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Knowledge of agro input dealers about certificate course on pesticide management

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Abstract

Agro input dealers serve as an important link between the manufacturers and the farmers and he has the responsibility to disseminate latest farm technology up to the field level. So, knowledge about pesticides is crucial for the agro input dealers. The farmers have more trust on the agro input dealers as they are more localized. There is a high need that proper recommendations should be communicated for sustainable usage of inputs and for proper understanding by the farmers about the product and process. The present study was conducted across the districts of Junagadh, Rajkot, Porbandar and Amreli in the Gujarat state. Data was collected from 160 agro input dealers who had completed a certificate course on pesticide management. Both purposive and random sampling techniques were employed. The study results revealed that just under three-fifths (58.13 per cent) of the agro input dealers possessed a moderate level of knowledge regarding the certificate course on pesticide management. Several profile characteristics including education, social participation, experience as a dealer, information sources, exposure to mass media, received training, extension contacts, economic motivation, management orientation, innovativeness, achievement motivation, and scientific orientation, exhibited positive and significant associations with knowledge about the certificate course on pesticide management. Conversely, age showed a negative and significant correlation with knowledge about the certificate course on pesticide management.

Keywords: Agro input dealers, certificate course, knowledge, pesticide management

Introduction

Agro input dealers are businesspersons with or without a technical qualification and a service provider. In order to overcome the possible negative effects, it is necessary to make technical qualification in agriculture as mandatory for issuing retailer ship license to provide agro advisory services besides selling agricultural inputs. The input dealer has no specific qualification to get license from the government and has inadequate knowledge about agricultural technology. So, training has to be provided to get better knowledge and skill to act as an extension service provider by competent institutes (Sharma, 2017) [9]. Agro input dealers serve as an important link between the manufacturers and the farmers and he has the responsibility to disseminate latest farm technology up to the field level.

Pesticide is one of the important agro inputs in agriculture. The pesticides are mostly marketed by dealers, distributors and retailers. Most of the farmers are dependent on pesticides dealers/retailers for information related to insecticides and pest management. However, majority of the pesticides dealers do not have formal education in agriculture. It is essential therefore to impart technical knowledge on pesticides, pest management and advisory based on scientific recommendations. In this context, the

National Institute of Plant Health Management (NIPHM) has been entrusted the role of coordinator for the 72 hours certificate course for pesticides dealers and distributors and to equip them to acquire professional competency on pesticides and pest management and advisory services thereof. The main objective of this course is to impart the basic technical knowledge on pesticides and pest management to the pesticides dealers and distributors and to provide knowledge about the rules and laws governing the insecticides.

If the agro input dealers have proper knowledge about pesticides, they can transfer that to the farmers for improving farming by boost up production which ultimately resulting in increasing living standard of farmers. Hence, it is quite essential to study the level of knowledge of input dealers about certificate course on pesticide management. By considering this fact the current study was determined with following objectives.

Objectives

1. To find out the level of knowledge of agro input dealers about certificate course on pesticide management
2. To ascertain the relationship between knowledge of agro input dealers with their profile

Methodology

The present study was conducted in Junagadh, Rajkot, Amreli and Porbandar district of Gujarat state, where there are more number of input dealers with completion of certificate course on pesticide management and the study was confined to “ex-post facto” research design. The purposive and random sampling technique was used for the selection of district and respondents. The total numbers of 160 input dealers were selected from four district by random sampling method. For the selection of independent variables, which were found most relevant were finally selected for the study. The tools and techniques used in the present study was interview schedule along with the suitable scales and indices for measurement of dependent and independent variables. For the data collection, pretested and structured interview schedule was prepared after discussing with a group of expert and necessary modifications were made. To know the association between selected profile of the input dealers and knowledge about certificate course on pesticide management, a correlation coefficient was applied.

Results and Discussion

Knowledge level of agro input dealers about certificate course on pesticide management

Knowledge is the body of understood information possessed by an individual input dealer regarding certificate course on pesticide management. The data regarding the knowledge level of the agro input dealers about certificate course on pesticide management were collected. As discussed in the methodology, a pretested and well-structured knowledge scale was developed and used to measure the knowledge level of the agro input dealers about certificate course on pesticide management.

These data regarding the knowledge level of the respondents about certificate course on pesticide management are presented in Table 1.

Table 1: Distribution of agro input dealers according to their knowledge level about certificate course on pesticide management (n = 160)

Sr. No.	Level of knowledge	Frequency	Percentage
1	Very low (Up to 20%)	3	1.87
2	Low (21 to 40%)	16	10.00
3	Medium (40 to 60%)	93	58.13
4	High (61 to 80%)	29	18.13
5	Very high (80 to 100%)	19	11.87
Total		160	100

The data given in Table 1 revealed that slightly less than three-fifth (58.13 per cent) of agro input dealers had medium level of knowledge after completion of certificate course on pesticide management, followed by 18.11 per cent, 11.87 per cent and 11.11 per cent of the agro input dealers had high, very high and low level of knowledge after completion of certificate course on pesticide management, respectively. Only few (1.87 per cent) of them was with very low level of knowledge after completion of certificate course on pesticide management. The finding was more or less similar to result of Kale *et al.* (2020) [3], Khambhala (2020) [4], Handa (2021) [2], Latha *et al.* (2021) [6] and Mayekar (2022) [7].

It can be seen that 76.26 per cent of agro input dealers

demonstrated a high to medium level of knowledge regarding the certificate course on pesticide management. This indicates that a significant majority of the respondents possessed a moderate level of knowledge on the subject matter. Several factors may contribute to this finding. Firstly, it can be attributed to the fact that a considerable number of the respondents had completed their education up to the middle school level, which may have provided them with a certain baseline of knowledge. Additionally, their experience as dealers, utilization of information sources, exposure to mass media and extension contact were also found to be at a moderate level. These factors collectively contribute to the medium level of knowledge observed among the respondents.

Relationship between profile characteristics and knowledge level

The variables of agro input dealers played a vital role in determining their knowledge level about certificate course on pesticide management.

Table 2: Correlation between knowledge level of respondent about certificate course on pesticide management and their profile (n = 160)

Sr. No.	Profile characteristics	'r' value
1	Age	-0.2611**
2	Education	0.2182**
3	Annual income	0.0196
4	social participation	0.1645*
5	experience as dealer	0.3125**
6	Source of information	0.1589*
7	Mass media exposure	0.1856*
8	Training undergone	0.2976**
9	Extension contact	0.3381**
10	Economic motivation	0.2805**
11	Management orientation	0.3589**
12	Innovativeness	0.1626*
13	Risk orientation	0.1093
14	Achievement motivation	0.1635*
15	Scientific orientation	0.3196**

*= Significant at 0.05 level

**= Significant at 0.01 level

Table 2 indicate that the age was negative and significantly associated with knowledge level of agro input dealers about certificate course on pesticide management. It means young age agro input dealers have high knowledge as compare to old age agro input dealers. The probable reason might be due to that young agro input dealers were more interested and had better understanding of pesticides. This finding was in line with the finding of Kumar *et al.* (2020) [5]. The other profile characteristics education, social participation, experience as a dealer, source of information, mass media exposure, training undergone, extension contact, economic motivation, management orientation, innovativeness, achievement motivation and scientific orientation had a significant and positive relationship with knowledge level. Another characteristic i.e., annual income and risk orientation was non-significant association with their knowledge level about certificate course on pesticide management; it means annual income and risk orientation were irrespective correlated with knowledge level of agro input dealers. Similar finding had been reported by Nagesh

et al. (2015)^[8] and Chaudhari *et al.* (2015)^[1].

Conclusion

Agro input dealers knowledge level about certificate course on pesticide management was found maximum under the medium level of knowledge category as revealed by the 58.13 per cent of the input dealers. The proper extension strategy like training undergone and extension contact may be found more important in updating the knowledge level of agro input dealers. The characteristics like education, social participation, experience as a dealer, source of information, mass media exposure, economic motivation, management orientation, innovativeness, achievement motivation and scientific orientation were positive and significant with knowledge level of agro input dealers except annual income and risk orientation which and non-significant relationship with knowledge level. Therefore, During the training programme more attention should be given on psychological variable viz., economic motivation, management orientation, achievement motivation, scientific orientation *etc.* for better effectiveness of the training programme and give more priority to young agro input dealers in training programme.

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