

## Requirements from the MERCOSUR inoculants industry

[MARTIN LAGE](#)<sup>1</sup> and PEDRO LAGE<sup>2</sup>

<sup>1</sup>*Lage y Cía. S.A., Montevideo, Uruguay*

<sup>2</sup>*Nitrasoil Argentina S.A., Quilmes, Buenos Aires, Argentina.*

\* *Corresponding author*

The technology of inoculating crops and legume pastures has been adopted since long time ago in South America. Several efforts have been made in order to develop this natural process into a successfully applied technology. Scientists started working at their laboratories in order to find a *Rhizobium* formulation with the capacity to increase the BNF in plants. In 1886, two German scientists, Hellrigel and Wilfarth, isolated some bacterias from protuberances present in the hairs of the legumes roots. In Argentina, Halbinger is recognised as the first inoculant producer (at the Laboratory of the Ministry of Agriculture of Santa Fe ), in 1937. Laboratory products evolved and in 1956, in Brazil, Dr. Joao Ruy Jardim Freire gave technical assistance in order to install a legume inoculant industry. At the same time, Uruguay was developing experimental inoculants and large scale produced peat based formulations started to be officially controlled in 1963 by Dr. R. A. Date, from The University of Sydney in the "Laboratorio de inoculantes" of the Ministry of Agriculture. In late 80's, only one Paraguayan legume inoculant industry, "Inoculantes S.R.L.", manufactured a product called "Ybyru", which only was sold for a short period of time. The degree of success of the inoculant companies in each country depend on several factors: commercial, regulatory, technical and technological. Nevertheless, the importance given by each government to the diffusion of the technology and to assure that farmers receive a high quality inoculant is the reason why there is such a difference in inoculated areas in countries of MERCOSUR. It is important to emphasize that in those of them where the inoculation technology is succesfull, with a high level of adoption in commercial legume pastures or crops, there has a permanent and intimate relation between researchers, universities, public entities, farmers and the private sector. Cooperative efforts among all these sectors permitted a dynamic development of the BNF research work, which allowed enormous economical benefits from it in productive terms. Today, soybeans are the legume crop in south America to which most rhizobiological work has been dedicated. In relation to the Lotus genre, the inoculation practise does not have high levels of adoption in all countries, and in most situations the reason is not the lack of positive productive responses. Although we may consider there is great research work dedicated to it in relation to BNF, it has not been transferred to the productive sector (farmers) in the same manner as it occurred with soybeans.