

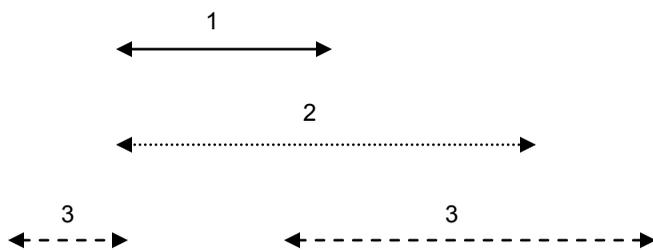


Cones

Seeds

Leaves

Jan Feb March April May June July Aug Sept Oct Nov Dec



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.nwcg.gov/courses/s130.html> and <http://training.nwcg.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.



Japanese Hop

Humulus Japonicus



A SERIOUS THREAT
To
Iowa's Prairies/Grasslands

Management Techniques

- (Spring) Hand pulling. Process can be labor intensive, so this is best on young vines when roots are shallow and before it becomes entangled with other plants. Ensure roots are removed to prevent re-growth. Due to prickles on stems and leaves, it is important to wear gloves, long pants, and long sleeves.
- (Spring to mid summer) Cut or mow. Japanese hop does not create an extensive root system so repeated cutting will prevent seed production. Entangled vines should not be mowed as they may uproot native plants that have been hooked on to.
- (Late spring to summer) Herbicide. Both techniques are most effective in conjunction with one another:
 - In areas of heavier infestation, a pre-emergent solution of metsulfuron methyl applied in early march at a rate of 1 oz per acre, prior to germination, will be effective while causing minimal damage to native perennials.
 - Apply a foliar spray of glyphosate(1 quart per acre) or sulfometuron(1 oz per acre) from may-August to actively growing vines that have not yet produced seeds. Herbicide will be ineffective once the plant seeds since the vine is an annual in Iowa.



What is Japanese Hop?

- Herbaceous sprawling vine of the cannabaceae family.
- Native to east Asia.
- introduced in the 1800s as an ornamental vine and tonic source.
- Rapidly climbs over native trees and shrubs.
- Commonly found by riversides and disturbed areas.



Japanese hop infestation

What is the threat to Iowa?

- Can grow up to 35 feet in a year, crowding out native plants.
- Climbs over trees and shrubs, which can cause them to topple over.
- Seed can be spread to new areas by rivers and waterways.
- Seeds remain viable up to three years.
- Covered in hooked bristles that irritate skin.

What does Japanese hop look like?

Identifying traits: herbaceous shallow rooted vine that reaches heights of ten feet. Leaves are rough, finely toothed, and have 5-7 pointed lobes. Produces seed bearing cones July-August.

Stems: covered in fine downward hooked bristles that wrap around other vegetation which can be difficult to separate.



Mature vines: mature vines will form dense mats that pile over native vegetation up to ten feet in height. Once entangled they are very difficult to separate.



Leaves: The leaves occur in symmetrical pairs on the stem. They are shaped in a palmate pattern with 5-7 finely toothed lobes that are rough to touch.

Native Alternatives:

Trumpet honeysuckle (*Lonicera sempervirens*):

A climbing, twining, semi-evergreen vine that grows up to twenty feet. Its signature red flowers provide a popular attraction for hummingbirds and other pollinators and its berries provide food for birds. Grows slowly and will not outcompete other native plants.



Cones: female plants begin producing greenish, scaled, drooping cones in late summer which begin seed production in mid-August.



Flowers: flowers appear on the leaf axil and are a greenish yellow with five petals. Male flowers are distinct from female cones. Male flowers are needed to pollinate female plants to produce viable seeds



Virgin's Bower (*Clematis virginiana*):

Sprawling vine that grows 10-20 feet in length. Produces white flowers in summer that attracts butterflies and other pollinators. Will do well in any conditions but prefers moist soil along riversides. Toothed leaves come in sets of three that hook onto other plants.



What is the Difference Between Japanese and common hop?

Japanese Hop (*Humulus japonicus*): Reaches up to 35 feet in length but rarely reach heights above 10 feet. Vines will sprawl outward over low growing plants and rarely upward over trees. Cones are covered in bristles and scales spike outward compared to the relatively smooth cones of common hops. leaves have 5-7 lobes and are finely bristled and the petiole is usually the same length as the leaves.

Common hop (*Humulus lupulus*): grown commercially for use in beermaking, common hop is a perennial herbaceous vine with three lobed leaves that are rounded at the tip and longer than the petiole. Common hops rarely shades out other plants, vines grow vertically up to 30 feet and produce smooth scaled cones.



Common hop (*Humulus Lupulus*)