

# CANADA THISTLE

*Cirsium arvense*



## WHAT IS IT?

Canada Thistle (CT) is a “creeping perennial” forb in the Aster family that was accidentally introduced to the U.S. from Eurasia as early as the 1600s. It spreads both from wind-dispersed seeds and from an extensive underground root system, making it one of the most wide-spread invasive species in the world. It is currently found on every continent except Antarctica. It competes aggressively with native plant species and its spiny leaves make it unpalatable to wildlife and livestock.



CT produces wind-dispersed seeds that are viable for 28 years in soil

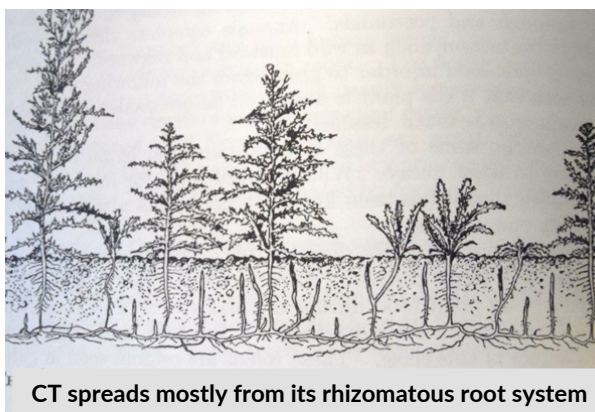
## HOW TO IDENTIFY CANADA THISTLE

### STEM AND LEAVES

CT produces erect stems, 3-5 ft tall, that are smooth or slightly hairy. There are no spines along the stems, which distinguishes it from other invasive thistles. Leaves are oblong, have smooth surfaces and spiny margins, and are arranged alternately along the stem.

### FLOWERS

CT flowers are small (less than 1 inch across), usually pink, and occur in clusters at the tops of stems. Flowers are made up of narrow petals emerging from a bulb-shaped base that is covered in pointed bracts. CT is “dioecious” - this means it produces separate male and female plants. It requires an insect pollinator to make fruit and seeds.



CT spreads mostly from its rhizomatous root system



Rust fungus is an effective biocontrol agent for CT

## REPRODUCTION AND SPREAD

### FRUIT/SEEDS

Once pollinated, CT flowers become clusters of seeds adorned with white fluffy pappus that aids the seeds in wind dispersal. CT produces between 1,000 – 5,000 seeds per stem. These seeds may be dispersed by wind and small animals. Seeds can remain viable in the soil for up to 20 years.

### ROOTS

CT spreads primarily through its extensive rhizomatous root system. CT rhizomes (underground stems) can extend 15 feet down and 15 feet laterally, allowing one plant to form an enormous patch that cannot be removed mechanically.

### LIFE CYCLE

CT is a “creeping” perennial. This means that it will continue to spread from its root system indefinitely, creating a continuously growing patch that is all one plant. It also spreads from wind-dispersed seeds which allows it to invade new areas.

## HOW TO CONTROL IT

### PREVENTION

Prevent new CT seeds from becoming established by maintaining a healthy groundcover. Once Canada Thistle is established, you must prevent it from producing seeds and limit its ability to replenish its root system with sugars by continuously removing above-ground portions.

### MECHANICAL

Hand pulling and digging out CT is generally not recommended because rhizome fragments are capable of re-sprouting new plants. But hand-pulling or mowing that is conducted every 2 to 3 weeks throughout the growing season, for several consecutive years, can eventually starve the root system.

### CHEMICAL

Herbicide can effectively manage CT if it is carefully timed in its application. The first application should be in early summer when buds have formed and should kill all above-ground growth. The second application should be in fall, when the plant is preparing for winter dormancy. An herbicide with Aminopyralid should be applied at this point. This treatment cycle should be repeated every year until CT is gone.

### BIOLOGICAL

There are several biocontrol agents available for CT, some more effective than others. The best agent in Wyoming is the rust fungus (*Puccinia punctiformis*). Livestock may graze CT if there is nothing else more palatable. This will not kill the roots but may prevent flowering.

### CULTURAL

Any control efforts will be enhanced if you maintain a healthy groundcover to compete with the CT. Neither grazing nor prescribed burning have been shown to be effective for managing CT.