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Conservation Reserve Enhancement Program (CREP)
Technical Assistance Series

Factsheet
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Managing Multiflora Rose

Multiflora rose (*Rosa multiflora*) is an invasive shrub that can develop into impenetrable, thorny thickets. It has the distinction of being among the first plants to be named to Pennsylvania's Noxious Weed List. This plant was introduced from Asia and widely promoted as a 'living fence' to provide erosion control and as a food and cover source for wildlife. Multiflora rose does provide cover and some food value with its fleshy fruit (called 'hips'), but its overall effect on habitat value is negative. Multiflora rose is very aggressive, and crowds planted grasses, forbs, and trees established on CREP acres to enhance wildlife habitat.

Telling Bad Rose from Good

There are least 13 species of rose that that grow 'wild' in Pennsylvania, and most of them are desirable in a wildlife habitat planting. Multiflora rose is readily distinguished from other roses by two features - its white-to-pinkish, five-petaled flowers occur in branched clusters, and the base of the leaf where it attaches to the thorny stem is fringed (Figure 1). Memorial rose (*Rosa wichuraiana*) is the only other species with a fringed leaf base, but its flowers are borne singly.

Individual plants can easily grow to more than 10 feet tall and 10 feet wide. When they grow singly, multiflora rose plants have a mounded form because of their arching stems (Figure 2). When the tips of the stems touch the ground, they can take root (called *layering*) and form a new crown. If near trees, the rose behaves almost like a vine, and can grow 20 feet into the tree.

Figure 1: Two features that distinguish multiflora rose from the other rose species that grow in Pennsylvania are the flowers that appear in branched clusters, and the fringed base of the compound leaf (inset).

Figure 2. Multiflora rose in whole-plant view, with its mounded form from arching stems, and cascades of showy, white-to-pinkish blooms.

Multiflora rose breaks bud early in the spring, quickly developing a full canopy of compound leaves that have seven to nine leaflets. Peak bloom is in early June. Birds and browsing animals eat the fleshy, bright red hips and the seeds pass through their digestive systems intact. These seeds can remain viable in the soil up to 20 years.

Multiflora Rose Control Measures

A single-method control approach will not eradicate a multiflora rose infestation. Like other invasive species, a combination of control tactics is necessary to manage this plant.

Finding multiflora rose early is the best way to simplify control. Controlling rose as small, scattered plants is much easier than trying to eliminate established thickets. Vigorous, competitive vegetation greatly aids control as well.

Brush mowers, or similar equipment can be used to cut and pulverize the top growth of established plants. Mowing alone will not control multiflora rose, but it is a great way to make it easier to treat the plant with herbicides. Top growth of smaller plants can be removed with conventional mowing equipment.

Herbicides can be applied to rose foliage or to the stems. Applications to foliage can be spot-applied with a hydraulic sprayer with a handgun, mounted on an ATV, tractor, or truck; or a backpack sprayer. In a grassland planting, treatments of the herbicide Cimmaron (*metsulfuron*) mixed at

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1 oz per 100 gal of spray solution will be very effective. Apply this solution uniformly to the rose foliage, so that it is visibly wet but the solution is not running off the foliage. Avoid treating the surrounding vegetation. *Metsulfuron* is extremely effective against rose, but it will cause injury to adjacent grasses if you contact their foliage during the application.

In tree plantings, there is some risk of injury by *metsulfuron* through root absorption, so a *glyphosate* (Roundup Pro) treatment is a better choice. If either *metsulfuron* or *glyphosate* is accidentally applied to the foliage of the trees, severe injury will result. When treating multiflora rose, you should also target any other undesirable woody species in your CREP plantings. *Metsulfuron* in combination with *glyphosate* provides an effective treatment against a wide spectrum of woody and herbaceous species (Table 1).

A more selective, but more expensive treatment is a foliar application of the combination of *triclopyr + 2,4-D* (Crossbow). Apply Crossbow as a one percent mixture (one quart in 25 total gallons of spray solution) to multiflora rose in grassland plantings on a spray-to-wet basis. The ingredients in Crossbow will not injure adjacent grasses. This treatment is more likely to cause injury if used in tree plantings than a glyphosate treatment.

The herbicide *triclopyr* (Pathfinder II) can be applied to multiflora rose stems to kill the top growth, either after cutting, or to intact plants as a basal bark application. For either application, apply the ready-to-use Pathfinder II to wet the stems, but not to the point of run-off.

Stump treatment is a very effective way to enhance a mowing treatment. Pathfinder II is oil-based, and can be applied after a mowing to prevent regrowth. The oil solution penetrates the bark of the rose stems and kills the tissue underneath, preventing sprouts. You can apply this treatment with a squirt bottle, but if you have a lot of crowns to treat, it's much easier to use a backpack sprayer.

When it's acceptable to leave the top growth of the rose in place, and when you can actually access the base of the plant with a spray wand, you can control multiflora rose with a basal bark treatment. Apply Pathfinder II to the lower 12 inches of all the stems, completely wetting each stem, but avoiding run-off. Basal bark treatments are best applied from January up to the point of fall coloration.

After making your initial control applications, it is essential to follow-up. If you don't, multiflora rose will re-establish. Where rose was dense, it is unlikely you were able to thoroughly treat all the plants while trying not to get tangled in the thorny stems. When spot treating, it's easy to miss a few stems. When stump treating after mowing, it's almost impossible to find all the crowns that need to be treated. Don't get complacent. If you had a significant infestation, only ongoing maintenance will prevent it from returning.

Table 1. You can effectively treat multiflora rose with herbicides applied to the foliage or to the stems. Metsulfuron (Cimarron) or the combination of triclopyr + 2,4-D (Crossbow) are very useful in grassland plantings, but glyphosate (Roundup Pro) poses less risk of non-target injury through root absorption in tree plantings. Triclopyr (Pathfinder II) is effective for treating stumps (stubble) or the stems of intact plants.

method	treatment	application rate (herbicide/total mix)	comments
foliar	Cimarron	1 oz/100 gal	Cimarron (*metsulfuron*) is extremely active against multiflora rose. Thoroughly spray all the foliage to the point of being wet without running off. Add surfactant according to label directions. *Metsulfuron* is somewhat selective at this rate, but avoid treating adjacent grasses, and limit this treatment to grassland plantings.
foliar	Roundup Pro	128 oz/100 gal	Roundup Pro (*glyphosate*) is not as active against rose as *metsulfuron*, but is a safer option in tree plantings because it has no soil activity. If you have a lot of problem woody species, tank mix this treatment with Cimarron at 0.5 oz/100 gallons for broad spectrum brush control in grassland plantings.
foliar	Crossbow	1 gal/100 gal	Crossbow contains *triclopyr + 2,4-D*, and is safer to grasses than Cimarron, but more expensive. Avoid using this treatment in tree plantings. Crossbow can potentially injure trees through root absorption, or volatilization during high air temperatures.
mow and stump treat	Pathfinder II	ready-to-use	Use when mowing is practical. After cutting, apply Pathfinder II to the point of just wetting the remaining stubble. This treatment can be applied year-round.
basal bark	Pathfinder II	ready-to-use	This application is only feasible when you can access the base of the plant. Apply Pathfinder II to completely wet the lower 12 inches of the stems, without causing run-off. This is best applied from January up to fall color.

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