International Journal of Farm Sciences **4(1)** :114-117, 2014

Knowledge of farmers of Baramulla, J&K about weedicides and their use in rice crop

SHEIKH MUZAFFAR AHMAD and DD SHARMA*

Dept of Extension Education
Shere-e-Kashmir University of Agricultural Sciences and Technology, Srinagar, J&K
***Dept of Social Sciences**
Dr YS Parmar University of Horticulture and Forestry, Nauni, Solan 173230 HP
Email for correspondence: shkmuzaffar@yahoo.co.in

ABSTRACT

The present study was undertaken in Baramulla dist of Jammu and Kashmir to determine the knowledge of rice growers about weedicides and to find out the association of knowledge about weedicides with the extent of their adoption in rice crop. It was found that two third of the respondents (67.50%) had good knowledge about the weedicides. Majority of the respondents (73.91%) having excellent knowledge treated the whole area under rice cultivation with weedicides. Fifty per cent of the respondents possessing poor knowledge of weedicides did not treat any area with weedicides as compared to the respondents possessing excellent knowledge (4.35%). Significant association was observed between farmers knowledge and extent of adoption of weedicides. It was concluded that farmers need to be educated through mass media like radio, TV, newspapers etc and trained on use of weedicides in rice crop.

Keywords: Knowledge; rice; weedicides; adoption

INTRODUCTION

Rice is one of the major staple food crops for the people of Jammu and Kashmir. Due to infestation of weeds in transplanted rice a reduction of 15 to 20 per cent has been observed in the yield of rice crop (Pillai and Rao 1974). Chemical weed control has a significant role to play in enhancing the yield of rice crop as it is quick, easy, efficient, labour and time saving method. Yet the adoption of this method of weed control is not up to the mark due to lack of knowledge about weedicides and their use among the farmers. Keeping this in view the present study was undertaken in Baramulla dist of Jammu and Kashmir with the following specific objectives:

1. To determine the knowledge of farmers about weedicides and
2. To find out the association of knowledge about weedicides with the extent of their adoption in rice crop

METHODOLOGY

The study was conducted in Baramulla district of Jammu and Kashmir. Out of 14 development blocks in the district four development blocks and two villages from each development block were selected randomly. A sample of 200 farmers comprising of adopters, partial adopters and non-adopters was selected through stratified random sampling technique. The size of sample from each stratum was in proportion to the total number of farmers in it. For obtaining reliable and valid data regarding farmers knowledge of weedicides a special 'knowledge test' was developed and standardized. The items pertaining to weedicides were collected through available literature and by discussing with the experts at Sher-e-Kashmir University of Agricultural Sciences and Technology-Kashmir, Jammu and Kashmir and Punjab Agriculture University, Ludhiana. The preliminary knowledge test consisting of a battery of 23 items pertaining to use of weedicides was administered to 24 farmers selected at random from a non-sample area. The responses were quantified by giving a score of one to correct answer and zero to incorrect answer. The total score of a respondent was obtained by adding his scores for all items. The items for the final test (8 out of 23 questions) were retained on the basis of difficulty index and discrimination index. The items with difficulty index values ranging from 25 to 80 and discrimination index values 0.25 and above were retained in the final test. The reliability of the knowledge test was measured with the help of split-half method and coefficient of reliability of the test was computed to be 0.85. The intrinsic validity was calculated by taking the square root of the reliability coefficient and found to be 0.92. The content validity was ensured in consultation with the experts of Sher-e-Kashmir University of Agricultural Sciences and Technology-Kashmir and Punjab Agriculture University. The data were collected through personal interview of the farmers with the help of standardized special knowledge test developed for this purpose. The extent of adoption of weedicides was measured in terms of proportion of area treated with weedicides to the total area under rice crop during the year and expressed as percentage. On the basis of knowledge score the respondents were classified into three categories viz poor, good and excellent as per the cumulative cube root method given by Singh (1969).

RESULTS AND DISCUSSION

A perusal of the data presented in Table 1 reveal that two third of the respondents (67.50%) had good knowledge about the weedicides. Those who had poor knowledge were 21.00 per cent. Only 11.50 per cent farmers were found to have excellent knowledge about different weedicides for the control of weeds in rice crop. This shows that the farmers

Table 1. Respondents knowledge of weedicides (N= 200)

Level of knowledge	Number	Percentage
Poor (score below 4)	42	21.00
Good (score 4 to 7)	135	67.50
Excellent (score 7 and above)	23	11.50

Table 2. Association between knowledge and extent of adoption of weedicides (N= 200)

Extent of adoption	Respondents frequency wrt knowledge of weedicides					
	Poor		Good		Excellent	
	No	%	No	%	No	%
Treated whole area with weedicides	14	33.33	82	60.74	17	73.91
Treated 50-100% area with weedicides	2	4.76	14	10.37	1	4.35
Treated <50% area with weedicides	5	11.91	11	8.15	4	17.39
Did not treat any area with weedicides	21	50.0	28	20.74	1	4.35
Total	42	100	135	100	23	100

$\div^2$= 21.26, significant at 1 per cent level of significance

Rows have been merged for computing $\div^2$ value

need to be educated about weedicides through short duration training programmes and mass media like radio, TV, local newspapers etc.

Respondents knowledge and extent of adoption of weedicides

The association between farmers knowledge and adoption of weedicides was also determined with the help of $\div^2$ test and the findings are given in Table 2. It is evident from the data that a majority of the respondents (73.91%) having excellent knowledge treated the whole area under rice cultivation with weedicides. Those having good knowledge of weedicides and found to treat 50 to 100 per cent area with weedicides were 60.74 per cent. However only one third of the respondents (33.33%) having poor knowledge of weedicides treated whole area with weedicides. The data further reveal that even 50 per cent of the respondents possessing poor knowledge of weedicides did not treat any area with weedicides as compared to the respondents possessing excellent knowledge (4.35%).

The statistical analysis of the data reveal significant association between farmers knowledge and extent of adoption of weedicides. These findings are in

conformity with those of Grewal (1976) and Randhawa (1980).

CONCLUSION

It is concluded from the study that majority of the respondents having excellent knowledge had applied weedicides in the whole area under rice crop as compared to their counterparts with poor knowledge of weedicides. Hence it implies that farmers should be educated through mass media like radio, TV, newspapers etc and trained on use of weedicides in rice crop.

REFERENCES

Grewal Iqbal Singh 1976. Multivariate analysis of adoption of high yielding wheat technology in arid, central and wet zones of Punjab State. PhD thesis, Punjab Agricultural University, Ludhiana, Punjab, India.

Pillai KG and Rao RMV 1974. Current status of herbicides research on rice in India. Paper presented, Annual International Rice Research Conference, IRRI, Manila, Phillipines, 22-25 April 1974.

Randhawa Tarlochan Singh 1980. A multivariate analysis of the adoption of improved agriculture technology for rice crop in the Punjab. PhD thesis, Punjab Agricultural University, Ludhiana, Punjab, India.

Singh R 1969. Optimum stratification. Annals of the Institute of Statistical Mathematics, Japan **21**: 515-518.

Received: 9.10.2013 ***Accepted: 22.12.2013***