



# A Homeowner's Guide to Buckthorn Control

Developed by the  
Northwoods Cooperative Weed Management Area

**Common buckthorn** (*Rhamnus cathartica*) and **glossy buckthorn** (*Rhamnus frangula*) are invasive shrubs that are commonly found in hedges, fence rows, yards, and residential forests. The black and red berries are eaten by birds or washed away in storm water, and eventually find their way to natural areas. Once the seeds take hold in a forest or field, the plants spread aggressively and choke out other plants. They will decrease tree regeneration and displace native vegetation. Buckthorns stay green later into the fall than most trees or shrubs, giving it an advantage over native plants. Buckthorn is also a host for agricultural pests such as the soybean aphid and oat rust disease. **Effective control or eradication requires regular treatments over several years.**



Figure 1: Common buckthorn with yellowish-green flowers in the spring.



Figure 2: Glossy buckthorn leaves with red and black fruit in the fall.

## Identification

**Common buckthorn** is a small tree to large shrub that can grow up to 25 ft tall. The ends of branches develop into thorns. Leaves grow opposite to subopposite on the stems. Leaves are finely toothed, elliptic and come to a point at the tip. They have 3 to 5 pairs of distinct lateral veins that curve toward the tip of the leaf. They have small greenish-yellow flowers in the axils of the leaves close to the stem that develop into dark purple to black fruit that stay on plants into the winter. The plants have either female flowers or male flowers. Thus, some plants produce fruit and seeds, while others do not. Buckthorns have bright orange inner bark.

**Glossy Buckthorn** is a small tree to large shrub that can grow up to 20 ft tall. Branches do not have thorns. Leaves grow alternately or subopposite on the stems. They are elliptical shaped and are wider near the tip than the base. They have no teeth on the edges (entire), have an abrupt point at the tip, and have 8-9 pairs of lateral veins. Plants have small greenish perfect flowers (with both male and female parts on each flower) that are in the axils of leaves along the stem. Thus, all plants can develop berries and seeds. Berries turn from red to dark purple or black.

## Manual Control

Pulling buckthorn is an option for small plants and seedlings. The best time to pull is after rain when the soil is moist, and roots are loose. Plants up to 2 inches in diameter may be pulled using a weed wrench or shovel. If buckthorn is cut without treating the stump, new shoots will inevitably sprout. Stumps can be treated manually by covering them so that the sprouting shoots cannot get sunlight. Buckthorn

Baggies are small and very strong mini garbage bags that can be used to cover the stump. They are secured with a zip tie. Alternatively, a large tin can (coffee can) with a heavy rock on top can stop resprouts. For Buckthorn Baggies or tin cans to kill the shrubs, they must be kept on the stumps for a year or more. If these methods are used, make sure to return to remove the baggies and cans.

## Chemical Control

Below are descriptions of two types of chemical treatments for buckthorn. The key to effective herbicide use is using the correct dosage of the active ingredient, referred to as a percentage of active ingredient (a.i.). You are legally required **to read and follow all instructions on the label of the herbicide**. Herbicides should not be used in or over wet areas without getting a permit through the DNR. Residue or leftover chemical should not be allowed in public waters including household drains. Used gloves can be disposed of in the trash. Contaminated clothing should be washed separately. Look at labels to find the active ingredient of the herbicide. Triclopyr and glyphosate are two active ingredients that can control buckthorn.

**Triclopyr** is an active ingredient in herbicides that is *selective* meaning it does not kill all types of plants. Broadleaf plants are most sensitive to triclopyr, while grasses and sedges are less sensitive. Triclopyr products are often diluted by oil-based liquids. Check the label for what it should be diluted with.

**Glyphosate** is an active ingredient in herbicides that is not *selective*, meaning it will kill or damage *grasses as well as broad leaf plants*. Be careful not to spray other plants when using this chemical.

**SUPPLIES** (Residents of the NCWMA may borrow supplies except herbicide from the NCWMA.)

- Loppers or folding handsaws
- Chemical resistant unlined gloves: 15 mil nitrile gloves work well.
- Safety glasses
- Protective clothing: Long sleeves, long pants, and boots.
- Cut-stump method: Small bottle (around 4 oz) with leak proof flip-top (such as a container for contact solution), spray bottle, or “Buckthorn Blaster.”
- Foliar spray method: Spray bottle or purchase herbicide that comes with built-in sprayer.
- Small funnel
- Measuring cup that has small increments (For example: 8 oz total with 0.25 oz increments)
- Liquid dye (such as food coloring or Rit dye)
- Herbicide: 20% to 50% concentrate for cut stump method. 1% -2% concentrate for foliar spray method. Read the label. Look for herbicides that have a concentration that does not need to be diluted.

### 1. Cut-Stump Method

This may be the most effective method with large bushes, but if there are dense small plants, foliar spray or hand-pulling would work best. Check the “active ingredient” concentration on the bottle. Treat stumps with 20-30 % active ingredient. Treat within an hour of cutting. Read the label for specific directions for each herbicide. More concentrated herbicides can be diluted as needed. Even at these levels, there can be resprouts from the stump. Expect to return annually to treat resprouts and new seedlings.

**Examples of concentrated triclopyr that comes in quart containers:** Brushtox Brush Killer with Triclopyr, Stump Stomp, Hi-Yield (35261) Triclopyr Ester, Triclopyr 4 Herbicide

**Example of concentrated glyphosate:** Compare-N-Save Grass and Weed Killer Glyphosate Concentrate, Round-up with the yellow cap, *Roundup Poison Ivy Plus Tough Brush Killer Concentrate* or purple cap *Roundup Weed & Grass Killer Super Concentrate*.

**Step 1: Verify plants.** Closely examine the plants to be sure it is a species of buckthorn. When in doubt, contact the NCWMA to have it verified. Make sure you can distinguish buckthorn from cherry, dogwoods or other shrub species that may be mixed in with the buckthorn.

**Step 2: Preparing for the treatment.** Label the bottle with the herbicide, its concentration, the amount it is diluted, and the date. Permanent marker may smear. Write on paper and tape on with clear packaging tape before mixing. Wear gloves, safety glasses and the appropriate clothing as noted in the supply list above. Pour herbicide from one bottle to another outside and over a bin. If using a small bottle, pour herbicide into a measuring cup first to avoid accidentally overflowing the bottle. Pour the herbicide into the bottle using a funnel. Add water or oil-based liquid to dilute appropriately. (Read the label to determine what should be used to dilute). Add enough dye so you will be able to tell where you have treated. Close tightly and shake gently to mix.

**Step 3: The treatment.** Vegetation should be dry when treating it with herbicide and precipitation should not be in the forecast. Wind speeds should be low. Cut the stem of the plant 2-3 inches above the soil. Wearing chemical resistant unlined gloves, spray the cut surface of the stump **immediately** with the herbicide mixture. Apply herbicide to the top surface of the stump. Focus treatment along the rim of the stump. This is where the cambium transports materials down into the roots. Try not to allow herbicide to drip down the stem or onto other plants.

**Step 4: After the treatment.** Read the label for specific directions of re-entry. Not entering the area for 36 hours is optimal. Put a caution sign at entry points to the treatment area if it is in a place the public may enter. Make sure pets and children do not enter the area during that time. Store herbicide in a secure location where children will not have access. You should not re-cut, mow or disturb treated stems for the season to allow the herbicide to work. If the plants re-sprout, you may use the cut-stump method again or you may treat it by foliar spraying (see below).

## **2. Foliar Spray Method**

A foliar spray treatment is a good option if the buckthorn is dense and predominantly smaller plants. Follow the directions for the “cut-stump method” (above) except use a much lower concentration of herbicide (1% to 2%) and spray the leaves with the herbicide instead of cutting the shrubs and treating the stumps. Follow the label of the herbicide you use. Foliar spraying requires near complete coverage of the leaves to be effective. Glyphosate and triclopyr products work. Instead of diluting high concentrated herbicides, it is easier and safer to purchase low concentrate products. Be careful not to over-spray. Do not let the herbicide drip off the plants and damages neighboring plants.

**Examples of low concentrate pre-mixed herbicides:** Roundup Ready-to-Use Poison Ivy Plus Tough Brush Killer (contains Glyphosate), BioAdvanced Brush Killer Plus, Ready-to-Spray (contains Triclopyr).

For more information:

Ramona Shackleford  
Northwoods Cooperative Weed Management Area Coordinator  
Bayfield County Land & Water Conservation Department  
P.O. Box 126  
Washburn, WI 54891  
Phone: (715) 373-6167  
info@northwoodscwma.org