



Research Article

Effect of rice (*Oryza sativa* L.) to Integrated Nutrient Management on growth attributes, dry matter production and nutrient status under system of rice intensification

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Abstract : The experiment was laid out in Randomized Complete Block Design (RCBD) with ten treatments replicated thrice. The treatments consisted of 100 per cent, 75 per cent, 50 per cent and 25 per cent recommended doses of nutrients (RDN) through chemical fertilizers and 25 per cent, 37.5 per cent and 50 per cent RDN through organic sources like farm yard manure, poultry manure and neem cake. Application of recommended dose of nutrients (120:60:40kg N:P:K ha⁻¹) along with 10 tonnes of FYM ha⁻¹ recorded significantly higher plant height, more number of tillers/ hill and maximum dry weight.

Key Words : Organic, Inorganic, INM, SRI

How to cite this Article: Kumar, J.S. Arun, Dawson, Joy, Kumar, Akhilesh and Reddy, K. Haricharan (2011). Effect of rice (*Oryza sativa* L.) to integrated nutrient management on growth attributes, dry matter production and nutrient status under system of rice intensification, *Internat. J. Forestry & Crop Improv.*, 2 (2) : 190-193.

Article Chronical : Received : 18.10.2011; Revised : 12.11.2011; Accepted : 24.11.2011

INTRODUCTION

Rice is one of the most important cereal crops in India. The country has to produce about 130 mt of rice by 2025 to feed the ever growing population. Meeting the targeted demands of rice is a challenging task. Decreasing in the soil fertility and increasing in water scarcity is becoming threat for rice cultivation. Hence, the technology which maintains the soil health and water scarcity and as well as economically beneficial needs to be developed. The role of organic fertilizer

in plant nutrition is now attracting the attention of agriculturists and soil scientists throughout the world. Chemical fertilizers, no doubt have the positive impact on crop growth and yield, but had negative impact on soil organic matter, soil structure, and microbial population. Application of organic materials along with inorganic fertilizers into soil results an increase in productivity of the system and also sustain the soil health for longer period. Rice being a crop having water requirement, there is a need to search for alternative method to reduce water requirement of rice without reduction in yield. In recent years, system of rice intensification (SRI) is an emerging water saving technology, with many fold increase in crop yield. This method was developed in Madagascar in early 1980s, where it has been shown that yields can be enhanced by suitably modifying certain management practices such as controlled supply of water, planting younger seedlings and providing wider spacing. Keeping above factors in mind, present investigation was conducted to study the response of rice to integrated nutrient management under system of rice

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