

EFFICACY OF CONSORTIA OF RHIZOSPHERE MICROORGANISM ON GROWTH PROMOTION AND NUTRIENT ASSIMILATION OF BEETROOT (*BETA VULGARIS* L.) UNDER GREENHOUSE CONDITION

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ABSTRACT

Biofertilizers, an integral component in green agriculture, help in nurturing the soil eco system by adding soil organic matter. Soil micro flora performs various activities which influence growth promotion resulting in crop productivity and yield. Synthetic biofertilizers, germicides, toxic materials and other crop inputs cause critical ecological imbalance, and reduce soil health and fertility in long run. Biofertilizer becomes an alternate solution to overcome this issue. In this context, the experiment was undertaken to estimate the efficiency of consortia of rhizosphere microorganisms on the growth promotion of beetroot under green house conditions. The bio inoculants were applied individually and in consortia. Co-inoculation with phosphate solubilises, potash mobilizes and potassium solubilising bacterial isolates (T₄) showed notable growth attributes and nutrient assimilation. Single inoculation with potash mobilizes exhibited equally highest growth parameters. Ascorbic acid and dietary fibre content were also recorded highest in T₄ whereas, beta nine content was found highest in single inoculation (T₆) applied. Secondary and tertiary nutrient content uptake was also recorded maximum in consortia followed by individual inoculations.

KEYWORDS: Consortia, Growth Promotion, Beet Root, Greenhouse

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