

Compared morphology of the aril region in Lotus corniculatus L. and L. tenuis Waldst. et Kit. seeds.

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In Argentina thrive two European species of the genus Lotus, which have well defined forage value. One of them, Lotus corniculatus is cultivated on friable and light alkaline soils, whereas L. tenuis has spread naturally on clayey, water-logged, slightly acid or highly alkaline soils in the "Depresión del Río Salado" (Buenos Aires Province).

Seed characteristics such as size, shape, colour, width, thickness, etc., have been used with little success by several authors to distinguish between these two species, particularly because of large variations induced on those features by environmental, varietal or harvest conditions.

The aim of this study was to find seed morphological traits that would discriminate more precisely those species.

The observation of the micropyle and hilum region with a Scanning microscope showed a clear-cut difference in the shape of the aril of each species. Measurements made with a binocular microscope confirmed that the ratio of the aril width taken perpendicularly at half of the hilum length to the aril width at the micropylar region was 1.2 ± 0.1 (n= 98) in L. corniculatus and 3.3 ± 0.6 (n=68) in L. tenuis. Therefore, the aril region in L. corniculatus resembled a "horse shoe" whereas in L. tenuis a "tulip" flower bud.

The practical use of this study is that those simple measurements can be carried out by anyone having access to a binocular microscope.

Prints of those characteristic aril region can be sent on request.