

## Awareness and Adoption of IPM Technology of Vegetable Growers through Extension Methods

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### Abstract

*Integrated Pest Management (IPM) is a combination of pest management techniques to reduce the need for pesticides. The present study was conducted during 2017-18 in the Deoria district of Uttar Pradesh. Out of 16 blocks only two blocks Salempur and Bhatpar Rani were purposively selected. Two villages from each block were selected randomly. A sample of 80 vegetable growers was selected randomly. The data were collected through a well structured interview schedule. The collected data were analyzed with statistical tools like frequency, percentage. IPM practices were followed by farmers to a considerable monitoring (95%), seed treatment (68.75%), crop rotation, (53.75%) and identification of insect pest and disease (43.75%).*

**Key words:** Awareness, IPM, Technology, Vegetable growers.

### Introduction

Vegetables are an important source of vitamins, minerals, and plant proteins in human diets throughout the world. Vegetable cultivation is one of the more dynamic and major branches of agriculture, and from the point of view of economic value of the produce. There is argent need to increase the productivity of vegetables in our country to feed the increasing population. One of the major constraints in increasing vegetable production is loss caused by vegetable pests. Insect's pests are responsible for reducing 40% of the total yield of vegetables.

Integrated pest management is a long-standing, science based, decision-making process that identifies and reduces risks from pest-management-related strategies<sup>[1, 2]</sup>. It coordinates the use of pest biology, environmental information and available technology to proven unacceptable levels of pest damage by

most economical means, while posting the least possible risk to people, property, resources and the environment. IPM provides an effective strategy for managing pests in all arenas from developed agriculture, residential, and public areas to wild lands. IPM serves as an umbrella to provide an effective, all encompassing, low risk approach to protect resources and people from pests.

### Methodology

The present study was conducted during 2017-18 in the Deoria district of Uttar Pradesh. Out of 16 blocks only two blocks Salempur and Bhatpar Rani were purposively selected. Two villages from each block were selected randomly. A sample of 80 vegetable growers was selected randomly. The data were collected through a well structured interview schedule. The collected data were analyzed with statistical tools like frequency, percentage and mean score.

## Results and Discussion

The data in table 1 indicate that all the farmers of vegetables were aware of field monitoring and management of crop debris. The two important IPM practices like seed treatment 80 per cent and crop rotation 78.33 were followed to a considerable extent. An interesting data also came out about the identification of insect pest and diseases that 63.33 per cent farmers were aware about it but they identified these disease and insect pest in their regional languages. Whereas, the awareness of pesticides and their recommended doses practices were adopted by 10 per cent farmers only. It

showed that the management and insect can be achieved to more extent if farmers acquire the knowledge of pesticides and their recommended doses<sup>[3, 4]</sup>. Plant spacing and seed rate of sowing were acquired by 60 percent farmers. Other IPM practices like adjustment of depth of sowing (50%), crop choice variety (40%), and use of value added vermicompost (56.67%) were acquired by the farmers. None of the farmer was aware about soil solarization and treatment of nursery bed. Hence, it indicates that farmers need to be trained more on adoption of a complete IPM module in vegetable production.

**Table 1 Awareness of Farmers with IPM practices**

Sl. No.	IPM Practices	Frequency	Percentage	Rank
1.	Monitoring of field	74	92.50	I
2.	Crop rotation	51	63.75	III
3.	Seed treatment	48	60.00	IV
4.	Hand removal of pest	45	56.25	V
5.	Soil solarization	10	12.5	X
6.	Identification of insect pest and diseases	20	25.00	VIII
7.	Use of vermicompost/Compost	71	88.75	II
8.	Knowledge of friendly insect	18	22.50	IX
9.	Biological control of pest	33	41.25	VI
10.	Use of bio pesticides and their recommended dose	29	36.25	VII

### Adoption of IPM technology through different extension methods

After discussion the level of IPM awareness among farmers, it was also tried to find out the best extension method of extension to implement IPM awareness among farmers<sup>[5]</sup>. It can be observed from table 2 that with a combination of three extension methods training+ demonstration+ literature adoption level of

IPM module was maximum (65%) and it was followed by training+demonstration (58.33%), demonstration alone (35%), training alone (26.66%) whereas by literature the adoption level was (5%). The results are in confirmation with findings of Gwada and Yellapa (1990).

**Table 2 Extension methods adopted by farmers**

Sl. No.	Extension Methods	Farmers	Frequency	Percentage	Rank
1.	Training	80	16		IV
2.	Demonstration	80	21		III
3.	Literature	80	03		V
4.	Training+Demonstration	80	35		II
5.	Training+Demonstration+Literature	80	39		I

### Conclusion

The present study clearly indicates that farmers need the knowledge and practices of the vegetables production regarding insect pest and disease management. Some practices like Soil solarization, Identification of insect pest

and diseases, Knowledge of friendly insect and use of bio pesticides and their recommended doses are needed to increase the awareness among farmers to have a complete economical and eco-friendly integrated approach and to manage the insect pest and diseases.

### Reference

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