



## Scotch Thistle

*Carduus nutans*



### Scotch thistle

<b>General</b>	Family: Sunflower (Asteraceae) Native to Europe and eastern Asia Colorado List B - Control required
<b>Habitat</b>	Biennial Found in rangelands, disturbed areas and rights-of-way Likes moist areas Very invasive. May form stands too thick for livestock and wildlife to walk through
<b>PLANT</b>	
<b>Vegetation</b>	Mature plants 10+ feet tall Leaves are up to 2 feet long and 1 foot wide, spiny Covered with dense hair Leaves extend onto the stem and give it a winged appearance Multi-branched stems from the base. Newly emerged plants over-winter in the rosette stage, bolt, then flower in the spring or early summer of the following season. Once it flowers, the plant dies.
<b>Roots</b>	Taproot
<b>Flower</b>	June to August Violet 1-2 inches wide Spiny bracts
<b>Seed</b>	One plant can produce 40,000 seeds per plant Seeds germinate in the fall and spring Seeds have a water-soluble coating that inhibits germination during dry periods. May remain viable in soil for over 30 years
<b>Seedling</b>	Rosettes form in spring and fall, to 6 feet wide. Overwinters as a rosette.
<b>Reproduction</b>	Seed

<b>CONTROL -- CHEMICAL</b>		
<i>Timing</i>	<i>Herbicide</i>	<i>Notes</i>
Preemergence	Aminocyclopyrachlor + chlorsulfuron (Perspective) Picloram (Tordon) Restricted Use	Use of a surfactant is recommended for most herbicides to help increase contact with the vegetation and to facilitate herbicide uptake. Refer to the specific label for the appropriate type of surfactant.
Spring or Fall Rosette  Spring to Early Summer Rosette to Early flowering	2,4-D (various) Aminocyclopyrachlor + chlorsulfuron (Perspective) <b>Aminopyralid (Milestone)</b> Chlorsulfuron (Telar) Clopyralid (various) Dicamba (various) Glyphosate (various) Metsulfuron (Escort XP) Picloram (Tordon) Restricted Use	Treating at the rosette and early bolt stage stops biennial weeds from using resources that desirable plants need to prosper.  Refer to the individual label for allowed sites, specific timing, and restrictions about grazing and haying.  Formulations of more than one active ingredient are available.  For established populations, control will take a few years so treatment will need to be repeated.
<b>CONTROL -- NON-CHEMICAL</b>		
<i>Technique</i>	<i>Timing</i>	<i>Method</i>
<b>Biological</b>	None	
<b>Burning</b>	Not recommended	Not effective in controlling Scotch thistle but may improve grass growth, which may act as competition. Burning may not be allowed so check with your local fire protection district for current restrictions.
<b>Cultivation</b>	Spring to Fall Rosettes and young plants without flower heads	May need to be repeated throughout the season and on an annual basis until the seedbank is exhausted. May allow more seeds to germinate due to disturbance.
<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 due to disturbance.
<b>Mowing</b>	Spring to Early Summer	Before flower bud formation. Plants may resprout. Repeat as needed throughout the season.
<b>Prevention</b>	Anytime	Maintain the health of the site by encouraging healthy stands of grass.
<b>Removal</b>	Spring to Early Summer Rosette to Bolting	Remove rosettes and young plants before they are more than 12 inches tall (before flower buds form). Remove at least the top couple inches of the taproot.
	Summer Flowering	Remove flower heads, bag, and dispose of in the trash or landfill. Sever root a least a couple inches below the soil. Plants without flower buds do not need to be put in the trash.
	Fall Rosette	Remove rosettes and at least the top couple inches of the taproot.
	Pulling will create disturbance and may allow more of the seedbank to germinate. Pulling when plants are small results in less bulk and makes disposal easier.	

Use all chemicals according to the manufacturer's label. The label will provide specific instructions including allowed sites, application methods, rates, storage, re-entry requirements and personal protective equipment. No specific recommendation or endorsement is made or implied by listing the above methods or products. 9/2021