

Knowledge Level about Organic Farming in Haryana

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ABSTRACT

The present study was conducted in Haryana state. The state of Haryana comprises 20 districts. Out of these, four districts viz., Hisar, Sirsa, Karnal and Kurukshetra were selected purposively depending upon the higher number of the organic farmers. A random sample of 20 organic farming practicing farmers from each of the four districts was taken. Thus, total number of 80 farmers constituted the sample for the purpose of the study. The finding indicated that nearly half of the farmers had highly knowledge, very few of them had low knowledge and remaining had medium level of knowledge about organic farming practices. Education, mass media exposure and innovativeness were positively and significantly related to the knowledge level when examined through correlation test. All the nine variables were fitted in regression equation of their knowledge level with total variation about 0.79 per cent of organic farmers.

Key words : Education; Mass Media ; Innovativeness ; Knowledge ; Organic Farmers.

Organic farming is a holistic production management system which favours maximum use of organic materials (crop residues, animal excreta, on and off farm organic wastes, growth regulators, biopesticides etc.) and discourages use of synthetically produced agro inputs, for maintaining soil productivity, fertility and pest management under conditions of sustainable natural resources and healthy environment. Awareness about organic farming is increasing in Haryana and even small number of farmers have converted and started organic farming. But majority of the farmers in the state are still engaged in commercial agriculture and adoption rate of organic farming practice is not significant. Many factors like cultural are responsible for the present dismal situation of organic farming in the state. Cultural and demographic attributes of the farmers play an important role in adoption/rejection of new technologies/alternative method. There is need for proper socio-cultural environment for promotion of organic farming in the state which have not been given due attention.

METHODOLOGY

The study was conducted in Haryana state. The four districts viz., Hisar, Sirsa, Karnal and Kurukshetra were selected purposively out of 20 districts of the state considering the higher number of the organic farmers. A random sample of 20 organic farming practicing farmers from each of the four districts was taken. Thus, total

number of 80 farmers constituted the sample for the purpose of the study. To measure the knowledge level of farmers they were asked to reply different questions about the concept of organic farming, use of organic manures and crop residues, bio-fertilizers, vermicompost, weed management, pest-management, diversification, i.e. crop rotation, intercropping, trap cropping and were also asked about the safe storage of produce. The respondents were grouped under three categories viz., those 'with full knowledge', 'with partial knowledge' and those farmers having 'no knowledge' and were assigned the score 2, 1 and 0, respectively. The scores so obtained under various questions were summed up. On the basis of the total score obtained, respondents were categorized into three classes i.e. low, medium and high level of knowledge. The activity wise knowledge percentage was also calculated on the basis of following formula.

$$\text{Knowledge percentage} = \frac{\text{Summation of obtained knowledge score}}{\text{Maximum possible obtainable knowledge scores}} \times 100$$

RESULTS AND DISCUSSION

Knowledge level of organic farming practices : Knowledge is pre-requisite to the adoption of an innovation. The final decision of farmers to use a new practice is usually the result of their knowledge of the practice and attitude. Knowledge level of farmers refers to the information they possess in respect of organic farming practices.

Knowledge of organic farming practices would

lead to adoption or rejection. Once acquired and accumulated, knowledge produces change in the thinking process. The result of this is seen in behavioural change of the farmers. i.e. adoption about organic farming practices. Therefore, an effort has been made to ascertain the knowledge level possessed by the organic farmers regarding organic farming practices.

Table 1. Overall knowledge level of farmers in respect of organic farming practices. N = 80

S. No.	Category of Knowledge	Score range	Number of farmers	% of respondents
1.	Low	28 – 45	12	15.00
2.	Medium	46 – 62	31	38.75
3.	High	63 – 79	37	46.25

Overall knowledge level of farmers: It is evident from the data in Table 1 that there was not much difference between number of farmers in medium and high level of category with regard to overall knowledge level of organic farming practices. The study shows that 37 farmers (46.25%) had high knowledge about organic farming practices and 31 farmers (38.75%) had medium level of knowledge. Only 12 farmers (15.00%) were having low level of overall knowledge of organic farming practices. The findings are in agreement with the findings by Kantharaj (1980) and Dube and Sawarkar (1992), who reported that majority of farmers had medium level to high level of knowledge. Majority of

respondents belonged to high to medium level of overall knowledge regarding organic farming practices.

Distribution of organic farmers on the basis of the knowledge score: To ascertain the level of knowledge possessed by the respondents in different organic farming practices, they were categorized into low, medium and high knowledge groups. On the basis of knowledge percentage, the practices were accorded ranks. The results are presented in Table 2 and their inferences are drawn as under.

The study here brought out that knowledge of respondents about concept of organic farming (83.59%) was maximum with mean knowledge score of 4.80 among all the six major practices of organic farming.

The table further shows that majority of respondents (90.00%) had high level of knowledge regarding concept of organic farming. While only 10.00 per cent have low level of knowledge and not even single respondent had medium level of knowledge about it.

The Table 2 also shows that knowledge about use of organic manure and crop residues was found 75.89 per cent and accorded second position in ranking order. The study brought to surface that 85.00 per cent of respondents had high level of knowledge. Whereas, 5.00 per cent had medium level and 10.00 per cent had low level of knowledge about use of organic manure and crop residue practices in organic farming.

Table 2. Distribution of organic farmers on the basis of the knowledge score regarding organic farming practices. N = 80

S. No.	Organic farming practices	Category	Score range	Frequency	Percentage	Mean Score	Knowledge percentage	Rank
1.	Knowledge about concept of organic farming	Low	0-2	8	10.00	4.80	83.59	I
		Medium	3-5	-	-			
		High	6-8	72	90.00			
2.	Weed Management	Low	0-3	12	15.00	7.35	65.62	IV
		Medium	4-8	24	30.00			
		High	9-12	44	55.00			
3.	Pest-Management	Low	0-9	15	18.75	16.31	54.37	VI
		Medium	10-20	33	41.25			
		High	21-30	32	40.00			
4.	Use of organic manures and crop residues	Low	0-4	8	10.00	9.64	75.89	II
		Medium	5-10	4	5.00			
		High	11-14	68	85.00			
5.	Vermicompost	Low	0-1	16	20.00	3.87	60.41	V
		Medium	2-4	24	30.00			
		High	5-6	40	50.00			
6.	Use of Bio-fertilizer	Low	0-3	8	10.00	7.95	72.91	III
		Medium	4-8	12	15.00			
		High	9-12	60	75.00			

The study revealed that the knowledge percentage about the use of biofertilizer was also quite high (72.91%). Three-fourth of the respondents (75.00%) were found to have high level of knowledge followed by medium level (15.00%). However, only (10.00%) respondents belonged to low level of knowledge regarding use of biofertilizers in organic farming. So far as the organic weed management was concerned, the knowledge was 65.62 per cent. Moreover, 55.00 per cent of the respondents had high level of knowledge, those who had medium level of knowledge were 30.00 per cent. There were 15.00 per cent respondents who had low level of knowledge about weed management with regard to organic farming. While the study in hand showed that the knowledge percentage of vermicompost was 60.41 per cent and accorded last rank order out of six organic farming practices. So the extension functionaries should make to disseminate the knowledge of this aspect among the farmers by continuous extension activities.

The knowledge level of respondents regarding pest management was 54.37 per cent which included cultural methods, mechanical method, biological control, diversification such as crop rotation, intercropping, trapcropping and also include safe storage of produce was minimum. This low level of knowledge was due to complexicity of some of the above technology and lack of government support to the organic farming till date. While looking on the distribution of respondents with regard to knowledge level about pest management practices in organic farming, almost equal number of respondents belonged to medium (41.25%) and high (40.00%) knowledge level. Whereas, 18.75 per cent had low level of knowledge about it.

Table 3. Relationship between independent variables and knowledge level of organic farming practices. N = 80

Sr. No.	Characteristics	Correlation coefficient (r)
1.	Age	0.1816
2.	Education	0.4169*
3.	Land holding	0.1588
4.	Family education	0.2367*
5.	Mass media exposure	0.6655*
6.	Social participation	0.1920
7.	Risk bearing capacity	0.1210
8.	<i>Economic motivation</i>	0.1995
9.	Innovativeness	0.3175*

* Significant at 0.05 level of probability

Relationship between independent variables and knowledge level: To establish association between the

background variables of the respondents and their knowledge regarding organic farming practices, the correlation coefficient was computed, the data in this regard have been presented in Table 3.

The table indicates that education had positive and significant correlation at 0.05 level of probability with knowledge of the respondents regarding the organic farming practices ($r=0.4169$). Accordingly, higher the level of education higher would be the knowledge of organic farming practices of the respondents. These results are in agreement with Haque *et al.* (1999) and Kumar (2000) who also observed that education had positive and significant relationship with the knowledge of the respondents. It implies that education leads to gain in the knowledge of the respondents.

The study also shows positive and significant correlation at 0.05 level of probability between knowledge of the respondents and their family education ($r=0.2367$). The mass media exposure of the respondents is observed to be positive and significantly correlated at 0.05 level of probability with the knowledge of organic farming practices ($r=0.6655$).

These results are in consonance with the observations of Pandey and Vekaria (1994) and Ekka (1999). The study shows that innovativeness had positive and significant correlation at 0.05 level of probability with the knowledge of respondents ($r=0.3175$).

However, all the remaining factors, namely, age, land holding, social participation, risk bearing capacity and economic motivation were showing positive but non significant relationship with the knowledge level of respondents regarding organic farming practices. Therefore, it can be inferred that knowledge level of organic farmers is not associated with these variables.

Table 4. Multiple regression analysis of independent variables on knowledge level of organic farming practices. N = 80

S. No.	Characteristics	Regression coefficient (b)	't' value
1.	Age	0.0683	0.5688
2.	Education	0.1897	3.4806*
3.	Land holding	0.6669	1.5605
4.	Family education	0.1665	1.0634
5.	Mass media exposure	0.4522	4.1754*
6.	Social participation	2.4532	1.3680
7.	Risk bearing capacity	0.2021	1.1221
8.	Economic motivation	1.3474	1.8895
9.	Innovativeness	0.5690	2.8015*

* Significant at 0.05 level of probability

$R^2 = 0.79$

Multiple regression analysis of independent variables on knowledge level: To predict the

contribution of the background variables on the knowledge level of farmers regarding organic farming practices, the data were subjected to multiple regression analysis. The results are presented in Table 4.

The partial regression coefficient of education, mass media exposure and innovativeness were significant at 0.05 level of probability. The remaining variables namely age, land holding, family education, social participation, risk bearing capacity and economic motivation were not found to have the prediction values of significant level.

The data also showed that all the nine variables collectively explained 79 per cent variation in the knowledge level regarding organic farming practices of

the respondents. Though more than three-fourth of the variation has been explained by these variables, yet it would be worthwhile to look for some more variables comprising personality traits of the farmers so that a higher level of variation in the knowledge level could be explained.

CONCLUSION

Organic farming practices are new to the farmers and hence, the knowledge levels are low in most of the practices. The farmers need to be made well aware about the use of such practices so that the basic concept of organic farming and its application part could be made well known to the farmers.

REFERENCES

1. Dube, S.K. and Sawarkar, V.K., (1992). Knowledge and adoption of rice production technology among small and marginal farmers. *Maharashtra J. Extn. Educ.* **11**: 60-72.
2. Ekka, V.S. (1999). Training needs of paddy growers in South Bihar, M.Sc. Thesis (unpublished), CCS HAU, Hisar.
3. Haque, S.M.A., Haque, M.E. and Hussain, M.A. (1999). Farmers' knowledge on use of organic matter in crop production. *Bangladesh Journal of Training and Development.* **12**(1/2): 19-24.
4. Kantharaj, J. (1980). A study of knowledge, extent of adoption and appropriateness of sunflower technology among growers. M.Sc. Thesis in Agric. Extn. (Unpub.), Univ. Agric. Sci., Bangalore.
5. Kumar, Ramesh (2000). Training needs of coconut growers in Andaman and Nicobar Island. M.Sc. Thesis (unpublished), Deptt. of Extn. Edu., CCS HAU, Hisar.
6. Pandey, R.D. and Vekeria, R.S. (1994). Knowledge and adoption behaviour of banana growers. *Maharashtra J. Extn. Edu.* **13**: 131-134.

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