

Knowledge regarding general use of pesticides and training need of pesticide dealers of North Gujarat

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ABSTRACT : This study was conducted in Banaskantha, Sabarkantha and Mehsana district of Gujarat state. Three talukas from each distinct were selected randomly. Fifty dealers from each district were selected from the list obtained from the quality control office. Thus, final sample consisted of 150 dealers. The data were collected by personal interview. Based on the findings of the study, majority of the pesticide dealers had middle aged, educated up to higher secondary level, belonged to general caste, engaged in single occupation, membership in one or more organisation, used pesticides company as a source of information and received training from company. Overall they possessed medium level of knowledge. The personal attributes like age, caste, experience in pesticides dealing, information sources used and training received by them had found associated with their knowledge level regarding general and specific areas of plant protection. Awareness of time methods quantity and number of spray, diseases, IPM and bio control were the major areas of training need reported by majority of the pesticide dealers.

KEY WORDS : Training, Knowledge, Dealers

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INTRODUCTION

Among the entire crop production practices insects and diseases control practices are very complex in nature because they are highly technical in nature which require precision in use. At the same time they are recommended by scientists but are available in the market with the pesticide dealers. Our farmers are not educated so well and also skillful to use the insecticides and pesticides. They have to rely on the advice of the pesticide dealers for its use. On the other hand the dealers may not know

the subject, as they are not trained in this respect (Schmitt, 1988a and b). They are advising farmers on the basis of knowledge they have (Jadhav, 1996). Hence, there is an urgent need to know the knowledge level of the pesticide dealers about the selected plant protection practices of the major crops of the area.

Objectives :

- To study the profile of the pesticide dealers,
- To measure the knowledge of pesticide dealers regarding the use and handling pesticide,

- To explore the relationship between the,
- To identify the areas of training need of the pesticide dealers.

METHODOLOGY

The study was conducted in Banaskantha, Sabarkantha and Mahesana districts in North Gujarat purposively, which covers the major crops of the North Gujarat. Taluka wise data of numbers of the registered pesticide dealers were obtained from each district. Three talukas from each distinct were selected randomly. One-third pesticide dealers were selected randomly from the list of the registered pesticide dealers. Thus, fifty dealers from each district were selected from the list obtained from the quality control office. Thus, final sample consisted of 150 dealers. The data were collected by personal interview. The interview schedule was developed with through discussion with experts, scientists and extension officers working in the district. The tool for data collection was interview schedule. The data were analyzed with appropriate statistical procedure.

Personal attributes and knowledge level of the pesticide dealers.

OBSERVATION AND ASSESSMENT

The data presented in Table 1 indicate that majority of the pesticide dealers had middle aged (54.67%), having educated up to higher secondary level (34.67%), belong to general caste (65.33%), engaged in single occupation (52.67%), membership in one or more organization (56.67%), used pesticide company as source of information (61.33%) and received training from company (54.67%). More or less similar results were obtained by Vikhe (1978).

A schedule was prepared to ascertain the level of knowledge about the general items related to pesticide dealers. The data regarding this were shows in Table 2.

The data in Table 2 reveal that majority (56.67%) of them possess medium level of knowledge regarding selected items. Whereas 26.00 per cent were having high level of knowledge followed by 17.33 per cent of them were having low level of knowledge. It can be concluded from this data that majority pesticide dealers need training for awareness and knowledge regarding general information about pesticide (Kalnay *et al.*, 2002; Joshi *et al.*, 2015 and Kumar *et al.*, 2013).

Correlation co-efficient between knowledge level

of pesticides dealers and their personal characteristics was worked out and the data depicted in the Table 3.

The data in the Table 3 reveal that only experience of the pesticide dealers had found positive and significant association at 0.01 level of significance, while age, caste, information sources used and training received had found positive and significant at 0.05 level of significance. It indicates that age, caste, experience, information sources, training received was played significant role in increasing the knowledge of the pesticide dealers. While business, social participation and education had not established any association with level of knowledge. It indicates that Business and social participation and education was not played significant role in increasing the knowledge of the pesticide dealers. Mahajan (1998); Mande and Darade (2011); Sawant *et al.* (2002) and Wayne *et al.* (2003).

The training need of the pesticide dealers in the field of pesticide management, identification of the pest and integrated pest management areas was worked out and the data depicted in the Table 4.

The data presented in Table 4 revealed that the training need in case of the area of pesticide management the 34.67 per cent pesticide dealers gave first preference to the awareness about time, method, quantity and number of spray of pesticides followed by selection of suitable pesticides (20.00%) and maintaining the Register (14.67%).

First preference had given to the awareness of fungal/viral/bacterial diseases (50.67%), identification of major crop diseases (24.00 %) and identification of major pest (12.67%) in case of the area of identification of pest.

With regards to the area of integrated pest management the pesticide dealers gave first preference to the awareness about concept of I.P.M (48.67%), methods of bio control (21.33%) and use of Agril practices for pest control (15.33%). More or less similar results were also obtained by Jana (2014) on bitter gourd growers pesticides use pattern in controlling insect-pests and diseases in Nadia district.

Conclusion :

Majority of the pesticide dealers had middle aged, educated up to higher secondary level belong to general caste, engaged in single occupation, membership in one or more organisation, used pesticide company as a source of information and received training from company.

Table 1: Distribution of the respondents according to their personal attributes

Sr. No.	Personal attributes	Number	Per cent
1.	Age group		
	Young age (15-35yrs.)	35	23.33
	Middle age (36-50yrs.)	82	54.67
	Old age (Above 50 yrs.)	33	22.00
2.	Education level		
	Primary level (1-7 std)	52	34.67
	Secondary level (8-10std.)	17	11.33
	Higher Secondary level (11-12 std.)	31	20.67
	College level	50	33.33
3.	Caste group		
	General	98	65.33
	S.E.B.C (Baxi)	49	32.67
	Schedule caste (S.C)	03	02.00
	Schedule tribe (S.T)	00	00.00
4.	Business		
	Pesticides dealers	79	52.67
	Pesticides dealers and other business	71	47.33
5.	Experience (years)		
	Below 10 years	22	14.67
	10 – 20 years	101	67.33
	21 – 30 years	15	10.00
	More than 30 years	12	08.00
6.	Social participation		
	No membership	58	38.67
	Membership in one organization	52	34.67
	Membership in more than one organization	33	22.00
	Membership with holding position	07	04.66
7.	Information sources		
	Publication	62	41.33
	Agril. programme on television	56	37.33
	Extension officer/Agril.officer contact	85	56.67
	Scientist contact	74	49.33
	Pesticides salesman/company officer	92	61.33
8.	Training institution		
	Pesticides company	82	54.67
	Research Station	56	37.33
	Krushi Vigyan Kendra	68	45.33
	Sardar Smruti Kendra	38	25.33
	Non-Government Organisation	28	18.67
	Agriculture Department	41	27.33

Sr. No.	Category	Number	Per cent
1.	Low (up to 56)	26	17.33
2.	Medium (56 to 66)	85	56.67
3.	High (above 66)	39	26.00
	Total	150	100.00

Sr. No.	Personal characteristics	P value
1.	Age	0.0253*
2.	Education	0.2886
3.	Caste	0.0382*
4.	Business	0.0691
5.	Experience	0.0086**
6.	Social participation	0.0877
7.	Information sources used	0.0176*
8.	Training received	0.0427*

* and ** indicate significance of values at P=0.05 and 0.01, respectively

Sr. No	Training need	Preference of training need		
		1	2	3
Pesticides management				
1.	Precautions of pesticides	14 (09.33)	28 (18.67)	40 (26.67)
2.	Maintaining register	22 (14.67)	29 (19.33)	19 (12.67)
3.	Selection of suitable pesticides	30 (20.00)	46 (30.67)	31 (20.67)
4.	Spraying calibration	14 (09.33)	17 (11.33)	14 (09.33)
5.	Awareness about time, method, quantity and no. of spray of pesticides	52 (34.67)	23 (15.33)	25 (16.67)
6.	Weedicides (pre/post emergence)	15 (10.00)	05 (03.33)	20 (13.33)
7.	Environment changes and pest out break	03 (02.00)	02 (01.33)	01 (00.67)
	Total	150	150	150
Identification of pests				
1.	Awareness of fungal /viral /bacterial diseases	76 (50.67)	54 (36.00)	33 (22.00)
2.	Identification of major crop diseases	36 (24.00)	53 (35.33)	26 (17.33)
3.	Identification of major pest	19 (12.67)	33 (22.00)	58 (38.67)
4.	To know about economic injury level	17 (11.33)	09 (06.00)	31 (20.67)
5.	Identification of major weed	02 (01.33)	01 (00.67)	02 (01.33)
	Total	150	150	150
Integrated pest management				
1.	Awareness of I.P.M	73 (48.67)	37 (24.67)	28 (18.67)
2.	Use of Agril practices for pest control	23 (15.33)	20 (13.33)	15 (10.00)
3.	Methods of bio-control	32 (21.33)	43 (28.67)	56 (37.33)
4.	Methods of chemical control	22 (14.67)	50 (33.33)	51 (34.00)
	Total	150	150	150

Overall they possessed medium level of knowledge. The personal attributes like age, caste, experience in pesticide dealing, information source used and training received by them had found associated with their knowledge level regarding general and specific areas plant protection.

Awareness of time methods quantity and no of spray, diseases, IPM and bio control were the major areas for training need reported by the majority of the pesticide dealers.

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