

ABSTRACT

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Integrated Pest Management is a holistic approach in reducing damage caused by crop pests with least possible disruption to the environment. A study on economics of adopting this technology in major vegetable crops was conducted in Banke and Surkhet districts of Nepal. These districts were selected where vegetable crops were widely adopted. Among the vegetable growers of those districts, 250 sample households were selected randomly from each district. Descriptive statistics, indexing, cost-benefit analysis as well as empirical tools like ordered probit model, t-test, ordinary least square estimates of multiple regression models, Lorenz curve and gini coefficients were employed in the study. It was found that 51.13% of the populations were male with an average family size of 5.38 and 68.40% of the populations were economically active (15 to 59 years of age). Major occupation was agriculture with average land holding size of 0.57 hectare. Half of the respondents were using integrated pest management technologies on vegetable production by receiving advice or getting training about this technology through agriculture extension and development personnel's/organizations. About 30% of the respondents revealed that tomato was the major vegetable crop and over 48% of the respondents had incorporated at least one integrated pest management practice while cultivating vegetables. The initiation and role of Market Planning Committee was associated with highest level of adoption and also had played a crucial role in spreading knowledge and information on integrated pest management technologies as Market Planning Committee was proactive. Bio-fertilizers, jholmol and bio-pesticides were the most adopted integrated pest management practices, whereas grafting technology was adopted the least. The adopters had maximized their profit by reducing cost in pesticides as compared to non-adopters. The farmers practicing this technology were significantly younger and educated as compared to conventional practice. Seed treatment, soil solarization, jholmol, bio-fertilizers, pheromone traps and mulching practices had positively and significantly increased the yield of the vegetable crops. Only 9% of the respondents were found fully adopting this integrated pest management technology. Experience on farming, awareness on chemical pesticides effects, participation on farmer field school, field visit, distance from extension agent, member of Market Planning Committee and training had played a significant role in the adopting integrated pest management technology. Similarly, farmers' age was negatively significant in the adoption of this technology. Investment in extension services, such as training, field day and awareness creation on this technology were identified as key interventions to increase the adoption level. Market Planning Committee information sources were the most cost efficient while farmer field school sources were the least cost efficient information source for disseminating this technology. The average cost per farmer adopting integrated pest management technology through Market Planning Committee was Nepali Rupees 180.51, whereas the cost per farmer adopting through farmer field

school was Nepali Rupees 459.55. The use of integrated pest management technology had positive and significant impact on the net revenue generation from the vegetable; actual difference (before and after adoption of IPM practice) in household income ranged from Nepali Rupees 2,000 to 49,000. The study suggest to ensure sufficient availability and optimum use of agriculture technicians in local level and policy reforms in Market Planning Committee to promote integrated pest management technology in Nepal.