



Musk Thistle

Carduus nutans

FAMILY

Asteraceae - daisies & sunflowers

ORIGIN

Eurasia

LIFE CYCLE

Biennial

OTHER NAMES

Nodding Thistle

QUICK FACTS

- Primarily an issue in overgrazed lands and disturbed soil. As the stem is **too spiny** for livestock to eat, they will consume the **surrounding vegetation**, further encouraging thistle growth and spread.
- The presence of one Musk Thistle promotes the germination of nearby seeds, rapidly creating localized **outbreaks**.
- This plant can produce between a few thousand and more than **100,00** seeds. Even though the seeds have a pappus (the white, fuzzy hairs that help the seeds become airborne), the vast majority of seeds will fall within **50 inches** of the parent plant.

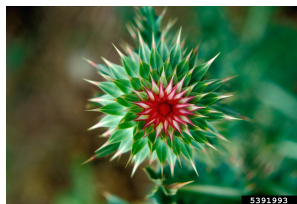
Musk thistle is an invasive weed with a flair for the dramatic, flaunting its purple blooms while quietly plotting a takeover of any disturbed pasture it can find. Beneath the showy exterior lies a highly competitive plant capable of producing thousands of seeds and crowding out native species with surprising efficiency.

What does it look like?

Musk Thistle is characterized by its large flowers (2 to 3 inches in diameter), their deep rose to violet color, and their tendency to droop toward the ground. The Stem can stand 3 to 8 feet tall with spines along it. The leaves have silvery margins and, unlike other Thistles, lack hair and fuzz on their surfaces. [2]



John M. Randall, The Nature Conservancy, Bugwood.org



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Plant: Like the Bull and Scotch Thistle, the Musk Thistle is a biennial plant, producing a rosette in the first year and sprouting its stem and flowers in the second. After producing seeds, the plant will die.

Roots: Large, fleshy, corky taproot that is hollow near the surface.

Leaves: Dark green with a light green mid-rib and mostly white margins. The leaves should be hairless on top and bottom with spines along the edges.

Flowers: Around 2 to 3 inches in diameter, purple to deep rose, rarely white. Behind the flower, there are needle-like bracts that connect to the stem.

Seeds: 1/8 to 3/16 inches long, shiny, striated, yellow-brown, with a hairlike plume. Each flower can produce up to 10,000 seeds, of which 33% are viable, yielding 3,600 seedlings. They can survive for more than a decade in the soil, and it can take 15 years to reduce the number of viable seeds to below 1%.

Impact and Management

Ecosystem Health

Areas that are overgrazed could promote a musk thistle infestation, but the seedlings appear to be sensitive to competition, especially when it reduces light availability. This is a highly competitive invasive species capable of displacing substantial portions of native vegetation.

Agriculture and Food Security

While livestock can feed on the flower, the stems and leaves are too thorny to consume and tend to be avoided when grown. In fact, livestock will avoid areas near the plants, resulting in reduced grazing capacity.

Health and Safety

The edges of the leaves and the stem have needles, which can be painful if handled with bare hands. There are no known toxins in musk thistle, but it is frequently sprayed with herbicides to control its population.

Economic

Established musk thistles can outcompete crops for space, water, and nutrients, reducing overall yield if not properly managed. As livestock will avoid eating or being near the plant, there will be a reduction in weight gain. A single thistle in a 1.49-meter square can reduce pasture yield by 23%.

Effective management of Musk Thistle requires persistent effort, as the seeds can remain in the soil for up to a decade, and it can take 15 years to eliminate them. They only spread through seeds, so as long as the plants are removed before the flowers come out, there will be a positive impact on their population.

They favor a wet ground in a poor vegetative state and respond positively to soils with an excess of nitrogen. Musk thistle seedlings' growth directly correlates to the amount of light they receive, so an effective control method is to prevent sunlight from reaching them by ensuring competition from native perennial grasses and not letting overgrazing remove their competition.

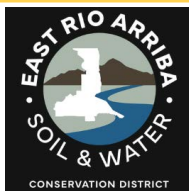
There are insects called the Head weevil and, to a lesser extent, the Rosette weevil that target the Musk Thistle; they were released in the 60s to combat the plant. However, due to the risk they posed to native thistles, it is now illegal to release them, and they no longer seem to be available for sale. They can still be found in nature, and were seen in Taos County as recently as 2023.

DO's

- Severing the plants from the roots will kill them, as new growth can only come from seeds.
- Remove the plants before they have the chance to produce seeds.
- Plant perennial grasses that can outcompete the thistle.

DON'Ts

- Avoid having any large amount of land that is both moist and devoid of local perennial grasses
- Don't use fire! It can create favorable conditions for the Thistle to return.
- Don't mow during or after flowering to prevent seed dispersal.



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

