

## *HERBASPIRILLUM SEROPEDICAE* — EFFECTIVE DIAZOTROPHIC BACTERIUM OF TEMPORATE CLIMATE?

### S u m m a r y

The only procaryotic organisms, which are capable of fixing atmospheric nitrogen, are those that can synthetize nitrogenase. This is an enzyme that plays a key role in the process of biological dinitrogen fixation. A widespread and well-known phenomenon is the fixation of this element by bacteria living in symbiosis with leguminous plants. However, also some free-living bacteria, frequently entering into associations with various plants, reveal capabilities of fixing molecular nitrogen. Such endophytes include bacteria

like *Herbaspirillum seropediceae* and *Acetobacter diazotrophicus* were first discovered in countries of the tropical climate.

The influence of inoculation with *Herbaspirillum seropediceae* on dinitrogen fixation was studied in different grasses in temperate climate. A beneficial effect of inoculation the grasses seeds with *Herbaspirillum seropediceae* was noted and the quantity of fixed nitrogen was larger in comparsion with control.