

## **ADAPTATION OF VETCH, FIELD BEAN AND LUCERNE TO ORGANIC FARMING**

RUSSI L., TORRICELLI R., FALCINELLI M.

Dipartimento di Biologia Applicata, Università degli Studi di Perugia, Borgo XX Giugno 74,  
06121 Perugia (Italy)

*Vicia sativa, Vicia faba, Medicago sativa, organic farming, GxE interaction, multilocation trials*

The most important results found in vetch, field bean and lucerne are reported and referred to the first year of research activities. In field bean eight varieties (Chiaro di Torre Lama, Irena, Melodi, Prothabat 69, Scuro di Torre Lama, Sicania, Sikelia e Vesuvio) were evaluated in five locations (Ancona, Perugia, Grosseto, Bari e Catania, a good sample of environments where field bean is grown). Statistically significant differences were found for most of traits: establishment, plant density, cold tolerance, flowering time, canopy height, disease resistance, grain yield and 1000-seed-weight. Significant differences among Location were shown for seed yields, with Bari being the highest (3.3 t/ha) yielding site. On the base of the first year results Prothabat 69 was the most interesting variety in terms of seed yield and seed weight, while at the same time Melodi ranked almost always last.

The eight varieties of vetch (Adonis, Ereica, Melissa, Mikaela, Mirabella, Principessa, Sfinge e Veronica) were evaluated in the same locations as those listed for field bean and, in addition to the same traits already described, in vetch the dry matter yield was measured in half of the plot, by harvesting the biomass present at full flowering time, while seed yield was assessed on the remaining half, at maturity. Differences were found for the source of variation Locations and Variety. The most interesting vetch varieties in terms of dry matter yield were Ereica and Mirabella. A significant GxE interaction showed different adaptation capability of the varieties in the five locations: Principessa for instance was the best in Catania, the most unfavourable environment, while Mirabella and Ereica were the best in the most favourable ones. Melissa was of no particular interest.

The results of lucerne are preliminary being referred to the establishing year. However, at this stage Cuore Verde, Beatrix and Prosementi seem to be the most interesting cultivars in terms of dry matter yield.

Project, funded by MiPAAF (Ministero delle Politiche Agricole Alimentari e Forestali)