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Morpho-physiological characterization of *Lotus glaber* naturalized populations

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Lotus glaber Mill (*Lotus tenuis* Waldst. et Kit) is a legume that has become naturalized in lowlands of Argentinean pampas. The productive cycle of this perennial legume native from Europe is during spring and autumn and summer and is considered a great alternative for forage production in stressed soil conditions including flooding and phosphorous deficiency. In addition, *Lotus glaber* is well known for its anti-bloating and high nutritional properties. (Mazzanti *et al*, 1992).

Our principal aim in this work is to evaluate the morpho-physiological genetic variability looking to contribute to future breeding programs in the species.

During 2003 and 2004 were collected several genotypes of *Lotus glaber* in diverse environments of Buenos Aires Province. The places where the samples were obtained were evaluated for their edaphically properties as well as their historical cow managements and production. Using an experimental block randomized method; at least 50 seeds were colleted for each genotype.

A biodiversity evaluation of vegetal species implanted around the *Lotus glaber* completed the study.

In May 2004 the seeds collected were sown in pots containing compost and maintained in controlled environmental conditions in a greenhouse. One month later, the plants obtained were transplanted to farm condition in the experimental field of EEA Pergamino. Eighty genotypes for each population were analyzed using the method described elsewhere (Turesson, 1922).

The variables evaluated were:

- Plant vigor (low, medium and high)
- Growth style (erect, prostrated and intermediate)
- Stem and blade numbers per plant
- Dry weight per plant
- Time flowering after farm transplantation.
- Seed production
- Existence or not of bacterial and fungal diseases

The results obtained will be presented and discussed.

References

MAZZANTI A., CASTAÑO J., SEVILLA G. and ORBEA J. 1992. Características agronómicas de variedades de gramíneas y leguminosas forrajeras adaptadas al sudeste de la Provincia de Buenos Aires. [Agronomic characteristics of forage grasses and legumes varieties adapted to Buenos Aires Southeast Province.] Centro Regional Buenos Aires Sur. Estación Experimental Agropecuaria. INTA (Argentina). *Boletín de Divulgación Técnica,* **Nº 102,** 20 p. [In Spanish]

TURESSON G. 1922. The genotipical response of the plant species to the habitat. *Hereditas*, **3**, 211-350.