#### **Translate**



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# Canada Thistle Biocontrol

### What is Canada thistle?

Cirsium arvense (Canada-, California-, Creeping thistle) is an invasive plant known to invade open, disturbed habitats. It colonizes new areas through the production of nearly 1,500 seeds per stem. Once established, it spreads through clonal underground shoots.



## How do I recognize it?

Canada thistle is a perennial weed that can grow over 6 ft. tall (more commonly ~3 ft.). Each branch of the plant typically bears 3-5 (dandelion sized) flowers that range from white to purple (more commonly pink). Canada thistle leaves are rigid and glossy, and stems are virtually spineless.

#### Effects of Canada thistle

It was introduced to North America in the 1600's from Europe. Today, it is distributed

throughout temperate regions of the globe and has become one of the most problematic weeds of crop, range, and pasture lands. Canada thistle is generally unpalatable to grazing animals and continues to cause severe economic losses. Canada thistle can form monocultures that outcompete and replace native plants, invade critical riparian habitat, dominate lawns, and congest roadsides.

## Biological control of Canada thistle

Since the 1970's, a Canada thistle gall-fly (Urophora cardui) and a stem-mining weevil (Hadroplontus litura) have been used to control Canada thistle in North America. However, these two insects have been very limited in field settings and are ineffective overall. Recent research now allows us to utilize a host-specific pathogenic rust fungus (Puccinia punctiformis) that was likely introduced with early Canada thistle infestations and is present in nearly every location where Canada thistle occurs.

### Life Stages and Cycle of Rust Fungus

In early spring, diseased Canada thistle shoots emerge that appear unusually tall, sparse, and are covered with yellow speckling (spores) on the underside of the leaves (A-B). During this time the diseased stems emit a sweet floral fragrance. In late spring to early summer, diseased shoots will cross with other nearby diseased shoots and the spores on leaf tissues will turn a rusty redbrown color (C). Spores from diseased shoots from the spring will infect neighboring Canada thistle stems throughout the summer via wind-blown spores. Finally, during late summer or fall, diseased stems die and the leaf tissue falls on fall emergent rosettes (D) that allow the fungus to quickly move to the roots where it overwinters (E).











### **FAQ**

What else does the rust fungus attack?
Will the rust kill the thistle?
How long will it take to control my Canada thistle?
Where can I get some rust and how do I apply it?
What is the best release site?
Is there a charge for the control?

## Request Canada Thistle Biocontrol

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