

Original Seeding of Lotus corniculatus L. in Indiana is Still Productive

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Broadleaved birdsfoot trefoil, Lotus corniculatus L., is a warm-season forage legume which is native to Europe. The introduction of this legume into the United States is unknown. It is generally assumed that birdsfoot trefoil was introduced as a contaminant of other seed or from the emptying of ships ballasts along the Hudson River in New York. Prof. H. A. McDonald, of Cornell University, observed this legume growing wild on low fertility soils in southern New York. He conducted extensive research on birdsfoot trefoil in the 1930's and as a result encouraged the seeding of this long-lived forage legume in northeastern U.S.

Dr. G. O. Mott, former professor of the Agronomy Department at Purdue University, made the first seeding of birdsfoot trefoil in the state of Indiana on the Miller-Purdue Agricultural Center at Upland in the spring of 1940. Empire birdsfoot trefoil, which tends to be more prostrate than the European type, was seeded. An excellent stand of birdsfoot trefoil resulted from this seeding with Kentucky bluegrass, Poa pratensis L., coming into the stand naturally within two to three years. This original seeding of birdsfoot trefoil has now persisted for 40 years while being utilized as a pasture for beef cattle.

As a result of this successful establishment, and its productivity, the seeding of birdsfoot trefoil pastures has been promoted by forage specialists for nearly 40 years. Despite the many advantages of birdsfoot trefoil as a pasture legume, only a few thousand acres are presently being grown in Indiana because farmers attempting to seed this legume have experienced many failures.

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These failures are probably associated with inadequate inoculation and competition from grass and weeds. A specific inoculum is required for birdsfoot trefoil. The seed is small and glossy making it difficult for the inoculum to stick to the seed. In addition, the trefoil seedlings are quite sensitive to weed competition during establishment. Herbicides have been found to be very beneficial in the successful establishment of birdsfoot trefoil.

The persistence of the original 1940 seeding of Empire birdsfoot trefoil on the Miller-Purdue Agricultural Center demonstrates that under proper management birdsfoot trefoil can be a long-lived and highly productive legume. However, it is essential that the associated cool-season grass be grazed rather closely in early May to allow the birdsfoot trefoil to compete with the grass. Otherwise, the grass starts its growth in early spring and will tend to out-compete the birdsfoot trefoil which does not make rapid growth until later in the spring and early summer. Permitting the birdsfoot trefoil plants to naturally reseed appears to be an important factor contributing to its long-term persistence in Indiana.