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Assessment of Technological Knowledge of Input Dealers About Agro Services in Junagadh District, India

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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

Aims: (1) To assess the technological knowledge of the input dealers towards agro-services and (2) To ascertain the association between selected characteristics of the input dealers and their knowledge regarding -services
Study Design: An ex-post facto research design was used for the study.
Place and Duration of Study: Junagadh district of Gujarat state
Methodology: Junagadh district comprises nine talukas out of which five talukas viz Junagadh, Keshod, Mendarda, Vanthali, and Maliya hatina were randomly selected for the study because

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these talukas had enough input dealers. From each taluka, thirty input dealers were selected randomly for the study. Thus, a total of 150 input dealers were selected randomly from five talukas.
Results: More than half (51.34 percent) of input dealers had a medium level of knowledge regarding agro-services followed by (30.00 percent) and (18.66 percent) of input dealers who had high-level and low of knowledge, respectively. The characteristics of input dealers viz., risk orientation, management orientation, economic motivation, and progressivism had a positive and highly significant relationship with their knowledge regarding agro-services. The age of input dealers had a negative and significant relationship with their knowledge regarding agro-services.
Conclusion: A significant majority of input dealers were found to possess a moderate to high level of knowledge regarding agro-services.

Keywords: Input dealers; knowledge; attitude; agro-services.

1. INTRODUCTION

The input dealers play a crucial role in various aspects of agricultural development at the grassroots level by disseminating knowledge about new technologies and recommendations [1]. “In rural areas across the country, there is an extensive network of approximately 282,000 agricultural input dealers, making it the second most important source of agricultural information for the farming community after progressive farmers. Therefore, input dealers hold a leading position in the field of agricultural development” [2]. In Gujarat, the total number of input dealers is 56,778, with 23,088 being pesticide dealers, 13,407 being seeds dealers, and 20,283 being fertilizer dealers [3]. The increase in the number of agro input dealers allows farmers to access quality inputs and advice much closer to home, thereby playing a major role in extension services in our state. As a result, alternative ways of financing agricultural services have been considered and implemented. Private services have gained traction, leading to a more complex extension system with multiple providers. During the Seventh Five-Year Plan, the government recognized the presence of private service providers and their contribution to agriculture. The basic agricultural inputs include seeds, fertilizers, pesticides, implements, irrigation, and credit. Distributing these inputs requires specialized skills due to the unique characteristics of this job. “The distribution, infrastructure facilities promotion, and mass communication provided by these input dealers are crucial at this stage. The input supplier model also relies on agro dealer businesses to offer farmers technical advice on farming techniques, proper use of inputs, and additional services such as output purchasing, equipment rental, and soil testing. Transforming these input dealers into para-extension professionals by providing necessary training and resources would further enhance their role in agricultural development. If these input dealers are made para-extension professionals by providing a necessary knowledge, they can commercialized extension services and contribute to paradigm shift in Indian agriculture and thereby help the farming community” [4]. Input dealers are important mediators for the transfer of technology so it is important to know knowledge and attitudes of input dealers toward agro-services.

2. METHODOLOGY

The present study was conducted in the district of Gujarat state. An ex-post facto research design was used for the study. Junagadh district of Gujarat state was purposively selected for the study because the researcher was studying in this university and the researcher can easily approach the respondents of this area. Junagadh district comprises nine talukas out of which five talukas viz Junagadh, Keshod, Mendarda, Vanthali, and Maliya hatina were randomly selected for the study because these talukas had enough input dealers. From each taluka, thirty input dealers were selected randomly for the study. Thus, a total of 150 input dealers were selected randomly from five talukas.

For measuring knowledge regarding agro-services of the input dealers, a structured schedule was constructed. A total of 40 statements were collected from various sources. The knowledge check thus prepared was administered to 30 input dealers. The response was quantified by giving a score of one to the correct answer and zero to the incorrect answer or does not know the answer. Thus, the total number of correct answers rendered by an individual was the knowledge score secured by him. Thus, the range of obtainable scores was 0-40. The total score obtained by using individual

respondents for all the statements was calculated.

3. RESULTS AND DISCUSSION

3.1Technological Knowledge of the Input Dealers About Agro-Services

Adequate knowledge is required with input dealers for better transfer agro-services and betterment of their business. The interview schedule was used for data collection. Scores of technological knowledge of input dealers were calculated and with the help of mean and standard deviation, the input dealers were categorized as presented in Table 1.

The data presented in Table 1 revealed that more than half (51.34 percent) of input dealers had a medium level of knowledge regarding agro services followed by 30.00 percent and 18.66 percent of input dealers who had a high level and low levels of knowledge, respectively. The probable reason for the above findings might be due to the majority of input dealers were educated up to high school and graduate/postgraduate level and had a medium level of utilization of information sources. The finding was in line with the findings reported by Salukhe [5], Prajapati et al. [6], Khatri et al. [7], Mamata [8], Kale et al. [9], [10].

3.2 Association between Selected Characteristics of the Input Dealers and Their Knowledge Regarding Agro-Services

The goal of the current study was to determine the kind and strength of the association between a few key input dealer characteristics and their understanding of agro-services. Table 2 displays the correlation coefficient ('r') values between the dependent variable, knowledge, and a range of independent variables. A discussion of the link between the dependent and independent variables follows.

Data in Table two indicated that out of the twelve independent variables, seven variables viz. education, social participation, annual income, sources of information, mass media exposure, extension contacts, and training received from input dealers had positive and significant relationships with their knowledge regarding agro services. The characteristics of input dealers viz., risk orientation, management orientation, economic motivation, and progressivism had positive and highly significant relationships with their knowledge regarding agro-services. The age of input dealers had a negative and significant relationship with their knowledge regarding agro-services.

Table 1. Distribution of the input dealers according to their technological knowledge towards agro services (n=150)

Sr. No.	Category	Frequency	Percentage
1	Low Level of Knowledge (below 19.32)	28	18.66
2	Medium Level of Knowledge (between 19.33 and 34.00)	77	51.34
3	High Level of Knowledge (above 34.00)	45	30.00
Total		**150**	**100.00**
Mean= 26.66		**S.D. = 7.34**	

Table 2. Association between the selected characteristics of the input dealers and their knowledge regarding agro-services (n=150)

Sr. No.	Independent variable	Correlation coefficient (r) (df=148)
1	Age	-0.183*
2	Education	0.196*
3	Social participation	0.105*
4	Annual income	0.177*
5	Source of information	0.127*
6	Mass media exposure	0.116*
7	Training received	0.185*
8	Extension contacts	0.511*
9	Risk orientation	0.471**
10	Management Orientation	0.584**
11	Economic motivation	0.313**
12	Progressivism	0.525**

*Note: 1. * = Significant at 0.05 level, ** = Significant at 0.01 level and NS= Not significant*

4. CONCLUSIONS

A significant majority of input dealers were found to possess a moderate to high level of knowledge regarding agro-services. This knowledge encompasses various aspects such as pesticide management, plant protection chemicals, seed quality, pesticide regulations, fertilizers, herbicides, intercultural practices, as well as other services like dairy farming and horticulture. The results of correlation analysis revealed that out of the twelve independent variables examined, seven variables including education, social participation, annual income, sources of information, mass media exposure, training received, and extension contacts of input dealers exhibited positive and significant associations with their knowledge of agro-services. On the other hand, age showed a negative and significant association with the knowledge of agro-input dealers. Furthermore, risk orientation, management orientation, economic motivation, and progressivism demonstrated positive and highly significant associations with the knowledge of input dealers regarding agro-services.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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