



ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2022; SP-11(7): 4191-4193
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www.thepharmajournal.com
Received: 08-04-2022
Accepted: 10-05-2022

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Constraints faced by farmers for purchase and uses of pesticide and suitable measures to overcome them

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Abstract

The quantitative understanding of farmer's behaviour in the purchase and use of pesticides is great importance to protect the crop, environment, improve farmers' practices and chemical pest management. Farmers are able to use a variety of chemicals to protect their crop from pest disease, with the time round the year foods are essential for this vast population, investigation is based on primary data collected from 100 farmers. For the present study, Raipur districts were selected purposively. The data was collected with the help of pre-tested questionnaire and personal interview. Major Constraints for purchase of pesticide and uses reported by the farmers were unawareness about hazardous effect of agrochemical on human health was ranked 1st with mean value of (28) and 5th rank was given to Lack of easy availability (13.7). The major constraints for use of pesticide ranked by the vegetable growers were, 1st rank was given to lack of latest recommended (34.5) and 4th rank was disposal of empty pesticide containers (24.25). The pesticide companies should ensure good pricing policies as the price was identified as the major factors influencing the buying behaviour of Farmers.

Keywords: Pesticide, consumer behaviour, purchase, environment, awareness

1. Introduction

The term pesticide refers to range of chemicals including insecticides, herbicides, fungicides, rodenticides, nematicides, molluscicides, and others. Pesticides enable to produce safe, quality food, and higher production of food grains at affordable prices. Their active ingredients provide a variety of desired effects, and the inactive ingredients preserve or aid in the action of the active affected ingredients, but they've also caused countless accidental poisoning. Manpower shortage and high agricultural wages are driving demand for Agrochemical. Modern agrochemical have helped make farming far more productive. The pesticide companies should ensure good pricing policies as the price was identified as the major factors influencing the buying behaviour of Farmers.

2. Methodology

The study was conducted in Raipur district of Chhattisgarh. These districts are selected purposively where maximum producer are involved vegetable production. Hundred respondent were selected from the surrounding area of Raipur city for the Present study.

2.1 Data collection

The study investigated numerous kinds of primary also as secondary knowledge concerning completely different aspects related to chemical usage in crop production within the study space The primary knowledge with reference to numerous concerned in chemical usage like, data of farmers regarding buying preference, blighter management, perceptions of the sort and frequency yet as severity of pests and diseases, awareness of farmers with relevance toxicity of chemical, safety measures followed throughout chemical application, amount and frequency of pesticides used etc. were collected.

3. Results and Discussion

The present investigation was carried out in surrounding of Raipur city of Chhattisgarh. For the study hundred vegetable growers were selected. Numerous required information and data was collected with the help of pretested schedules.

3.1 Constraints for purchase of pesticide

- 28% respondents said that, there is lack of hazardous effect of agrochemical on human health ranked.
- 27.6% respondents thought that, there is lack of technical guidance for pesticides application in the region.
- 26.8% respondents having issue with poor quality of pesticide.
- 24.8% respondents thought that, there is Lack of pesticide application equipment.
- 13.7% respondents having least problem with Lack of easy availability.

This are major problems faced by the growers during purchase of pesticide.

3.2 Constraints for use of pesticide

- 34.5% farmer face problem in lack of latest recommendation.
- 33.25% respondent said that they don't have equipment to mix pesticides.
- 30.75% of farmer said they use safety measures.
- 24.25% farmer face problem in disposal of empty pesticide containers.

The reason behind the above problems due to the lack of technical training, less participation of private sector in farmer training session, field demonstrations, village meeting, Farm visit of progressive farmer, and group discussions etc.

Table 1: Problems faced by respondents in use of pesticide:

S.N.	Constraints for purchase of pesticide	Respondent	
		Mean value	Rank
1	Unawareness about hazardous effect of agrochemical on human health	28	I
2	Lack of technical guidance	27.6	II
3	Poor quality of pesticide	26.8	III
4	Lack of pesticide application equipment	24.8	IV
5	Lack of easy availability	13.7	V
Constraints for use of pesticide			
1	Lack of latest recommended	34.5	I
2	How do you mix pesticides	33.25	II
3	Do you use safety measures	30.75	III
4	Disposal of empty pesticide containers	24.25	IV

Note: Figure in the parenthesis indicate the mean value and ranking of constraints.

Suitable measure to overcome the problems encountered in purchase and use of pesticides

- 31.25 farmer suggest to provision of adulteration free chemical.
- 29% farmer told that Provision of different combinations and less concentrations of chemical.
- 21.25% farmer suggest that Train the farmer to identify adulterations.
- 16.75% respondent want to Easy availability of plant protection chemicals.
- 44.66% farmer suggest that Hand on hand training program for farmer.
- 41.33% respondent want Create an eco-friendly pesticide.
- 31.99% farmer suggest that Use recycle packaging material.

Table 2: Suggestions offered by respondents to overcome the problems

S.N.	Suggestion for purchase of pesticide	Mean score	Rank
1	Provision of adulteration free chemicals	31.25	I
2	Provision of different combinations and less concentrations of chemical	29.0	II
3	Train the farmer to identify adulterations	21.25	III
4	Easy availability of plant protection chemicals	16.75	IV
Suggestion for use of pesticide			
1	Hand on hand training program for farmer	44.66	I
2	Create a eco-friendly pesticide	41.33	II
3	Use recycle packaging material	31.99	III

4. Summary and conclusion

The study locale was Raipur Chhattisgarh, were the constraints for purchase and uses of pesticide is analyses that, unawareness about hazardous effect of agrochemical on human health ranked 1st (28) and rank 2nd is lack of technical guidance (27.6), rank 3rd is poor quality of pesticide (26.8), and rank 4th Lack of pesticide application equipment (24.8) and 5th rank was given to Lack of easy availability (13.7) was the major problems faced by the growers during purchase of pesticide. The major constraints for use of pesticide ranked by the vegetable growers were, 1st rank was given to lack of latest recommended (34.5), 2nd rank was how do you mix pesticides (33.25), 3rd rank is do you use safety measures (30.75) and 4th rank was disposal of empty pesticide containers (24.25). The reason behind the above problems due to the lack of technical training, less participation of private sector in farmer training session, field demonstrations, village meeting, Farm visit of progressive farmer, and group discussions etc.

5. Suggestions

- The companies should adopt effective marketing strategies to make good relations with farmers to satisfy their understanding their requirements etc.
- The pesticide companies should ensure good pricing policies as the price was identified as the major factors influencing the buying behaviour of Farmers.
- The pesticides companies should ensure the availability of pesticides near the local market because majority of the farmers were purchasing the pesticides from the local markets.
- The government can conduct the awareness programs, in collaboration with Indira Gandhi Krishi Vishwavidyalaya, for the promotion and use of Bio-pesticides.
- The farmers need to be educated and increase their awareness level for proper use of these agrochemical particularly plant protection chemicals.

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