

Category A—High

# Bull Thistle (*Cirsium vulgare*)

Identification and Impacts



Photo credit: Bureau of Indian Affairs



Photo credit: Bureau of Indian Affairs



Photo Credit: S. Dewey, USU

### Origin

Native to Europe

### Description

Bull thistle is a biennial forb. It can grow to 7 feet tall. It starts as a basal rosette before bolting in the spring. In its flowering form, it can have a single stem or multiple branching stems. Leaves are deeply lobed with coarse prickly hairs on top and woolly hairs on the underside. Sharp spines are present on the midrib and tips of the leaves. Bull thistle has a solitary flowers, 1.5 to 2 inches wide, that forms at the end of each stem, which are pink to magenta, with spiny rounded bracts. They are upright and have bulbous spherical ovaries. Stems have spiny wings along the length. Seeds have a feathery pappus , but do not travel large distances.



Photo credit: S. Dewey, USU

### Biology

Bull thistle is a prolific seeder with individual plants producing between 100 to 300 seeds per seedhead. Seeds germinate in fall or spring, depending on soil moisture. While most seeds die in the first year, deeply buried seeds may survive for 3 or more years (DiTomaso et al. 2013). They are suited to disturbed areas and can occur in foothills, dry meadows, and riparian areas.

### Locations

Small populations have been detected on the Navajo Nation along roads and highways.

### Ecological Threat and Management Concerns

While seeds may be short lived, individual plants can produce thousands of them. Bull thistle can regularly invade disturbed sites, and is most problematic in rangelands, burned forest areas, and along roads, ditches, and fences. It is not palatable to livestock and can reduce the value of hay while outcompeting native plants.

### Key ID Tips

- Upright, single, small, bulbous flowers at the end of each stem.
- Spiny wings along the stem.
- Coarse hair on top, and woolly hair on the underside of leaves.
- Seedheads can have woolly hairs when developed.

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Additional safety measures and limitations may apply for each method. Refer to the Navajo Nation Integrated Weed Management Plan for more information.

### Mechanical/Manual Removal

Tilling, hoeing, and hand pulling can be effective if done before flowers form. Any methods that cuts the root of the plant below the soil surface is effective to prevent regrowth. Mowing can be effective if done before flowering and usually must be repeated during the growing season to prevent flowering. Once flowered, cutting the flower and seed heads and reduce seeding for future plants.

### Biological

No biological control agents are currently approved for use on the Navajo Nation.

### Cultural Control

Grazing can be effective if done during the rosette stage. Sheep, goats, and horses will eat young bull thistle. However, goats tend to avoid the plants and prefer the flowers. Grazing can be effective at reducing growth but must be paired with other methods.

Fire is not recommended as it can increase establishment and increase seed dispersal. Burning can be useful for removing dead material, however.

### Chemical

Use of herbicides can be effective. Refer to the product labels for information application rates, timing, and approved application methods.

Recommended herbicides include:

- 2,4-D
- Aminopyralid
- Clopyralid
- Picloram\*

\*Restricted Use by U.S. EPA

### References

DiTomaso, J.M., G.B. Kyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center. University of California. 544 pp.

USDA, NRCS. 2023. PLANTS Database. Available at <https://plants.sc.egov.usda.gov/>. National Plant Data Team, Greensboro, NC 27401-4901 USA



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