



## Research on the influence of inoculation and fertilization on the morphological and productive features of lucerne (*Medicago Sativa* L.) under conditions of Moldavian forest steppe

Mihai STAVARACHE, Iulian MUNTIANU, Vasile VÎNTU, Costel SAMUIL, Constantin Iulian POPOVICI - USAMV Iasi

The research conducted during March-June 2010, on the Ezăreni farm, under the condition of Moldavian forest steppe, analyzed in the first year of alfalfa crop, at the first cut, the influence of seed inoculation with symbiotic bacteria *Rhizobium meliloti* Dangeard and fertilization with N50P50, N75P50 and 30 Mg•ha<sup>-1</sup> manure, on the number of shoots•plant<sup>-1</sup>, number of shoots•m<sup>-2</sup>, plant height dynamics, the leaves/stems ratio and dry matter production (DM) per hectare. The experience has been placed on a cambic chernozem soil type containing 41.8% clay, pH 6.68 and 2.24% humus on 0-20 cm layer. The results showed that under experimental conditions, the number of shoots per plant was between 1.16 to 1.45, the number of shoots•m<sup>-2</sup> fluctuated between 850-921 shoots•m<sup>-2</sup>, plant height at harvest was between 40.9-50.1 cm, the leaves/stems ratio ranged from 56.5/43.5 and 45.9/54.1 and DM yields ranged from 1873-2661 kg•ha<sup>-1</sup>. For this stage of observations, seed inoculation had a insignificant influence on the tracked indicators. Fertilization positively influenced the number of shoots•plant<sup>-1</sup>, plant height and dry matter production, negative ratio leaves/stems and had a significant influence on the number of shoots•m<sup>-2</sup>.