



mile-a-minute (Polygonum perfoliatum)

Description

- Refer to the DCNR Invasive Exotic Plant Tutorial mile-a-minute page - (http://www.dcnr.state.pa.us/forestry/invasivetutorial/mile_a_minute.htm).
- Annual vine reaching lengths of 20 ft., smothering desirable vegetation.
- Stem features stout, downward-pointing spines – often called ‘tearthumb’.
- Seed enclosed in fleshy blue ‘berry’ attractive to birds – which aid in dispersal.
- Distinctive triangular leaves.
- Native to East Asia, imported as seed in *Rhododendron* stock to a York County nursery in the 1930’s.
- Infests non-maintained areas, in full sun to partial shade.
- Noxious Weed in Pennsylvania.

Management Keys

Mile-a-minute (MAM) is not a difficult plant to dispatch. It’s readily pulled and it is sensitive to moderate rates of several widely used herbicides. However, it can begin setting seed by mid-June; and it will grow onto and over desirable vegetation, making selective control with herbicides difficult.

Prevent Seed Production

To prevent an infestation from expanding, you must prevent further seed production. Flowering can begin in early June in southeast PA, and continue until killing frost. You need to control MAM early in the season limit seed production. MAM seed is viable in the soil for at least five years, so preventive MAM management is going to be an ongoing operation.

Mechanical Operations

Limited infestations of MAM can be pulled fairly easily – provided you have protective gloves.

Repeated cutting will reduce or prevent seed set. To be truly effective, cutting would have to be at ground level, using a string trimmer or similar device. Intact stems left after cutting will send up new branches. If seed has formed, remove the seed-bearing stems and destroy them.

Biological Control

Where infestations are extensive, biological control agents that feed solely on MAM can be released. The MAM weevil (*Rhinoncomimes latipes*) became available in 2004 for release. Releases are coordinated with the PA Department of Agriculture and USDA-APHIS.

Herbicide Applications

MAM is effectively controlled with pre- or postemergence herbicide applications. Significant infestations in high-priority areas should be treated with a preemergence application and follow-up postemergence applications to eliminate escapes and misses. Sparse populations are better treated with postemergence applications.

Recommended Preemergence Herbicides

For preemergence applications, three options for Park settings are ‘Pendulum Aquacap’ (*pendimethalin*), ‘Oust XP’ (*sulfometuron*), and ‘Plateau’ (*imazapic*). These herbicides are effective against MAM, are available on the state herbicide contract, and provide some selectivity – allowing you to preserve existing desirable vegetation. *Pendimethalin* is the most selective – it will not affect established herbaceous or woody vegetation. However, *pendimethalin* must be applied prior to germination to be effective. Plan on applying it by mid-March. *Imazapic* and *sulfometuron* have postemergence activity as well, so you can apply them even after the MAM has emerged. However, both of these herbicides will cause injury to some already established herbaceous species, even when applied preemergence. Delaying application until desirable vegetation is beginning active growth will increase the injury. If woody species have broken bud before *sulfometuron* application, they may be severely injured if you contact the emerging foliage.

Recommended Postemergence Herbicides

There are several widely used herbicides that are effective against MAM. However, we will limit recommendations to *triclopyr* (‘Garlon 3A’) or *glyphosate* (‘Glyphomate 41’). These products are on the state herbicide contract, they have little (*triclopyr*) to no (*glyphosate*) soil activity, and they both have aquatic labeling. These products are effective, available, and pose low risk to non-target plants and other organisms.



This work was sponsored by the Pennsylvania Department of Conservation and Natural Resources, Bureau of State Parks (PA DCNR). By Art Gover, Jon Johnson, Kirsty Lloyd, and Jim Sellmer, 2008. The contents of this work reflect the views of the authors who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the PA DCNR or The Pennsylvania State University at the time of publication.

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'Garlon 3A' only injures broadleaf plants, while 'Glyphomate 41' will injure all contacted plants. Choose your product based on the vegetation that the MAM is growing in and what vegetation you are trying to retain. If you are targeting a number of species while treating MAM, you can use a 4:1 mix of 'Glyphomate 41': 'Garlon 3A' (target 4 qts:1qt per acre). This will provide control of most any species you treat. This is a potent rate appropriate for brush, so apply it lightly to the MAM.

MAM has waxy leaves, so it is important to use a surfactant (e.g. 'Timberland 90', which is the current non-ionic surfactant on the state contract) with 'Garlon 3A'. 'Glyphomate 41' includes pre-mixed surfactant.

Follow-up Treatments

In high-priority areas, spot treat escapes and misses later in the season. If plants bearing seed are present, pull and bag them, and destroy them.

Figure 1. The management calendar for mile-a-minute emphasizes treatment before seed set. When seed is present it should be removed and destroyed. Where bars are dimmed, this timing is less useful because of ripened seed.

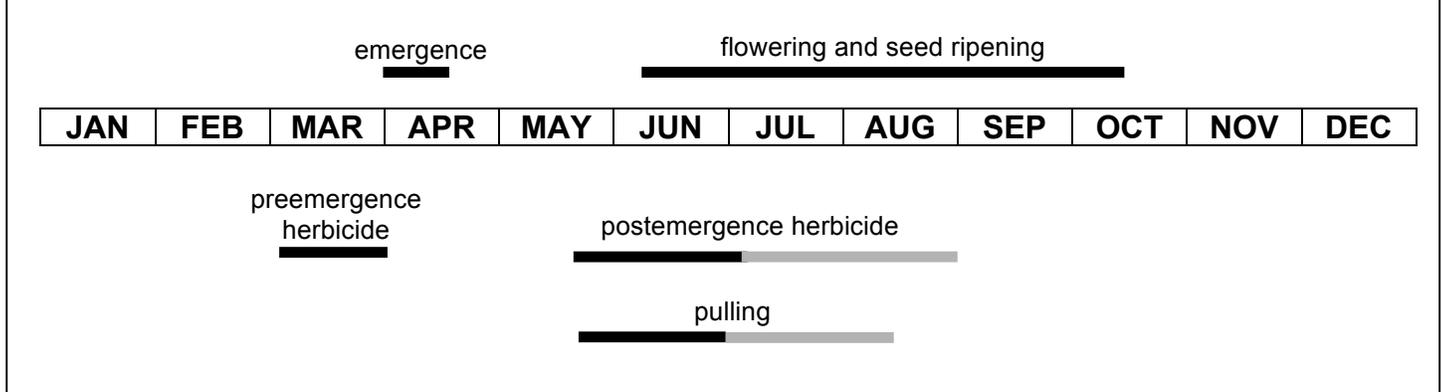


Table 1. Prescriptions for controlling mile-a-minute (MAM) stress completing control operations before July 1 to prevent seed production. MAM is an indeterminate vine that flowers from mid-June until killing frost.

timing	treatment	product rate	comments
May to mid-June	pulling	n/a	As long as ripe or nearly-ripe seed (look for the blue fruit) are not present, the vines can be pulled (with protective gloves) and left to dry.
After mid-June	pulling and removing vines for destruction of seed	n/a	Once ripe seed is present, pulled vines should be bagged and destroyed, preferably by burning. The simplest approach would be to use sturdy paper bags and burn the bags.
May to killing frost	mowing, cutting	n/a	Cutting plants at the ground (i.e. string trimmer) will kill them. If you are mowing and leaving the lower stem intact, the vines will likely regrow. Repeated mowing will suppress seed set and prevent the vines from climbing desirable plants.
March	preemergence herbicide (choose one): 'Pendulum Aquacap' 'Plateau' 'Oust XP'	4.3 qts/ac 8 to 12 oz/ac 2 oz/ac	Use preemergence herbicides where infestations are dense, then follow-up in May with postemergence herbicide to treat misses. 'Pendulum' (<i>pendimethalin</i>) is the safest treatment to existing, desirable herbaceous plants. In forested settings, 'Plateau' (<i>imazapic</i>), or 'Oust XP' (<i>sulfometuron</i>) are safe to woody plants, but will cause injury to some herbaceous species. 'Plateau' and 'Oust XP' have significant postemergence activity, while 'Pendulum' has only preemergence activity and <i>must</i> be applied 2 to 3 weeks prior to germination get moved into the soil by rainfall.
May through June	postemergence herbicide (choose one): 'Garlon 3A' plus surfactant 'Glyphomate 41'	48 oz/ac 64 oz/ac	Use postemergence herbicides as the primary tool where infestations are not dense, and as a follow-up to preemergence applications. 'Garlon 3A' (<i>triclopyr</i>) will not injure grasses and other grass-like plants, while 'Glyphomate 41' (<i>glyphosate</i>) will injure all vegetation that is contacted. MAM is susceptible to a number postemergence herbicides, but <i>triclopyr</i> and <i>glyphosate</i> are on the state herbicide contract, have little-to-no soil activity, and have aquatic labeling.

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