

Impact of integrated nutrient management on yield, economics and soil fertility in hybrid rice (*Oryza sativa*) – mustard (*Brassica juncea*) cropping system

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ABSTRACT: A field experiment was conducted to study the effect of integrated nutrient management applied to rice in Udic ustochrepts on the performance of hybrid rice-mustard cropping system in a sandy loam soil. The seed yield of rice was produced highest 70.94 q/ha under FYM₅ + GM + S + Zn + Mn + Fe with RDF followed by 68.16 q/ha under FYM₅ + GM with RDF without significant variation. Mustard seed yield was produced highest 21.22 q/ha under residual effect of RDF + FYM 10 t/ha. Total productivity of rice-mustard sequence was recorded highest 116.82 q/ha REY under FYM₅ + GM + S + Zn + Mn + Fe with RDF followed by RDF + FYM₅ + GM with 113.85 q/ha REY with out significant difference. Maximum net return from R-M sequence was obtained Rs. 93272/ha under RDF + FYM₅ + GM followed by Rs. 91011/ha under RDF + FYM 10 t/ha without significant difference. Maximum net return per rupee invested was obtained Rs. 1.88 under RDF + FYM 10 t/ha. Integrated use of organic manures or biofertilizers with RDF improved the physical, chemical and biological properties of soil at completion of experiment.

Key Words: Rice-mustard sequence, integrated nutrient management, yield, economics, soil properties.