

The Impact of Different Rhizobium leguminosarum Strains on the Protein Content of Peas and Broad Beans

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Abstract : Legume symbiotic relationship with nitrogen fixing bacteria Rhizobium leguminosarum is an important factor used to improve the productivity of legumes, due to the fact that rhizobia can supply plant with the necessary amount of nitrogen. R. leguminosarum strains have shown different activity in fixing nitrogen. Depending on the chosen R. leguminosarum strain, host plant biochemical content can be altered. In this study we focused particularly on the changes in protein content in beans (using two different varieties) and peas (five different varieties) due to the use of several different R. leguminosarum strains (four strains for both beans and peas). Overall, the protein content increase was observed after seed inoculation with R. leguminosarum. Strain and plant cultivar interaction specification was observed. The effect of R. leguminosarum inoculation on the content of protein was dependent on the R. leguminosarum strain used. Plant cultivar also appeared to have a decisive role in protein content formation with the help of R. leguminosarum.

Keywords : legumes, protein content, rhizobia strains, soil

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