use and PPE.** The use of a surfactant (aka sticker) increases the efficacy of herbicide application, saving you time and money. If treating over multiple seasons, rotate using herbicides with different modes of action to reduce likelihood of herbicide resistance developing. Below are recommended herbicides based on stage of growth and time of year. All recommendations are supplied with the understanding that no discrimination is intended and no endorsement by the Noxious Weed Board is implied. Trade names are used to simplify recommendations.

NOTE: There is no 'magic bullet' in noxious weed control, and control efforts must be repeated every season to stop their spread. Using a combination of methods (e.g. cultural and chemical) will lead to better control over time.

April - May Rosette, Seedling Stage	June - July Bolting, Bud, Bloom Stage	August - October Seeding, Fall Rosettes
2,4-D	Transline	Tordon + 2,4-D
WeedMaster	Escort	Regrowth or fall rosette:
Milestone	Tordon + 2,4-D	WeedMaster
Telar		Roundup (Spot spray)