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BUYING BEHAVIOUR OF FARMERS FOR AGRI INPUTS: A STUDY OF BIKANER DISTRICT

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ABSTRACT

The study was conducted with the purpose of studying the buying behavior of farmers for agri inputs. Farmers, generally, have a large number of options and a limited amount of time in which the purchase decision has to be made. Therefore, farmers end up buying inputs from the same supplier. Repeat purchase may result from a number of other factors including habit, a lack of decision making, a perceived absence of choice, or, the lack of time to evaluate alternative suppliers. The present study conducted in Bikaner district is an attempt to identify such factors that affect the buying decision of the farmer.

KEYWORDS: Farmers, Agri Inputs, Buying Behaviour, Repeat Purchase

INTRODUCTION

The ever changing market environment in which agricultural input suppliers operate include factors such as developing customer base resulting from structural change in the agricultural sector, continued consolidation within the agricultural input supply sector, and rapid technological advancements that allow for the frequent introduction of new products/techniques each year. Further, there has been an evolution of the agri input firms over the years. Companies like ITC, Rallis India, Tata Chemicals, Godrej Agrovet, and Mahindra & Mahindra have spawned innovative business models to the vast business opportunity prevailing in the sector. Auxiliary to these were several multinationals and local firms to intensify the competition. This was mainly the case with the expendable/consumable agri inputs, which included seed, fertilizer and pesticide. The stores operating in a rural market face tough competition to retain the existing customer and to raise the market share. Determining how current and potential new customers make purchasing decisions and choose a brand is of particular interest to agricultural input companies of expendable product. Since consumable agri input products are marked by high purchase frequency, availability of various alternatives, brand switching behavior, this particular category of agri inputs has been purposively selected for the study. Industry and traders of farm supplies want to know how farmers choose a specific product type and/or brand within a product class. This choice determines the relative position of different suppliers in the market.

OBJECTIVES OF THE STUDY

Primary Objective

The main objective is to study the buying behavior of agriculture input customer for seed, fertilizer and pesticide individually. The behavioral aspects are studied using various parameters.

Secondary Objectives

- Studying demographic characteristics that influence purchase decision.
- Identifying important factors while purchasing agriculture inputs.

RESEARCH METHODOLOGY

The data includes both primary and secondary data. The primary data was collected using schedule consisting of a well-structured questionnaire. The sample taken for the study is from Bikaner district, Rajasthan. The sample was selected using random sampling technique. For each selected village, farmers are classified as small, medium and large farmers. The farmer's sample size was taken proportionately based on their population size. The total sample size taken for the study is 200 which include 45 small farmers, 72 medium farmers and 83 large farmers. The secondary data was collected from the books, published and unpublished articles, research publications etc.

RESULTS AND DISCUSSIONS

The results are presented in two sections. The first part provides a description of demographic profile of the farmers and the second section discusses about the different aspects of farmers' buying behavior.

Demographic Profile of Farmers

Distribution of Sample Farmers According to Age

Table 1 shows the age distribution of farmers interviewed. The age group with the highest frequency is 41-60 years representing 49 percent of the sampled farmers. The age group of 26-40 years is the next highest representing 44.5 percent of farmers interviewed. The least age group is those falling between 18-25 years representing 2.5%. The results indicate majority of the farmers indulged in farming are in their midlife and above. These are the farmers who have gained experience and equity with age and time involved in agriculture production.

Table 1: Distribution of Sample Farmers According to Age

Number of Years	Frequency	% of Total
18-25	5	2.5
>25-40	89	44.5
>40-60	98	49.0
Above 60	8	4.0
Total	**200**	**100**

Distribution of Sample Farmers According to Education

The results of the literacy level of the farmers interviewed are shown in table 2. The education level with highest frequency was primary education representing 40 percent of the sampled farmers, followed by 26.5 percent of the farmers qualified up to secondary level. The education level with least percentage of farmers is the graduation level with only 5% of the sampled farmers falling in the category. A handful number of farmers were found illiterate, the percentage of such farmers being 21 percent. A small number of farmers were qualified up to senior secondary level also.

Table 2: Distribution of Sample Farmers According to Education

Literacy Level	Frequency	% of Total
Illiterate	42	21.0
Primary	80	40.0
Secondary	53	26.5
Sr. Secondary	15	7.5
Graduate	10	5.0
Total	**200**	**100**

Distribution of Sample Farmers According to Landholding Size

The distribution of farmers interviewed according to the landholding size is depicted in table 3. As shown in the table, 41.5 percent farmers were large farmers, followed by 36 percent of medium farmers and the least proportion of 22.5 percent were small farmers. But, when looked at individual villages, the two villages i.e. Akasar and Madiyan with 27 and 25 farmers respectively, had maximum number of medium farmers, followed by large size farmers and the least number of small farmers with 10 farmers in each village. In case of other two villages i.e. Phooldesar and 14 BD, maximum farmers were large farmers with 20 and 35 farmers in each village respectively. Further Phooldesar had an equal number of small and medium farmers, whereas in 14 BD, the number of small farmers was more than medium farmers.

Table 3: Distribution of Sample Farmers According to Landholding Size

Village	Number of Farmers According to Landholding Size		
	Small	Medium	Large
Akasar	10	27	13
Madiyan	10	25	15
Phooldesar	15	15	20
14 BD	10	5	35
Total	**45**	**72**	**83**

Source of Income of Farmers

Table 4 elucidates the results of the source of income of farmers surveyed. Of all the farmers, only 23% of farmers had an alternative source of income. Other than agriculture, farmers' surveyed were engaged in activities like government jobs, doing business etc.

Table 4: Source of Income of Farmers

Source of Income	Frequency	% of Total
Only agriculture	154	77
Agriculture and other	46	23
Total	**200**	**100**

Buying Behaviour of Farmers for Agri Inputs

The section provides a basic insight into farmers' buying behaviour for agri inputs. The attributes thus identified were used in study of factors affecting brand loyalty of a farmer.

Factors Considered by Farmers while Purchasing an Agri Input

The list of factors affecting purchase of agri inputs by farmers include price of the product, quality of the product, availability of the product, past experience and dealer recommendation. As seen in figure 1, in case of seed, 59 percent of

famers purchased seed on the basis of their past experience, followed by 35 percent of farmers who made the purchase decision on the basis of quality of the product. Relatively, small number of farmers considered dealers' recommendation and price of the product while purchasing seed. The percentage of such farmers is 10.5 and 6.5, respectively.

In case of fertilizers, the farmers in all the four villages bought fertilizers from the cooperative. The purchase being from cooperative, the farmers were assured of the quality of fertilizers. In case of unavailability of fertilizers at the cooperative, the farmers made the purchase from open market. In that case, 25.5 percent of the farmers considered quality of the product followed by 6.5 percent of farmers who bought on the recommendations of the dealer. 5.5 percent of farmers bought fertilizers on the basis of price of the product and another 5.5 percent of farmers considered past experience while buying. 2 percent of farmers also considered availability of the product.

In case of pesticides, 45.5 percent of the farmers made purchase based on their past experience, followed by 32 percent of farmers who followed dealers' recommendation. Quality of the product was considered by 25.5 percent farmers as a purchasing criterion. Relatively small number of farmers made purchase on the basis of availability of the product and price of the product being 10 and 6 percent, respectively.

It is clear from the result that in case of all the three inputs, past experience was the most important factor considered while purchasing. In case of seed and fertilizer, the second most important factor was quality of the product but in case of pesticides, dealers' recommendation was the second most important factor.

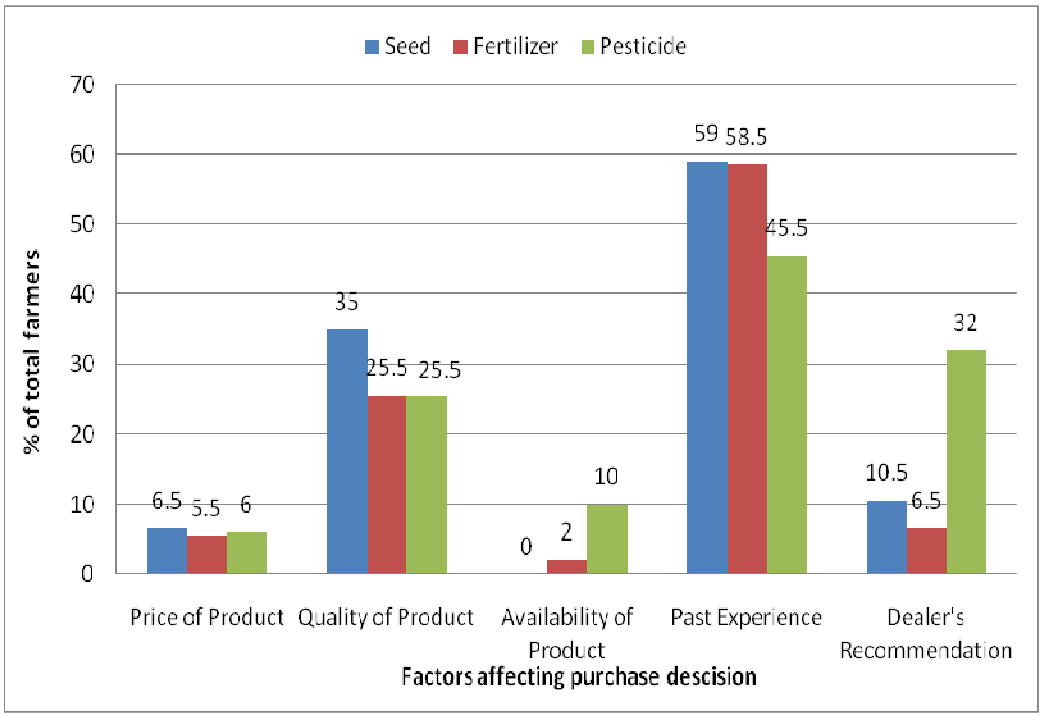

Figure 1: Factors Considered by Farmers While Purchasing an Agri Input (In %).

Promotional Activities Attended by Farmers

The result of the promotional activities attended by farmers is given in figure 2. The activities listed, are those, that are performed other than the routine jobs. As shown in the figure, in case of seed, 34 percent farmers participated in discussions with influence group, followed by 21 percent farmers who contacted dealers. Only 5 percent and 3 percent farmers were involved in the activities like attending demonstrations etc and reading publications respectively.

In case of fertilizer, 29.5 percent farmers participated in discussion with influence group, followed by 19 percent farmers who contacted dealers. Only 3 percent and 2 percent of farmers attended demos and read publications respectively.

In case of pesticides, 31 percent of the farmers contacted dealers followed by 27 percent of the farmers who participated in discussions with the influence group. Only 4.5 percent farmers and 3 percent farmers attended demos and read publications respectively.

It is evident from the results of promotional activities attended by farmers, discussion with influence group and contacting dealers were the most important promotional activity, while , contacting dealers was more important in case of pesticide.

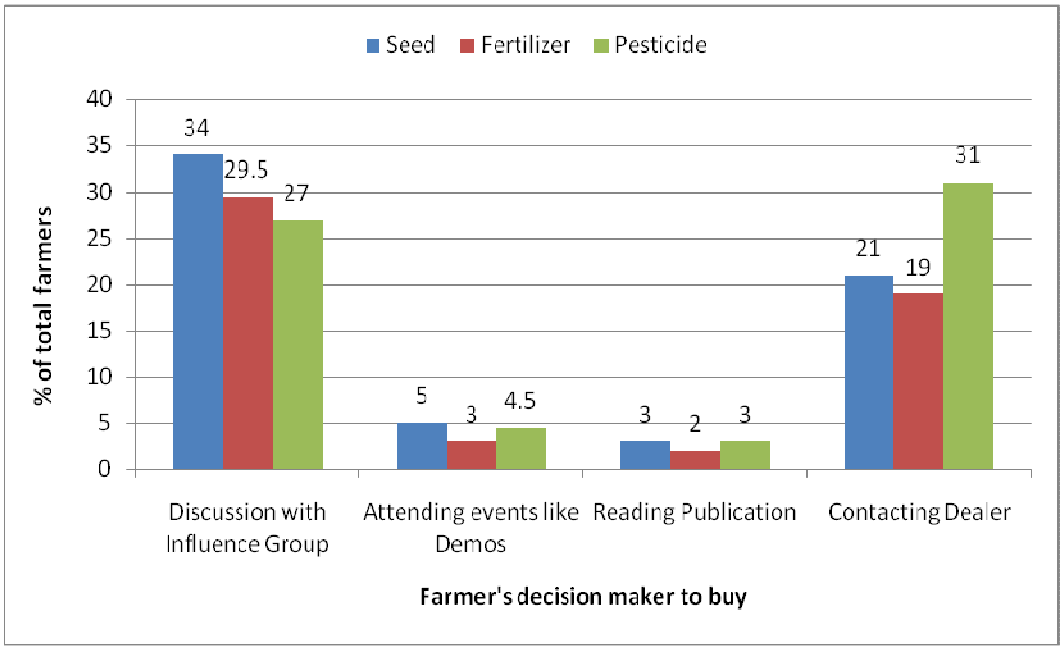

Figure 2: Promotional Activities Attended by Farmers.

Sources of Information for Farmers

The results of the various sources of information to a farmer are shown in figure 3. As shown in the figure, in case of seed, the source of information for 46.5 percent of the farmers were through peer farmers followed by 34 percent of farmers for whom the sources were dealers. The role of extension agents was also found quite important in most of the villages surveyed. For 27 percent of farmers, extension agent was a vital source of information. Other less important sources of information include farmers meeting, company representative and farm fair. The percentage of farmers using these sources was 9, 6.5 and 0.5, respectively.

In case of fertilizers, farmers' peers accounts for 36 percent as source of information followed by 23 percent farmers and 23.5 percent farmers for whom the sources were extension agents and dealers respectively. Other least sources of information include farmers meeting, farm fair, company representative with only 9 percent, 6.5 percent and 5 percent of farmers used these sources respectively.

In case of pesticide, farmers' dealers are the main source of information that accounts for 28.5 percent followed by 28.5 percent of the farmers who took information from the peers. As depicted in the figure, 21.5 percent of the farmers' extension agents were another source of information. Other lesser used sources of information were farmers meeting,

company representative, farm mela which was used by only 8 percent of farmers, each for farmers meeting and company representative and 6.5 percent of farmers for farm fair.

The results of sources of information reveal that the most important source of information in case of seed and fertilizer were peer farmers followed by dealers and extension agents. In case of pesticides, the main source of information was dealer, followed by peer farmers and extension agents.

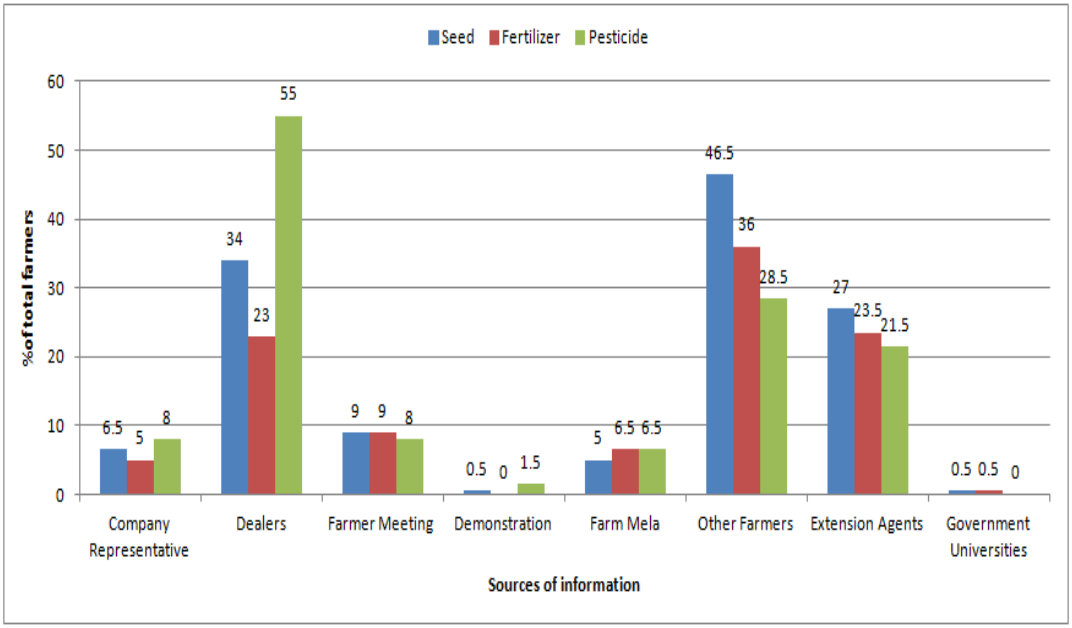

Figure 3: Sources of Information for Farmers.

Farmers' Decision maker to buy Agri Inputs

Figure 4 shows the result of farmers' decision maker to buy agri inputs. The figure depicts that out of all the three inputs, farmer himself was the major decision maker. For seed, fertilizer and pesticide, 72 percent, 80 percent and 50.5 percent of farmers made a decision on their own regarding the purchase of the above mentioned input respectively.

Further, in case of seed, it was observed that 16.5 percent of farmers bought what their peers were buying. Only for 10 percent of the farmers, dealer was the decision maker to buy a seed brand. The role of family members were negligible, as for only 1.5 percent farmers', family members were their decision makers.

In case of fertilizers, 13 percent of the farmers bought what the peers were buying. A very small number of farmers bought what the dealer recommended, the number of which was a mere 6.5 percent.

In case of pesticides, the role of dealers as decision makers to buy the inputs was observed quite significant. 36.5 percent of farmers bought pesticides that were recommended to them by the dealer. This is due to heavy competition in pesticides. For only technically related inputs, several brands and several spurious products are available. In such a situation, the farmers were dependent on the dealers. 12 percent of farmers bought what their peers were buying followed by 0.5 percent of farmers for whom family members were decision maker.

From the results of farmers' decision maker to buy agri inputs, it is elucidated that the farmer himself was the decision maker for the purchase of all three inputs. In case of pesticides, dealers was the second most important decision maker.

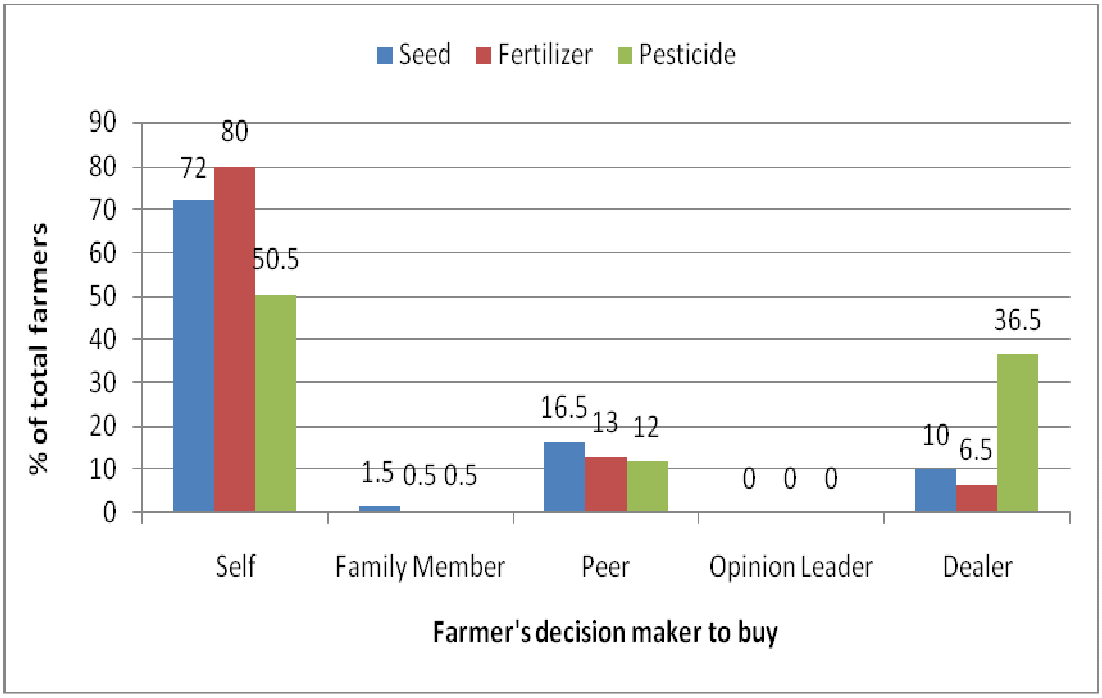

Figure 4: Farmers' Decision maker to buy Agri Inputs.

Factors Affecting buying of Agri Inputs from Same Dealer

Figure 5 shows the result of factors that affects the buying of agri inputs from the same dealer. These are the responses of only those farmers who buy from the same dealer every time. In case of fertilizers, since the number of farmers buying from open market is very less; hence response rate to this is also very low. In case of seed, 41.5 percent of the farmers bought from the same dealer because of the credit facility rendered by dealer. Other reasons to buy from same dealer include factors such as availability of product with the dealer, dealer behaviour, dealer knowledge and experience, nearness to dealer shop and other services. 9.5 percent of farmers bought because of dealer behaviour, followed by 5.5 percent of farmers who bought from same dealer because of the availability of the product every time. Yet, a small number of farmers with 4.5 percent, 4 percent and 2 percent bought for reasons like dealer knowledge and behaviour, nearness to dealer shop and other services, respectively.

In case of fertilizers, 21 percent of farmers bought from the same dealer because of the credit facility. 4 percent of farmers bought because of nearness to dealer shop and availability of the product every time. Yet, a small number of farmers with 3 percent farmers each for dealer behaviour and dealer knowledge and experience, and 2 percent farmers bought because of the other services offered by the dealer.

In case of pesticides, for 48 percent of the farmers, credit facility provided by the dealer every time of the purchase was the main reason to approach dealer. 9 percent of farmers bought because of dealer behaviour, followed by 5 percent of farmers who bought from same dealer because of the availability of the product every time. Yet, a small number of farmers with 4 percent, 3.5 percent and 1.5 percent farmers bought for the reasons like nearness to dealer shop, dealer knowledge and behaviour and other services respectively.

Out of all three inputs, availing credit from dealer was the main reason to buy from the same dealer every time.

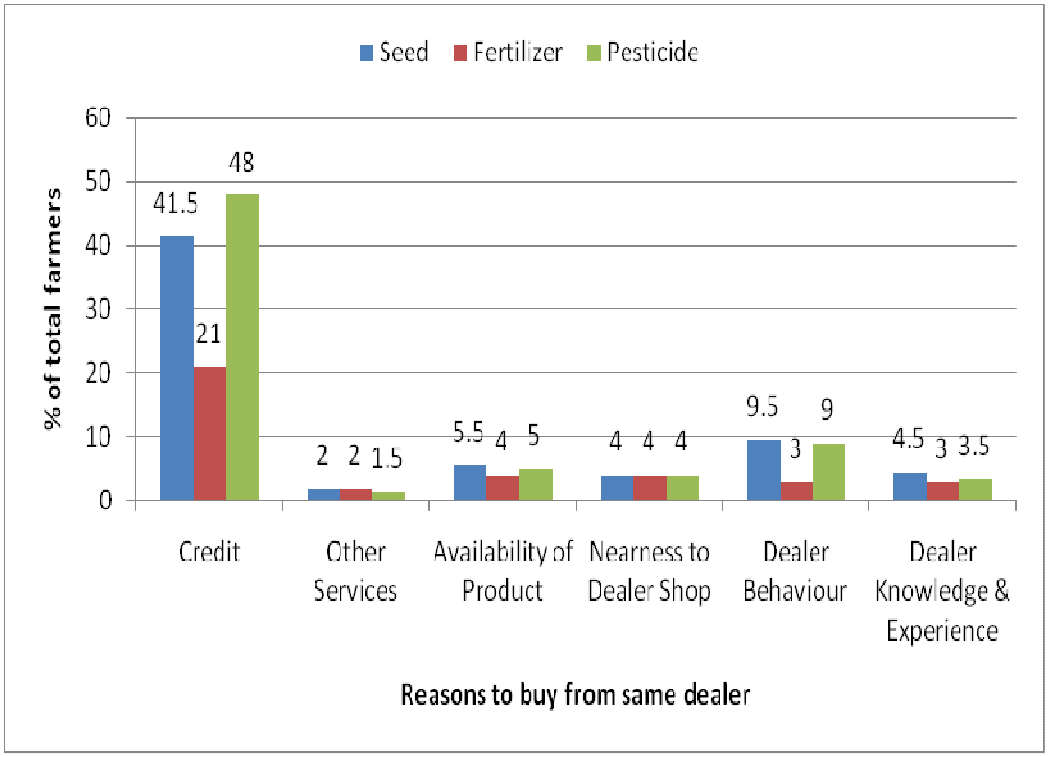

Figure 5: Factors Affecting buying of Agri Inputs from Same Dealer.

Farmers' Preference for Outlets to Buy Agri Inputs

Figure 6 reveals the results of farmers' preference for buying the three inputs. As shown in the figure, in case of seed and pesticides, the preferred outlet for buying was the nearby retail shop. This can be attributed to the fact that out of the four villages surveyed, the distance of three villages from the main district was too far. In order to purchase from the main *mandi* in the district, the farmers had to incur expenses and spend a day to make the purchase, hence did not prefer buying from dealer shop in the *mandi*. 62.5 percent and 68.5 percent farmers preferred to buy from the nearby retail shop for seed and pesticide respectively. 35 percent and 31.5 percent farmers prefer to buy from dealer shop in the *mandi* for seed and fertilizer respectively. These are mainly those farmers who belonged to the village close to the district.

In case of fertilizers, the most preferred outlet was the cooperative. There is a cooperative outltet at every *panchayat samiti* level, and hence it becomes an easy reach for the farmers. 71 percent of farmers preferred to buy from the cooperatives, followed by 26 percent farmers who bought from dealer shop in *mandi.*

The results of farmers preference for outlet to buy agri inputs shows that for seed and pesticides, farmers' most preferred outlet was nearby retail shop. In the case of fertilizers, the preferred outlet was cooperatives. The second most preferred outlet was dealer shop from *mandi* for all the three inputs.

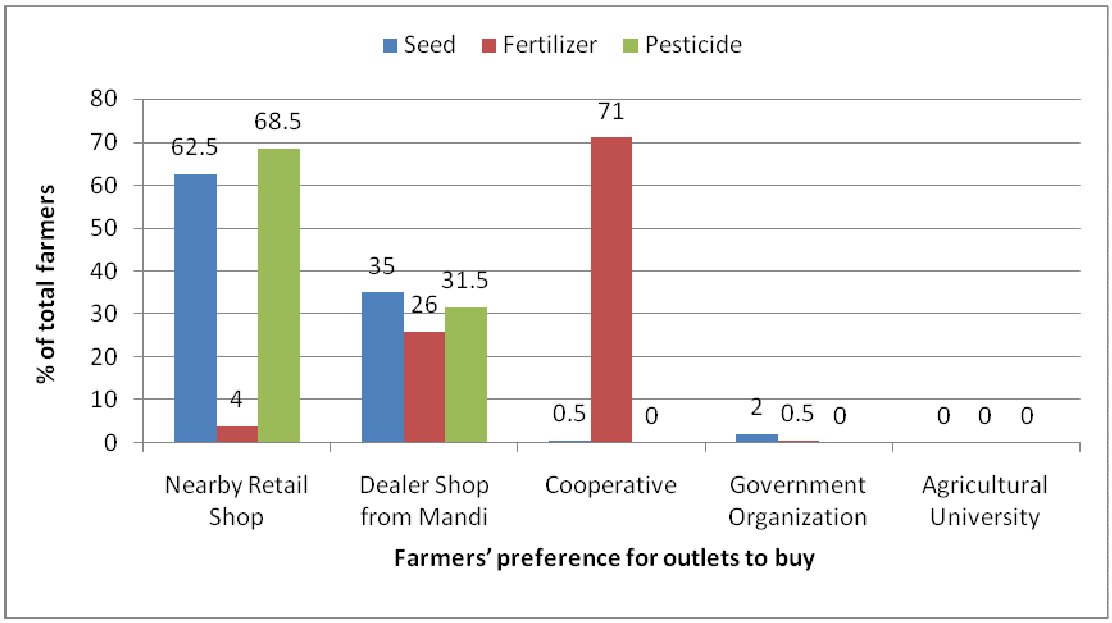

Figure 6: Farmers' Preference for Outlets to buy Agri Inputs.

CONCLUSIONS

Based on the findings of the study, the following major conclusions drawn are:

- The most important factors considered while purchasing the three inputs were identified as past experience and quality in case of seed and fertilizer, whereas in case of pesticides, dealers' recommendation was most important factor followed by past experience.
- The most popularly participated promotional activities were discussion with influence group and contacting dealers. In case of pesticide alone, contacting dealer was more preferred.
- The most important source of information in case of seed and fertilizer were peer farmers followed by dealers and extension agents. In case of pesticides, the main source of information was dealer followed by peer farmer and then extension agent.
- For purchase of all the three inputs, farmer himself was the decision maker. In case of pesticides, dealers were the second most important decision maker.
- For buying all three inputs, Availability of Credit was the main reason why farmers buy from the same dealer every time.
- In case of seed and pesticides purchase, farmers' preferred outlet was nearby retail shop. Whereas, in case of fertilizer, the preferred outlet was cooperative. The second most preferred outlet was dealer shop from *mandi* for all the three inputs.

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