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TANNIN CONTENT AND GEOGRAPHICAL ORIGIN IN BIRDSFOOT TREFOIL

Field screening of a large number of introductions of Lotus corniculatus for condensed tannins has revealed an interesting relationship between tannin content, morphology, and geographical distribution. Most of the plants that were tannin-negative or only weakly tannin-positive originated in Turkey, Iran and the U.S.S.R., and were narrow-leaved, slender and low-growing compared with the common European form of birdsfoot trefoil. Heyn notes in the Flora of Turkey that L. tenuis (L. corniculatus var. tenuifolius) intergrades extensively with L. corniculatus in Turkey, and it is possible that introgression from L. tenuis (which does not contain tannins) is the cause of these morphologically and biochemically distinct variants of L. corniculatus. Alternatively, the resemblance might be indicative of an ancient relationship between L. tenuis and L. corniculatus in this region. The two tannin-negative cultivars 'Empire' and 'Winnar' are morphologically similar, and it is interesting to speculate whether they were based on introductions from the Turkey-USSR-Iran region, or whether they might be the result of independent genetic contact with L. tenuis after domestication.