RESEARCH ARTICLE

EFFECT OF ORGANIC AND INORGANIC SOURCES OF NUTRIENT ON PRODUCTIVITY, NUTRIENT UPTAKE AND ECONOMICS OF RICE (*ORYZA SATIVA* L.)

Suresh Kumar*, Ram Bharose, Alok Kumar and S.F.A. Zaidi

Department of Soil Science and Agricultural Chemistry, College of Agriculture
Narendra Deva University of Agriculture and Technology,
Kumarganj, Faizabad 224 229 (U. P.)
Email: skumarpubs@gmail.com

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Abstract: A field experiment was conducted at Instructional Farm of Narendra Deva University of Agriculture and Technology, Kumarganj, Faizabad (U.P.) during the *Kharif* 2013 to evaluate the Effect of Organic and inorganic sources of nutrient on productivity and nutrient uptake of rice (*Oryza sativa* L.). Twelve treatments comprised with different integrated modules of organic, inorganic and biofertilizer combinations. The various integrated nutrient management modules significantly influenced the yield, economic and nutrient uptake by rice. Among integrated modules the application of 100% RDF received maximum yield (60.61 grain and 78.86 straw q ha^{-1}) and nutrient uptake followed by 75% RDF+ 25% N (FYM+GM+BGA). The highest net return (78,409.00) and benefit: cost ratio (2.80) was computed under treatment T_2-100% RDF which was closely followed by 75% RDF+ 25% N (FYM+GM+BGA).

Keywords: INM yield, Economic and nutrient uptake of rice

REFERENCES

Anonymous (2014). Agricultural Statistics at a glance, Directorate of Economics and Statistics Department of Agriculture and Cooperation pp72-73

Anonymous (2014). Economics survey of India, Economic Division Ministry of Finance, Government, of India, New Delhi pp 45-55

Jackson, M.L. (1973). Soil chemical analysis, prentice Hall of India, Pvt. Ltd, New Delhi.

Lal, B. Sharma, G.D.; Gautam, P.; Rana, R. (2013) Effect of integrated nutrient management and spacing on growth parameters, nutrient content and productivity of rice under system of rice intensification. *International journal of research in biosciences*; **2** (3): 53-59.

Pandey, P. C., Kumar, V.; and Rathi, A. S. (2007). Effect of inorganic fertilizers and FYM on productivity of rice and soil fertility in long term rice-wheat cropping system. *Progressive Research*; **3** (1): 76-78.

Rakesh, Sahu, D.L.; Kanvar and Rishikesh Thakur (2009) impact of integrated source of management on production and nutrient uptake by rice crop. *Journal of Soil and Crop;* **19** (2): 205-209.

Sharma, M. P., Bali, S. V. and Gupta, D. K. (2001) Soil Fertility and Productivity of rice–wheat cropping system in an Inceptisol as influenced by integrated nutrient management. *Indian Journal of Agricultural Sciences***71,** 82-83

Singh, Surendra, Singh, R. N., Prasad., J. and Kumar, B. (2002) Effect of green manuring, FYM and biofertilizer to fertilizer nitrogen and major nutrient uptake by upland rice. *Journal of the Indian Society of Soil Science* **50**, 313-314

Singh, Y. V.; Dhar, D. W. and Agarwal, B. (2011) Influence of organic nutrient management on *Basmati* rice (*Oryza sativa* L.)-Wheat (*Triticum aestivum*)-green gram (*Vigna radiata*) cropping system. *Indian Journal of Agronomy*; **56**(3):169-175.

Sowmya, C.; Ramana, M.V. and Kumar, M. (2011). Effect of systems of rice cultivation and nutrient management options on yield, nutrient uptake and economics of rice. *Crop Research* (*Hisar*); **42** (2):63-69.

*Corresponding Author