



Photo by Dee Nash

American Bittersweet has berries only at the tips of the branches. Replacing invasive Asian Bittersweet with American Bittersweet provides habitat and food for wildlife and protects native ecosystems.



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Herbicide Common Sense

NOHLC treats invasive Asian Bittersweet using an herbicide called glyphosate. ShoreKlear™ and some other brands contain 53.8% of glyphosate with no surfactants added. ShoreKlear™ is the only brand of glyphosate currently sold in small quantities for homeowners. ShoreKlear™ may be purchased online or at local stores such as McKays Do It Center in Holly and The Pond Place in Milford.

Manufacturers recommend adding surfactants to glyphosate if the herbicide is sprayed. Roundup™, ShoreKlear Plus™, and other products are premixed with surfactants. However, surfactants are not necessary if the herbicide is placed on a cut stump, as described in this pamphlet. Surfactants may harm amphibians, fish, and other animals. NOHLC does not recommend these mixtures to control invasive Asian Bittersweet. Current research suggests that glyphosate without surfactants, used as described in this pamphlet, controls invasive plants without harming wildlife, and will kill any plants that absorb the herbicide.

Because glyphosate affects metabolism in plants but not animals, it has very low toxicity to humans. However, homeowners should take common-sense precautions; wear gloves when handling it, and mix and store the glyphosate in something that contains spills.

Where Can I get More Information?

More information on invasive Asian bitter-sweet and lists of other native plants to replace it are available at:

- Midwest Invasive Plant Network (mipn.org)
- The Center For Invasive Species and Ecosystem Health at the Bugwood Network (bugwood.org)
- The Stewardship Network

NOHLC offers a ***Starter Kit To Control Invasive Plants***. This starter kit contains a chemical-resistant plastic dropper bottle containing a little biodegradable purple dye. The dye (food coloring may also be used) makes the herbicide more visible and easy to use. Fill the bottle halfway with glyphosate, a herbicide which may be used in wetlands. Then fill the bottle with distilled water.



A Homeowner's Guide to Invasive Asian Bittersweet



Asian Bittersweet is an invasive vine that blankets and smothers native vegetation and trees, destroying forests and harming our wildlife.



What's the Problem with Asian Bittersweet?

Asian Bittersweet is commonly found in southeast Michigan as an invasive vine. It was imported from Eurasia as an ornamental plant in the 1860's. It is still sold in nurseries. Without the natural competitors from its native Asia, it is growing unchecked in Michigan.

Asian Bittersweet blankets and suffocates trees, girdling and strangling the trunk and blocking the light from the tree. The weight of the vines makes trees vulnerable to wind-fall. It harms our wildlife by choking out the native trees they depend on for food and shelter. It is best to eliminate small sprouts when they first develop, before they climb trees and produce berries.



Bark on young vines is smooth and reddish brown. The bark gets rougher with age.



Is this Plant Asian Bittersweet?

Asian Bittersweet (*Celastrus Orbiculata*) vines grow up to 60 feet tall that climb and blanket trees, strangling and killing native vegetation. Young bark is smooth reddish brown with little white specks called lenticels. Older bark is gray and rougher. The green leaves are oval and alternate along the stem. Asian bittersweet has a long growing season; the smooth oval leaves appear earlier than on native plants and persist later into the fall. In fall, the bright yellow leaves last for about two weeks after native trees have dropped their leaves, making Bittersweet easy to spot in late fall.

American Bittersweet (*C. Scandens*) has very similar leaves and bark. It produces clusters of 5 to 60 berries at the tips of the branches, beyond the leaves. Asian Bittersweet berries are found as clusters of 2 to 3 berries along the entire stem. American Bittersweet is a

Photo by James H. Miller, USDA Forest Service, Bugwood.org.



Non-Chemical Controls

The best way to control invasive Asian bittersweet is by pulling or digging out young vines, roots and all. Invasive bittersweet can be pulled any time of year when the ground is not frozen. If invasive Asian bittersweet vines are cut, or if large roots are left in the ground, the vines will re-sprout. If the invasive Asian bittersweet are too large to pull or dig out, herbicide must be applied to the cut base.



Above: Roots are orange.

Below: Asian Bittersweet berries grow along the branches.



Cut and Treat

If Bittersweet is too large to pull or dig out, it must be cut and herbicide applied to the cut stump. Cutting and treating the stump can be done in summer, fall, and winter. Because sap is rising upwards in the spring and the herbicide does not move down into the roots, cutting and treating the stump in the spring does not prevent re-sprouting.

On small sprouts, the cut stump can be covered with a drop of herbicide. On larger cut stumps, simply apply the herbicide to the ring of darker wood just inside the bark. This part of the wood, called the cambium, will transport the herbicide into the roots.



Cut larger vines with clippers, loppers, or saws. Treat stumps with herbicide to prevent re-sprouting.