

PROBLEM WEED CONTROL IN CORN

Research conducted to date on controlling specific problem weeds in corn by Peter Sikkema, Ridgetown College, University of Guelph. Compiled by Mike Cowbrough, Field Crop Weed Specialist, Ontario Ministry of Agriculture and Food.
www.ridgetownc.on.ca/weeds

CANADA THISTLE

Life Cycle: Perennial

Reproduction: By both seed and underground roots.

Distinguishing Characteristics:

- The leaf margins (outside edge of leaf) are wavy and toother with prickly spines and white “fuzzy” hair on the underside. As the plant matures the leaves become pricklier, and the white “fuzzy” hairs on the leaf underside diminish.
- Flowering head.



Canada Thistle control options in Corn

Table 1 - Visual control of Canada thistle using various post-emergent herbicides had been applied.

PRODUCT	TIMING	% CONTROL
Distinct	POST	91
Battalion	POST	70
PeakPlus	POST	68
Summit	POST	66

Source: Dr. Peter Sikkema, Ridgetown College, University of Guelph



(Source: BC Ministry of Agriculture and Lands)

This insert is the fourth in a series designed to provide clear and up to date research information on crop management challenges. Remove it from the magazine and file for easy reference.

PERENNIAL SOWTHISTLE

Life Cycle: Perennial

Reproduction: By both seed and underground roots.

Distinguishing Characteristics:

- Shallow to deeply lobed and very reminiscent of dandelion leaves, however the leaf margins of perennial sow thistle contain numerous weak prickles which are not as course as Canada Thistle. The leaves of perennial sow thistle are usually narrower and less lobed than annual or spiny annual sow thistle. A milky white juice will appear when stem or leaf tissue is broken.
- Flower heads are bright yellow, and 2.5-4cm (1-1 1/2 in.) in diameter. The leaf tissue under the flower head is covered in glandular hairs. Perennial sow-thistle will usually flower from June to late autumn.



Common Perennial Sowthistle control options in Corn.

Table 1 - Visual control of perennial sow thistle using various post-emergent herbicides had been applied.

PRODUCT	TIMING	% CONTROL
Marksman (High Rate)	POST	94
atrazine (high rate) + 1% Corn Oil Concentrate	POST	92
PeakPlus	POST	83
Banvel II / Oracle (High Rate)	POST	83
Distinct	POST	81
Summit	POST	71
Callisto	POST	27



Source: Dr. Peter Sikkema, Ridgetown College, University of Guelph

* Rating: Based on a scale from 0 to 9. A rating of 0 represents 0 to 10% control of the weed and 9 represents 90 to 100% control.

VOLUNTEER RED CLOVER

Significance as a Weed:

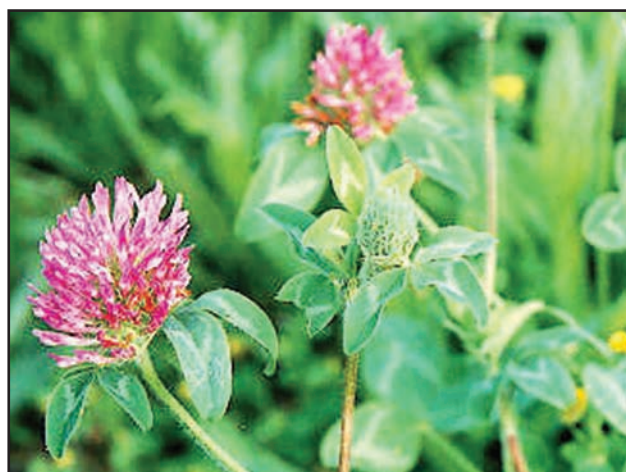
Mainly known as a forage and cover crop in winter wheat. Volunteer red clover can re-grow the next season, even after tillage or a fall herbicide treatment has been made.

Life Cycle: Biennial or short-lived perennial

Reproduction: Reproduces only by seed.

Distinguishing Characteristics:

- Tri-foliolate, the leaflets are serrated and usually contain an inverted “v-shaped” watermark. The stems and leaflets are hairy.
- Consists of up to 125 flowers, rose purple or deep purplish-red in colour. The head will be nested in 2-3 leaves.



(Source: ontariowildflower.com)

Fall Control

Fall control is the most effective way to control red clover. Although re-growth next spring (particularly with glyphosate) can occur. Chemical control in the fall will not negate or reduce the nitrogen credit provided by red clover.

Table 1. Visual control of red clover the following spring after various post-emergent herbicides had been applied in the fall.

PRODUCT (Rate per acre)	TIMING	% CONTROL
Banvel II or Oracle (0.25 L/ac)	POST	99
amitole (1 L/ac)	POST	93
2,4-D Ester – 564 g/L (0.5 L/ac)	POST	91
glyphosate (2 L/ac)	POST	90
glyphosate (1 L/ac)	POST	86

Source: Dr. Peter Sikkema, Ridgetown College, University of Guelph

* Rating: Based on a scale from 0 to 9. A rating of 0 represents 0 to 10% control of the weed and 9 represents 90 to 100% control.

Volunteer Red Clover control options in Corn.

Table 2. Visual control of red clover 28 days after various post-emergent herbicides had been applied.

PRODUCT (Rate per acre)	TIMING	% CONTROL
Callisto + atrazine	POST	96
Summit	POST	96
Marksman (High Rate)	POST	95
PeakPlus	POST	95
Banvel II / Oracle	POST	94
Distinct	POST	94
atrazine + 1% Corn Oil Concentrate	POST	88
Pardner / Koril + atrazine	POST	85
Shotgun	POST	80

Source: Dr. Peter Sikkema, Ridgetown College, University of Guelph
Red Clover ranged from the 3 to 20 + leaf stage or 4 to 32 cm in height at application.