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NARROWLEAF TREFOIL NATURALIZED IN LOW-LAND FIELDS IN BUENOS AIRES PROVINCE
(ARGENTINA)

The genus Lotus is represented in Argentina by two naturalized species: L. pedunculatus Cav. and L. tenuis Waldst. The latter is spread in low-land fields and well suited to poorly drained, heavy-textured clay soils and on saline and alkaline soils of a wide extension of Buenos Aires province. It is particularly luxuriant along roadsides and fields throughout extensive areas of the called Depresión del Río Salado which has an extension of 6 millions ha.

Narrowleaf trefoil (L. tenuis) has a good colonizing strategy in those soils and is spreading continuously throughout low-land fields with pH that ranges between 6.5 and 9.5 and a low phosphorus contents with values ranging from 3.5 to 6.5 ppm.

Although we do not know exactly the data of initial occurrence it is possible that it happened about 1930.

The excellent agronomical properties of this species induced us to collect seeds and plants in order to use it in forage improvement and breeding programmes.

Until now we have collected more or less 80 introductions, fig. 1. Small quantities of seeds are available on request.

We have found a wide range of morphological variations (flowers and leaflets size with a Central Index Leaflet ranging between 2.30 and 5.16; numbers of stems; characteristics of roots, etc.) but this variability probably is due to environmental variations because when plants were transferred to another soil, these characters weren't maintained.

Preliminary studies point to the existence of differences in the distribution of cyanogenic substances within and between populations, although we didn't find acyanogenetic plants.

In none of the collection sites we found diseased plants or plagues that attack this species. On the other hand the fact that it doesn't cause bloat and produces a forage which has a high protein content (16 to 28 %) and with a digestibility that ranges between 65 to 75 % (dry matter digestibility) points out why it is preferred by the cattle.

All these properties and because it is one of the few legumes that grows well in heavy poorly-drained soils, makes Lotus tenuis a very promising forage legume in pasture improvement programmes.

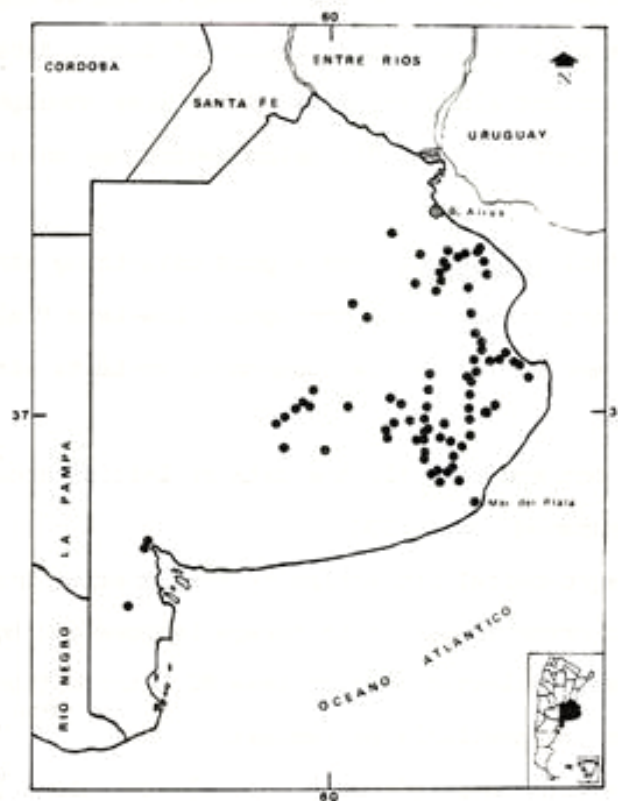


Fig. 1 - Geographic distribution of Lotus tenuis in Buenos Aires province, Argentina, showing the localities sampled.