

## **Cytogenetical and seed micromorphological studies in *Lotus glaber* and *L. corniculatus***

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*Lotus glaber* Mill. and *L. corniculatus* L., two closely related species of great agronomic interest, present difficulties to be identified in the seed or seedling stages. Both possess different foraging aptitudes, preferences of habitat and economic value. The possibility of differentiating these species using methodologies that turn out to be sufficiently fast, reliable, economic and reproducible would help to the producer in his decision making.

The general aim is to find differential characteristics between *L. glaber* and *L. corniculatus* in relation to the karyological or seed micromorphological level. The specific aims are:

- To verify if the chromosomal numbers and the ploidy levels reported for most authors of foreign countries,  $2n = 4x = 24$  for *Lotus corniculatus* and  $2n = 2x = 12$  for *L. glaber*, coincide with those of naturalized populations of our country.
- To determine if different cultivars of *Lotus glaber* and of *L. corniculatus* are homogeneous in relation to their chromosomal number and, in samples brought by private producers, appearance and frequency of chromosomal numbers.
- To observe mature seed coats of *Lotus glaber* and *L. corniculatus* in order to know if they present differential micromorphological characteristics.

Samples of *Lotus corniculatus* and of *L. glaber* seeds provided by laboratories belonging to the Association of Private Laboratories (ALAP) and of cultivars inscribed in the National Institute of Seeds (INASE) are analyzed. Root apexes of germinating seeds are used for the study of the mitotic chromosomes. They are pretreated, fixed and hydrolyzed in agreement to standard cytogenetical methods. The observation of mature seeds by means of scanning electronic microscopy (SEM) was carried on in the SEM's service of the Buenos Aires Natural Sciences Museum.

Data obtained until this moment are presented and the usefulness or not of using these methodologies for the interspecific differentiation of these two *Lotus* taxa is discussed.