



Effect of land preparation techniques, NP levels and bioinoculants on soil available nutrients and soil micro-organism in aerobic rice production

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Abstract : A field experiment was conducted during 2010-2011 at the Wetland Farm of Vanavarayar Institute of Agriculture, Pollachi to study the effect of land configuration techniques, NP levels and bioinoculants on soil available nutrients and soil microorganism for aerobic rice. Postharvest soil analysis clearly showed that the soil available nitrogen was highest (219.7 kg/ha) for the application of 100% recommended dose of fertilizers+ biofertilizers which was at par with the application of 100% recommended dose of fertilizers + biofertilizers+ AM fungi seed treatment. Lowest P status of 9 kg/ha was observed for the application of 100% recommended dose of fertilizers + biofertilizers+ AM fungi seed treatment. This was due to the solubilisation of P in the soil by AM fungi which is made available for crop growth. Application of bio fertilizer enhanced the N availability and solubilized the unavailable P which in turn recorded higher N availability and low P status indicating better P uptake when applied along with recommended dose of fertilizer for aerobic rice. The population of *Azospirillum*, phosphobacteria, *Pseudomona* and VAM, where is notably higher because of the increase microbial load due to application of bioinoculants along with the fertilizers.

Key Words : Aerobic rice, Soil available nutrients, Bio inoculants, Soil micro-organisms

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