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| **ABSTRACT** | | |
| **Title of the Thesis** | **:** | “Impact Evaluation of Rice Integrated Pest Management Programme in Sub-tropical North India” |
| **Name of the Student and Registration No.** | **:** | Raj Kumar  J-15-D-252-A |
| **Major Subject** | **:** | Agricultural Extension Education |
| **Name and Designation of the Major Advisor** | **:** | Dr. Rajinder Peshin  Professor & Head |
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| **Name of the University** | **:** | Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu Faculty of Agriculture, Chatha |

**ABSTRACT**

In India, Directorate of Plant Protection Quarantine and Storage (DPPQS) through its 36 Integrated Pest Management Centres (CIPMCs) implements the integrated pest management (IPM) programmes through Farmer Field School (FFS) since 1994. Many studies have been conducted for measuring the impacts of IPM-FFS programmes. Most of these studies have measured short-term and intermediate-term impacts of IPM-FFS programmes. There is a debate going on about the long-term impacts of IPM-FFS. Therefore, to find out the long-term impacts of rice IPM-FFS programme, a study entitled “Impact Evaluation of rice integrated pest management programme in sub-tropical North India” was carried out. *Ex-post facto* with/without research design was employed to study the impact IPM-FFS. The results show that the IPM-FFS trained farmers were more knowledgeable about cultural practices, pesticides, and insect pests of rice crop but the differences with the non-IPM farmers were not statistically significant. Both IPM-FFS trained and non-IPM farmers attitude towards IPM practices was less favourable. However, the mean knowledge and attitude scores of the IPM-FFS trained farmers were higher both in Jammu and Punjab, but the difference was statistically significant only in case of Jammu. A higher percentage of IPM farmers had adopted resistant varieties, seed treatment, deep summer ploughing, and management of paddy straw as compared to non-IPM farmers. Most of the studies show that long-term impact of IPM-FFS programme on reducing insecticide and fungicide use does not reflect a conclusive trend. Overtime the benefits of IPM-FFS programme on reducing insecticide and fungicide have fleeted. The results show contrary impact of IPM-FFS on pesticide use in Jammu and Punjab. In Jammu, the average pesticide applications by the IPM-FFS trained farmers were 24.8 per cent less than the non-IPM farmers, whereas in Punjab, it was only 6.9 per cent. However, the IPM-FFS trained farmers use of pesticide active ingredient was less than the non-IPM farmers by only 3 and 3.9 per cent in the case of Jammu and Punjab, respectively. Thus, not much difference was observed in the FEIQ of pesticide use between the IPM-FFS trained and non-IPM farmers. Thus, it can be concluded that the long-term impact of IPM-FFS programmes on the knowledge gain of the farmers, adoption of non-pesticide pest management practices, and pesticide use do not sustain over time. There was not much to differentiate between the IPM-FFS trained and control group farmers. The finding of the study revealed that there are many barriers in the adoption of IPM practices namely i) lack of knowledge and skill ii) unawareness about the benefits of IPM practices iii) IPM practices being time consuming and un favourable attitude towards IPM and iv) influence of the pesticide dealer on pesticide use decision of the farmers. There is a challenge in reaching more and more farmers for popularizing the IPM technique through FFS and sustain its positive benefits. Therefore, the IPM-FFS programme should be reoriented by having periodic training for the farmers and using other extension methodologies like mass media.

**Keywords**: IPM-FFS programmes, Training, Knowledge, Attitude, Pesticide use frequency, Adoption and Constraints

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| Signature of Major Advisor | Signature of the Student |