

Correlates of Farmers' Knowledge of Recommended Water Productivity Practices

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ABSTRACT

The study was carried out in Buldana and Yavatmal district in Maharashtra state to know the farmers' knowledge about recommended Water Productivity practices. Krishi Vigyan Kendra, Buldana and Yavatmal were selected purposively as these KVKs have organized trainings on water productivity practices. From each KVK, 25 respondents who attended the trainings were selected randomly. Thus a total 50 respondents were personally contacted for data collection. The study revealed that more than half respondents possessed moderate knowledge about recommended practices of water productivity practices. The relational analysis showed that education qualification, risk reference, sources of information, sources of irrigation and innovativeness were positively correlated with the extent of knowledge of recommended water productivity practices by the respondents.

Key words: Correlates, Knowledge, Water Productivity Practices

INTRODUCTION

The output of agriculture is linked with the water availability. Water is one of the important / basic inputs of agriculture production. For increasing agriculture production there is a need for optimum utilization of water resources. About 74 per cent of area in the country is receiving less than 1125 mm. of rainfall and 74 per cent of annual rainfall received during crop season in the lands. The loss of rainwater makes us to think seriously about its conservation. In Maharashtra 84.36 per cent area is rain fed and the major sources of water is rainfall received from south-west monsoon during the period of June to September. So it is very important to conserve the water by building various water conservation structures to protect the soil moisture to increase water productivity.

Considering aforesaid points, numbers of the training programme on "Scaling up of water productivity in agriculture through training, demonstrations on live hood beneficiaries" were organized by the Department of Soil Conservation Engineering, College of Agricultural Engineering & Technology, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola through the KVK in this area. Hence, to know the extent knowledge of scaling up of water productivity the farmers acquainted, the study was planned and carried out with following specific objectives.

OBJECTIVES

1. To study of the knowledge of recommended water productive practices by the farmers.

2. To know the relationship of selected characteristics of farmers with their knowledge level.

METHODOLOGY

A number of training programmes on scaling up of water productivity in agriculture for livelihood through Teaching cum Demonstration on Beneficiaries were organized by Department of Soil and Water Conservation Engineering, CEAT, Dr. PDKV Akola through 11 KVKs in Vidarbha region of Maharashtra. Out of these, KVK, Yavatmal and KVK, Buldana were selected for the study. A list of farmers who attended the training programme was obtained and 25 participant farmers from each KVK were selected randomly. Thus a total of 50 respondents were interviewed. In light of objectives set forth, the schedule was prepared, pretested and data was collected. Various statistical methods were used for analysis and for facilitating meaningful interpretation of the data.

RESULTS AND DISCUSSION

1. Practice wise knowledge of recommended water productive practices

The practice wise knowledge of recommended water productivity practices was ascertained and thus the data obtained has been presented in Table 1. It was observed that majority of trainee farmers had knowledge about cropping system like inter-cropping (96%) and crop rotation (94 %), while 94 per cent of the trainee farmers had knowledge about ridges and furrows and deep ploughing (92 %). It is however also noted that majority

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of trainee had knowledge about tillage operation (90.00%), and sowing direction across the slope (86.00%).

Majority of trainee farmers had knowledge about and vetiver bund (86.00%). More than one fourth trainee farmers had knowledge about watershed (84.00), and mulching (82.00%). More than 82.00 per cent of trainees had knowledge about live fencing (78.00%), contour vegetative hedges (78.00%), cover crop (76.00%) sowing on the contour (76.00%), and grasses in water way (76.00%), respectively.

Majority of trainee's farmer had knowledge about the practices like vegetative filter strip (70.00%), followed by graded bund (74.00%). About 72 per cent of respondents were having knowledge of earthen bund and over seedling of grasses was known to 72 per cent.

This was followed by dug out sunken pod (62.00%) and live check dam, (56.00%), the practices like gully plugging were known to 54.00 per cent of respondents.

Table 1: Distribution of respondents according to their knowledge about recommended water productivity practices.

Name of practice	Trainees (n = 50)	
	Yes	No
Sowing direction		
a) across the slope	43(86.00)	7(14.00)
b) on the contour	38(76.00)	12(24.00)
Cropping system		
a) Intercropping	48(96.00)	2(4.00)
b) Crop rotation	47(94.00)	6(12.00)
c) Cover crop	38(76.00)	12(24.00)
d) Kharif fallow	43(86.00)	7(14.00)
Land preparation		
a) Deep ploughing	46(92.00)	4(8.00)
b) Ridges and furrow	47(94.00)	3(6.00)
c) Tillage operation	45(90.00)	5(10.00)
Surface drain.	33(66.00)	7(14.00)
Underground drain	26(52.00)	24(48.00)
Contour bund	38(76.00)	12(24.00)
Vegetative bund		
a) vetiver bund	43(86.00)	7(14.00)
b) Lucaena bund	47(94.00)	3(14.00)
Graded bund	37(74.00)	13(26.00)
Earthen bund	36(72.00)	14(28.00)
Brushwood dam at outlet	28(56.00)	22(44.00)
Loose boulder bund	35(70.00)	15(30.00)
Cement plug	40(80.00)	10(20.00)
Live check dam	28(56.00)	22(44.00)
Vegetative filter strip	35(70.00)	15(30.00)
Contour vegetative hedges	39(78.00)	11(22.00)
Live fencing	39(78.00)	11(22.00)
Green manuring	41(82.00)	9(18.00)
Dug out sunken pond	31(62.00)	19(38.00)
Grasses in water way	38(76.00)	12(24.00)
Gully plugging	27(54.00)	23(46.00)
Over seeding of grasses	36(72.00)	14(28.00)
Use of soil amendments	37(74.00)	13(26.00)
Mulching	41(82.00)	9(18.00)
Watershed	42(84.00)	8(16.00)

Table 2: Distribution of respondents according to knowledge level

Knowledge level	Frequency (n-50)	Percentage
Low	2	4.00
Medium	32	64.00
High	16	32.00

A critical perusal of the table 2 indicates that slightly more than half respondents possessed moderate knowledge about recommended practices of water productivity practices, followed by 16 per cent and 2 per cent of the respondent belonging to high and low categories of knowledge level.

1. Relationship of selected characteristic with knowledge of respondents: Among the personal, socio-economic and psychological characteristics namely education, annual income, risk preference, sources of information, sources of irrigation and innovativeness were found to have positive and highly significant correlation with the extent of knowledge possessed by respondents, where as age could establish the negative and significant correlation at 0.05 level of probability (Table 3).

The variable such as land holding, scientific orientation and experience in farming did not show significant association with the knowledge possessed by the respondents

Table 3: Correlation of selected characteristics of the respondents with their knowledge level.

Variable	'r' value
Age	-0.275*
Education	0.631**
Land holding	0.105
Annual income	0.216**
Sources of irrigation	0.255**
Scientific Orientation	0.198
Innovativeness	0.553**
Risk Preference	0.507**
Sources of information	0.307**
Experience in farming	0.102

From the above findings, it could be interpreted that the respondents with higher educational qualification, risk reference and innovativeness had an influence on the possession of knowledge by them. It is quite logical that the respondents with higher educational qualification created an urge to get acquainted with higher scientific aspects of water productivity practices through frequent contact with KVK personnel.

CONCLUSION

Findings of the study revealed that more than half respondents possessed moderate knowledge about recommended practices of water productivity practices. Independent variables like education, annual income, risk preference, sources of information, sources of irrigation and innovativeness were found to have positive and highly significant correlation with the extent of knowledge possessed by respondents. Thus it is concluded that the farmers gained the knowledge about the techniques for enhancing water productivity in agriculture but also developed their skill with changed positive attitude which are reflected in adoption of the technologies by substantial number of farmers.

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