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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.

Multiflora rose

(*Rosa multiflora*)

Multiflora rose is a perennial shrub with arching stems that grow up to 15' tall. Stems are covered in stiff, curved thorns.

Legal classification in Wisconsin:

Restricted

Leaves: Leaves are alternate and pinnately compound with 7–9 oval, toothed, 0.5–1" leaflets. Leaflets are smooth on the upper surface. Underside is lighter in color than the upper side and covered in small hairs. The base of each leaf stalk bears two fringed bracts.

Flowers:

Late spring to early summer. Flowers are white, 1–2" in diameter, and grow in clusters on the shrub.

Fruits and seeds: Round, red fruits (rose hips) develop from flowers over the summer and are 0.25" in diameter. These dry to an angular, dry fruit with each containing one seed (achene).

Roots: Shallow fibrous roots extend from a woody crown. Arching stems can root when in contact with the ground.

Similar species: Native rose species have pink flowers and lack bracts at the end of the leaf stalk (petiole).

Ecological threat:

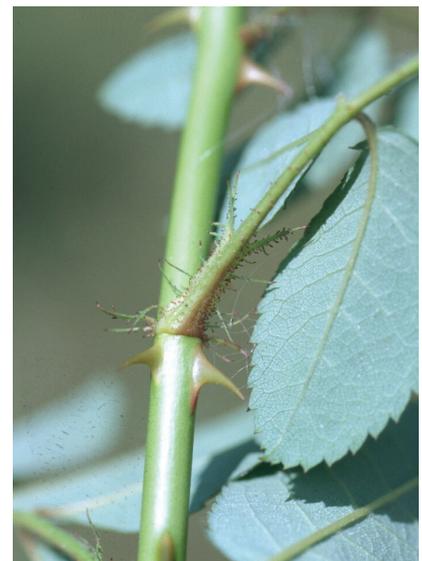
- Invades prairies, grasslands, pastures, savannas, open woodlands, and forest edges.

Non-chemical control Removal

Effectiveness in season: 90–100%

Season after treatment: 50–70%

Removing plants is an effective individual plant treatment if soil conditions allow for the removal of the root crown. Plants will resprout from root crowns if they are left in the ground. Heavy equipment (e.g., a bulldozer) is effective for clearing severely infested areas, as long as the root crowns are removed. When using heavy equipment, it may be advantageous to remove the top few inches of soil to remove rose seeds as well. When using these techniques, assess the potential for soil erosion. Reseed with desirable species if needed.



Mowing

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

Mow times 3–6 times a year for 2–4 years. After four years, more than 90% of the original population is typically eliminated.

Prescribed burning

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

Spring burns can kill germinating seedlings and young plants. Fire can also suppress above-ground growth of established plants, depending on fire intensity. After the fire, established plants will quickly resprout and reinvade areas. The removal of the litter layer by the fire can also increase the germination of multiflora rose; this management method is not recommended unless integrated with other techniques. A handheld propane torch can be effective for treating seedlings and small adult plants (≤ 4 " in diameter) in heavy shade.

Grazing

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

Grazing with sheep or goats with or without cattle can suppress populations. Management prior to grazing (e.g., herbicide application or mowing) is recommended to promote the new young growth preferred by grazing animals. Spring and summer grazing are critical times for rose control. A stocking rate of ten animals per acre may be needed early in the season, but can be reduced as the season progresses and growth slows. If mature seeds are consumed, animals must be isolated to prevent further seed spread. Five years of goat grazing are needed to control a population; grazing with only sheep may take longer, but grazing with a combination of all three can increase the effectiveness of control. Cattle will not readily graze multiflora rose, but create paths through the infestation that allow goats and sheep access to plants in dense stands.

Biological control

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

There are currently three organisms that significantly damage multiflora rose. They are rose rosette disease (RRD), a mite-vectored virus; rose seed chalcid, a torymid wasp that infests and kills developing rose seeds; and rose stem girdler, a beetle whose larvae girdles and kills plant canes. RRD is an unregulated native disease which causes infected plants to die within 2–5 years of infection. The rose seed chalcid and rose stem girdler are regulated agents that require permits to introduce. The girdler damages portions of individual canes but rarely kills an entire plant, while the chalcid feeds on and destroys seeds. To release biological control agents in Wisconsin, contact the Wisconsin Department of Agriculture, Transportation, and Consumer Protection for required permit.

Chemical control

Pre-emergence

Apply herbicide directly to soil. Use lower rates and narrower bands that are more closely spaced together on smaller plants and where less dense populations are expected and higher rates and broader bands that are more widely spaced apart on larger plants and where denser populations are expected.

tebuthiuron*

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

Common name: Spike 20P

Rate:

broadcast: 10–20 lb/A (2–4 lb a.i./A)
spot: 1.12 oz/100 ft² (0.02 oz a.i./100 ft²)

Timing: Apply during late winter or early spring when soil is not frozen. Apply evenly to ground infested with target species.

Remarks: Spike 20P can be used at rates as low as 2.5 lb/A (0.5 lb a.i./A), but partial control should be expected. Tebuthiuron is also available as a liquid formulation, Spike 80DF. This formulation is applied in a banded spray or as a spot treatment.

Caution: Do not apply directly to water or to areas where surface water is present. Applications can result in bare ground since tebuthiuron is not selective and can remain in the soil for several years, depending on application rate. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. In areas fitting this description, Spike can be used at rates as low as 2.5 lb/A (0.5 lb a.i./A), but partial control should be expected. Any plant with a root system that intercepts the area treated with this herbicide can be damaged or killed. Do not apply more than 20 lb/A (4 lb a.i./A) a year. Do not apply this product more than once a year.

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.

aminocyclopyrachlor + chlorsulfuron*

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

Common name: Perspective

Rate:

broadcast: 4.75–8.0 oz/A
 (aminocyclopyrachlor: 1.9–3.15 oz a.i./A
 + chlorsulfuron: 0.75–1.25 oz a.i./A)
spot: 0.2–0.3 oz/gal
 (aminocyclopyrachlor: 0.08–0.12 oz
 a.i./A + chlorsulfuron: 0.03–0.05 oz a.i./A)

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

Caution: Do not apply directly to water or to areas where surface water is present. Avoid using Perspective in areas where soils are permeable, particularly where the water table is shallow, since groundwater contamination may result. Perspective remains in the soil for months, depending on application rate, and has the potential to contaminate surface runoff water, especially on poorly draining soils or areas with shallow groundwater. Maintenance of a vegetative buffer strip is recommended between the areas Perspective 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.

dicamba + 2,4-D + 2,4-DP*

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

Common name: Brushmaster

Rate:

broadcast: 2–3 gal/A (2,4-D: 2–3 lb a.e./A + 2,4-DP: 1–1.5 lb a.e./A + dicamba: 0.5–0.75 lb a.e./A)
spot: 1–4% (2,4-D: 0.01–0.04 lb a.e./gal + 2,4-DP: 0.005–0.02 lb a.e./gal + dicamba: 0.002–0.01 lb a.e./gal)

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

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.

glyphosate*

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

Common name: Roundup

Rate:

broadcast: 1.4–2.0 lb a.e./A
spot: For a 3 lb a.e./gal product. 1–1.5% (0.03–0.05 lb a.e./gal)

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

Remarks: Wick application is effective on small plants with 33–75% (1.49–3.38 lb a.e./gal) solution.

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.

imazapyr*

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

Common name: Arsenal

Rate:

broadcast: 48–64 fl oz/A
 (0.75–1.0 lb a.e./A)
spot: 0.5–1% (0.01–0.02 lb a.e./gal)

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

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since imazapyr is not selective and can remain in the soil for several months to more than a 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.

metsulfuron*

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

Common name: Escort

Rate:

broadcast: 0.3–0.6 oz/A (0.2–0.4 oz a.i./A)
spot: 0.04 oz/ gallon (0.02 oz a.i./gal)

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

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.

*Active ingredient (a.i.)

picloram*

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

Common name: Tordon K

Some products containing picloram are restricted-use in Wisconsin.

Rate:

broadcast: 32–64 fl oz/A
 (0.5–1.0 lb a.e./A)

spot: Equivalent to broadcast rates.

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

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 this product 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.

triclopyr + 2,4-D*

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

Common name: Crossbow

Rate:

broadcast: 128–192 fl oz/A (triclopyr: 1–1.5 lb a.e./A+2,4-D: 2–3 lb a.e./A)

spot: 1–1.5% (triclopyr: 0.01–0.02 lb a.e./gal + 2,4-D: 0.02–0.03 lb a.e./gal)

Timing: Apply when target species is actively growing and fully leafed out. Early to middle flowering stage is the most effective time for treatment.

Remarks: Avoid application if the target plant is drought-stressed.

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.

triclopyr + fluroxypyr*

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

Common name: Pasturegard HL

Rate:

broadcast: 24–64 fl oz/A
 (triclopyr: 0.55–1.5lb a.e./A + fluroxypyr: 0.2–0.5 lb a.e./A)

spot: 1–2% (triclopyr: 0.03–0.06 lb a.e./gal + fluroxypyr: 0.01–0.02 lb a.e./gal)

Timing: Apply when target species is fully leafed out, but after growth at the end of branches and canes has slowed. Early to middle flowering stage is the most effective time for treatment.

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.

Cut stump

Cut a stem of a plant near the base and apply herbicide to the cut surface that remains rooted in the ground. Apply as soon as possible after cutting, but no later than one hour after cutting. Do not use this method if there is heavy sap flow or if snow covers the cut surface. Use lower rates on smaller plants and higher rates on larger plants.

glyphosate*

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

Common name: Roundup

Rate: For a 3 lb a.e./gal product. 10–20% (0.3–0.6 lb a.e./gal) in water.

Timing: Apply any time of year.

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.

imazapyr*

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

Common name: Stalker

Rate: 6–12% in oil (0.1–0.25 lb a.e./gal)

Timing: Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil). Consult the label to determine the appropriate carrier.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since imazapyr is not selective and can remain in the soil for several months to more than a 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.

picloram + 2,4-D*

Effectiveness in season: 90–100%
Season after treatment: 50–70%

Common name: Pathway

Some products containing picloram are restricted-use in Wisconsin.

Rate: 100% (picloram: 3%; 2,4-D: 11.2%)

Timing: Apply any time of year.

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 this product 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.

triclopyr*

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

Common name: Garlon 4

Rate: 20–25% in oil (0.8–1.0 lb a.e./ gal)

Timing: Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil). Consult the label to determine the appropriate carrier.

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.

Basal bark

Apply herbicide in a ring around the entire stem. Applications should be made at least 6" wide (6–18") to the base of a woody stem. Ideal for stems ≤ 6" in diameter. Do not use this method if snow covers the application area. Use lower rates on smaller plants and higher rates on larger plants.

dicamba*

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

Common name: Banvel

Rate: 7% in oil and water (0.3 lb a.e./gal)
 See label for directions.

Timing: Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil) or both. Consult the label to determine the appropriate carrier.

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.

imazapyr*

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

Common name: Stalker

Rate: 6–9% in oil (0.1–0.2 lb a.e./gal)

Timing: Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil). Consult the label to determine the appropriate carrier.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since imazapyr is not selective and can remain in the soil for several months to more than a 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.



triclopyr***Effectiveness in season: 50–70%****Season after treatment: 50–70%****Common name:** Garlon**Rate:** 25% in oil (1.0 lb a.e./ gal)**Timing:** Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil). Consult the label to determine the appropriate carrier.

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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