



common reed (*Phragmites australis*)

Description

- Common reed is usually known simply as 'phragmites'.
- Refer to the DCNR Invasive Exotic Plant Tutorial phragmites page (http://www.dcnr.state.pa.us/forestry/invasivetutorial/common_reed.htm)
- Herbaceous, rhizomatous, perennial, cool-season grass.
- Grows in tall (6 to 12-plus feet), dense stands that exclude almost all other vegetation.
- The invasive form of phragmites is an exotic genotype likely introduced via ship ballast. There is a native form that is less common.
- Grows in tidal and non-tidal marshes, other wet areas, and will persist in terrestrial settings when introduced via rhizome fragment.

Management Keys

Due to its sheer size and persistence, phragmites is difficult to control, but as long as you are willing to invest the effort and follow a few guidelines, it can be successfully suppressed.

Target the Rhizomes

To eliminate phragmites, you have to injure the rhizomes. This is most effectively done with systemic herbicides.

Timing is Key

Systemic herbicides are most effective when applied later in the growing season. This is when the foliage is sending sugars produced through photosynthesis to the roots and rhizomes. Systemic herbicides are moved in the same direction through the plant as the sugars.

Applications made too early in the season or too soon after cutting do not translocate to the rhizomes, and only injure the shoots.

Do Not Disturb

After herbicide treatment, it is important that you do not disturb the rhizome system through any type of excavation or vehicle rutting.

Cutting Helps

Cutting alone is not an effective suppression approach. However, cutting prior to an herbicide treatment will make the application easier. Cutting reduces the size and density of the regrowth, and eliminates the persistent stems from the previous season.

A point to consider is that it may be easier to simply spray the phragmites rather than cut it.

Be Patient

Wait 8 weeks after cutting before applying herbicide. If you apply too soon after cutting, the herbicide will not be translocated to the rhizomes.

Recommended Herbicides

Imazapyr ('Habitat' is an aquatic-labeled formulation) is regarded as the most effective herbicide against phragmites. However, *imazapyr* has considerable soil activity. Application near desirable trees and situations where you are relying on the seedbank for revegetation is not recommended.

Glyphosate is probably less effective than *imazapyr*, but has a greater 'comfort level'. *Glyphosate* is the active ingredient the many 'Roundup' products that are available for agricultural, professional, and homeowner use. As of this writing, the *glyphosate* products available on the PA statewide herbicide contract are 'Aquaneat' and 'Glyphomate 41'. Both of these products have aquatic labeling.

Glyphosate has several advantages:

- it *is* effective
- it has low toxicity to non-target organisms
- it has no soil activity
- it's relatively inexpensive

A new option still being evaluated is the herbicide *imazamox* ('Clearcast'). Operational results to date suggest it is very active against phragmites. It has less soil activity than *imazapyr*, and may be less injurious than *glyphosate* to many species that would be contacted during spray operations.



Where's the Water?

If standing water is present, a spray application requires the presence of an applicator certified for aquatic application, and a permit from the PA Fish & Boat Commission. It's easier to wait for drier conditions so that a permit is not required.

Be Persistent

There are two phases of phragmites management

– control and maintenance. The control phase takes two seasons, and includes at least two operations in year-one (e.g. cut and treat, or treat twice) and at least one operation in year-two.

After your control efforts have nearly eliminated phragmites, you need to periodically monitor the sites and treat any signs of new growth to prevent re-infestation.

Figure 1. The management calendar for phragmites emphasizes late-season applications of the herbicide glyphosate to maximize injury to the rhizomes.

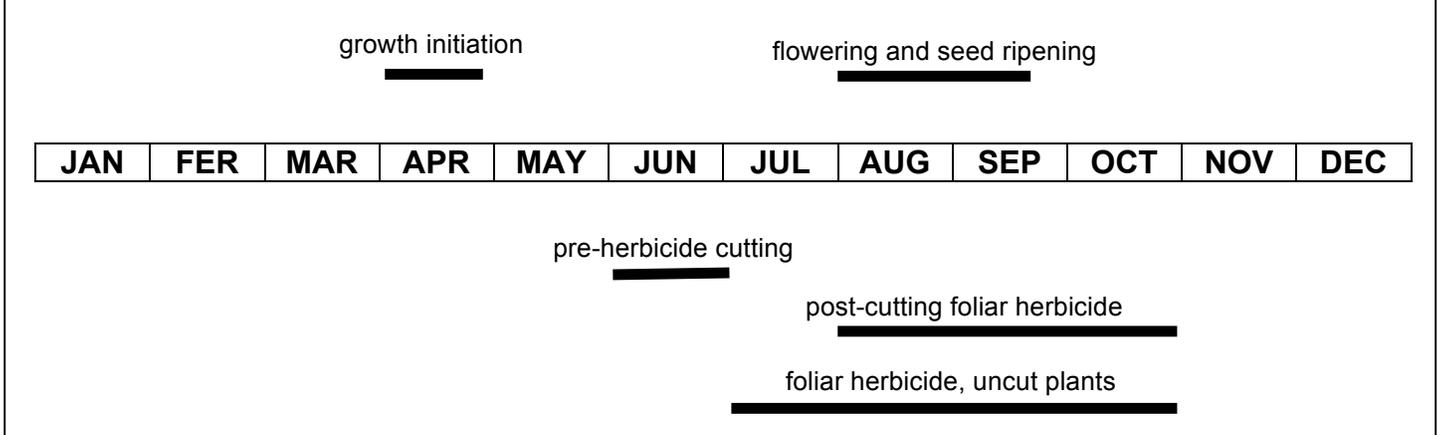


Table 1. Prescriptions for elimination of phragmites stress proper timing of operations to maximize injury to rhizomes. Improper timing (impatience) will result in treatments that provide 'topkill' (shoot injury) but no net effect.

timing	treatment	product rate	comments
June	cutting prior to foliar herbicide application	n/a	Cutting in June results in shorter, less dense regrowth. It also eliminates the persistent stems from previous seasons. This makes a subsequent herbicide application easier. However, cutting is very laborious – unless you have a small infestation or a mower that won't get stuck or leave damaging ruts, it may be easier to spray twice rather than to manually cut and spray.
anytime	cutting	n/a	Repeated cutting does not eliminate phragmites, but it does slow its growth and lateral spread significantly. Where phragmites is adjacent to mowed areas, it should be included in the mowing regimen (conditions permitting). If you are going to treat phragmites with a systemic herbicide, stop mowing 8 weeks prior to application.
At least 8 weeks after mowing, or to uncut phragmites after July 1	'Aquaneat' or 'Habitat' or 'Clearcast'	7.5 pints/acre or 5 pints/acre or 4 pints/acre	Use any of these products to treat regrowth, waiting eight weeks after the cutting to treat, or treat uncut phragmites after July 1. Phragmites will usually remain green into late October, allowing time for a follow-up application as well. 'Habitat' (<i>imazapyr</i>) has significant soil activity and should not be used over the root system of desirable trees.
fall follow-up, while foliage is still green	'Aquaneat'	7.5 pints/ac	Phragmites can be treated as late as early November in some locations. Use an aquatic-labeled <i>glyphosate</i> product for the follow-up treatment if 'Habitat' or 'Clearcast' were used for the initial treatment.
after herbicide treatment	STAY OUT	n/a	Do not disturb the rhizome system after herbicide application. Where rhizomes are severed due to mechanical injury, you will likely observe more resprouting.

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