

## Italian Thistle

*Carduus pycnocephalus*

### Physical Control:

1. Burning: Prescribed burning will remove dense stands of mature thistles. However, burning may not completely control plants still in the rosette stage.
2. Grazing: Targeted grazing of thistle with goats and other farm livestock, but not cattle, provide a useful technique to control thistle. Thus, livestock will drastically reduce average seed production per plant. Seeds ingested by goats and other ruminants will not spread in the feces.
3. Hand-pulling: Only effective if 4+ in. of root is removed with the plant. Pull before seeds set.
4. Mowing: Seed production can be reduced by mowing. However, mowing alone will not eradicate an infestation. Mowing is not a reliable method, as plants can regenerate and produce seed, even if kept mowed to 3 in. tall.

### Chemical Control:

Use herbicides only when it is sure that the affects will cause more biological or ecological good than harm. Contact the State Department of Agriculture or County Agriculture Commissioner to learn information regarding state and local application permits and posting requirements. Make sure to follow all label instructions and warnings. See table for herbicide specifics.

*Commonly used herbicides for Italian thistle control.*

Common Name	Trade Name	When to Apply	Rate of Application
2,4-D	Class®, Navigate®, Weedar®, and others	Mar. - Apr. in rosette stage	8-12 oz. active ingredient per acre
MCPA	Agroxone®, Chiptox®, Vacate®, and others	Feb. - Apr. in rosette stage	2-6 oz. active ingredient per acre
Picloram	Access®, Grazon®, Pathway®, Tordon®	Feb. - Mar. in the seedling or rosette stages	1-8 oz. active ingredient per acre

### Biological Control:

1. Fungal: Two fungi, *Alternaria* spp., a genus of molds, and *Puccinia cardui-pycnocephali*, a rust, have been evaluated as control agents. Both show some effectiveness as methods of control, however the *Alternaria* spp. can spread to orchard trees.
2. Insect: All insects employed for biological control of Italian thistle produce only one generation of larvae per year and they affect several species of thistle. *Rhinocyllus conicus* (thistle head weevil) lays its eggs on bud bracts and the larvae infest the seed head. *Trichosirocalus horridus* (musk thistle weevil) larvae feed on the growing tips of thistle rosettes. Adults may also defoliate plants. *Cheilisia corydon* (thistle crown fly) larvae damage thistle leaves, stems, and crowns. This fly can infest the root systems of thistles and kill the plants. To purchase *R. conicus* and *T. horridus* call Integrated Weed Control (888) 319-1632 or visit [www.integratedweedcontrol.com](http://www.integratedweedcontrol.com).

### Long-term Control:

An Integrated Pest Management (IPM) program utilizing a combination of control methods is most desirable. Once dense stands of Italian thistle are removed, continue to monitor the area annually for Italian thistle reinvasion.