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 Or visit the Hawkeye CWMA website at
 http://www.hawkeyecwma.org

Selected websites:

http://www.iowadnr.com/forestry/invasive.html
 http://plants.usda.gov
 www.invasivespecies.gov
 www.nps.gov/plants/alien

Credits:

Photographs: Mark Vitosh, IDNR; Mary Sue Bowers, USACE; US Fish and Wildlife; Courtney Janiak, Boston Globe; Joseph Austin, Austin, TX; www.bugwood.org

Brochure Design: Sarah Chmielewski
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Mention of an trade names is for the convenience of the reader and does not imply any endorsement by the Hawkeye CWMA

ALWAYS READ AND FOLLOW THE PESTICIDE LABELS.

Applicators must be certified to apply pesticides

The Hawkeye Cooperative Weed Management Area (HCWMA) is a collective group of county, state, and federal agencies, nonprofit organizations and community associations who have come together to **combat the invasive species problem in Eastern Iowa.** The HCWMA serves Benton, Johnson, Linn, and Louisa Counties and is open to all interested parties. The term CWMA, or Cooperative Weed Management Area, refers to a local organization that integrates invasive species management resources across jurisdictional boundaries in order to benefit entire regions.



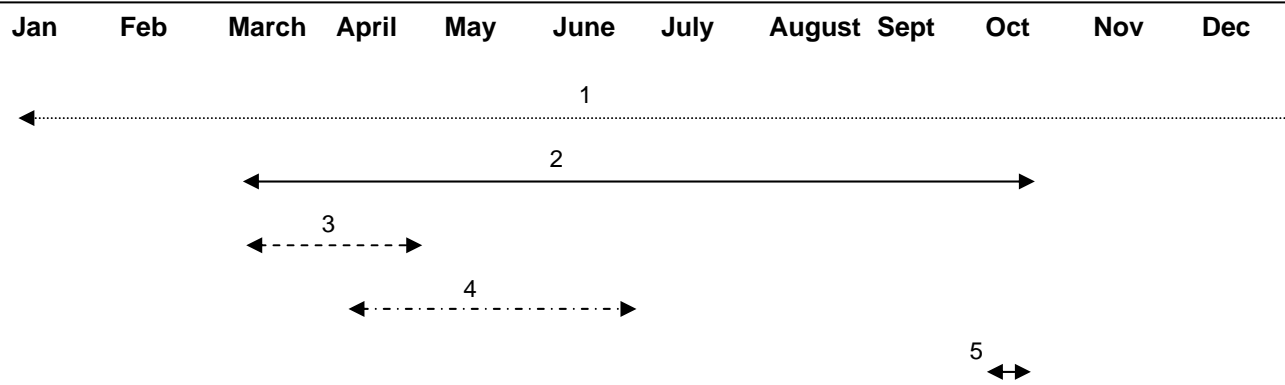
Leaves



Vines intertwining



Berries in the fall



Management Techniques

1. (All year) Stump treat. Cut vine close to the ground. Apply a 25% glyphosate solution (if temp. is between 40°F and 80°F) or a 25% triclopyr solution (if temp. is between 60°F and 80°F) to the cut. Effectiveness is increased if followed by a foliar spray.
2. (Early Spring-Fall) Cut the vines. Frequent (2-week intervals) cutting depletes root stores. However, less frequent intervals stimulates root suckering. Anything that is cut should be bagged and removed if possible. Anything hanging from a tree does not need to be bagged.
3. (Early Spring, temp between 65°F and 80°F) Foliar spray using a 2% glyphosate, or 2% triclopyr solution and a 0.5% surfactant.
4. (Spring) Pull vines by hand. Walk with the runners as you pull up the roots in order to get rid of the entire root system. Carefully bag the plant and take it to a landfill. Monitor area for re-sprouts for at least 3 seasons after pulling.
5. (Mid-to late-October) Foliar spray. Spray the plant using a 2% triclopyr/2,4-D mixture.



A SERIOUS THREAT To Iowa's Woodlands

Oriental Bittersweet
Celastrus orbiculatus

What is Oriental Bittersweet?

- Rapid spreading, highly invasive non-native woody vine
- Introduced from Eastern Asia in the 1860s for ornamental uses
- Came to U.S. without natural predators
- Threatens to rob us of our forests



Ornamental oriental bittersweet wreath with berries

What is the threat to Iowa?

- Threatens growth at all vegetation levels
- Has no natural growth controls
- Prevents light from getting to native plants
- Spreads rapidly, chokes trees as the vine climbs up the tree.
- Causes trees to topple down from the weight of the vines
- Displaces native bittersweet *Celastrus scandens*

What does Oriental Bittersweet Look Like?

Identifying traits: Climbing vine with round glossy finely toothed leaves. With green or yellow fruits all along the stem that reveal red-orange berries in the fall.

Young vines: Stick out of the ground and reach towards the trees. As they mature they start to wrap around each other as they reach towards trees.



Vines on trees: Wrap around the tree as they grow towards the top. Once they reach the canopy they start growing back towards the ground. The weight of the vines eventually pulls down the entire tree.



Leaves: The leaves are glossy, rounded, finely toothed and alternately arranged along the stem.

Berries: When the female plants mature, globular green to yellow fruits split open to reveal three red-orange fleshy arils that contain seeds.



Flowers: Clusters of small greenish flowers emerge from leaf axils allowing each plant to produce large numbers of seeds.



Native Alternatives:

There are many native alternatives that you could plant instead of Oriental Bittersweet, or to replant in the area you have removed some.

American Bittersweet (*Celastrus scandens*) – Berries of this vine attracts birds. Should only be used in areas that are completely clear of oriental bittersweet. If oriental bittersweet remains hybridization can occur. Purchase from a reputable nursery, and verify your purchase.



Virginia creeper (*Parthenocissus quinquefolia*)

Attracts birds throughout the winter. This option works well as an ornamental, it is one of few vines that when it grows against a building it doesn't cause damage.



What is the Difference Between Oriental and American Bittersweet?

Oriental bittersweet (*Celastrus orbiculatus*): Reaches heights of 60 feet. Has fruits and flowers located along all the leaf axils along the stem. The capsules of the fruits are yellow. Leaves are flat.

American bittersweet (*Celastrus scandens*): Only grows to heights of 20-30 feet. Flowers and fruits only appear at the end of the stem in clusters. Fruits are fewer and larger than the ones found on oriental bittersweet. The color of the capsules around the fruits are orange. Leaves appear to be rolled when they finish growing.



American bittersweet (*Celastrus scandens*)