Controlling Canada Thistle
Michigan State University Extension Service
IPM Facts
Fred Salzman, Karen Renner, Jim Kells, Department of Crop and Soil Sciences
Issued December 1992
2 pages

IPM FACTS
MICHIGAN STATE UNIVERSITY
Extension Bulletin E-2245 Revised December 1992

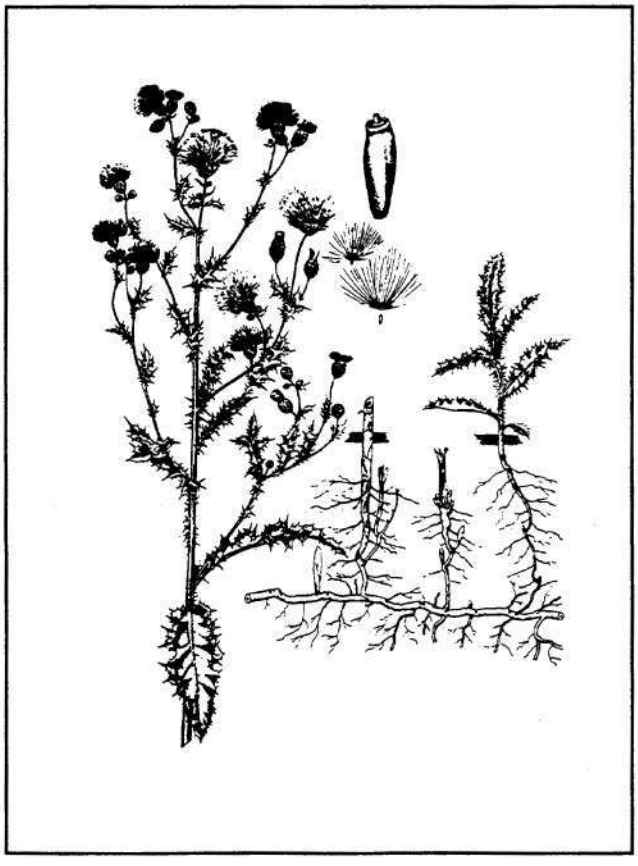
Controlling Canada Thistle

Fred Salzman, Karen Renner, and Jim Kells
Department of Crop and Soil Sciences
Michigan State University

What is a Perennial Weed?

A perennial weed is any weed capable of surviving for three or more years. Perennial weeds are characterized by vegetative reproduction. Vegetative reproduction in these species is due to: (a) rhizomes - underground creeping stems commonly found in perennial grasses; (b) stolons - prostrate stems or runners on the soil surface with roots at the nodes; (c) creeping roots; (d) tubers - underground enlarged storage stems; or (e) bulbs - underground storage organs consisting of a stem axis covered with many overlapping leaf scales.

Perennial weeds may or may not reproduce by seed. They always, however, have the potential to reproduce by vegetative means.



Description of Canada Thistle

Canada thistle has an extensive, deep root system. Stems are 2 to 5 feet tall, grooved, and branch only at the top. Stems are slightly hairy when young, but increase in hairiness with maturity. Leaves are slender, smooth, and have crinkled edges with spiny margins. There are many compact rose-purple flowers surrounded by tight bracts. Flowers are about 3/4 inch in diameter. Seeds are brown, smooth-coated, 3/16 inch long, and attached to a tannish down that is easily broken off. Canada thistle primarily spreads by an underground root system. It often grows in dense patches in fields or pastures.

Methods of Control

Methods of perennial weed control fall into three categories: (a) cultural, such as crop rotation; (b) mechanical, tillage including various implements such as plows, disks, or cultivators; and (c) chemical, using herbicides. Control of perennial weeds may require a combination of all these methods. Consider the energy and environmental implications when choosing a method of control.

Mechanical Control

Mechanical control may increase or decrease perennial weed infestations. Tillage may increase infestations by moving perennial weeds to new areas of the field or breaking dormancy of underground buds resulting in new shoot growth. Tillage during cool, wet conditions results in reduced control.

Tillage may decrease perennial weed infestations if done frequently enough to deplete underground root reserves. The field should be tilled every two or three weeks. Warm, dry soil conditions increase the effectiveness of tillage for perennial weed control by drying plant roots on the soil surface.

Chemical Control of Canada Thistle

Soybeans

Herbicide	Rate	Timing (Weed stage)	Effectiveness
Basagran + COC[1]	1 qt/A + 1 qt/A and repeat[2]	POST (6-8")	Good
Blazer + NIS[1]	1.5 pt/A + 1/4%	POST (before bud)	Poor
Cobra+ COC[1]	0.78 pt/A + 1 pt/A	POST (up to 12")	Poor

[1] COC = crop oil concentrate; NIS = nonionic surfactant.
[2] A cultivation may replace the second herbicide application.

Corn

Herbicide	Rate[1]	Timing (Weed height)	Effectiveness
Basagran + COC[2]	1 qt/A + 1 qt/A and repeat	POST (8")	Good
Banvel	1/2 pt/A and repeat	POST (8")	Good
Stinger	1/2 pt/A	POST (6-8")	Good
Banvel + 2,4-D amine	1/4 pt/A + 1/2 pt/A and repeat	POST (8")	Fair
2,4-D amine	1 pt/A and repeat	POST (8")	Poor

[1] Two applications of each treatment are recommended for adequate results.
[2] COC = crop oil concentrate.

Winter Wheat and Barley

Herbicide	Rate	Timing	Effectiveness
Stinger	1/3 pt/A	Rosette-bud stage	Good
Express + NIS[1]	1/3 oz/A + 1/4%	4-8" Can. thistle	Fair
Harmony Extra + NIS[1]	0.6 oz/A + 1/4%	4-8" Can. thistle	Fair
2,4-D ester	1 1/2 pt/A	Fully tillered to boot stage (Crop)	Poor-Fair
Banvel	1/4 pt/A	Early spring to fully tillered (Crop)	Poor-Fair

[1] NIS = nonionic surfactant.

Spot treatment and between crops

Herbicide	Rate	Timing[1] (Weed growth stage)	Effectiveness
Roundup	2%	Spot treatment(bud stage)	Good-Very Good
Roundup	2-3 qt/A	Bud to bloom stage	Good-Very Good
Banvel	1-2 qt/A[2]	Bud stage	Good-Very Good
2,4-D ester	1-2 qt/A	Bud stage	Fair-Good

[1] Fall applications provide the most effective control.
[2] Banvel at 1 qt/A will provide suppression; 2 qt/A will provide control.

This bulletin was prepared with the support of the U.S. Department of Energy, Grant No. DE-FG0276CS60204. However, any opinions, findings, conclusions or recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of DOE.

To protect yourself and others and the environment, always read the label before applying any pesticide.

This publication contains pesticide recommendations based on research and pesticide regulations. However, changes in pesticide regulations occur constantly. Some pesticides mentioned may no longer be available, and some uses may no longer be legal. If you have questions about the legality and/or registration status for using pesticides, contact your county Cooperative Extension Service office.

Revision 12:92-TCM-UP-Price 25 cents. File 34.28 (Weeds)