



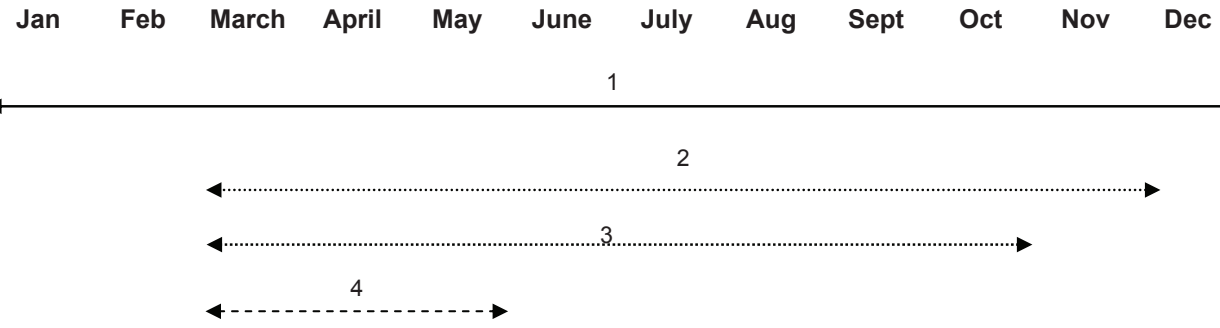
Leaves



Vines intertwining



Berries in the fall



Management Techniques

1. (All Year) Cut vines close to the ground. Apply herbicide within 15 minutes of cutting, using a sponge applicator or paintbrush. Larger vines can be left in the trees to decompose (do not allow hanging vines to touch the ground, as they may re-root). This works best in the fall. If used at other times of the year re-sprouting can occur. *This works best if followed by technique 2.*
 - A. 25% Triclopyr solution (if temp. is between 30°F and 80°F).
2. (Spring-Fall) Cutting or mowing young vines or resprouts. Frequent (2-week intervals) cutting can deplete root stores. Less frequent intervals will stimulate root suckering (new shoots being sent up from the roots). *This should be followed by technique 4.*
3. (Spring- Late October) Foliar spray. Apply herbicide to leaves using a sprayer. In general this technique will have a deeper root-kill if used in the fall, but can be used to top kill the plant in the spring and summer. *When the plants are young it is best to follow this with technique 4.*
 - A. 2% Triclopyr solution (if temp. is between 30°F and 80°F).
4. (Spring) Pull young vines and their roots by hand. Walk with the roots as you pull them up in order to get rid of the entire underground system. Pulled vegetation must be bagged and removed from the area. Monitor area for re-sprouting. This technique is only useful on very young plants.

For More Information Visit:

<http://www.HawkeyeCWMA.org>

ALWAYS READ AND FOLLOW PESTICIDE LABELS.

Proper training for prescribed fires is highly recommended.

Basic training can be found online at <http://training.nwccg.gov/courses/s130.html> and <http://training.nwccg.gov/courses/s190.html>

Related Websites:

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

Credits:

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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, Cedar, Iowa, Johnson, Jones, 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.

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All Hawkeye CWMA members (agencies, organizations, and individuals) are equal opportunity providers and employers.

Oriental Bittersweet

Celastrus orbiculatus



A SERIOUS THREAT To Iowa's Woodlands

What is Oriental Bittersweet?

- Rapid spreading, highly invasive non-native woody vine.
- Introduced from Eastern Asia in the 1860s.
- Brought to the US for ornamental purposes.



Seeds on wreaths can stay viable for many weeks after being cut. Birds may eat the berries, helping to disperse the seeds. Once thrown away, seeds on wreath may enter the soil and germinate.

What is the threat to Iowa?

- 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 from the weight of the vines.
- Displaces native American Bittersweet (*Celastrus scandens*).

What does Oriental Bittersweet Look Like?

Identifying traits: Climbing vine with round, glossy, finely toothed leaves. Green or yellow fruits grow at the leaf axils along the stem, and reveal red-orange berries later in the fall.

Young vines:

Vines grow vertically. As they mature they wrap around each other, gaining support to reach sunlight.



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, spherical green to yellow fruits split open to reveal three red-orange fleshy arils that contain seeds.



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



Native Alternatives:

Virginia creeper (*Parthenocissus quinquefolia*)-

This native, woody, deciduous vine can reach up to 60 ft tall on trees. Clusters of blue-black berries provide food for many animals throughout the winter. This vine works well as an ornamental because it does not cause damage if it grows against a building. Also can be used to control soil erosion if grown as a groundcover. Leaves turn red in fall.



Wild Cucumber (*Echinocystis lobata*)-

This herbaceous, annual vine grows best in moist soils. The white flowers are found in long, erect clusters. Bloom time for the flowers is from July to September. The fruit is green, oval, and is covered in soft thorns.



What is the Difference Between Oriental and American Bittersweet?

Oriental bittersweet (*Celastrus orbiculatus*): Reaches heights of 60 feet. Has fruits and flowers located at 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 tend to be a darker orange-red. Leaves appear to be rolled when they finish growing.



American bittersweet (*Celastrus scandens*)