

## Awareness of Agro Input Dealers about Insecticide Label Claims in Marathwada Region

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### ABSTRACT

The present research study was carried out with the specific objective to study the awareness of the agro input dealers about insecticide label claims in the Marathwada region. It also provides relationship between the profiles of agro input dealers with their level of awareness of insecticide label claim. The study was conducted in randomly selected three districts of Marathwada region during 2019-20. Results of the study revealed that the agro input dealers (61.67%) were found medium level of awareness about insecticide label claims while 41.67 per cent of them were found medium level of awareness about insecticide toxicity label printed on the container. It could be observed that variables age, annual income, experience as an input dealer, farming experience, social participation, extension contact, training received and source of information were having positively significant relationship with awareness about the label claim of insecticides among the input dealers at 0.01 level of probability.

**Keywords :** Awareness, Agro Input Dealers, Insecticide Label Claims

### INTRODUCTION

Farmers using the pesticides including herbicides, insecticides, and fungicides in all major field crops in India. Pesticides labels contain detailed information on how to use the product correctly and legally. Pesticide use in India is regulated by the Central Insecticides Board and Registration Committee (CIBRC) and Food Safety and Standards Authority of India (FSSAI). The CIBRC registers pesticides for crops while the FSSAI sets the maximum residue limits (MRL) of pesticides for the crops it has been registered. If a food has a higher level of residue than the MRL, it means that the food is not safe to eat. A residue above the MRL may show that the farmer has not used the pesticide properly. Uses of spurious and non-recommended pesticides by the CIBRC i.e. without approved label claims are the reasons of pesticides residues in food commodities. CIBRC stated that use of pesticides is a hazardous sector and unless pesticides are used as approved by the Registration Committee, the whole environment could be at risk. There has been issues country wide about the inadequate knowledge about the labels and their utilization. Usage of pesticides without approved label claims, lead to presence of residues of those pesticides on particular crops.

**Label Claim:** Pesticides Company registered its products as per Insecticide Act 1968 and claimed that the registered products are for management of certain pest on particular crop only as per the written, printed or graphic label on the container approved by the government regulatory agencies. It also includes any written, printed or graphic matter accompanying the pesticides like technical leaflets or brochures.

It was observed that agro input dealers were unaware about the insecticides label claims and they mostly using insecticide as the input dealers recommended them. Hence, the present research study was carried out with the specific objective to study the awareness of the agro input dealers about insecticide label claims in the Marathwada region. It also provides relationship between the profiles of agro input dealers with their level of awareness of insecticide label claim.

### Objectives of the study

1. To study the profile of agro input dealers.
2. To assess the awareness level of insecticide label claims among the agro input dealers.
3. To delineate relationship between profiles of agro input dealers with their awareness of insecticide label claims.

## METHODOLOGY

The present study was carried out to find out the awareness of agro input dealers about insecticide label claims in term of knowledge level. The study was conducted in randomly selected three districts viz., Parbhani, Hingoli and Beed from the Marathwada region during 2019-20. From the selected districts, thretalukas district headquarters viz., Parbhani, Hingoli and Beed district were selected for the study. Forty (40) agro input dealers were randomly selected from each selected district. Thus, total of 120 respondents were selected for the study. Ex-post facto research design was used for the study. The interview schedule was used as a tool for collection of requisite data. The suitable statistical tools used were viz., frequencies, percentages, arithmetic mean, standard deviation, correlation and regression.

A teacher made knowledge test was developed to measure the awareness of an individual respondent about the insecticide label claims, responses of the respondents were taken on two point continuum i.e. yes / no and numerical

score of 1 and 0 was assigned respectively. Obtained awareness raw score was converted into awareness index by using following formula;

$$\text{Awareness index} = \frac{\text{Awareness score actually obtained}}{\text{Maximum obtainable awareness score}} \times 100$$

The respondents were categorized according to obtained awareness index score into low, medium and high category on the basis of mean  $\pm$  standard deviation.

Similarly, awareness index score of the respondents about toxicity label printed on the insecticide containers was calculated by using above formula. The respondents were categorized according to awareness index score into low, medium and high category on the basis of mean  $\pm$  standard deviation.

## RESULTS AND DISCUSSION

### 1. Profile of the respondents i.e. agro input dealers

Table 1 indicates the profile of agro input dealers.

*Table 1*  
*Distribution of agro input dealers according to their profile* (n=120)

Sr. No.	Profile	Frequency	Per cent
<b>1</b>	<b>Age</b>		
	Young (Upto 32 yrs)	18	15.00
	Middle (33 to 51 yrs)	78	65.00
	Old (52 yrs & above)	24	20.00
<b>2</b>	<b>Education</b>		
	Illiterate	00	00.00
	Primary	24	20.00
	Secondary	21	17.50
	Higher Secondary	31	25.83
	College level	42	35.00
<b>3</b>	<b>Annual income</b>		
	Low (Upto Rs. 38,103/-)	01	00.83
	Medium (Rs. 38,104 /- to 4,72,212 /-)	03	02.50
	High (Rs. 4,72,213 /- & Above)	116	96.67
	<b>Mean - 2,55,158 /- SD - 2,17,054 /-</b>		
<b>4</b>	<b>Experience as a input dealer</b>		
	Low (Upto 5 yrs)	16	13.33
	Medium (6 to 21)	84	70.00
	High (22& Above)	20	16.67
	<b>Mean - 13.67 SD - 8.23</b>		

<b>5</b>	<b>Farming Experience</b>		
	Low (Upto 7 yrs)	15	12.50
	Medium (8 to 25 yrs)	89	74.17
	High (26 yrs & Above)		
	<b>Mean - 16.98      SD - 9.31</b>	16	13.33
<b>6</b>	<b>Land holding</b>		
	Landless (No holding of agri. land)	04	03.33
	Marginal (Upto 1 ha)	20	16.67
	Small (1.1 to 2 ha)	33	27.50
	Medium (2.1 to 4 ha)	41	34.17
	Semi medium (4.1 to 10 ha)	18	15.00
	Big (10.1 ha & above)	04	03.33
<b>7</b>	<b>Social Participation</b>		
	Low (Upto 1.79)	63	52.50
	Medium (1.80 to 4.63)	51	42.50
	High (4.64 & above)	06	05.00
	<b>Mean - 3.21      SD - 1.42</b>		
<b>8</b>	<b>Extension contact</b>		
	Low (upto 7.59)	23	19.17
	Medium (7.60 to 30.84)	73	60.33
	High (30.85 & above)	24	20.00
	<b>Mean - 19.22      SD - 11.62</b>		
<b>9</b>	<b>Training Received</b>		
	Yes	14	11.67
	No	106	88.33
<b>10</b>	<b>Source of information</b>		
	Low (upto 5.24)	23	19.17
	Medium (5.25 to 15.57)	19	65.00
	High (15.58 & above)	05	15.83
	<b>Mean - 10.41      SD - 5.16</b>		

The data from Table 1 revealed that majority of the respondents (65.00%) were found in middle age group. Whereas 20.00 per cent and 15.00 per cent of them were in old and young age group, respectively.

As per as education of the respondents is concern, it was observed that 35.00 per cent of them were educated upto college level. Whereas, 25.83 per cent, 20.00 per cent and 17.50 per cent of them were educated upto higher secondary school, primary school level, and secondary level, respectively. Only 1.67 per cent of them had agricultural education (either diploma or degree). Data also revealed that majority of the respondents (96.67%) had more than Rs.4,72,212 /- annual income. As regards to experience as a agro input dealer, 70.00 per cent of the respondents had medium experience as a input dealer i.e. between 6 years to 21 years experience.

Regarding farming experience of agro input dealer, majority of them (74.17 %) had medium farming experience i.e. 8 years to 25 years. In case of land holding, 34.17 per cent of the respondents were medium land holder (i.e. 2.1 to 4 haland holding), followed by small (27.50 %) and marginal (16.67 %) land holders. Whereas, 15.00 per cent of them had semi medium land holding (4.1 to 10 ha) and 3.33 per cent of them had found marginal land holding. While 3.33 per cent of them did not have any agricultural land.

The data further revealed that 52.50 per cent of the respondent shadlow level of social participation, followed by 42.50 per cent and 5.00 per cent of them had medium and high level of social participation, respectively. As regards to extension contact, 60.33 per cent of them had medium level of extension contact, followed by 20.00 per cent and

19.17 per cent of them were having high and low level of extension contact, respectively.

Data regarding training received about label claim by the respondents, only 11.67 per cent of the respondents were received training about label claim of insecticides. In case of sources of information, majority of the respondents (65.00%) were having medium level of sources of information, followed by low (19.17%) and high (15.83%) level of sources of information.

## 2. Awareness of insecticide label claims among the agro input dealers

### 2.1 Statement wise awareness of insecticides label claims

Total nine important statements about the insecticides label claims have been considered for accessing the awareness of the respondents about the label claims and presented in Table 2.

*Table 2*  
*Distribution of the Agro Input Dealers according to awareness about the label claims of insecticides (n=120)*

Sr. No.	Awareness test statements about the insecticide label claims	Number of respondent aware about label claims	
		Frequency	Percentage
1	Do you know about Insecticides Act 1968?	71	59.17
2	Do you know about the Central Insecticides Board & Registration Committee (CIBRC)?	46	38.33
3	Do you know the insecticides label claims?	96	80.00
4	While selling insecticides, do you ensure whether particular insecticide is having label claim for specific insect / disease and crops?	96	80.00
5	Prior to selling insecticides, do you read carefully all instructions given on the label claims?	88	73.33
6	Do you guided details to the customer farmers about spraying of insecticides as per recommendation of label claim?	77	64.17
7	Do you advice to the customer farmers about recommended dose of insecticides as per label claim?	96	80.00
8	Do you provide the information about Maximum Residues Level / Limit (MRL) of insecticides to the customer farmers?	49	40.83
9	Do you provide the information about when do you stop spraying of insecticide before harvesting to avoid residues of insecticides i.e. waiting period (PHI - Post Harvest Interval)	45	37.50

It was observed that 80.00 per cent of the agro input dealers know what is the label claim of insecticide and 80.00 per cent of them ensure whether particular insecticide is having label claim for specific insect / disease and crops while selling it. Whereas 80.00 per cent of them were advice to the customer farmers about recommended dose of insecticides as per label claim. While 73.33 per cent of them were read all instruction given on the label claims, and 64.17 per cent of them guided details to

the customer farmers about spraying of insecticides as per label claim.

It was further indicated that 59.17 per cent of the agro input dealers aware about Central Insecticide Act 1968 and 40.83 per cent of them were given the information about Maximum Residues Level of insecticides to the customer farmers at the time of selling. While 38.33 per cent of them aware about Central Insecticides Board and Registration

Committee (CIBRC) and only 37.50 per cent of them were given information about Post Harvest Interval (PHI) and its importance with seriousness.

## 2.2 Overall awareness level about insecticides label claim

Overall knowledge level of agro input dealers about selected nine statements about insecticides label claims has been computed in the form of index and respondents have been distributed in three categories.

Table 3

Distribution of the Agro Input Dealers according to their overall awareness level about insecticides label claims

(n=120)			
Sr. No.	Awareness level about insecticide label claim	Frequency	Percentage
1	Low (Upto 48)	21	17.50
2	Medium (49 to 94)	74	61.67
3	High (95& Above)	25	20.83
	Mean - 72 SD - 23		

Table 3 indicated that majority (61.67%) of the input dealers were found in medium awareness level group, followed by high awareness level (20.83%) and low awareness level (17.50%), respectively.

## 3. Relationship between profile of agro input dealers with their awareness level of insecticide label claims.

Table 4

Relationship between profile of the agro input dealers with their awareness Index

(n=120)		
Sr. No.	Variables	'r' value
1	Age	0.917**
2	Education	0.168*
3	Annual income	0.664**
4	Experience as a input dealer	0.860**
5	Farming Experience	0.886**
6	Land Holding	0.083
7	Social Participation	0.474**
8	Extension Contact	0.922**
9	Training Received	0.432**
10	Source of Information	0.947**

\* Significant at 0.05 level of probability \*\* Significant at 0.01 level of probability

It could be seen from Table 4 that variables age, annual income, experience as a input dealer, farming experience, social participation, extension contact, training received and source of information were having positively significant relationship with awareness about the label claim of insecticides by the input dealers at 0.01 level of probability. Whereas, Education was positively significant relationship with awareness at 0.05 level of probability and land holding was not correlated with awareness about the insecticide label claim

The findings are in line with the findings of Bhaltilak et al. (2018), Kale et al. (2018), Jones Kapeleka (2017) and Kale et al. (2017).

## CONCLUSIONS

Majority of the agro input dealers (61.67%) were found medium level of awareness about insecticide label claims while 41.67 per cent of them were found medium level of awareness about insecticide toxicity label printed on the container. It could be observed that variables age, annual income,

experience as an input dealer, farming experience, social participation, extension contact, training received and source of information were having positively significant relationship with awareness

about the label claim of insecticides among the input dealers at 0.01 level of probability.

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