



## Musk Thistle

(*Carduus nutans*)



Musk thistle	
<b>General</b>	Family: Sunflower (Asteraceae) Introduced from Europe Colorado List B - Control required
<b>Common names</b>	Nodding thistle
<b>Habitat</b>	Herbaceous biennial or short lived perennial Pastures, rangeland, forests, disturbed areas, rights-of-way, ditch banks, and grain fields Grows in all soil textures, but the soils must be well drained Musk thistle out-competes desirable plants for resources
PLANT	
<b>Vegetation</b>	Plants up to 6 feet tall Leaves hairless, dark green with light green mid-rib, deeply lobed, 1- 1½ inches wide and 4-5 inches long with yellow to white spines near tip. Extend onto the stem and give it a winged appearance Multi-branched stems
<b>Roots</b>	Tap root
<b>Flower</b>	May - August Purple Buds 1 inch or less wide Mature flowers are 1 ½ -3 inches wide and droop from stem Each head produces an average of 1,200 to 1,500 seed 45-55 days after bolting. Seed dispersed 7-10 days after flowering
<b>Seed</b>	Can germinate 6-8 weeks after falling to the ground May remain dormant in soil for over 10 years Dispersal by wind
<b>Seedling</b>	Seedlings emerge in mid to late July Rosettes can be up to 4 feet wide Overwinters as rosette
<b>Reproduction</b>	Seed

<b>CONTROL</b>			
<b>BIOLOGICAL</b>	<i>Rhinocyllus conicus</i> , a seed-head weevil that has naturalized and now also infests native thistles. Redistribution not recommended		
<b>CHEMICAL</b>	<i>Stage</i>	<i>Herbicide</i>	<i>Timing</i>
	Rosette	2,4-D (many) Aminopyralid (Milestone) Chlorsulfuron (Telar) Clopyralid (Curtail, Transline) Dicamba (Banvel) Metsulfuron (Escort XP) Picloram (Tordon <i>Restricted use</i> )	Spring Fall
	Bolt to early flower	2,4-D (many) Aminopyralid (Milestone) Chlorsulfuron (Telar) Clopyralid (Curtail, Transline) Dicamba (Banvel) Metsulfuron (Escort XP) Picloram (Tordon <i>Restricted use</i> )	Spring to early Summer
<b>CULTURAL</b>	Prevention Removal prior to seed set - Remove at least the top 2 inches of the root Flowers need to be bagged and disposed of		
<b>MECHANICAL</b>	<i>Stage</i>	<i>Method</i>	<i>Timing</i>
<b>Burning</b>	Not recommended	Not effective in controlling musk thistle but may improve grass growth, which may act as competition	
<b>Grazing</b>	Not recommended	Grazing as a control method is ineffective because livestock only eat a few flowers. Heavy grazing and disturbances near water, salt, and loafing areas will increase seedlings	
<b>Mowing</b>	Early bud	Between the first appearance of pink on the earliest buds and brown on the pappus. Plants may resprout	Spring

Use all chemicals according to the manufacturer's label. No specific recommendation or endorsement is made or implied by listing the above methods or products.

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