



Leaves

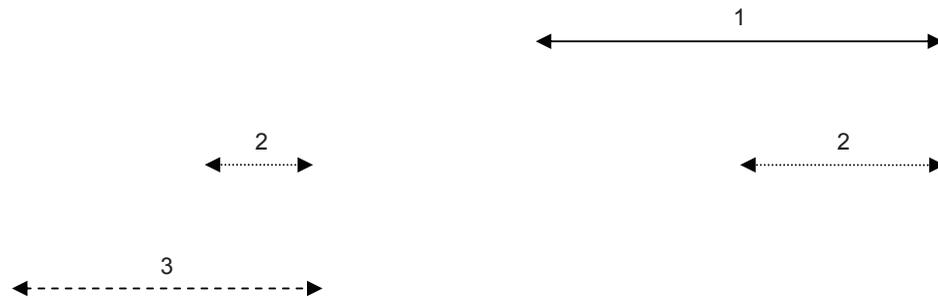


Seeds



Yellow & White Sweet Clover

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



Management Techniques

1. (Late Summer-Fall) Mowing prevents adequate protection of the taproot during the winter, decreasing survivability. After the cut plants have dried, conduct a prescribed burn in the Fall. This can be harmful to native plants if done on an annual basis. *This should be followed with technique 2 during the next growing season. After the cut plants have dried, follow with technique 3.*
2. (May, late Fall) Hand-pulling. Pull first-year plants in late fall, after their root-crown buds have developed. Pull second-year plants in May, before they flower.
3. (Spring) Conduct a prescribed burn in April of the first year to stimulate germination. If only this is done, the infestation will spread. This should be followed by technique 1 or 2. Conduct a prescribed burn in May (after the root-crown buds have developed) of the following year. If done before buds have developed, re-sprouting will occur. This sequence may need to be repeated for a few years.

CHEMICALS CAN BE USED, BUT SHOULD NOT BE NECESSARY!

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:

Photographs: www.mobot.org; plants.usda.gov; Illinois DNR; Steve Hurst, USDA NRCS PLANTS Database; Steve Dewey, Utah State University; Mary Ellen Harte; Richard Old, XID Services Inc; Ohio State Weed Lab Archive, Ohio State University; www.bugwood.org

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Last updated: 4/19/2011



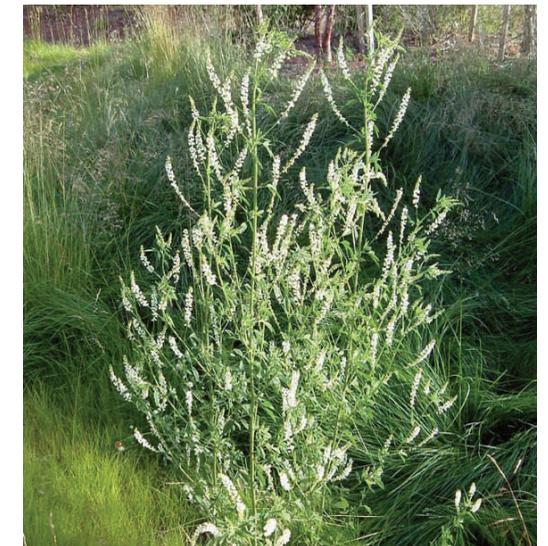
The Hawkeye Cooperative Weed Management Area (HCWMA) is a collective group of county, state, and federal agencies, nonprofit organizations and community associations who have come together to **combat the invasive species problem in Eastern Iowa**. The HCWMA serves Benton, Cedar, Iowa, Johnson, Jones, 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.

Funding for this brochure provided by the US Forest Service through a Healthy Forest Initiative Grant.

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

Yellow & White Sweet Clover

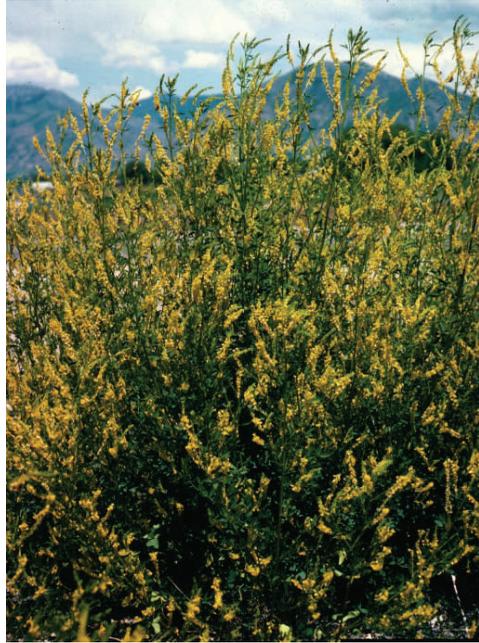
Melilotus officinalis & Melilotus alba



A SERIOUS THREAT
To
Iowa's Prairies/Grasslands

What are Yellow and White Sweet Clover?

- Biennial herb
- Came to North America in the 1600s
- Introduced as a forage crop
- Native to Europe and Asia



Yellow Sweet Clover

What is the threat to Iowa?

- Degrades prairies by shading out native plants.
- Seed can stay viable for up to 30 years in the soil.
- Is fire assisted, so in areas that are burned then left alone a problem can arise
- Thick stands can be difficult to burn due to their low fuel content.
- When it becomes moldy it can become toxic to livestock.
- Management requires areas be checked regularly throughout the year.
- Is drought tolerant and winter hardy.

What does Yellow and White Sweet Clover Look Like?

Identifying traits: Grows between 3 to 8 feet tall. Has small, fragrant white or yellow flowers. Produces a strong tap root during the first year. The second year it flowers, sets seeds, then dies.

Leaves:

Each leaf is comprised of 3 leaflets which are oval with finely toothed edges, and are ½ to 1 ½ inch long. Leaves are arranged alternately along the plant's stem. When the leaves are crushed they smell like hay or vanilla.



Fruits:

The fruits are small, circular, and generally having wrinkled surfaces (on rare occasions can be smooth). They become brown pods that contain 1 seed each.

Flowers:

The individual flowers are less than ¼ inch long and tend to hang downward along the stem. The flowers generally are clustered along the top 4 inches of the stem. They are white or yellow in color. Flowers and their sweet smell appear from May to October.



What is the Difference Between Yellow and White Sweet Clover?

Yellow Sweet Clover (*Melilotus officinalis*):

This variety has yellow flowers and darker green leaves and stems. The seed pods are generally wrinkled. Yellow Sweet Clover blooms a few weeks before White Sweet Clover does.

White Sweet Clover (*Melilotus alba*):

Has white flowers with grayish greenish foliage. The seed pods are smooth and slightly set back.



White Sweet Clover (*Melilotus alba*)

Native Alternatives:

Early Meadow Rue (*Thalictrum dioicum*)-

This plant blooms in the middle of the summer and grows between 1 and 3 feet tall. The foliage is a blue-green color and its flowers are pale yellow or white. It attracts butterflies and birds and needs moist soil and full sun or partial shade to reach full potential.



Culver's Root (*Veronicastrum virginicum*)-

This plant produces purple or white flowers in mid-summer to early fall. Culver's Root can reach heights of 5 feet and resembles an upside down candle. It attracts butterflies, and holds up well against animals and bugs that usually eat the leaves of other plants. The seeds are too small to be spread by birds so the plant self-seeds, but does not tend to become weedy.

