

# Plumeless & Nodding Thistle (*Carduus* spp.)

## DESCRIPTION:

Plumeless thistle (*Carduus acanthoides*) and nodding thistle (*Carduus nutans*), also called musk thistle, are two similar species of exotic biennial thistles. Plumeless thistle is common in southern Wisconsin and occasional elsewhere, typically found in overgrazed pastures, fallow land and waste areas. Nodding thistle is most common in southeast Wisconsin and northeast Illinois most often on roadsides. These European members of the aster family arrived in North America in the 1800's, but have only recently become a common weed in our area. And they can be prolific; each nodding thistle plant can produce upwards of 100,000 seeds, which can then survive in the soil for over 10 years.

During their first year in the rosette stage both species have leaves with light frosted edges, deep lobes, with thorns at each tip, laying flat on the ground and radiating out from a central point. In their second year the plants "bolt" and form a flowering stalk with small leaves forming ridges of spines running along their stems. Nodding thistle has large, rounded, reddish-purple flower heads that often nod downward at the terminus of singular stalks, which are nearly thornless near the top. Plumeless thistle has smaller magenta flower heads with multiple flowers per stem on short thorny stalks.

## CONTROL METHODS:

Since these plants only live for two years, the primary goal of management should be to prevent seed production. Once flowering has begun they can produce seeds even if you kill the plant.

**Organic:** Hand-pulling is not practical; the root usually breaks off near the surface allowing the plant to re-sprout later. Cutting the root about 2" below the surface with a sharp shovel or "Parsnip Predator" is effective. This is best done before they flower, otherwise the flower heads (or entire plant) will need to be removed and disposed of. Mowing can be effective at reducing seed production if it is repeated several times as the plants attempt to re-flower.



Stems with thorny leaf flaps

**Chemical:** In most cases, these plants grow individually or in small groups, so a spot application of herbicide with a backpack or hand sprayer is often the best method of control. It is best to patrol for these plants and treat them in their rosette stage. Herbicide can also be applied on second year plants, but this is best done before the flowers have opened. If the plants are well into flowering, cutting or mowing can set them back again so that herbicides can be applied later. Spraying can be done into the fall months, even after the first hard frost if the plants still appear lively and the temperature is above 50 degrees. Apply herbicide across the entire leaf's surface, but not to the point of run-off. Milestone® herbicide is very effective on thistles even at very low concentrations. The broad spectrum herbicide, glyphosate (Round-Up®, etc.), has a low toxicity to animals and breaks down quickly, but will also kill any neighboring plants. Triclopyr (Garlon® 3A) is also effective and will not kill grasses.



First year rosettes



Plumeless thistle


 Nodding Thistle  
 photo by Bernd Haynold

Always read herbicide labels carefully before use and always apply according to the instruction on the product label.

**-3**  
**Agressive**  
**Weed**