FACTORS AFFECTING FARMERS' PURCHASE DECISIONS OF INSECTICIDES

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ABSTRACT

The use of insecticides leads to high productivity in Indian agriculture and sustainability of agriculture is increased. Modern agriculture depends on the four main factors is, water, fertilizer, seed and pesticides. Pesticides are the integral part of modern agriculture. About 35.00-45.00 per cent crop production is lost due to insects, weeds and diseases, while 35.00 per cent crop produce are lost during storage farming. The study entitled "A study on factors affecting farmers' purchase decisions of insecticides in Mehsana district" was carried out to study the purchase decision towards insecticides, influence of promotional activities on the farmers for purchasing insecticides and constraints faced by farmers while purchasing insecticides. To study these objectives, Mehsana district was purposively selected as higher consumption of agrochemicals. Mehsana and Unjha talukas were selected randomly. Six villages from each taluka were selected randomly. Ten farmers were selected randomly from each village, making a sample size of 120 farmers. The primary data were collected by pre-structured interview schedule which was developed keeping the objectives in view and variables of the study.Regarding results of the study it was observed that 76.70 percent farmers purchased insecticides from the retailers' shop. Majority (62.50 percent) of farmers purchased insecticides at time of pest attack and majority (60.33 percent) of farmers preferred bottle for the packaging of insecticides.Farmers highly considered factors namely, quality (76.70 percent), easy availability in market (45.00%). Nearly 28.33 per cent farmers highly considered promotional activities of personal contact.

***Keywords**: purchase decision, knowledge, promotional activities*

INTRODUCTION

Agriculture is the science of farming, including cultivation of the soil for the growing of crops and the rearing of animals to provide food, wool, and other products. Agriculture and related products are the main economic drivers of thirds world countries as opposed to manufacturing in developed nations. Agriculture plays a crucial role in the life of an economy. It is the backbone of Indian economic system. Agriculture dominates the economic sector in India. Agriculture not only provides food and raw material but also employment opportunities to a very large proportion of population. Modern agriculture depends on the four main factors is, water, fertilizer, seed and pesticides. Pesticides are the integral part of modern agriculture. About 35.00-45.00 per cent crop production is lost due to insects, weeds and diseases, while 35.00 per cent crop produce are lost during storage. India is the fourth largest producer of agrochemicals globally, after United State, Japan and China. The agrochemicals industry is a significant industry for the Indian economy. The Indian agrochemicals industry size in estimated to be US$ 3.8 billion in year 2012. Over the 12th plan period, the segment is expected to grow at 12.00-13.00 per cent per annum to reach 7.0 billion. The Indian domestic demand is growing at the rate of 8.00-9.00 per cent and export demand is growing at 15.00-16.00 per cent. India's agrochemicals consumption is one of the lowest in the world with per hectare consumption of just 0.58 kg compared to US (4.5 kg/ ha) and Japan (11 kg/ ha). Indian population is increasing and the per capita size of land decreasing, the use of pesticides in India has to improve further. Besides increasing in domestic consumption, the exports by the Indian Agrochemicals Industry can be doubled in the next four years if proper strategies and sophisticated technologies are adopted by the industry.With this background, the present study entitled as **"**A study on factors affecting farmers' purchase decisions of insecticides in Mehsana district" was carried out.

OBJECTIVES

(1) To assess farmers' purchase decision towards insecticides

(2) To measure influence of promotional activities on the farmers for purchasing insecticides

METHODOLOGY

Mehsana and Unjha talukas of Mehsana district of Gujarat state were selected for the present study. Six villages from each taluka were selected randomly. From each village, 10 respondents were interviewed personally for the present study. Thus, total 120 respondents were randomly selected. Primary data were collected through the personal interview with the help of pre-structured questionnaires and secondary data were collected from the university library, journals, research papers and authentic websites. Multistage random sampling technique was used for the study. The analytical techniques used for the study namely, frequency distribution, percentage and graphical presentation.

RESULTS AND DISCUSSION

Awareness about types of insecticide

Table 1: Distribution of the respondents according awareness about types of insecticide

n= 120

Sr. No.	Awareness of insecticide	Frequency	Percent
1	Systemic	58	48.33
2	Contact	54	45.00
3	Fumigant	08	6.67

The Table 1 shows that 48.33 per cent farmers were known about systematic insecticides followed by 45.00 per cent contact and 6.67 per cent fumigant in selected talukas of Mehsana district.

Farmers purchase of insecticides

Farmer's purchases of insecticides were categorized in four categories viz; first is dealer shop, second is retailer shop, third is co-operative society and fourth is other group.

Table 2: Distribution of the respondents according purchase centre from where farmers purchasing insecticides

n=120

Sr. No.	Purchase of insecticide	Frequency	Percent
1	Dealer shop	25	20.80
2	Retailer shop	92	76.70
3	Co-operative society	03	02.50
4	Other	00	0.00

Table 2 indicates more than seventy per cent of farmers (76.70%) purchased insecticides from the retailers' shop followed by 20.80 per cent farmers purchased insecticides from the dealers' shop, 2.50 per cent farmers purchased insecticides from the co-operative society and none of farmers purchased insecticides from the other way. It shows that majority of farmers purchased insecticides from the retailers' shop.

Time of purchase of insecticides

Table 3: Distribution of the respondents according to their time of purchase insecticides

n= 120

Sr. No.	Time of purchase	Frequency	Percentage
1	Before insect attack	06	05.00
2	Time of insect attack	75	62.50
3	After certain loss	39	32.50

Table 3 indicates that 62.50 per cent of farmers purchased insecticides at the time of insect attack on crop followed by 32.50 per cent of farmers purchased insecticides after certain loss on crop and 5.00 per cent of farmers purchased insecticides before pest attack due to pest on crop.

Type of packaging while purchasing insecticides

Table 4: Distribution of respondent according to type of packaging while purchasing insecticides

n= 120

Sr. No.	Packaging	Frequency	Percent
1	Tin	41	34.17
2	Pouch	06	5.00
3	Bottle	73	60.33

Table 4 indicates majority farmers (60.33%) preferred bottle of packaging of insecticides followed 34.17 per cent farmers preferred tin of packaging of insecticide and 5.00 per cent farmers preferred pouch. It shows that farmers are mostly preferred bottle of packaging while purchasing the insecticides.

Factors that impact on farmers for purchase of insecticides

Important factors that considered by selected farmers while purchasing the insecticides were depicted in Table 5. Major nine important factors were identified and enlist in this table.

Table 5: Distribution of respondent according to Factor that impact on farmers for purchase of insecticides

n= 120

Sr. No.	Factors	High Considered	Moderately Considered	Less Considered	No Considered
1	**Price**				
	Frequency	53	38	26	03
	Percent	44.17	31.66	21.67	2.50
2	**Quantity**				
	Frequency	34	56	30	0
	Percent	28.33	46.67	25.00	0
3	**Quality**				
	Frequency	92	27	1	0
	Percent	76.70	22.50	0.80	0
4	**Brand name**				
	Frequency	46	62	12	0
	Percent	38.30	51.70	10.00	0
5	**Easy availability in the market**				
	Frequency	54	52	14	0
	Percent	45.00	43.33	11.67	0
6	**Less side effect**				
	Frequency	21	76	22	01
	Percent	17.50	63.30	18.30	0.80
7	**Promotional activities**				
	Frequency	05	31	75	9
	Percent	4.17	25.83	62.50	7.50
8	**Friends suggestion**				
	Frequency	33	61	25	01
	Percent	27.50	50.80	20.80	0.80
9	**Shopkeeper suggestion**				
	Frequency	47	61	10	02
	Percent	39.20	50.80	8.30	1.70

(1) Price

Table 4.1.6 depicts that 44.17 per cent of selected farmers highly considered price followed by 31.66 per cent selected farmers moderately considered price.

(2) Quantity

It can be seen from table that 46.67 per cent of selected farmers moderately considered about quantity followed by 28.30 per cent of selected farmers highly considered quantity, 25.00 per cent of selected farmers less considered quantity. Farmers were check quantity with relative price of insecticides.

(3) Quality

It can be observed from the table that 76.70 per cent farmers highly considered quality of pesticides followed 22.50 per cent of selected farmers moderately considered quality. Quality was important factor that impacts on farmers to purchase the insecticides.

(4) Brand name

Table 4.1.6 shows that 51.70 per cent of selected farmers moderately considered about brand name followed by 38.30 per cent farmers high considered about brand name of insecticides. Brand name was important factor that impacts on purchase of insecticides by selected farmers. It effects on

perception of farmers towards quality of product.

(5) Easily available in market

It can be seen from table that 45.00 per cent of selected farmers moderately considered of this factor followed by 43.33 per cent farmers highly considered this factor of insecticides. Easy available in market was important factor that impacts on purchase of insecticides. Thus, it can be concluded that usually farmers considered factor namely, availability of product while purchasing the pesticides.

(6) Less side effect

More than three fifth of (63.30 %) selected farmers moderately considered less side effects due to insecticides followed by 18.30 per cent selected farmers less considered this factor of insecticides, 17.50 per cent of selected farmers highly considered this factor and 0.80 per cent of selected farmers were not considered this factor.

(7) Promotional activities

More than three fifth of (62.50%) selected farmers less considered about promotional activities followed by 25.80 per cent selected farmers moderately considered about promotional activities for insecticides. Promotional activities were important but not much important factor that impacts on purchase of insecticides by selected farmers.

(8) Friends' suggestion

Nearly 50.80 per cent of selected farmers highly considered friends' suggestion followed by 27.50 per cent selected farmers moderately considered about friends suggestion for insecticides. Therefore, friends' suggestions were important factor that impacts on purchase of insecticides.

(9) Shopkeeper suggestion

Nearly 50.80 per cent of selected farmers moderately considered about shopkeeper suggestion followed by 39.20 per cent selected farmers highly considered shopkeeper suggestion for insecticides. Therefore, shopkeeper suggestion was very important factor that impacts on purchase of insecticides. Farmers were considered shopkeeper advice.

Influence of promotional activities on a farmers

The goal of promotional activities is to stand out and be noticed. Good promotional activities keep drawing farmer's attention to company's products and services. It is clearly defined, well-packaged, competitively-priced products and services are the foundation of marketing. The newer in market, the harder have to work to attract and retain new farmers in agri-input companies. The factors impact most on farmers towards purchase of pesticides and most effective promotional activities were defined.

Table 6: Distribution of respondent according to Promotional activities impacts on purchase of insecticides

n= 120

Sr. No	Activities	High Considered	Moderately Considered	Less Considered	No Considered
1	**Personal contact**				
	Frequency	34	63	19	04
	Percent	28.33	52.50	18.34	3.33
2	**Group meeting**				
	Frequency	27	70	11	12
	Percent	22.50	58.33	09.17	10.00
3	**Demonstrations**				
	Frequency	60	27	24	09
	Percent	50	22.50	20.00	7.50
4	**Mass media advertisement**				
	Frequency	1	20	65	34
	Percent	0.80	16.70	54.20	28.30
5	**Coupon**				
	Frequency	0	30	52	38
	Percent	0	25.00	43.33	31.67
6	**Exhibition**				
	Frequency	11	57	43	09
	Percent	09.17	47.50	35.83	07.50
7	**Seminar**				
	Frequency	05	72	40	03
	Percent	04.17	60.00	33.33	02.50

Table 6 represents promotional activities impacts on purchase of insecticides by selected farmers. Five major promotional activities enlisted below with results.

- **Personal contact:** Table 6 shows that 52.50 per cent farmers moderately considered personal contact followed as 28.33 per cent farmers highly considered.
- **Group meeting:** Nearly 58.33 per cent farmers moderately considered group meeting followed as 22.50 per cent farmers highly considered.
- **Demonstration:** Table 6 shows that 50.00 per cent of selected farmers highly considered about demonstration followed by 22.50 per cent farmers moderately considered demonstration of insecticides. Thus, demonstration was important promotional activity that impacts on selection of insecticides.
- **Mass media advertisement:** Majority (54.20%) of selected farmers less considered mass
- media advertisement followed by 28.00 per cent selected farmers no considered about mass media advertisement of insecticides.
- **Coupons:** More than two fifth 43.33 per cent of selected farmers less considered towards coupons followed by 31.70 per cent of selected farmers not considered coupons and 25.00 per cent farmers moderately considered coupons. Thus, coupons were less important promotional activity that impacts on selection of insecticides by selected farmers.
- **Exhibition:** 47.50 per cent of selected farmers moderately considered about exhibitions followed by 35.83 per cent farmers less considered exhibitions. Only 9.17 per cent of selected farmers highly considered and 7.50 percent farmers were not considered exhibition.
- **Seminar:** Three fifth **(**60.00%) of selected farmers moderately considered towards seminar followed by 33.33 per-cent farmers less considered seminars. Hence, seminars were important promotional activity that impacts on selection of insecticides by selected farmers.

CONCLUSION

From the entire study, it can be concluded that insecticides are one of the major input for crop.. Majority of farmers purchased insecticides from the retailers' shop. Farmers preferred bottle for packaging of insecticides. Factors considered by the farmers while purchasing insecticides namely, quality, easy availability in market, price, shopkeeper suggestions and friend's suggestions. Personal contact and demonstration highly considered by the farmers for promotional activities and also group meeting, exhibition and seminar moderately considered by the farmers with regard to impacts of the promotional activity.

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