



## Implementation and Evaluation of Integrated Pest Management Technology in Irrigated *Basmati* Rice in Punjab, India

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**Abstract:** The IPM technologies developed for *basmati* rice were implemented and evaluated in four *basmati* rice growing villages of district Tarn Taran, Punjab, India during 2008-10. The incidence of stemborer (0.89, 0.49 & 0.72 % dead heart); 1.93, 1.39 & 1.56 % white ear) was low in IPM villages than non-IPM villages (2.71, 1.74 & 2.02 % dead heart); 4.88, 5.13 & 4.19 % white ear) during all the three years of study. The incidence of leaffolder (1.07, 1.20 & 2.88 % damaged leaves) was low in IPM villages than non-IPM villages (5.17, 7.59 & 16.59 % damaged leaves). Population of whitebacked planthopper and brown planthopper was low in IPM villages than in non-IPM villages. The population of natural enemies per plant was higher in IPM villages (0.89, 0.70 & 0.75) than non-IPM villages (0.22, 0.07 & 0.05) during study period. With adoption of IPM technologies there was reduction in number of insecticide application in IPM villages (3.4, 3.2 & 3.3) as compared to non-IPM villages (6.5, 5.2 & 6.7). The average cost of insecticide application in IPM villages was Rs 1852, 1629 and 1687 ha<sup>-1</sup>, whereas it was Rs 4605, 3960 and 4468 ha<sup>-1</sup> in non-IPM villages during study period. The increase in yield of IPM villages over non-IPM villages was 12.16, 11.64 and 15.36 per cent, respectively during the three years. The average net return of the IPM farmer was Rs 89,751, 72,558 and Rs 66,858 ha<sup>-1</sup> as compared to non-IPM farmers (Rs 74,418, 60,158 & 52,205 ha<sup>-1</sup>). The additional profit due to adoption of IPM technologies was Rs 15,333, 12,390 and Rs 14,653 ha<sup>-1</sup> during all the three years of study.

**Key Words:** *Basmati* Rice, IPM, Non-IPM, Stemborers, Leaffolder, Planthoppers, Natural Enemy, Yield

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