

# Sweet Clover (*Melilotus* spp.)

## DESCRIPTION:

Sweet clovers are native to Eurasia and were brought to North America in the late 1600's as a crop for cattle forage and honey production. Sweet clover gets its name from the sweet flavor of milk from dairy cows that eat too much of this plant. These biennial members of the legume family are aggressive plants that can even invade high quality prairies. Their prolific seed production and the long viability of these seeds in the soil make them a difficult species to eradicate. Typically they prefer dry to mesic areas including roadsides, trail sides, new native plantings, agricultural areas, waste places, pastures, and prairies.

**-3**  
**Aggressive**  
**Weed**

## IDENTIFICATION:

Sweet Clover can vary in height from 3-6' with a 'airy' delicate structure (which makes it difficult to herbicide adult plants). There are two species of sweet clover in our area. Yellow sweet clover (*Melilotus officinalis*) has yellow flowers and blooms in late June. White sweet clover (*Melilotus alba*) has white flowers and blooms about two weeks later. Otherwise they are nearly identical with sets of three leaflets that are finely toothed and rounded at the top. Numerous, short stalks of flowers arise from the leaf axils near the top of the plant. No native plants can be confused with sweet clover. Black medic is another exotic weed whose leaves look similar to sweet clover, but black medic is less than 1' tall and has small rounded yellow flowers.



## CONTROL METHODS:

**Organic:** Since these plants only live for two years, the primary goal of management should be to prevent seed production. Hand pulling can be very effective on small populations especially, if the soil is moist. Be sure to remove plants from the site if they are well into the flowering process so that the dead stalks cannot develop seeds. Mowing is very effective for larger populations, but only if it is carefully timed for early in the flowering period, when the plant has invested energy into flowering and cut stalks cannot develop seeds. Follow-up mowings will be needed as the plants resprout from the cut stubble and attempt to flower again. The stems of these plants are too tough for string trimmers so either metal bladed brush cutters or field mowers must be used. Fire actually enhances germination rates and seedling establishment so a prescribed burn may worsen a sweet clover management problem. However, burning multiple years in a row should set the population back considerably by killing the young plants that have sprouted as a result of earlier fires.

**Chemical:** Spot spraying rosettes with a glyphosate (Round-Up®) herbicide is effective. Alternatively, use one of many broadleaf specific herbicides, such as aminopyralid (Milestone) or triclopyr (Garlon® 3A), which will not kill nearby grasses. A surfactant may be needed to help the spray stick to the leaves if it is not already included in the herbicide formula. Fall or spring are effective control periods. Once the second year plants have bolted the leaf and stem structure are too fine and airy to make herbicide effective and collateral damage to nearby plants would be considerable. Always read herbicide labels carefully before use and always apply according to the instruction on the product label.



## NATIVE ALTERNATIVES:

Since these are full-sun weeds, we recommend a diverse selection of prairie species to replace and compete against sweet clover in order to develop a more stable and productive plant community for the site. Contact us for specific recommendations.