

LONG TERM EFFECT OF INORGANIC FERTILIZERS AND ORGANIC MANURES ON NUTRIENT UPTAKE, AND YIELD OF RICE ON INCEPTISOL

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Abstracts: The experiment was conducted during the kharif season at research farm, Indira Gandhi Krishi Viswavidyalaya, Raipur to investigate the long term effect of Inorganic fertilizer and organic manures on nutrient uptake and yield of rice. The soil was sandy loam and locally known as matasi, Low in nitrogen, medium in P and K. The experiment was laid in RBD and replicated three times with eleven treatments: T₁-No Fertilizer, No Organic manure (Control), T₂-50% Recommended NPK (40:30:20), T₃-75% Recommended NPK, T₄-100% Recommended NPK (80:60:40), T₅-50% Recommended NPK +50%N through Farm yard manure, T₆-75% Recommended NPK +25%N through Farm yard manure, T₇-50% Recommended NPK +50%N through rice residue, T₈-75% Recommended NPK +25%N through rice residue, T₉-50% Recommended NPK +50%N through Green manure, T₁₀-75% Recommended NPK +25%N through Green manure, T₁₁-Conventional Farmer' Practice (50:30:20). A medium duration high yielding rice variety Mahamaya was taken as test crop. The results revealed that combination application of inorganic fertilizer and organic manure i.e. integrated of fertilizer and manure improve chemical properties of soil. The macro nutrient uptake yield and attributing parameter and grain yield of rice were found superior in different organic and inorganic treatment combination at 25, 50 % and along with Green manuring and / FYM as compared to 50 % or 75% RDF to rice crop.

Keyword: Rice, Nutrient uptake, Nutrient content, Organic, Inorganic fertilizer

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