

European Black Alder

(*Alnus glutinosa*)

Best Management Practice Technical Document for Land Managers

March 2017

- DISCLAIMER -

The intent of this document is to relay specific information relating to invasive plant control practices that have been advised by leading professionals across Ontario. This document contains the most up-to-date research and knowledge available at the time of publication and reflects current provincial and federal legislation regarding pesticide usage. It is subject to change as legislation is updated or new research findings emerge and is not intended to provide legal advice. The timing suggested will differ throughout Ontario and should be tailored to your region.

Use this document after you have performed monitoring, assessed your priority areas and made sure that the control options listed in this document are allowed and appropriate on your site. For more information, please refer to the Ontario Invasive Plant Council's Best Management Practices document for European black alder.

Strategy and Cautions

- Remove the outlying populations (isolated plants or satellite populations) first to prevent further spread.
- Small populations of seedlings and small trees (≤ 5 cm in diameter) can be removed manually.
- Large populations of seedlings or small trees for which pulling is not practical can be treated with a systemic foliar herbicide.
- Large trees (> 5 cm in diameter) can be cut and the stump treated with a herbicide. Basal bark treatment is effective where cutting is not an option.
- Manual control of mature trees should be done before the female fruits start to drop seed (typically late September).

Caution: If not combined with chemical control, other forms of manual control, such as girdling and cutting, will encourage suckering.

Management of Seedlings and Small Trees (≤ 5 cm in Diameter)

Saplings can, depending on soil conditions and root development, be hand-pulled any time of the year but this method is easiest when the soil is wet and pliable. Use a shovel to aid in stubborn root removals. Small populations of plants up to 5 cm in diameter can be removed using a weed pulling tool. Perform before female fruits start to drop seed (typically late September). With manual control, the entire root crown must be removed in order to prevent re-sprouting.

Management of Large Populations (> 300 m²) and Large Trees (> 5 cm in Diameter)

A foliar application of a glyphosate-based herbicide is recommended for large populations of small trees. Large trees (> 5 cm diameter) can be cut and the stumps treated with either glyphosate (must be applied immediately following cut) or triclopyr mixed with bark oil. Cutting must be followed by an application of a systemic herbicide or re-sprouting may occur, typically resulting in a thicker stem base and denser branches. Large trees can also be controlled using a triclopyr-based basal bark application. This treatment can be applied year-round, as long as the root collar is not in water. Pesticide drift may prohibit pesticide use near water.

Legal Considerations and Regulatory Tools for Chemical Control

Herbicides must be applied in accordance with the federal *Pest Control Products Act*, the Ontario *Pesticides Act*, Ontario Regulation 63/09 and in accordance with all label directions. Ensure you have the most current label and are aware of any re-evaluation decisions. The easiest way to find a chemical label is by using the PMRA's label search tool, which can be found by searching "PMRA label search" in any major search engine. Only licensed pesticide applicators are legally allowed to apply restricted pesticides in Ontario.



Ontario's *Cosmetic Pesticides Ban Act* prohibits the non-essential use of prescribed pesticides (Class 9) on land. Exceptions exist to allow the use of these herbicides for control of plants, such as European black alder, that are detrimental to the environment, economy, agriculture and/or human health. To qualify for these exceptions specific criteria must be met and appropriate ministry approval is required.

Table 1: Exceptions to the Ontario *Cosmetic Pesticides Ban Act* which may be applicable for control of European black alder.

Forestry:	This species forms monoculture stands that out-compete native species in as little as 10 years, blocking them from water, nutrients and sunlight. This exception therefore applies to treed areas greater than 1 hectare.
Natural resource:	Black alder can reduce native biodiversity, threatening wetland and riparian species and habitats specifically.

For more information on these exceptions and applicable procedures, please refer to the Ontario Invasive Plant Council's Best Management Practices document for European black alder.

Herbicide Selection and Application

Professionals consulted for this document recommend using glyphosate-based or triclopyr-based herbicides.

Table 2: Chemical control techniques recommended by experts for European black alder.

Chemical Control Method	Chemical and Concentration	Timing and Application	Details
FOLIAR	Glyphosate (3 - 5% solution*).	Spring and summer. Must have growing leaves present to be effective.	For large populations.
CUT STUMP	Glyphosate (95% solution*).	Any time the plant is not flushing (usually early spring) and above zero temperatures.	Apply immediately following cut.
	Triclopyr (20% solution**) mixed with bark oil.	Any time the plant is not flushing (usually early spring) and above zero temperatures.	Can be applied to stumps days to weeks after cutting.
BASAL BARK	Triclopyr (20% solution**) mixed with bark oil.	All year. Follow herbicide label instructions regarding temperatures at which the herbicide can be applied.	Apply chemical all the way around the stem in a 30 cm high strip starting at the root collar.

*Based on a product containing 540 g/l of chemical. **Based on a product containing 755 g/l of chemical. Please read the label in full before use to ensure that these recommendations meet the requirements of the herbicide you have selected.

Disposal

Do not compost viable plant material (seeds and roots) at home or send to landfill. If your municipality has a high-heat compost program, plants can be sent there. Alternatively, solarize viable plant material by placing it in sealed black plastic bags and leaving them in direct sunlight for 1-3 weeks. Alternatively, place in yard waste bags, cover with a dark-coloured tarp and leave in the sun for 1-3 weeks. The branches and stems can be burnt as firewood, composted or sent to municipal composting facilities.

Rehabilitation and Monitoring

Control is much more successful when heavily infested areas are re-planted with native tree, shrub and plant species that are able to outcompete new growth and other invasive species. European black alder creates extra nitrogen which alters the soil composition. Soil rehabilitation may be necessary. Follow-up monitoring is crucial. Control measures may need to be repeated for five years or more. Remove seedlings and suckers as they appear.