Multiflora Rose Control

Daniel J. Childs, Extension Weed Specialist, Purdue University

Multiflora rose *(Rose multiflora)* has, over the past several years, invaded nearly every county in Indiana. This woody perennial plant is a bramble with short spines or thorns on the stems and leaf petioles. It produces many clusters of small, white flowers in late May to early June. Many of southern Indiana's permanent grass pastures contain from a few scattered shrubs to large, dense stands of multiflora rose. While they provide habitat for wildlife, these shrubs compete with the existing forage, resulting in a reduction of the available grazing areas for livestock.

Complete eradication of multiflora rose from a pasture or fence row is quite difficult. However, employing the right control strategies and being persistent can result in success. Generally, no single treatment will provide complete control without destroying the pasture. A combination of chemical, mechanical, and cultural control practices, including grazing, is necessary to eradicate multiflora rose from a pasture.

Chemical Control

The use of herbicides to control multiflora *rose* has been a popular practice for many years. Certain herbicides that were once used to kill these shrubs are no longer available or registered, but several effective herbicides are still on the market. Many of these products contain 2, 4-D as one of their herbicidal components. These products include Weedone 170, Weedone CB, Crossbow, Tordon RTU and ACME Super Brush Killer. Other herbicides not containing 2, 4-D that are labeled for controlling multiflora rose in pastures or fence rows include Banvel, GarIon, Roundup, Spike, Krenite, and Ally, Several of these herbicides can be applied either as a dormant or foliar treatment.

Dormant applications can generally be made anytime while the shrub is dormant, with the preferred time being late winter or early spring, prior to the resumption of growth. Some applications may be made as a basal bark treatment involving solutions containing diesel oil or kerosene as the carrier. These treatments are applied to the lower areas of the canes, including the crown. Banvel herbicide can be applied as an undiluted, "spot concentrate" treatment directly to the soil within 6-8 inches of the crown. Crossbow has a label for applying a horizontal, thin line of undiluted herbicide across all stems at a height where the stems are less than 1/2 inch in diameter. Although not necessarily a dormant treatment, Tordon RTU and Weedone 170 can be sprayed or painted on freshly cut stumps.

Dormant treatments have certain advantages over foliar applications. Since basal applications do not require coverage of the entire shrub, less volume is needed; therefore, less time and energy are required for treating individual shrubs. Also, farmers may be less busy during the winter months than they are in May and June, when foliar treatments are applied.

Foliar treatments are generally made in late spring, when the shrub is green and actively growing. The label for Krenite, however, recommends application from July to first fall coloration. Thorough spray coverage of the foliage (some herbicide labels recommend treating stems and trunk as well as foliage) is essential for good control. Large spray volumes are generally required to obtain this coverage. Products such as Roundup, Ally, Banvel, Crossbow, ACME Super Brush Killer, and Weedone 170 have a label for foliar applications.

Many of the above-mentioned herbicides may be used in perma- -nent grass pastures to control multiflora rose, while others have only non-crop labels (i.e. fence rows). The following products are labeled for use in pastures.

1. Ally

2. Banvel

3. Crossbow

4. Roundup

5. Spike

Follow label restrictions regarding grazing and haying.

These products have a non-crop label.

1. ACME Super Brush Killer

2. GarIon

3. Krenite

4. Tordon RTU

5. Weedone 170

Table 1 gives the results of a multi-flora rose herbicide trial conducted in the winter of 1988-89 and spring of 1989. Both dormant and foliar treatments were applied at three locations in Indiana (Orange, Jefferson, and Warren counties). The percent control results were obtained by the averaging of two replications per treatment and then the averaging of all three sites.

Follow-up treatments of these herbicides the following season(s) may be necessary to provide complete control. As mentioned earlier, mechanical and/or cultural control practices should be used in combination with chemical applications for best results.

Mechanical Control

Pulling individual shrubs out of the ground with a heavy chain and tractor can be successful only if all the roots are removed. If root pieces remain, new plants will regenerate from these.

Repeated mowing of the tops has proven to be effective and is generally a good management practice for controlling all types of weeds in a pasture. Research at West Virginia University indicated that three to six mowings per season for more than one year may be necessary to provide a high percentage of plant death.

Cultural - Biological Control

Sheep and, more often, goats are known to forage on multiflora rose growing in pastures. This is documented in several university trials. Research at West Virginia University suggests that the grazing of goats for two seasons at a rate of eight to ten goats per acre will be necessary to provide effective control. Ken Simeral, an Ohio extension agent, recommends raising angora goats to fight infestations of multiflora rose in pastures. An added benefit is the profits from 10 to 30 lbs. of mohair produced per goat per year.

Certain insects and diseases are being studied for their effect on multiflora rose. One such disease, called "Rose Rosette," has been detected in several counties in southern Indiana as well as some counties in the central and north central parts of the state. Rose Rosette produces a bright red, witches'-broom-type foliar growth at the end of the canes. Studies conducted by J.W. Amrine at West Virginia University show the disease to be transmitted from plant to plant by a tiny mite. The disease will eventually spread throughout the entire plant, and the plant will generally die within two years after infection. This author has observed hundreds of dead and dying multiflora rose shrubs in southern Indiana as a result of this disease. As climatic conditions favor the development of the mite populations, the spread of this disease among multiflora rose will increase, perhaps to the point of total eradication in several areas of southern Indiana.

Table 1. Multiflora Rose Herbicide Trials

Herbicide**	Application method	Rate & carrier	Control* Dormant treatments 6 month (%)	Dormant treatments 12 month (%)	Foliar treatments 3 month (%)	Foliar treatments 12 month (%)
Banvel	Spot Concentrate	1 oz. Banvel per shrub	90	98	–	–
	Foliar	1.5% solution in water	–	–	100	99
Crossbow	Basal Bark	4% solution in kerosene	100	100	–	–
	Thin-line	0.7 oz. Crossbow per shrub	80	94	–	–
	Foliar	1.5% solution in water	–	–	100	95
Garlon 4	Basal Bark	20% solution in kerosene	100	100	–	–
Tordon RTU	Cut Stump	Applied undiluted to stumps	100	100	–	–
Weedone 170	Basal Bark	4% solution in kerosene	98	100	–	–
	Cut Stump	Applied undiluted to stumps	100	94	–	–
	Foliar	1.5% solution in water	–	–	99	95
ACME S.B.K.	Basal Bark	5% solution in kerosene	90	95	–	–
	Foliar	1.2% solution in water	–	–	99	96
Spike 20P	Spot Treatment	0.25 oz. per 22 sq. ft. of ground surface	89	95	63	84
Ally	Foliar	1 oz. per 100 gal. water	–	–	100	100
Roundup	Foliar	1.0% solution in water	–	–	98	100
Weedone LV4	Foliar	3.0% solution in water	–	–	100	96

*Percent control for 3-, 6-, and 12- month observations are defined as: 100% control = no regrowth from crown and no living/green leaves present.

**Read and follow all label directions regarding rates, precautions, and grazing restrictions.