

# Black Locust

(*Robinia pseudoacacia* L.)

## 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 black locust.

## Strategy and Cautions

- Black locust is extremely difficult to eradicate once established and no single technique is entirely effective.
- Remove the outlying populations (isolated plants or satellite populations) first to prevent further spread.
- Younger trees with thin bark ( $\leq 15$  cm in diameter) can be controlled using a basal bark application of a triclopyr-based herbicide.
- Larger trees ( $> 15$  cm in diameter) should be treated with a triclopyr-based herbicide using a cut stump method.

**Caution:** Once black locust is established, any attempt at physical control will encourage suckering/colonization, making it extremely difficult and costly to eradicate fully. For this reason, hand pulling, girdling, burning, mowing and cutting (without chemical control) is not recommended!

### Management of Small Trees ( $\leq 15$ cm in Diameter)

Small trees with thin bark ( $\leq 15$  cm in diameter) can be controlled using a basal bark application of a triclopyr-based herbicide. Basal bark application is best performed during the growing season (midsummer to early fall) after the heavy sap flow of spring has slowed.

### Management of Large Trees ( $> 15$ cm in Diameter)

Large trees should be controlled using a cut stump method combined with a triclopyr-based herbicide to prevent suckering. This method should be performed during the growing season. Cut the tree as close to the ground as possible and apply herbicide within 30 minutes of cutting. Apply herbicide to the cambium - the thin layer where active growth occurs, just inside the bark - using, for instance, a spray bottle or wicking applicator.

## 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 black locust, 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 black locust.

<b>Forestry:</b>	Black locust readily invades forest ecosystems where it outcompetes native plants. This exception therefore applies to treed areas greater than 1 hectare.
<b>Agricultural:</b>	Black locust thrives in prairies, pastures, meadows and savannahs.
<b>Natural resource:</b>	Black locust is named as a specific threat to several species at risk in Ontario and can have a wide range of negative impacts on Ontario's native ecosystems and species.

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

## Herbicide Selection and Application

Certain herbicides used for cut-surface application, such as picloram, may cause vigorous sprouting from roots. Only herbicides which control the tree's root system will kill the tree. Professionals consulted for this document recommend using a triclopyr-based herbicide.

**Table 2:** Chemical control techniques recommended by experts for black locust.

Chemical Control Method	Chemical and Concentration	Timing and Application	Details
<b>BASAL BARK</b>	Triclopyr (20% solution*) mixed with bark oil.	Mid-summer to early fall. Apply to the bottom 50 cm of trunk.	For small trees with thin bark.
<b>CUT STUMP</b>	Triclopyr (20% solution*) mixed with bark oil.	During growing season. Cut tree close to the ground and apply herbicide. Apply herbicide to the cambium within 30 minutes.	For larger trees (>15 cm in diameter).

\*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. Branches and stems that have been cut can be burnt as firewood, composted or sent to municipal composting facilities.

## Rehabilitation and Monitoring

Black locust is shade intolerant. Control is much more successful when areas are re-planted with native tree, shrub and plant species that can outcompete and shade out new growth. Being a legume, black locust trees have nitrogen-fixing nodules which increase the nitrogen content in soils, altering the soil conditions of the habitat. Soil rehabilitation may be necessary. Seeds have a highly impermeable seed coat and can remain viable for decades. Even plants that appear dead may re-sprout several years after treatment. **Annual monitoring is of critical importance in managing this species.**