MANAGEMENT OF

INVASIVE PLANTS IN WISCONSIN

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Dame's rocket
(Hesperis matronalis)

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.

Dame's rocket acts as either a simple perennial or a biennial, depending on climate, and grows 2–4′ tall. First-year leaves form a basal rosette that overwinters. Flowering stalks emerge in spring.

Legal classification in Wisconsin: Restricted

Leaves: Lance-shaped, toothed, and alternate with a very short or absent (sessile) petiole. Leaves decrease in size as they ascend the stem. Fine hairs present on leaves and stem.

Flowers: Late spring through summer. Flowers are four-petaled and fragrant with colors ranging from white to pink, sometimes purple. Flowers appear in the top third of the canopy in a loose inflorescence. Stamens and style are concealed in flower tube, with six stamen (four long and two short).

Fruits and seeds: Produced in slender capsules (siliques) up to 5″ long that are constricted between seeds and break apart lengthwise at maturity.

Roots: Tap-rooted with smaller branching roots.

Similar species: Fall phlox (*Phlox paniculata*; native) has opposite leaves that are not toothed and flowers with 5 petals.

Ecological threat:

- Invades woodlands (interior and edges), open areas, and roadsides.
- Found in "native" wildflower seed mixes sold throughout the country and planted as an ornamental.

Non-chemical control

Removal

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

Pulling is effective in eliminating established plants. While effective at any stage, it is easiest to pull just before flowering. For pulling to be effective, the entire taproot must be removed. If flowers are present, bag material and dispose of it in a landfill or burn it to avoid potential for seed spread. It will take 2–5 years of pulling to suppress populations, but removal rarely controls established populations.

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NPM

Mowing

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

Mowing after stems have elongated, but before they have flowered, will prevent plants from producing viable seeds. Most plants will not die, but persist as rosettes. Typically 2–5 years of mowing is required to reduce populations. If areas cannot be mowed, cutting stems and bagging flower heads after blooming is also effective.

Prescribed burning

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

Spring burns can kill germinating seedlings and suppress above-ground growth of established plants, depending on fire intensity. After the fire, established plants will resprout and reinvade areas; therefore this management method is not recommended unless integrated with other techniques. Fire may benefit other species well-adapted to this management (e.g., prairie grasses), resulting in improved competition with dame's rocket. Burns also allow for increased visibility of rosettes for follow-up treatment since they are often one of the first plants to green up after a burn. A handheld propane torch can be effective for treating seedlings.

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.*

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. Dame's rocket is most sensitive in the fall or during flowering; if applications are made at other times use higher rates.

2,4-D*

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

Common name: Many

Rate:
broadcast: 1–2 lb a.e./A
spot: For a 3.8 lb a.e./gal product: 0.5–0.8% (0.02–0.03 lb a.e./gal)

Timing: Apply to rosettes in the fall or spring or to flowering plants.

Remarks: While effective on new infestations, multiple applications will only suppress established populations.

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.

chlorsulfuron*

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

Common name: Telar

Rate:
broadcast: 1.0–2.0 oz/A (0.75–1.5 oz a.i./A)
spot: 0.04 oz/gal (0.03 oz a.i./gal)

Timing: Apply to rosettes in the fall or spring or to flowering plants.

Caution: Do not apply directly to water or to areas where surface water is present. Can remain 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.

dicamba*

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

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 to rosettes in the fall or spring or to flowering plants.

Remarks: While effective on new infestations, multiple applications will only suppress established populations.

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.

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

glyphosate*

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

Common name: Roundup

Rate:
broadcast: 0.75–1.5 lb a.e./A
spot: For a 3 lb a.e./gal product: 1.0–3.0% (0.03–0.09 lb a.e./gal)

Timing: Apply to rosettes in the fall or spring or to flowering plants. Use higher rates when air and soil temperatures drop below 40°F to maintain control.

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.

imazapic*

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

Common name: Plateau

Rate:
broadcast: 6–10 fl oz/A (0.05–0.15 lb a.e./A)
spot: 0.25–1.0% (0.005–0.02 lb a.e./gal)

Timing: Apply to rosettes in the fall or spring or to flowering plants.

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. Imazapic can remain in the soil for months, 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 Imazapic is applied and surface water features. Overspray or drift to desirable plants should be avoided, as even minute quantities of the spray may cause severe injury to plants.

metsulfuron*

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

Common name: Escort

Rate:
broadcast: 0.5–1.0 oz/A (0.3–0.6 oz a.i./A)
spot: 0.04 oz/gal (0.02 oz a.i./gal)

Timing: Apply to rosettes in the fall or spring or to flowering plants.
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.

triclopyr*

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

Common name: Garlon

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 to rosettes in the fall or spring or to flowering plants.

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.

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

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