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 Environmental and Geographic Information Center
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Invasive Plant Information Sheet



Asiatic Bittersweet, Oriental Bittersweet *Celastrus orbiculatus* Staff Tree
 Family (Celastraceae)

Ecological Impact: Asiatic bittersweet is a rapidly spreading deciduous vine that threatens all vegetation in open and forested areas. It overtops other species and forms dense stands that shade out native vegetation. Trees and shrubs can be strangled by twining stems that twist around and eventually constrict the flow of plant fluids. Trees can be girdled and weighed down by vines in the canopies, making them more susceptible to damage by wind, snow, and ice storms. There is evidence that Asiatic bittersweet can hybridize with American bittersweet (*Celastrus scandens*), which occurs in similar habitats. Hybridization will destroy the genetic integrity of the native species.

Control Methods: The most effective control method for Asiatic Bittersweet is to prevent establishment by annually monitoring for and removing small plants. Eradication of established plants is difficult due to the persistent seed bank in the soil. Larger plants are best controlled by cutting combined with herbicide treatment.

Mechanical Control: Light infestations of a few small plants can be controlled by mowing or cutting vines and hand pulling roots. Weekly mowing can eradicate plants, but less frequent mowing (2-3 times per year) will only stimulate root suckering. Cutting and uprooting plants is best done before fruiting. Vines with fruits should be bagged and disposed of in the trash to prevent seed dispersal. Heavy infestations can be controlled by cutting vines and immediately treating cut stems with herbicide. Cutting vines without removing or killing the roots will stimulate vigorous re-growth resulting in large patches.

Chemical Control: Herbicides can be applied broad scale as a foliar spray, or to select individuals as cut stump treatments.

1) Foliar Spray: This method is most effective for low, dense patches. Early in the growing season, cut all vegetation to ground level and allow to regrow. One month later, spray the area with a 1-2% solution of water-soluble triclopyr (Garlon 3ATM) using a backpack sprayer. Triclopyr is suggested over glyphosate since it does not kill monocots (e.g., grasses, sedges, lilies) which remain and keep the soil from being exposed. Triclopyr is the active ingredient, in relatively dilute form, in Ortho's Brush-B-Gone, which is not a restricted chemical and can be used as an alternative to Garlon 3ATM.

2) Cut Stump Treatment: This method is most effective for tall patches. Care should be taken to cut and treat only bittersweet vines and not native plants, since these will be needed to revegetate the area. In late summer, cut vines and apply a systemic herbicide like triclopyr (Garlon 3ATM) or glyphosate (Roundup™) to the cut. To ensure uptake of the herbicide before the plant seals off the cut, apply immediately after cutting, within 5-15 minutes. Apply with a sponge or paint brush. Any vines left hanging in the trees will decompose and fall within two to three years.

Biological Control: Currently, there are no known biological control methods.

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