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RESEARCH PAPER

Grain yield and nutrient uptake of rice (*Oryza sativa* L.) under crop residue incorporation and different nitrogen management practices

C. RADHA KUMARI*, D. SRINIVASULU REDDY[1] AND G. LALITHA SIVA JYOTHI[1]
Department of Crop Production, Acharya N.G. Ranga Agricultural University, ANANTPUR (A.P.) INDIA

Abstract : Field experiments were conducted in the wetland farm of S.V. Agricultural College (Acharya N.G. Ranga Agricultural University), Andhra Pradesh for two consecutive years 2002 – 2003 and 2003 – 2004 and results revealed that by raising a reasonably short duration leguminous crop (either a pulse crop or vegetable crop depending up on the farming situation) preceding to rice and incorporation of the crop residues after picking the economic yield and supply of 100 per cent recommended dose of nitrogen through fertilizer to rice was found the best nitrogen management package for rice in terms of higher grain yield, nutrient uptake and economic returns. Incorporation of fieldbean crop residues (C_3) was found superior to any other crop residue incorporation with regard to dry matter production, yield and nutrient uptake. The highest gross returns and net returns as well as benefit-cost ratio recorded with the incorporation of crop residues of fieldbean (C_3). Supply of 100 per cent N through fertilizer to rice (N_2) was found to be superior to any other nitrogen management practices, with regard to dry matter production and yield.

Key Words : Rice, Crop residue incorporation, Different nitrogen management practices

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*** Author for correspondence**
[1]Department of Agronomy, S.V. Agricultural College, TIRUPATI (A.P.) INDIA