

# Invasive Plants in Pennsylvania

## Canada Thistle

*Cirsium arvense*



Steve Dewey, Utah State University  
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### Description:

Canada thistle is an erect herbaceous perennial with an extensive creeping rootstock. Its leaves are irregularly lobed with spiny, toothed margins. Rose-purple or sometimes white flower heads appear in terminal clusters from June through October. The small seeds have feathery plumes.

### Biology and Spread:

Canada thistle produces an abundance of feathery seeds, which are quickly dispersed in the wind. The seeds can remain viable in the soil for up to 20 years or more. The fibrous taproot is capable of sending out lateral roots, which sprout shoots at frequent intervals.

### Background:

Canada thistle was probably introduced into the United States by accident in the early 1600s. By 1954, it had been declared a noxious weed in 43 states. It is considered one of the most tenacious and economically important agricultural weeds and is becoming increasingly recognized as a problem in natural areas.



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### Ecological Threat:

Once established in an area, Canada thistle crowds out and replaces native plants, changing the structure and species composition of plant communities and reducing diversity. This thistle outcompetes native plants through shading, competition for soil resources and possibly through the release of toxic allelochemicals.

### Range:

Despite its name, Canada thistle is native to temperate regions of Eurasia. In North America, it is distributed throughout Canada and the northern United States, from northern California to Maine and south to Virginia.

### Habitat:

This plant does best in open and disturbed upland areas, but also invades wet places with fluctuating water levels, such as stream bank meadows. It is commonly found in barrens, glades, meadows, prairies, fields, pastures and waste places.



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## How to Control this Species:

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Because Canada thistle is a perennial and spreads primarily by its root system, the entire plant must be destroyed for effective control.

Control efforts may be more successful when Canada thistle is under environmental stress, such as during droughts and floods, or after a very severe winter.

Canada thistle is stubborn and difficult to remove. Management practices that limit soil disturbance and encourage diverse native plant communities will help prevent establishment of this species.

## Look-A-Likes:

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Native species of thistle (*Cirsium* sp.), some of which are rare, could be confused with Canada thistle. Before control is attempted, the thistle species in question should be accurately identified.



Field Thistle

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## Physical

For light infestations, black plastic sheeting can be used to smother this thistle. Repeated and frequent pulling or hand-cutting will eventually starve underground stems. This should be performed at least three times each season.

Mowing does not kill Canada thistle unless repeated monthly for up to four years. This method is not recommended for natural areas.

Late spring burns, between May and June, are detrimental to this invasive.

## Chemical

In areas interspersed with desirable native plants, targeted application of a systemic herbicide, such as glyphosate, works well. For extensive infestations in disturbed areas, a broad application may be more effective. Repeated applications are usually necessary in order to exhaust the seed bank.

Herbicide treatment is best done in late summer or fall when plants are in the rosette stage.

Varying the type of herbicide used will prevent clone colonies from becoming resistant.

## References:

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*Center for Invasive Species and Ecosystem Health:*  
<http://www.invasive.org/browse/subinfo.cfm?sub=2792>

*Plant Conservation Alliance's Alien Plant Working Group:*  
<http://www.nps.gov/plants/alien/fact/ciar1.htm>

## For More Information:

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*DCNR Invasive Species Site:* <http://www.dcnr.state.pa.us/conservation/science/invasivespecies/index.htm>

*DCNR Invasive Exotic Plant Tutorial for Natural Lands Managers:*  
[http://www.dcnr.state.pa.us/forestry/invasivetutorial/canada\\_thistle.htm](http://www.dcnr.state.pa.us/forestry/invasivetutorial/canada_thistle.htm)