

## FACT SHEET

# Controlling *Phragmites australis* (European Common Reed) in Agricultural and Rural Areas

### What is Phragmites?

Phragmites is an aggressively spreading invasive grass capable of reaching heights greater than 5 m and densities of over 200 plants per square metre. In 2005 it was recognized as Canada's worst invasive plant by scientists at Agriculture and Agri-Food Canada.



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### Why is Phragmites a Concern in Agricultural Areas?

If left uncontrolled, Phragmites can develop into a dense mass that clogs drainage tiles and ditches, impeding water flow and causing flooding. Old stalks are resistant to decay and can remain for several years, further impeding water flow if not removed.



Roadside Phragmites  
Army Camp Road, Lambton Shores

Lambton Shores Phragmites Community Group

Phragmites is spreading along roadside ditches and municipal drains, interfering with water flow.



Same roadside ditch after herbicide application and excavating

### Controlling Phragmites on the Farm

Phragmites control options are site specific and may include a combination of herbicide application, excavation, cutting or burning.

#### Timing is Everything

Regardless of the control method selected it is important to note that animals, including nesting birds, turtles, frogs, toads, or snakes, may be present on the edges of Phragmites cells, and timing control activities to reduce potential harm or mortality should be a consideration.

#### Cutting

- Although cutting will not cause Phragmites mortality, it may slow growth, reduce stand density and reduce seed head development.
- If this method is selected as a management option, a regular cutting regime must remain in place for perpetuity, since the plants can grow quite rapidly and dense cells can re-establish once cutting discontinues.

#### Herbicide Application

- Mortality rates of between 70 – 95% can be expected after one treatment and complete control can be expected after two treatments for most sites.
- Depending upon the site conditions, control can be undertaken using conventional equipment such as boom sprayers.
- Allow at least three weeks after herbicide application before cutting, burning or excavation activities take place to ensure the chemical has time to be effective.
- If plants are to be treated before they reach full height it is highly recommended that the standing dead plants be flattened or cut prior to the growing season, to increase herbicide contact with live plants and reduce product waste.

#### Disposal

- There are many benefits to removing dead plant material including restoring water flow and native vegetation.
- For more information on proper disposal refer to “Smart Practices for the Control of Invasive *Phragmites* along Ontario’s Roads” – Ontario Phragmites Working Group.

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## How to Identify Invasive Phragmites

- Mature plants have tall, brittle stalks with broad, flat leaf blades starting ~ halfway up the stem, and a purple or blonde plume that can be quite large and contain thousands of seeds
- Immature Phragmites can be confused with other grasses and can be more difficult to identify
- Detailed identification information can be found in the references and at the website links listed below



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## Herbicide Control Information

With proper timing, concentration and application methods, Phragmites mortality can be achieved using herbicides effectively, efficiently and environmentally responsibly. Currently there are three products legally available in Canada to control Phragmites australis; WeatherMAX® (registration No. 27487) and VisionMAX (registration No. 27736) which have glyphosate as the active ingredient and Arsenal® Powerline (registration No. 23713) which has imazapyr as the active ingredient. It is important to note that none of these products can be applied over water because of the additives they contain that are harmful to aquatic life.

- For established infestations it is recommended that the highest concentrations as per label instructions be used; for the two glyphosate products the concentration of 8 L/ha or ~5% by volume is recommended; for the imazapyr product the recommended rate is 4 L/ha or 2.5% by volume. **The most important consideration is to make sure that the plants get as wet as possible but not to the point of dripping.**
- It is highly recommended that the surfactant MSO Concentrate Methylated Seed Oil (Adjuvant commercial, active ingredients 70% methylated soybean oil, Registration No. 28385) also be added at a 1% concentration to increase plant uptake and improve herbicide efficacy.
- Timing for herbicide application is different for the two active ingredients; Imazapyr can be effective if applied early during the growing season (~mid June) up until late fall before the plants naturally senesce; Glyphosate works best if applied after the plants have reached peak height (~early/mid August) up until late fall before the plants naturally senesce.
- Higher leaf surface area coverage by the herbicide ensures greater below-ground biomass die off.
- Herbicide application on hot, humid days or cold, damp days is not recommended.



**No herbicides** are currently available in Canada for control of invasive Phragmites in **wet sites**.

## Phragmites Impacts on Non-agricultural Areas

- Native plant species cannot effectively compete against Phragmites which severely alters wetlands and other sensitive habitats.
- Hundreds of hectares of habitat are now infested with Phragmites.
- While wildlife may use the edges of a Phragmites cell the interior sections are effectively dead zones.
- A high number of Species at Risk are negatively impacted.
- Phragmites can grow so tall and thick that cells become effective barriers along shorelines greatly impacting recreational access, aesthetic enjoyment and property values.
- During the dormant period the standing dead biomass presents a significant fire hazard to infrastructure and residential areas.
- Phragmites creates safety hazards along roads by blocking sight lines.



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## More Information about Phragmites

- There are no natural controls to keep Phragmites in check.
- Phragmites is a strong competitor for nutrients and can survive and even thrive in a wide variety of conditions.
- It is allelopathic, exuding chemicals from roots that harm other plants.
- Below ground the rhizomes and roots can develop into a dense, thick mat several metres thick.
- Its typical growth habit is to develop into dense, mono-culture cells, even where it grows naturally in Europe.

## Stop the Spread

- Phragmites colonizes new sites via seeds, rhizomes, stolons.
- Seeds can be dispersed by winds up to a ~10 kilometre radius.
- Seed germination rates tend to be low, but this increases where plants are growing in high nutrient sites.
- Humans are the main spread vector, moving Phragmites throughout the province on contaminated heavy equipment.
- Farmers can help stop the spread of Phragmites into creeks, wetlands, beaches and other sensitive habitats by controlling this plant on their properties.

*For more information please refer to:*

**Ontario Invasive Plant Council and Ontario Phragmites Working Group:** <http://www.opwg.ca>

**Great Lakes Phragmites Collaborative:** <http://greatlakesphragmites.net>

**Ministry of Natural Resources & Forestry:**

<http://www.ontario.ca/document/invasive-phragmites-best-management-practices>

**Lambton Shores Phragmites Community Group:** <http://www.lspcg.com>

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