MANAGEMENT OF

INVASIVE PLANTS IN WISCONSIN

A3924-21

Crown-vetch
(Securigera varia)

Brendon Panke and Mark Renz

Invasive plants can thrive and aggressively spread beyond their natural range, disrupting ecosystems. The *Management of Invasive Plants in Wisconsin* series explains how to identify invasive plants and provides common management options. Management methods recommend specific timings for treatment, as well as expected effectiveness. For more information, go to: fyi.uwex.edu/weedsci/category/invasive-plants-of-wisconsin.

Crown-vetch is an herbaceous perennial with trailing stems that form dense patches, growing 2–6′ long.

Legal classification in Wisconsin: Not regulated

Leaves: Pinnately compound, alternate, 2–6″ long, with 11–25 oval leaflets occurring in an odd number.

Flowers: Spring to middle summer. Pea-like, ranging in color from pink or lavender to white. Flowers are clustered in flat-topped umbels of 14–20 flowers on long stalks growing where the leaf meets the stem (axils).

Fruits and seeds: Slender, pointed seed pods 2–3″ long, each containing 3–7 narrow seeds.

Roots: Reproduces vegetatively by rhizomes that grow up to 10′ long.

Similar species: Crown-vetch is distinguished from other plants in the legume family by compound leaves with an odd number of leaflets, leaves and flower stalks arising from the main stem, and flat-topped umbels.

Ecological threat:

- Invades open areas of varying soil types. Spreads into natural areas from roadsides where it was planted for erosion control.
- Fixes nitrogen, which alters soil conditions for other plants.

Non-chemical control

Removal

Effectiveness in season: 70–90%
Season after treatment: < 50%

If all perennial tissue (rhizomes) is removed, populations can be eliminated. This can be difficult, especially in medium to fine soils. A pitchfork or other tool can be used to loosen the soil around the plant to make removal easier. Removal of shoots alone will suppress established populations, but the frequency and length of period necessary to reduce populations is not known. If flowers are present, bag material and dispose of in a landfill or burn it to avoid potential for seed spread.

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NPM

Mowing

Effectiveness in season: 50–70%
Season after treatment: < 50%

Mowing for 2–3 years will decrease the vigor of a stand and suppress, but not control, crown-vetch. Begin mowing in the late spring and repeat at least three times a year as plants regrow. To be sure that mowing will prevent seed production, mow before plants flower.

Prescribed burning

Effectiveness in season: 50–70%
Season after treatment: < 50%

Late spring burns can kill germinating seedlings and can suppress above-ground growth of established plants, depending on fire intensity. After the fire, established plants will quickly resprout and reinvade areas; this management method is not recommended unless integrated with other techniques. Low-intensity and short-duration burns can increase the germination rate of vetch seeds. Fire may benefit other species well-adapted to this management (e.g., prairie grasses), resulting in improved competition with crown-vetch. A handheld propane torch can be effective for treating seedlings.

Grazing

Effectiveness in season: < 50%
Season after treatment: < 50%

Crown-vetch is very palatable to a number of grazing animals. Crown-vetch tolerates grazing, but heavy grazing can reduce stands. This typically results in invasion by other non-native species. If using grazing as a control method, the area should be overseeded with desirable species or grazing should be used as part of an integrated control program. Grazing can be an effective method to prepare a site for later herbicide application.

Chemical control

Foliar

Apply directly to individual plants or broadcast across an infested area. Broadcasted foliar applications are typically the most cost-effective treatment in dense infestations. Use lower rates on smaller plants and less dense populations and higher rates on larger plants and denser populations. Absorption of herbicide can be limited with this species, resulting in reduced effectiveness. Including a recommended surfactant at 0.25–0.5% can alleviate any potential reduction in effectiveness.

2,4-D*

Effectiveness in season: 50–70%
Season after treatment: < 50%

Common name: Many

Rate:
broadcast: 2.0–4.0 lb a.e./A
spot: Equivalent to broadcast rates.

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Use aquatically labeled product if potential exists for solution to contact surface water. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

aminopyralid*

Effectiveness in season: 90–100%
Season after treatment: 70–90%

Common name: Milestone

Rate:
broadcast: 5–7 fl oz/A (0.08–0.1 lb a.e./A)
spot: Equivalent to broadcast rates.

Timing: Apply before flowering.

Remarks: 14 fl oz/A can be used as long as less than half of the area is treated. Depending on the volume of solution applied per acre, typical mixtures for spot treatments are 2–8 mL Milestone per gallon of water.

Caution: Do not apply directly to water or to areas where surface water is present. Remains in soil for up to one year, depending on application rate. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.

clopyralid*

Effectiveness in season: 70–90%
Season after treatment: 70–90%

Common name: Transline

Rate:
broadcast: 16–21 fl oz/A (0.4–0.5 lb a.e./A)
spot: 0.25–0.4% (0.008–0.01 lb a.e./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Remains in soil for up to one year, depending on application rate. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.

dicamba*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Banvel

Rate:
broadcast: 32–64 fl oz/A (1.0–2.0 lb a.e./A)
spot: Equivalent to broadcast rates.

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Rates > 16oz/A (0.5 lb a.e./A) may cause stunting and discoloration of sensitive grasses, such as smooth brome.

fluroxypyr*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Vista XRT

Rate:
broadcast: 22 fl oz/A (0.5 lb a.e./A)
spot: 0.4% (0.01 lb a.e./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

glyphosate*

Effectiveness in season: 50–70%
Season after treatment: < 50%

Common name: Roundup

Rate:
broadcast: 1.5–3.0 lb a.e./A
spot: For a 3 lb a.e./gal product. 1–2% (0.03–0.06 lb a.e./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since glyphosate is not selective. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

metsulfuron*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Escort

Rate:
broadcast: 0.3–0.5 oz/A (0.2–0.3 oz a.i./A)
spot: 0.04 oz/gal (0.02 oz a.i./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Remains in the soil for months, depending on application rate. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

picloram*

Effectiveness in season: 90–100%
Season after treatment: 70–90%

Common name: Tordon K

Some products containing picloram are restricted-use in Wisconsin.

Rate:
broadcast: 64–96 fl oz/A (1–1.5 lb a.e./A)
spot: Equivalent to broadcast rates.

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Remains in the soil for more than one year, depending on application rate, and has the potential to contaminate surface runoff water during this timeframe. Maintenance of a vegetative buffer strip is recommended between the areas picloram is applied and surface water features. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.

***Active ingredient (a.i.)**

sulfometuron*

Effectiveness in season: 70–90%
Season after treatment: 70–90%

Common name: Oust

Rate:
broadcast: 3.0–5.0 oz/A (2.25–3.75 oz a.i./A)
spot: Equivalent to broadcast rates.

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Applications can result in bare ground since sulfometuron is not selective and can remain in the soil for months, depending on application rate and site conditions. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

triclopyr*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Garlon 4

Rate:
broadcast: 24–32 fl oz/A (0.75–1.0 lb a.e./A)
spot: 1–2% (0.04–0.08 lb a.e./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

Herbicide information is based on label rates and reports by researchers and land managers. Products known to provide effective control or in common use are included. Those that do not provide sufficient control or lack information for effectiveness on target species have been omitted.

References to pesticide products in this publication are for your convenience and not an endorsement of one product instead of a similar product. You are responsible for using pesticides in accordance with the label directions. *Read the label before any application.*

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