IMPACT ASSESSMENT OF REJUVENATION TECHNOLOGY AND INTEGRATED PLANT NUTRIENT MANAGEMENT IN OLD GUAVA ORCHARD THROUGH FARMERS PARTICIPATORY APPROACH

S. K. Pandey[1], Hari Baksh[2], C.S. Pandey[3], and Mukesh Kumar[4]

[1]KVK, Ghazipur,U.P.; [2]School of Life Sciences, JNU, New Delhi, [3]JNKVV, Jabalpur, M.P.; [4]S.V.B.P.U.A&T, Meerut, U.P.

Abstract : An on farm trial was conducted in old guava orchard to assess the rejuvenation and integrated plant nutrient management (IPNM) technologies to restore yield and quality traits from exhausted trees of cv. Allahabad Safeda for the three consecutive years i.e. 2007-10. The eighteen year old trees of selected guava orchard were pruned drastically at a height of 2.00 meter in 2007-2008. It was observed that topping and heading back increased the number of new shoots (below the cut portion) and spread of plant significantly resulting in reduced tree height and improved fruiting potential of trees as compared to farmers practice. As a result of pruning practices increased flowering shoots (39.66%) have given higher yield 63.44 kg tree-1 (average of Ist, IInd, IIIrd years) followed by un pruned well managed trees (44.16 kg tree-1), with having increased yield 107.72 per cent and 44.59 per cent over farmers practice (30.54 kg tree-1) respectively. However, initial yield was recorded lower in rejuvenated plants (29.00 kg tree-1) as compared to T2 (38.66 kg tree-1) and farmers practice (35.50 kg tree-1). The economic analysis revealed that B: C ratios were much higher in rejuvenated plants i.e. T1 (3.76) than T2 (2.38) and farmers practice T3 (1.43).

Keywords : Canopy management, Heading back, *Psidium guajava* L., Yield & quality attributes

REFERENCES

Burondkar, M.M.; Rajput, J.C. and Waghmare, G.M. (2000). Recurrent flowering: A new physiological disorders in 'Alphanso' Mango. Acta Horticulture, 509: 669-673.

Compbell, R. J. and Wasielewaski, J. (2000). Mango tree training techniques for the hot tropics. Acta Horticulture, 509: 641-651.

Kallo, G.; Reddy, B.M.C.; Singh, G. and Lal, B. (2005). Rejuvenation of old and senile orchard. Pub. CISH, Lucknow, 40.

Ravindra, N. Padaria; Lal, B. and Pathak, R.K. (2006). Through participatory extension intervention popularizing rejuvenation technology in Mango. Indian Horticulture. **2**: 4-5.

Singh, H.P.; Singh, G.; Samuel, J. C. and Pathak, R. K. (2003). Precision farming in horticulture. NCPAH, DAC, MOA, PFDC, CISH, Lucknow. 1-354.

Singh, G. (2005). High density planting of guava, application of canopy architecture. ICAR, News (April-June); **11** (2): 9-10.

Singh, G.; Mishra, R. and Singh, G.P. (2005). Guava rejuvenation, Pub. CISH, Lucknow, 20.

Singh, V.K. and Singh, G. (2003). Strategic approaches of precision technology for improvement of fruit production. Precision farming in horticulture;

Singh, H.P.; Singh, Gorakh; Samuel S.C. and Pathak, R.K. (Eds.) NCPAH, DAC, MOA, PFDC, CISH, Lucknow, pp 75-91.