

IMPACT ASSESSMENT OF INTEGRATED PLANT NUTRIENT MANAGEMENT IN BRINJAL (*SOLANUM MELONGENA* L.), THROUGH FARMERS PARTICIPATORY APPROACH

S. K. Pandey¹, Hari Baksh² and Mukesh Kumar³

KVK, Ghazipur, U.P.¹; School of Life Sciences, JNU, New Delhi²; S.V.B.P.U.A & T, Meerut, U.P.³

Abstract : Adoptive experiments on the integrated plant nutrient management (IPNM) with farmer's participatory approach were conducted during Rabi 2008 and Rabi 2009 by Krishi Vigyan Kendra, Chandauli at farmer's field in two villages to assess the technological gap in Brinjal production and potential. Eight numbers of technological gaps including application of fertilizers and pesticides for commercial Brinjal production were identified. The package of IPNM includes application of 10 tons FYM ha⁻¹ + 150:80:60 kg ha⁻¹ NPK respectively + Soil application of Azospirillum biofertilizers @ 10kg ha⁻¹ + foliar spray of Zn and Bo@ 50 ppm at 30, 45 and 75 days after transplanting were applied at farmers field. Findings of experiment revealed that maximum marketable fruit yield 404 q ha⁻¹ in Rabi 2008 and 390 q ha⁻¹ in rabi 2009 were obtained from IPNM plots and subsequently 25.72 and 24.00 per cent increase in total yield were recorded over farmers practice in respective seasons. The per cent loss of yield from total production due to diseased and inferior quality fruits were observed nearly double (13.07 & 12.00) in farmer practice when compared with IPNM plot (7.67 & 7.17%) respectively. Partial budget analysis revealed that the net returns obtained from IPNM plot in Rabi 2008 and Rabi 2009 were higher i.e. Rs. 1, 24,110 and Rs. 1, 16,114 respectively than the farmers practice (Rs. 76,740 and Rs. 71,235) in respective years. Reduction in cost of cultivation of Rs. 8,170 and Rs. 8,879 were also reported in IPNM plot in comparison with farmers practice. B:C ratio were found maximum 4.25 in Rabi 2008 and 4.23 in Kharif 2009 respectively in IPNM plot, whereas, in farmers practices it were 2.98 and 2.82 in respective seasons. Minimization in hazardous use of pesticide was also appreciated.

Keywords : Brinjal, IPNM, OFT, Participatory approach

REFERENCES

De, Nirmal, Singh, K.P., Chaurasia S.N. S. and Rai Mathura (2004). Sabjiyon me Aakikriterit Poshaktatva Prabandhan. *Indian Institute of vegetable Research Varanasi, Tech Bull.* 19. pp. 27-29

Singh, S.S.; Kumar, S. and Singh, S.P. (2002). Effect of organic and inorganic fertilizers on production of tomato. *An impact of vegetable research in India* P.212.

Ramanathan, K. M. (2006). Organic farming for sustainability. *J. Indian Soc. Soil Sci.*, 54(4): 418-425.

Kumar, Satish and Sharma, S. K. (2002). Effect of different methods of biofertilizer application in tomato seed production. *Seed Res.*, 34 (1): 15-19.

Shashidhara, G. B. (2000). Integrated nutrient management in chilli (*Capsicum annum* L.) under northern transitional zone of Karnataka. *Ph. D. Thesis*, Univ. Agric. Sci., Dharwad, Karnataka, India

Thakur, D. S. and Sharma, K. D. (2005). Organic farming for sustainable agriculture and meeting the challenges of food security in 21st century: An economic analysis. *Indian J. Agric. Econ.*, 60(2): 205-218.

Sathiamurthy, V. A. and Pugalendhi (2009). Studies on the effect of organic manures in okra, tomato, cowpea cropping system (Abstr.) Inc. Conf. on Horticulture, Bangalore p. 350.