

INVASIVE PLANTS OF OHIO

Fact Sheet 16

White and Yellow Sweet-clover

Melilotus alba, *M. officinalis*



Yellow Sweet-clover

Division Photo

DESCRIPTION:

Both white and yellow sweet-clover are erect, herbaceous, non-native biennials that are members of the pea family. In their first year of growth, the plants are small with a smooth multi-branched stem. The leaves are alternate and divided into 3 finely toothed leaflets. The second year of growth is characterized by rapid growth of the root system and an overall bushy appearance with the plant reaching 3-5 feet tall by May. From May to September, flowers are produced on the second year plants. Flowers are borne on irregular spikes on the ends of elongated stems. Each flower spike will bear 40-80 flowers. The flowers are either white or yellow, the most obvious difference between these two species. Seed is set in summer with up to 350,000 seeds per plant.

HABITAT:

White and yellow sweet-clovers grow in open, disturbed areas such as roadsides, old fields, and utility easements. Intolerant of shade, sweet-clover invades upland habitats such as prairies, savannas, dunes, alvars, and meadows. They seem to grow best in, but are not limited to, calcareous soil. The roots of sweet-clover fix nitrogen in the soil, allowing the plants to live in nutrient poor areas.

DISTRIBUTION:

White and yellow sweet-clover are native to the Mediterranean region, central Europe, and Asia. They were brought to the United States in the 1600s as a forage crop for livestock and for honey production. They are now found in all 50 states and are used as a soil builder because of their nitrogen fixing capability. They are also often planted as wildlife cover. Both sweet-clovers are found throughout Ohio especially near agricultural regions.

PROBLEM:

The seeds of white and yellow sweet-clover have been shown to be viable for over 30 years. The plants are drought resistant and winter hardy. Because of their large size in the second year of growth, they tend to overtop and shade native sun-loving species. They are problematic in recovering prairies and savannas where they out-compete native species for water and nutrients.



White Sweet-clover

Division Photo

CONTROL:

Mechanical: Prescribed burning in 2 or more consecutive years has been effective in reducing populations of white and yellow sweet-clover. However, burning in only 1 year tends to increase populations. In small areas, hand pulling of first year plants when roots are small is also quite effective.

Chemical: Spraying with systemic herbicides such as Roundup® or Glypro® can be effective. Care must be taken to prevent over-spray to non-target species.

Biological: The native sweet-clover weevil can help control white and yellow sweet-clover if the weevil is present in high concentrations. Unfortunately, this is not a reliable form of control.

ADDITIONAL INFORMATION SOURCES:

Eckardt, N. 1987. Element Stewardship Abstract for White and Yellow Sweetclover. The Nature Conservancy.

Turkington, R.A., P.B. Cavers, and E. Rempel. 1978. The Biology of Canadian Weeds: *Melilotus alba* Desr. and *M. officinalis* (L.) Lam. Canadian Journal of Plant Science 58: 523-537.

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FOR MORE INFORMATION:



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