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A Study on Consumer Buying Behaviour of Insecticide in Prayagraj Uttar Pradesh

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Insecticides are the substances which are used to kill insects. They have the potential to alter ecosystem components majorly and are toxic to animals as well as humans. Some insecticides become concentrated as they spread in the food chain. Insecticides are insecticides that are formulated to kill, harm, repel or mitigate one or more species of insect. Insecticides work in different ways. Some insecticides disrupt the nervous system, whereas others may damage their exoskeletons, repel them or control them by some other means. They can also be packaged in forms including sprays, dusts, gels, and baits.

It has been revealed during the study that there is availability factor which are affecting buying behaviour of TAKAF by different categories of respondents are availability at wholesaler shop (29.16%), availability at retailer shop (58.33%) and availability on online platform (12.50%) respectively. It has been revealed during the study that there is quality factor which are affecting buying behaviour of TAKAF by different categories of respondents are preventive (33,33%),

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curative (37.50%) and Safe to applicator (29.16%) respectively. It has been found during the study that the major constraint in marketing of TAKAF was the high cost of transportation with 30 respondents response ranked I, followed by shortage of trading ranked II, followed by Price fluctuation with 18 respondents response ranked III, followed by High cost storage with 16 respondents response ranked IV, followed by High prices with 15 respondent response ranked V, followed by storage with 14 respondents response ranked VI and lastly delayed sales with 6 respondent response ranked VII.

Keywords: *Buying behaviour; socio-economic profile; factor impacting; constraints; suitable measures.*

1. INTRODUCTION

Insecticides are chemical compounds that are designed to kill or control insect populations. While they have been widely used for decades to protect crops, homes, and public spaces from insect damage, there is growing concern about their potential negative impact on the environment and human health [1-3]. It is important to use insecticides responsibly and to explore alternative approaches to pest control, such as integrated pest management and the development of less harmful insecticides. According to a report by Research and Markets.com, the Indian insecticide market is expected to grow at a compound annual growth rate (CAGR) of around 6.5% during the forecast period of 2021-2026. The market is dominated by chemical insecticides, which account for more than 80% of the total market share. The major players in the Indian insecticide market include companies such as Bayer Crop Science, Syngenta, BASF, UPL, and Dhanuka Agritech. ADAMA Ltd. is one of the world's leading crop protection companies. They understand farming is much more than just a business, it's a way of life. They strive to Listen> Learn> Deliver [4-6]. Takaf is a unique combination product with two different modes of action. Takaf inhibits mitochondrial ATP synthase leading to paralysis of the pest simultaneously effects the central and peripheral nervous system by interfering with sodium channel gating. Takaf can be used as a solution for effective control of whiteflies.

2. RESEARCH METHODOLOGY

2.1 Selection of District

There are 75 District and 18 division in Uttar Pradesh state. Out of these Prayagraj district of Uttar Pradesh was selected purposively for the study based on maximum area under chilli cultivation.

2.2 Selection of Block

There are 23 blocks in the district. Out of these Soraon was selected purposively for the study. The agro condition of the block is suitable for the cultivation of chilli.

2.3 Selection of Village

There are total 113 village in Soraon block as per the data obtained from the block development office. Thereafter these villages were arranged in order which was based on area of cultivation. Thus, out of total villages 5% villages were selected randomly for the present study.

2.4 Selection of Respondents

From the selected village list data of all the chilli cultivator was obtained from the block development office in each selected village. Ascending order on the basis of size of their land holding for the selection of cultivators from families was listed and farmers was randomly selected from each village. Sample size of the thesis is 120.

2.5 Selection of Market and Market Functionaries

2.5.1 Market

Two types of market were selected purposively for the present study.

2.5.1.1 Primary market

The primary market (Soraon mandi etc) was selected purposively.

2.5.1.2 Secondary market

Regulated market was selected purposively.

2.5.2 Market Functionaries

The market functionaries were considered for data collection regarding and other marketing charges in different marketing channel list of all

market functionaries was prepared with the help of primary and secondary market offices then out of total number of market functionaries like 10 wholesalers, 5retailers etc., market functionaries were selected purposively for present study.

2.6 Analytical Tools

2.6.1 Standard deviation

To calculate the standard deviation, use the following formula -

$$\sigma = \sqrt{\frac{\sum(x_i - \mu)^2}{N}}$$

2.6.2 Likert Scale

A Likert scale is a rating scale used to assess opinions, attitudes, or behaviour. To collect data, you present participants with Likert-type questions or statements and a continuum of possible responses, usually with 5 or 7 items. Each item is given a numerical score so that the data can be analysed quantitatively.

2.6.3 Garrett ranking

$$\text{Per cent position} = 100 (R_{ij}-0.5) / N_j$$

Where,

R_{ij} = rank given for i^{th} factor by j^{th} individual

N_j = number of factors ranked by j^{th} individual

3. RESULTS AND DISCUSSION

Table 1 reveals that during the study that there is availability factor which are affecting buying behaviour of Takaf by different categories of respondents are availability at wholesaler shop (29.16%), availability at retailer shop (58.33%) and availability on online platform (12.50%) respectively [7-10].

Table 2 reveals that during the study that there is quality factor which are affecting buying behaviour of TAKAF by different categories of respondents are preventive (33,33%), curative (37.50%) and Safe to applicator (29.16%) respectively.

Table 3 reveals that during the study that there is price factor which are affecting buying behaviour of TAKAF by different categories of respondents are low price (45.83%) , medium price (41.66%) and high price (12.50%) respectively.

Table 4 reveals that during the study that there is packaging factor which are affecting buying behaviour of TAKAF by different categories of respondents are availability in small pack (45.83%), availability at large pack (8.33%), bottle quality (37.50%) and packaging quality (8.33%) respectively.

Table 1. To analyze different factor impacting on buying behaviour of Takaf: Availability of TAKAF

General	Categories	Respondents Number	Respondents					Percentage
			Marginal	Small	Semi medium	Medium	Large	
Availability of Takaf	Wholesaler	35	3	16	7	4	5	29.16%
	Retailer	70	9	18	15	23	5	58.33%
	Online	15	3	4	3	3	2	12.5%
Total		120	15	38	25	30	12	100%

Table 2. Quality of TAKAF

General	Categories	Respondents number	Respondents					Percentage
			Marginal	Small	Semi-medium	Medium	Large	
Quality of TAKAF	Preventive	40	5	14	5	14	2	33.33%
	Curative	45	7	17	16	3	2	37.5%
	Safe to Applicator	35	3	7	4	13	8	29.16%
Total		120	15	38	25	30	12	100%

Table 3. Price of TAKAF

(n=120)

General	Categories	Respondents number	Respondents					Percentage
			Marginal	Small	Semi-medium	Medium	Large	
Price of TAKAF	Low	55	3	22	13	15	2	45.83%
	Medium	50	9	12	10	12	7	41.66%
	High	15	3	4	2	3	3	12.5%
Total		120	15	38	25	30	12	100%

Table 4. Packaging of TAKAF

(n=120)

General	Categories	Respondents Number	Respondents					Percentage
			Marginal	Small	Semi-medium	Medium	Large	
Packaging of TAKAF	Small pack	55	6	19	11	15	4	45.83%
	Large pack	10	2	3	3	1	1	8.33%
	Bottles	45	5	12	10	12	6	37.5%
	Quality	10	2	4	1	2	1	8.33%
Total		120	15	38	25	30	12	100%

Table 5. To find out the constraint in consumers buying and suggest suitable measures: constraints in marketing of TAKAF

S. No.	Constraints	Frequency	Ranking
1.	High cost of transportation	30	I
2.	Price fluctuation	18	III
3.	Delayed sales	6	VII
4.	Shortage of trading	21	II
5.	High prices	15	V
6.	Storage problems	14	VI
7.	High-cost storage	16	IV
Total		120	

It has been found during the study that the major constraint in marketing of TAKAF was the high cost of transportation with 30 respondents response ranked I, followed by shortage of trading ranked II, followed by Price fluctuation with 18 respondents response ranked III, followed by High cost storage with 16 respondents response ranked IV, followed by High prices with 15 respondent response ranked V, followed by storage with 14 respondents response ranked VI and lastly delayed sales with 6 respondent response ranked VII.

4. CONCLUSION

It has been revealed during the study that there is availability factor which are affecting buying

behaviour of Takaf by different categories of respondents are availability at wholesaler shop (29.16%), availability at retailer shop (58.33%) and availability on online platform (12.50%) respectively. It has been revealed during the study that there is quality factor which are affecting buying behaviour of TAKAF by different categories of respondents are preventive (33.33%), curative (37.50%) and Safe to applicator (29.16%) respectively. It has been revealed during the study that there is price factor which are affecting buying behaviour of TAKAF by different categories of respondents are low price (45.83%), medium price (41.66%) and high price (12.50%) respectively. It has been revealed during the study that there is price factor which are affecting buying behaviour of TAKAF by different categories of respondents

are low price (45.83%), medium price (41.66%) and high price (12.50%) respectively. It has been found during the study that the major constraint in marketing of TAKAF was the high cost of transportation with 30 respondents response ranked I, followed by shortage of trading ranked II, followed by Price fluctuation with 18 respondents response ranked III, followed by High cost storage with 16 respondents response ranked IV, followed by High prices with 15 respondent response ranked V, followed by storage with 14 respondents response ranked VI and lastly delayed sales with 6 respondent response ranked VII.

5. SUGGESTIONS

- Field staff should be well educated and having good sense of humour and sharp mind.
- Number of stuffs should be enough for each level of work.
- Strategy should be made to fulfil all the recommendation of farmers.
- Field staff should keep in mind that our consumers are the giver.
- Company should give the appraisal to the staff for their good work.
- Field work is the most necessary part and it should be done with great potential.
- Company should also focus on medium and small land holding farmers to make its grip strong in the market.
- Quality of products, its packaging supply should be good.

6. SUMMARY

It has been revealed during the study that there is quality factor which are affecting buying behaviour of TAKAF by different categories of respondents are preventive (33.33%), curative (37.50%) and Safe to applicator (29.16%) respectively. It has been revealed during the study that there is price factor which are affecting buying behaviour of TAKAF by different categories of respondents are low price (45.83%), medium price (41.66%) and high price (12.50%) respectively. It has been revealed during the study that there is packaging factor which are affecting buying behaviour of TAKAF by different categories of respondents are availability in small pack (45.83%), availability at large pack (8.33%), bottle quality (37.50%) and packaging quality (8.33%) respectively.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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