Research Article

Microbial Population Dynamics Under Organically Managed Rice Based Cropping Sequence

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Abstract

Population of five microbial inoculants *viz., Rhizobium*, PSB, *Azotobacter*, *Azospirillum* and *Pseudomonas fluorescens* were recorded for two consecutive years from 2014-16 in Rice-Tomato-Cowpea cropping sequence using four different treatments, which include biofertilizers, coinjoint use of biofertilizer and slow release fertilizer, slow release fertilizer (SRF) and chemical fertilizers. Results indicate that among five microbes, except Azotobacter, all the microbes used were root colonizers which showed a more or less constant increase in population over a period of two years. Least enhancement of population was noticed in plots with SRF. Among the four treatments biofertilizer treated plots showed 80 percent enhancement of microbial inoculants followed by 52 per cent in coinjoint use of biofertilizer and slow release fertilizer in comparison to chemical treatment as check. Results from different cropping sequences could be used for the organic management of cropping system.

Key word: Microbial population dynamics, organic cultivation

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