

Research Note

# Constraints in adoption of integrated pest management practices by the potato growers

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**SUMMARY :** This study was conducted in Chhindwara district of Madhya Pradesh for identifying the constraints faced by potato growers. Six villages were selected randomly from the potato growing areas and 20 farmers were selected from each village, thus, 120 respondents were included in the sample for investigation. Results showed that important constraints as perceived by the respondents were improper technical knowledge about bio-agents and bio-insecticides, lack of knowledge about light trap and pheromone trap, high cost of seed, fertilizers and insecticides etc. This needs attention of the KVK and State Deptt. for delineating the constraints which in turn would enhance the adoption of the IPM practicing leading to the green and clean agriculture.

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Potato, Constraints, Adoption, IPM practices

Integrated pest management, briefly IPM, is a comprehensive approach of pest control that uses combined mean to reduce the status of the pest to tolerable level which maintaining a quality environment. In this method, all the different pest control measures like cultural, mechanical, biological, chemical and integrated and are planned to minimize the crop-damage without disturbing the ecological system.

The productivity of potato is affected by many factors *viz.*, crop genetics, resource management and climatic factors. The losses caused by weeds, insects, diseases and other agricultural hindrances by the IPM maintains the pest population at level below those causing economic injury and maximum crop protection against pests at the least cost. Hence, for increasing the yield and pesticide free food commodity, it is necessary to accelerate the level of adoption of recommended IPM practices amongst potato growers on this ground, it is imperative by them in adoption of IPM practices by potato growers and identifies the constraints perceived by them.

Keeping these points in view, an attempt was made to find out the major constraints in adoption of integrated pest management practices by potato growers.

The present study was conducted in Chhindwara district of Madhya Pradesh where potato is grown largely out of all districts of Jabalpur division of this state. There are 11 blocks in the districts and out of them one block *i.e.* Chhindwara block was selected purposively for this study because of largest area under potato crop, as compared to other blocks of the district.

The respondents were selected through multi-step random sampling method. At first stage, out of 131 villages of Chhindwara block, 6 villages were selected randomly. At the second stage, a list of farmers was prepared from all 6 villages. At third stage, 20 potato growers from each selected villages were randomly selected from the list, making the total of 120 farmers for the study.

On the basis of the study, 14 major constraints in adoption of IPM practices were identified. Table 1 revealed that improper

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**Table 1: Constraints perceived by potato growers in adoption of integrated pest management practices**

Sr.No.	Constraints	Frequency	Percentage	Rank
1.	Non-availability of chemical fertilizers	59	49.17	IX
2.	Lack of knowledge about biological method of pest control	65	54.16	VII
3.	Non-availability of seeds and fertilizers	74	61.60	V
4.	Climatic problems	46	38.33	XI
5.	Improper technical knowledge about bio-agents and bio-insecticides	92	76.66	I
6.	Lack of knowledge about light trap and pheromone trap	87	72.50	II
7.	Non-availability of labours	40	33.33	XII
8.	High cost of seed, fertilizers and insecticides	81	67.50	III
9.	Lack of information about improved and resistant varieties of potato	75	62.50	IV
10.	High cost of agricultural implements and tools	54	45.00	X
11.	Irrigation problem	38	31.66	XIII
12.	Lack of money to purchase useful agricultural material at right time	66	55.00	VI
13.	Lack of knowledge about chemical fertilizers	62	51.67	VIII
14.	Lack of knowledge about seed treatment	75	62.50	IV

technical knowledge about bio-agents and bio-insecticides (76.66%) ranked 1<sup>st</sup>, followed by lack of detail technical knowledge about light trap and pheromone trap (72.50%) ranked 2<sup>nd</sup>, high cost of seed, fertilizers and insecticides (67.50%) ranked 3<sup>rd</sup>, lack of information about improved and resistant varieties of potato (62.50%) and lack of knowledge about seed treatment (62.50%) both ranked 4<sup>th</sup>, non-availability of seed and fertilizers (61.60%) ranked 5<sup>th</sup>, lack of money to purchase useful agricultural material at right time (55.00%) ranked 6<sup>th</sup>, lack of knowledge about biological method (54.16%) ranked 7<sup>th</sup>, lack of knowledge about chemical fertilizers (51.67%) ranked 8<sup>th</sup>, non-availability of chemical and their recommended doses (49.17%) ranked 9<sup>th</sup>, high cost of agricultural implements and tools (45.00%) ranked 10<sup>th</sup>, climatic problems (38.33%) ranked 11<sup>th</sup>, non-availability of labours (33.33%) ranked 12<sup>th</sup> and irrigation problem (31.66%) ranked 13<sup>th</sup>. A study on adoption of improved potato production technology by potato growers of Chhindwara block in Chhindwara district (M.P.) was also conducted by Sonare (2008).

### Conclusion:

The main constraints perceived by potato growers of Chhindwara district in adoption of integrated pest management practices were non-availability of chemical fertilizers and lack of knowledge about calibration of chemical and their recommended doses, lack of knowledge about biological pest control method, light trap and pheromone trap, seed treatment, information about improved and resistant varieties of potato, crop rotation and inter-cropping. Some other constraints like climatic problem,

irrigation problem, non-availability and high cost of labour, high cost of seed, fertilizers, insecticides, agricultural implements and tools, lack of money to purchase useful agriculture material at right time. One of the most common constraints is improper technical knowledge about bio-agents and bio-insecticides were the major constraints and these constraints may be overcome with the help of education, training, dissemination of information through different communication methods and extension personnel.

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