EFFECT OF VARIOUS NUTRIENT MANAGEMENT OPTIONS ON GROWTH, YIELD ATTRIBUTING CHARACTERS AND YIELD OF SHORT GRAIN AROMATIC RICE VARITIES (ORYZA SATIVA L.)

Amit Kumar Patel, M.C. Bhambri and Damini Thawait

Department of Agronomy, Indira Gandhi Krishi Vishwavidyalaya, Raipur - 492 012 (C.G.) India Email: amitpate5595@gmail.com

Abstract: The experiment was carried out at Raipur during season of 2012. The experiment revealed that the performance of *Dubraj* was comparatively better than that of *badshahbhog*, *vishnubhog* and *bisni* in terms of grain yield along with highest plant height, dry matter accumulation, leaf area, leaf area index with good yield attributing characters. Among the different nutrient management practices, application of 80:50:40 kg N:P₂O₅:K₂O ha⁻¹(50% Inorganic+50% Organic) gave better performance in all the above characters. It is revealed that the variety *Dubraj* fertilized with 80:50:40 kg N:P₂O₅:K₂O ha⁻¹(50% Inorganic+50% Organic) gave the highest grain yield along with good growth characters.

Keywords: Effect, Nutrient, Growth, Management, Rice

REFERENCE

Anonymous (2012a). Agricultural Outlook and Situation Analysis Reports, Quarterly Agricultural Outlook Report, Under the Project Commissioned by the Ministry of Agriculture, National Council of Applied Economic Research, New Delhi. pp. 47-48.

Anonymous (2012b). Directorate of Economics and Statistics, Department of Agriculture and Cooperation.

Prodhan, S. B. 1992. Status of fertilizer use in developing countries of Asia and pacific region. Proc.Regi. FADINAP Seminar, Chiang Mai, Thailand. pp 37-47.

Chakraborty, A., Chakraborty, P.K., Kanik, P. and Begchi, D.S. (2001). Effect of integrated nutrient supply and management of yield of rice and N and P recovery but it in acid lateritic soils. *Indian Journal of Agronomy*, 46(1): 75-80. 3841

Patra, A.K., Nayak, B.C. and Mishra, M.M. (2000). Integrated nutrient management on ricewheat cropping system. *Indian Journal of Agronomy*, 45(3): 453-457.

Singh, G. Kumar, T. Kumar, V., Singh, R.G. and Sharma, R.B. (2002). Effect of integrated nutrient management on transplanted rice and its residual effect on succeeding wheat crop in rainfed low lands. *Indian Journal of Agronomy*, 47(3): 311-317.

Kaul, A.K.; Khan M.R.I. and Munir, K.M. (1982). Rice quality: A survey of Bangladesh Germplasm. Bangladesh Rice Res. Inst., Joydebpur, Gazipur, Bangladesh. pp.1-178.

Nambiar, K.K.M.; Sehgal, J.; Blum W.E. and K.S. Gojbhiya (1998). Ingreted use of organic manures and chemical fertilizer in red soils for sustainable agriculture. Red and Lateritic soils. 4(1): 367-376.

Pradhan, L. (1992). Effect of N,P,K and Zn on rice in cultivator's fields of Bolangir district, Orrissa under rainfed condition. Orissa J.Agril. Res. 4(1-2): 30-33.

Singh, R.K. and Singh, U.S. (1997). 'Indigenous Scented Rices: Farmers Perception and Commitment'. Paper presented at International Conference on Creativity and Innovation at Grassroots, January 14-17, 1997 at 11 am, Hyderabad.

Jha, S.K., Tripathi, R.S. and Malaiya, S. (2004). Influence of integrated nutrient management practices on growth and yield of scented rice (*Oryza sativa L.*). *Annals Agriculture Research*. 25(1): 159-161.

Mahapatra, A.K., Khanda, C.M. and Mishra, P.J. (2004). Response of scented rice varieties to nitrogen application in eastern ghat highland zone of Orissa. *Oryza*. 41 (3&4): 135-136.

Sarawgi, S.K. and Sarawgi, A.K. (2004a). Effect of blending of N with or without FYM on semi-dwarf, medium to long slender scented rice varieties in lowland alfisols of Chhattisgarh. *In:* International Symposium on rainfed rice ecosystems: perspective and potential. IGAU, Raipur, India. 11-13th Oct., 2004. pp. 159-160.

Behera, A.K. (1998). Response of scented rice to nitrogen under transplanted condition. *Indian Journal of Agronomy* 43 (1):64-67

Sarawgi, S.K., Purohit, K.K., Sarawgi, A.K., and Singh, A.P. (2006). Effect of nutrient management on semi dwarf, medium to long slender scented rice varieties in alfisols of Chhattishgarh. *Journal of Agricultural Issues* 11(1): 75-78.

Pandey, T.D. and Nandeha, K.L. (2004). Response of scented rice (*Oryza sativa*) varieties to FYM and chemical fertilizers in Bastar Plateau. *In:* International Symposium on rainfed rice ecosystems: perspective and potential. IGAU, Raipur, India. 11-13th Oct., 2004. pp. 105.

Paraye, M.P., Bansasi, R., Nair, S.K., Pandey, D. and Soni, V.K. (2006). Response of scented rice (*Oryza sativa*) to nutrient management and varieties. *In:* National symposium on conservation and management of agro-resources in accelerating the

food production for 21^{st} century. IGAU, Raipur, India. $14\text{-}15^{th}$ Dec., 2006. pp. 248-250.

Mhaskar, N.V., Thorat, S.T. and Bhagat, S.B. (2005). Effect of nitrogen levels on leaf area, leaf area index and grain yield of scented rice varieties. *Journal for Soils and Crops.* 15(1): 218-220.

Dahiphale, A.V., Giri, D.G., Thakre, G.V. and Kubde, K.J. (2004). Yield and yield parameters of scented rice as influenced by integrated nutrient management. *Annals of Plant Physiology* 18(1): 207-208

Sharma D.K., Prasad K. and Yadav S.S. (2008). Effect of integrated nutrient management on the performance of dwarf scented rice (*Oryza sativa L.*) grown in rice-wheat sequence. *International journal of Agricultural Sciences* .4(2): 660-662.

Netam, A. K., Sarawgi, S.K. and Purohit, K.K. (2008). Performance of integrated nutrient management on growth, soil nutrient status and yield of traditional scented rice (*Oryzą sativa* L.) varieties. *Journal of Agricultural Issues* 13(1): 115-118.

Pandey, N., Sarawgi, A.K., Rastogi, N.K. and Tripathi, R.S. (1999). Effect of farmyard manure and chemical N fertilizer on grain yield and quality of scented rice (*Oryza sativa*) varieties. *Indian Journal of Agriculture Science* 69(9): 621-623.

Pandey, N., Sarawgi, A.K., Rastogi, N.K. and Tripathi, R.S. (1999). Effect of farmyard manure and chemical N fertilizer on grain yield and quality of scented rice (*Oryza sativa*) varieties. *Indian Journal of Agriculture Science* 69(9): 621-623.