# Controlling Canada Thistle

**CANADA THISTLE** is a perennial weed. Infestations can start from seed but plants primarily regrow and spread each year from Canada thistle's creeping root system. The roots have adventitious buds that form new shoots each spring and summer. This extensive root system can run 15 ft or more horizontally and may penetrate up to 20 ft deep. Canada thistle plants can grow 2 to 5 ft tall and branch only at the top. Leaves are slender, smooth, and have crinkled edges with spiny margins. Canada thistle has male and female flowers on separate plants (dioecious) and seed production requires the presence of both plants. Flowers are about ¾ inch in diameter, are rose to purple in color, and are produced between July and August. Individual flower heads have about 100 florets and vigorous stems can produce 50 to 100 flower heads, with each producing 80 to 90 seeds. Viable seeds are formed 8 to 10 days after flowering and single plants can release more than 5,000 seeds. Long distance dispersal by wind is unlikely since the seeds often remain in the flower head while the pappus detaches and floats away. However, seed that remains attached to the pappus may move several feet from the parent plant. Seeds may remain viable in the soil for up to 4 years.

## CULTURAL CONTROL

Including a forage or small grain in the rotation can help manage Canada thistle.

- Repeated mowing suppresses Canada thistle in forages.
- Small grains are competitive with Canada thistle, and provide an opportunity for mechanical and chemical control after harvest.

## MECHANICAL CONTROL

- Tillage of established patches may spread and chop up rootstock; breaking apical dominance that leads to emergence of more shoots.

## CHEMICAL CONTROL

Canada thistle is most susceptible to certain herbicides between the bud and flower stages. However, most herbicides have maximum crop height or stage restrictions for application; refer to the herbicide label for these restrictions.

### SOYBEANS

| Herbicide[a,b] | Rate | Effectiveness |
|---|---|---|
| Basagran + COC | 1 qt | **Good** |
| Classic + NIS[c] | 0.5-0.75 oz | Fair-**Good** |
| Pursuit + NIS + N[c] | 4 oz | Fair-**Good** |
| FirstRate + NIS or COC + N[c] | 0.3 oz | Fair |
| Ultra Blazer + NIS + N | 1.5 pt | Poor |
| Cobra + COC | 12 oz | Poor |

### CORN[d]

| Herbicide[a,b] | Rate | Effectiveness |
|---|---|---|
| Stinger | 0.5 pt | **Good** |
| Hornet + Stinger + NIS + N | 4 oz + 4 oz | **Good** |
| Basagran + COC | 1 qt | Fair-**Good** |
| Clarity | 0.5 pt | Fair-**Good** |
| Beacon + 2,4-D + NIS | 0.38 oz + 1 pt | Fair-**Good** |
| Beacon + Clarity + NIS + N | 0.38 oz + 0.5 pt | Fair-**Good** |
| Northstar + NIS + N | 5 oz | Fair-**Good** |
| Status + NIS + N | 5 oz | Fair-**Good** |
| Clarity + 2,4-D amine | 0.25 pt + 0.5 pt | Fair |
| Beacon + COC or NIS + N | 0.76 oz | Fair |
| 2,4-D amine | 1 pt | Poor |

### ROUNDUP READY CROPS

| Herbicide[a,b] | Rate | Effectiveness |
|---|---|---|
| glyphosate + AMS fb. | 1.13 lb a.e. | **Good-Excel.** |
| glyphosate + AMS *(if needed)* | 1.13 lb a.e. | |
| ***SOYBEANS ONLY*** | | |
| Extreme + NIS + AMS | 3 pt | **Good** |

### TREATMENT BETWEEN CROPS (WHEAT STUBBLE)[e]

| Herbicide[b] | Rate | Effectiveness |
|---|---|---|
| glyphosate + AMS | 1.5-2.25 lb a.e. | **Good-Excel.** |
| Clarity | 1-2 qt | **Good-Excel.** |
| 2,4-D ester | 1-2 qt | Fair-**Good** |

[a] Refer to herbicide label for maximum application heights and stages.
[b] NIS = non-ionic surfactant; COC = crop oil concentrate; N = 28% UAN or AMS (ammonium sulfate).
[c] Apply when Canada thistle is between 2 and 4 inches tall.
[d] Applications should be made when Canada thistle is 8 inches tall.
[e] Apply when Canada thistle is in the bud stage for Clarity and 2,4-D; bud to bloom stage for glyphosate; **Fall applications** are most effective.

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