

# Effect of integration of NPK levels and organic sources on growth, yield and economics of rice

■ V.K. SRIVASTAVA<sup>1</sup>, J.S. BOHRA<sup>1</sup> AND J.K. SINGH

## AUTHORS' INFO

### Associated Co-author :

<sup>1</sup>Department of Agronomy, Institute of Agricultural Sciences, Banaras Hindu University, VARANASI (U.P.) INDIA

### Author for correspondence :

**J.K. SINGH**

Department of Agronomy, Institute of Agricultural Sciences, Banaras Hindu University, VARANASI (U.P.) INDIA  
Email : jksinghbhu3@gmail.com

**ABSTRACT :** A study was undertaken to evaluate the effect of integration of nitrogen, phosphorus and potassium (NPK) levels with green manuring and farmyard manure (FYM) on the growth and productivity of rice (*Oryza sativa* L.). The treatments consisted of combination of three levels of NPK (50% RFD, 75% RFD and 100% RFD) and two levels of nitrogen (30 and 60 kg N/ha) through two organic sources (FYM and dhaincha). The results revealed that an application of 100 per cent recommended dose of fertilizer (120, 26.2, 49.8 kg NPK/ha) increased plant height by 10.3 per cent, and also enhanced dry matter accumulation (16.4%), chlorophyll SPAD value (23.9%), effective tillers/ m<sup>2</sup> (12.9%), filled grains/ panicle (11.8%), test weight (8.5%), grain yield (27.6%) and straw yield (28%) over the 50% RFD. As regards the two levels of N through organic sources, application of 60 kg N through FYM gave higher values of growth parameters, yield attributes and grain yield as compared to 30 kg N/ha either through FYM or dhaincha. The integration of moderate NPK level (75% RFD) with 60 kg N/ha through FYM was found to be most productive, remunerative and cost-effective dose for rice (cv. NDR-359).

**Key Words :** Rice, NPK levels, FYM, *Sesbania*, Yield attributes, NPK removal, Economics

**How to cite this paper :** Srivastava, V.K., Bohra, J.S. and Singh, J.K. (2013). Effect of integration of NPK levels and organic sources on growth, yield and economics of rice. *Adv. Res. J. Crop Improv.*, **4** (2) : 113-117.

**Paper History :** Received : 06.09.2013; Revised : 27.10.2013; Accepted : 15.11.2013