Canada Thistle

Cirsium arvense

FAMILY	*Asteraceae*-daisies & sunflowers	**ORIGIN**	Eurasia
LIFE CYCLE	Perennial	**OTHER NAMES**	Creeping thistle, Corn thistle, Field thistle

QUICK FACTS

- Look out for this weed and don't let it get established, because it's very difficult to get rid of! Its expansive perennial root system **spreads aggressively and spawns clones of itself**, making it a nightmare for land managers across the world.
- It is allelopathic; it **fills the soil with toxins**, making it inhospitable to other plants. It degrades soil health over time.
- Its **root system can reach 15 ft underground** and an equal horizontal spread. Most direct management tools involve working with aboveground parts, so controlling a large infestation is a difficult and lengthy process.
- **Native thistles are an important part of our ecosystem and a crucial food source for wildlife.** Please protect them by learning to differentiate between Canada thistle and our rare and beneficial thistles. See Identification to learn more.

Meet the poster child of noxious weeds! This invasive thistle has been a thorn in the side of landowners and farmers for centuries. Canada thistle was one of the targets of our nation's very first noxious weed laws, and today is classified as a noxious weed in all 50 states. Canada thistle is a tenacious and invasive weed that poses a significant threat to New Mexico's landscapes and agriculture. Known for its sharp spines and extensive root system, this noxious weed can quickly take over pastures, fields, and even your backyard.

What does it look like?

Despite relying primarily on clonal reproduction, Canada thistle has a high degree of genetic variation between localized populations, making it difficult to reach universal descriptions. For the purposes of this guide, we are focusing on the features that distinguish it from other types thistles.

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Flowers: C. arvense is dioecious, so the male and female flowers are found on separate plants; this distinguishes it from many other thistles (both native and invasive) that have both sets of organs in each individual plant. Flowers typically smaller than other invasive thistles, less than 1 inch in diameter and grow in clusters of 1-5.

Rosettes: Fairly weak rosette base with few, if any leaves. Rosettes from seed have dull green, relatively thick, rounded-oval to oblong cotyledons (seed leaves); clonal rosettes sprouted from the root lack these cotyledons.

Leaves: Leaf shape varies greatly. Some display deep lobes, while some are narrow and thin. Leaf margins are lined with spikes; on Canada thistle, the spikes are relatively fine and evenly spaced. Upper surface is usually dark green, and smooth or slightly hairy; underside is lighter in color and covered with fine, white hairs.

Stems: Erect, smooth or slightly hairy, typically with no spines. Often ridged, sometimes pinstriped purple or red due to disease or genetic variation. Shape can vary, but is almost always branching. Stems 18-48 inches tall, plants typically reach a height of 3-5 ft tall.

Seeds: Tiny achenes; become "plumed" when mature, similar to dandelion seeds.

Impact and Management

Agriculture and Food Security

Farmers and ranchers face increased costs associated with managing this weed, including expenses for herbicides, additional labor, and mechanical control measures. Furthermore, Canada thistle can harbor pests and diseases that may affect crops, exacerbating the threat to food production. The economic burden on farmers and the potential for decreased food supply contribute to the overall negative impact on food security in the region.

Soil Degradation

Canada thistle negatively impacts soil health in New Mexico by altering soil composition and structure. As an allelopathic plant, it releases chemicals that can harm surrounding vegetation, leading to decreased soil fertility over time. It consumes significant water, contributing to soil drying and increased erosion. Its brittle root system is less effective at stabilizing soil compared to other plants. The dense growth of Canada thistle can prevent the regeneration of native plants, resulting in ongoing soil health problems.

Native Ecosystems and Biodiversity

Canada thistle competes effectively against native plants, forming dense monocultures that disrupt native plant communities. This leads to degraded habitats for wildlife, including important pollinators. The plant's long growing season allows it to outcompete native forbs, particularly threatening New Mexico's rare native thistles, which are crucial for regional ecosystems as they provide food for songbirds and pollinators and serve as hosts for endangered butterfly and moth species.

To manage Canada thistle effectively, it's crucial to address its rapidly spreading underground root system, which can regenerate from small fragments. Prevention is key, as disturbances like grazing or hand-pulling can stimulate growth by damaging the roots. Established infestations require a strategy of repeated disturbances, such as frequent mowing, to deplete the plant's stored energy.

DO's

- Properly ID the plant and any rosettes before attempting to manage; native thistles are an important part of our ecosystem and can look very similar to *C. arvense*
- Exhaust nutrient reserves by repeatedly stressing plant over several growing season
- Communicate with neighbors and businesses about the presence of this weed and take care not to transport seeds to new locations

DON'Ts

- Wait until the infestation has spread to a large area; prevention and early detection are the best management strategies
- Cultivate or hand-pull the plant, as any small fragments left behind will help spread the infestation
- Rely on a single management strategy; combining multiple approaches is necessary to combat Canada thistle

TAOS SOIL & WATER CONSERVATION DISTRICT

For more information on managing Canada thistle, please visit **www.nmweeds.org**