

Challenges in Adoption of Integrated Pest Management Practices in Vegetable Cultivation in Hambantota District, Sri Lanka

N.P. Liyanage^{1*}, M.T. Gunasena², V.G.S. Nilantha¹, J.W.L. Surangi² and M.M.U. De silva²

¹ Socio Economic and Planning Centre, Department of Agriculture, Peradeniya, Sri Lanka

² Grain Legume and Oil Crops Research and Development Center, Angunakolapelessa, Sri Lanka

Abstract

Farmers extremely rely on usage of synthetic pesticide in high yielding cropping systems in developing countries. Therefore, there is an urgent need to adopt integrated pest management (IPM) practices in crops cultivation as a safe and sound technique for human health, household economy and environment worldwide. Empirical background evidences show that influencing farmers to adopt IPM practices does not have effect on its adoption. Several studies reported that adoption rate is affected by different reasons. Therefore, this study aimed to identify factors affecting on adoption of IPM practices in vegetable cultivation, pesticides usage pattern and opportunities to influence farmers for adoption of IPM practices in Hambantota district, Sri Lanka. Primary data were collected through a questionnaire survey. Based on the Raosoft web based sampling calculator, sample size was decided as 194 vegetable farmers. Cluster sampling procedure was assigned to select the most suitable areas for the study. Respondents from each cluster were randomly drawn to the sample and face to face interviewed. Adoption level was measured by developing adoption score and socio economic factors were tested through stepwise regression to identify factors affecting adoption level. Results indicated that factors of knowledge on IPM and awareness on negative impact of use of heavy synthetic pesticides positively affected IPM adoption level. Further, income through farming and farmers' attitudes negatively affected IPM adoption level. However cultivated extent and interaction with extension officer were also about to significant (p- value = 0.051 and 0.053, respectively) although they did not considered in the equation. In terms of pesticides usage pattern, 56% of the farmers applied synthetic pesticide even at the pest population is minimum and frequency of application was ranged from 3 to 18 in average and 10 to 40 in maximum with disparities among different crops. Only 5% of farmers were well aware about IPM, though adoption level was moderate. Opportunities are still there to increase adoption level by long-term mechanism that linked extension officers and farmers through different approaches. Continuing demonstration cultivation for every isolated areas, providing quick access for updated knowledge, facilitate extension officers for continuous field supervision were priorities among those approaches as supplements for the available programs.

Key words: IPM adoption, Synthetic pesticides, Vegetable cultivation

***Corresponding Author:** nplagriecon.doa@gmail.com