Birdsfoot trefoil is a useful conservation plant but also an invasive weed in low maintenance turf areas maintained at high mowing heights.

This species often appears as patches and clumps in under-fertilized lawns and institutional grounds, and in utility areas along roads and highways. It grows well in full sun and in poor-quality, droughty soils. Birdsfoot trefoil is most noticeable when producing yellow flowers during June and July. Used primarily as a forage crop and conservation planting along Pennsylvania highways, birdsfoot trefoil seed occasionally is transported to lawns and other grassy areas where it is not desired.

Life cycle

Birdsfoot trefoil belongs to the legume family (Fabaceae) and is classified as a perennial. Plants form dense patches through branching stems that are semi erect or grow prostrate along the soil surface and root at nodes. Foliage typically dies back in winter and new leaves are produced from crown tissues in spring. Birdsfoot trefoil produces bright yellow flowers in summer, with a peak flowering period from late June to mid-July. Flowers eventually form seed pods containing small dark-brown seeds that germinate during cool, moist periods in spring and fall. Like other species in the legume family, birdsfoot trefoil forms a symbiotic relationship with nitrogen-fixing Rhizobia bacteria which produce nodules on roots and convert atmospheric nitrogen into a plant-available form.
Identification

Birdsfoot trefoil stems are smooth or slightly hairy. Leaves are arranged alternately on stems, and each leaf is composed of three leaflets at the upper portion of the leaf, and two leaflets (stipules) at the junction of the petiole and stem. Leaflets are oval or spatula-shaped and pointed at the tips. Leaflets have mostly smooth margins and are approximately ½ to ¾ inch in length and ¼ to ½ inch wide. Yellow flowers appear in clusters (umbels) of 2 to 8 and are situated on long stalks. Individual flowers contain five petals that look similar to pea flowers. Flowers are eventually replaced by green seed pods, about 1 inch in length, that radiate from the flower stalk and take on the appearance of a bird’s foot.

Figure 3. Leaves of birdsfoot trefoil showing three leaflets on the upper portion of the leaf and two leaflets (stipules) at the junction of the petiole and supporting stem. Photo: Peter Landschoot, Penn State

Figure 4. Flowers of birdsfoot trefoil. A single flower is composed of five petals (a larger standard petal, two wing petals, and two fused petals that form the keel). Photo: Peter Landschoot, Penn State

Management and control

Birdsfoot trefoil forms large, dense patches in turf that is mowed at high cutting heights and not adequately fertilized with nitrogen. Infestations of birdsfoot trefoil can be reduced by improving turf density through good establishment procedures, fertilization, and use of turfgrasses well-adapted to site conditions.

Very few turfgrass herbicides are labeled for the control of birdsfoot trefoil, perhaps because it is used as a conservation plant or because it is not often found in high-maintenance turf. Two herbicides labeled for control of birdsfoot trefoil are Trimec Classic and Speedzone. Both these herbicides contain 2,4-D, MCPP, and dicamba as active ingredients.

References


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