

NOTICE OF RELEASE OF MU-81 BIRDSFOOT TREFOIL GERMPLASM

MU-81 birdsfoot trefoil (Lotus corniculatus L.) germplasm was cooperatively developed by USDA-ARS and the Missouri and Minnesota Agricultural Experiment Stations, and will be released in 1985. Scientists participating in the development of this germplasm were R. L. McGraw and P. R. Beuselinck, USDA-ARS. MU-81 is a randomly mated, highly heterogenous population that provides a diverse genetic source to those involved in the study and genetic improvement of birdsfoot trefoil.

This germplasm is the seed resulting from three cycles of inter-crossing plants that trace to 56 foreign introductions, 9 experimental synthetics, 3 germplasms, and 13 cultivars. The foreign introductions were collected in 20 countries and obtained from USDA Regional Plant Introduction Stations at Geneva, New York, and Ames, Iowa. The experimental synthetics, germplasms, and cultivars were obtained from public and private sources in the United States and Canada.

In 1981, the source materials were established as space-planted transplants on 0.5 m centers at Rosemount, Minnesota, in isolation from other birdsfoot trefoil. Most entries were represented by 15 genotypes randomly assigned within the crossing block. The 1200 plants flowered over sufficient time to be interpollinated by colonies of honey bees (Apis mellifera). Fifty open-pollinated seed were harvested from every plant and bulked to form Cycle-1 seed. Cycle-2 seed was generated in an identical manner from 2000 randomly chosen plants produced from Cycle-1 seed. Cycle-3 was generated by bulking the seed of 2000 randomly chosen plants produced from Cycle-2 seed. Cycle-3 constitutes MU-81.

No selection was practiced in any Cycle to permit intercrossing of the source materials to increase the frequency of new gene combinations. The foreign introductions included in Cycle-0 were, however, chosen for moderate to high winterhardiness at Geneva, New York; Ames, Iowa; and Columbia, Missouri.

The merit of MU-81 germplasm is attributable to the broad genetic base compiled into a single source. Fifteen grams of MU-81 are available to each applicant upon written request. It is requested that this source of germplasm be appropriately recognized if it contributes to the development of a cultivar. Request seed from P. R. Beuselinck, ARS-USDA, Agronomy Department, 216 Waters Hall, University of Missouri, Columbia, MO 65211.