

CONSTRAINTS PERCEIVED BY THE VEGETABLE GROWERS IN ADOPTION OF RECOMMENDED ENVIRONMENTAL PROTECTION MEASURES

Payal H. Vihariya¹, M. R. Patel² and P. C. Patel³

1 PG Student, Dept. of Agricultural Extension and Communication, NMCA, NAU, Navsari -396450

2 Assistant Extension Educationist, Sardar Smruti Kendra, DOEE, AAU, Anand - 388110

3 Assistant Prof., Office at Directorate of Extension Education, AAU, Anand-388110

Email : payal14.vihariya@gmail.com

ABSTRACT

Constraints in adoption of newer agricultural technology never end. However, they can be minimized. Constraints in this study were operationalized as the item of difficulties faced by the vegetable growers in adoption of recommended environmental protection measures. There might be number of constraints in adoption of these protection measures. The present study was conducted on a random sample of 120 vegetable growers selected from the 12 random villages of Anand, Borsad and Petlad Taluka of Gujarat state by using simple random sampling. The investigator collected data by using personal interview method. The most important constraint faced by vegetable growers was found as "Non availability of information in time as per recommended dose of pesticides" and the least important constraint faced by vegetable growers was found as "Non-availability of plant protection chemicals at village place".

Keywords: adoption, constraints, pesticide residue, vegetable growers

INTRODUCTION

Agriculture is a substantial sector that produces food for humanity. However, due to an expansion of industrial sector along with urban growth and the expansion of communities, lands for agricultural activities have a tendency to reduce by time. An increase of uses of high technology and pesticides to accelerate productivity of crops to meet population demands is also another factor that worsens the cause of soil damage. Besides, use of chemical pesticides is also not safe for workers in agricultural farm lands. With the limitation of their literacy level, these farmers have less awareness of danger from using chemical pesticides, while the behavior of use is not friendly to users, consumers and the environment. Toxic substances caused from the over use or misuse of pesticides have become pollutant to the air, soil and water. Soil and water are the primary source for food production for human, thus pesticide residues in these natural resources have a significant negative impact to human lives. (Dureja and Gupta, 2009) Vegetables are the essential component of human diet and having third place along with taking over the pesticides load next to cotton and rice. Vegetables consume 13.00% of total pesticide use in India. The persistence of pesticides among the vegetables brinjal, okra, and chilly require frequent application of pesticides even at fruiting stage. It has been estimated that 85.00-90.00% of pesticides in human bodies are received through foods vegetables are of direct concern with respect to the buildup of pesticides residues from point of hazards to consumers. Exposure to pesticides, both occupationally and environmentally causes

a range of human health problems. It has been observed that the pesticides exposures are increasingly linked to immune suppression, hormone disruption, diminished intelligence, reproductive abnormalities and cancer. Currently Pesticide residue in several crops has also affected the export of agricultural commodities in the last few years. The presence of pesticide residues in vegetables is major blockage in the international trade of food commodities. If farmers become more aware of the judicious use of pesticides and to adopt recommended environmental protection measures it will reduce the hazards related to pesticide residues. (Rathod, 2009) It can only be achieved when the farmers will get the right information about hazards caused by improper, careless, and excessive use of pesticides from the various sources of information.

Keeping all the above facts in mind, the present study on Constraints being perceived by the Vegetable growers in Anand District for adoption of recommended environmental protection measures in vegetables was done with the objective to find out the constraints as perceived by the vegetable growers for adoption of recommended environmental protection measures in vegetables.

OBJECTIVE

To know the constraints perceived by the vegetable growers in adoption of recommended environmental protection measures

METHODOLOGY

The present study was conducted among eight districts under the jurisdiction of Anand Agricultural University. Anand district was purposively selected for the study because vegetable crops are frequently grown more or less in all the talukas of the Anand district. Out of 8 Talukas of Anand district Anand, Borsad and Petlad taluka where vegetables (Brinjal, Okra and Chilli) are grown on maximum areas were selected purposively. Four villages from each taluka were selected by using simple random sampling for study purpose. From 12 selected villages 120 respondents were selected by proportionate random sampling technique for study purpose. The investigator collected data by using personal interview method. The collected data were analyzed by using Frequency, Percent and Mean Score.

RESULTS AND DISCUSSION

Table 1: Constraints faced by the vegetable growers for adoption of recommended environmental protection measures. (n=120)

Sr. No.	Constraints	Mean Score	Rank
1	Non availability of information in time as per recommended dose of pesticides	2.85	I
2	Difficult trade name of pesticides	2.81	II
3	Lack of awareness about environmental pollution through pesticide residues	2.76	III
4	Lack of awareness about hazardous effect through injudicious use of pesticides	2.76	III
5	Lack of knowledge about selection of the correct pesticides for a pest or diseases control	2.55	IV
6	Lack of skilled labour for spraying of pesticides	2.21	V
7	Lack of technical knowhow about usage of bio-control agents	2.16	VI
8	lack of knowledge about usage, repair and maintenance of plant protection equipment	1.96	VII
9	Lack of knowledge about Integrated pest management	1.91	VIII
10	Non-availability of plant protection chemicals at village place	1.80	IV

On the perusal of data presented in table 1 it can be observed that constraints faced by vegetable growers for adoption of recommended environmental protection measures in descending order of rank (table 1). Non-availability of information in time as per recommended dose of pesticides (rank 1st), Difficult trade name of pesticides (rank 2nd), Lack of knowledge about selection of the correct pesticides for a

pest or diseases control (rank 3rd), Lack of awareness about hazardous effect through injudicious use of pesticides and lack of awareness about environmental pollution through pesticide residues (rank 4th), Lack of technical knowhow about usage of bio-control agents (rank 5th), Lack of knowledge about Integrated pest management (rank 6th), Lack of skilled labour for spraying of pesticides (rank 7th), Lack of knowledge about usage, repair and maintenance of plant protection equipment (rank 8th) and non-availability of plant protection chemicals at village place (rank 9th) were the major constraints faced by the vegetable growers for adoption of recommended environmental protection measures.

CONCLUSION

Based on the findings of the study, it may be concluded that the most important constraint faced by vegetable growers were “Non availability of information in time as per recommended dose of pesticides” (Mean score 2.85), “Difficult trade name of pesticides” (Mean score 2.81) and the least important constraint faced by vegetable growers “Non-availability of plant protection chemicals at village place” (Mean score 1.80).

RECOMMENDATION

Knowledge about selection of the correct pesticides and its recommended dose should be provided timely and Training should be imparted to the farmers regarding the use of pesticides, maintenance and repair of plant protection equipments to accelerate rate of adoption of recommended environmental protection measures in vegetables.

REFERENCES

- Dureja, P. and Gupta, R. L. (2009). Status of pesticide of India. *Pesticide research journal*, 21(2): 202-210.
- Handa, S. K., Agnihotri, N. P. and Kulshrestha, G. (1999). Pesticides Residues: Significant Management and Analysis. *Research Periodicals and Book Publishing Home, Texas, USA*, 302.
- Horrrigan, L., Lawrenc, R. S. and Walker, P. (2006). How sustainable agriculture can address the environmental and human health harms of industrial agriculture. *Environmental Health Prospect*. 110 (5): 445-456.
- Rathod, J. J. (2009). A study on adoption of recommended plant protection measures by chilli growers in Anand district of Gujarat state (Master's thesis, Anand Agricultural University, Anand).
- Soni, Arti N., Verma, P. D. and Soni, Dipal N. (2018) Adoption of fruits and vegetable preservation technology by tribal farm women of tapi district. *Guj. J. Ext. Edu.* 29(1):9-15.
- Soni, A.N., Verma, P.D. and Soni, D.N. (2017) Impact of training on adoption of fruits and vegetable preservation technology by tribal women. *Guj. J. Ext. Edu.* 28(1):46-49