ROLE OF ACC-DEAMINASE CONTAINING PLANT GROWTH PROMOTING RHIZOBACTERIA ON NODULATION IN MUNG BEAN (VIGNA RADIATA)
B. Shaharooona, M. Arshad* and Zahir A. Zahir
Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad, Pakistan.

Inoculation of plants with ACC-deaminase containing plant growth promoting rhizobacteria (PGPR) may alter the endogenous levels of ethylene (C\textsubscript{2}H\textsubscript{4}), which subsequently leads to changes in the growth and development of inoculated plants. Endogenous C\textsubscript{2}H\textsubscript{4} synthesis has been found to act as a potent negative regulator of nodulation, therefore, 2 effective ACC-deaminase containing strains, Pseudomonas putida and Pseudomonas fluorescence, were selected for co-inoculation with Rhizobium japonicum on Vigna radiata (mung bean). Co-inoculation with ACC-deaminase containing PGPR increased Number of nodules, and fresh and dry weights of nodules significantly as compared to Rhizobium alone, most likely by decreased C\textsubscript{2}H\textsubscript{4} levels in the plant roots during early stages of nodule development. It is highly likely that ACC-deaminase containing PGPR could be employed to increase nodulation in legumes.