

## Experiments with *Lotus* at Chacra Experimental Chascomús M.A.A.\*

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The national agricultural scenario continues with a clear tendency to the crop expansion, product of the different profitability of the agricultural activities and cattle rearing. This is due, partly, to the good grains prices, but also to the uncertainty of prices in the near future in productions of long term like the cattle rearing and to the low productive efficiencies of the cattle raising, as a consequence of the lack of investments and innovations in these systems that continue in general being similar to those of previous decades. In addition, Argentina has an internal demand of meat that increases and sustained interest from external markets. As for the animal stock, it is similar to those of 10 years ago but distributed in a different way; particularly in the Cuenca del Salado, superior quantity of animals is observed. The question is: agriculture is not done in the Cuenca del Salado? Yes, and also more than a while ago, reason why we have a combination of more animal stock in a smaller area with poorer soil characteristic (most of the good soils are used for agriculture), and national and provincial projects that stimulate to produce more quantity of meat. It is for these reasons that there should be carried out actions to increase the cattle production. Within the possible technologies with good productive impact is to increase the forage capacity of paddocks with low or null agricultural aptitude (soil capacity use IV at VII). It is impossible to establish forage species like alfalfa, red clover, perennial ryegrass in this type of soil, and it is only possible in some occasions to establish white clover, cocksfoot, rescuegrass or *Lotus corniculatus*. On the other hand good productions can be achieved if other species like fescue, quackgrass and *Lotus tenuis* (= *Lotus glaber* Mill.) are used. The utilization of these species recognized by their good performance in the low soils, together with the direct drill sowing, fertilization and good grazing management of the sward, can end up playing an important role in the improvement of paddocks dominated by species of low forage aptitude and/or with poor productions. *Lotus tenuis* is a naturalized species in our soils, very good production and mainly spring-summer-autumn cycle, and the production pick between the end of spring and mid summer; in the latter the forage is no longer plentiful and its quality declines, while the requirements of the breeding herds increase (milking cows or during pregnancy). In occasions, the bad forage management, the lack of P and the genotypes more adapted to the over-grazing than to grazing (plants with prostrate growth habit) does not allowed to express all the potential production. The results of forage and meat production with resources bases on narrowleaf trefoil, fescue and quackgrass are not abundant; therefore this is a pending topic to develop. In the Chacra Experimental Chascomús, belonging to the Ministerio de Asuntos Agrarios of the Buenos Aires Province, is carried out experiments related to *Lotus tenuis* as follow: 1- Comparative experiment of varieties performance and inoculation; 2- Fertilization experiments with nitrogen and P on natural

grasslands with presence of *Lotus tenuis*; 3- Experiment of systems of incorporation of seeds of *Lotus tenuis*; 4- Experiment of summer promotions of *Lotus tenuis*; 5- Experiment of forage and meat production in pastures based on fescue and narrowleaf trefoil.