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Comparative Knowledge Level of the Organic and Conventional Farmers Regarding Organic Farming Practices in Jaipur, District of Rajasthan

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ABSTRACT

Organic farming is one of the several approaches to sustainable agriculture, which is a necessity in today's unstable and degrading environment. The present study was conducted in the 6 selected villages of purposely selected Govindgarh Panchayat Samiti of Jaipur district. From these villages 50 organic and 50 conventional farmers were selected by simple random sampling technique for the study purpose by proportional allocation method. It was found that majority of the organic farmers and half of the conventional farmers had medium level of knowledge about organic farming. There was a significant difference between the organic and conventional farmers in their knowledge levels about organic farming practices. It was also found that the organic farmers had highest knowledge regarding general information about compost, whereas the conventional farmers had highest knowledge about organic weed management. The organic farmers had significantly higher knowledge as compared to conventional farmers regarding general information about compost, organic weed management, biofertilizer, NADEP compost, trichocards, vermicompost and HaNPV. It was further found that in case of organic weed management both the organic and conventional farmers had highest knowledge about "Knowledge about losses caused by weeds". The organic and conventional farmers had lowest knowledge about "Natural substances or plant extract which can control weeds".

As organic agriculture gains recognition across the world, India is stepping up efforts to grab a substantial share of the pie. In 10th five-year plan, Government allotted Rs. 100 crore for the promotion of organic agriculture and National Programme on Organic Production (NPOP). According to a survey by the International Federation of Organic Agriculture Movement, India has 41,000 hectares under organic management, and with govt. support, the area under organic farming is expected to increase further. Indian organic farm produce-tea, coffee, spices, fruits, vegetables, cotton, Basmati rice, neem, oilseeds, pulses and cane sugar have already found markets in several countries. Though Indian organic agriculture forms a negligible portion of total agricultural produce, it is increasingly becoming an export item. According to Exim bank, India accounts for one-third of the world's organic tea productions, which commands 1 per cent of the total global tea production. India has about 1 per cent share in the $ 150 million organic coffee-market and a 3 per cent share in the $ 3.2 million organic spices market.

It is a well-known fact that the knowledge of an individual towards his profession has a significant influence on his role performance in that occupation. Knowledge is an important component of human behaviour and as such plays an important role in the covert and overt behaviour of farmers. Hence the knowledge of the farmers about the organic farming play an important role in increasing the adoption of organic farming practices.

It is evident that there is very low level of organic farming in India when compared with other developed countries. It is still low in Rajasthan. This leads to think and analyze the reasons for such a wide gap between the uses of organic farming practices by the farmers. Keeping in mind, the above facts and importance of organic farming the study entitled "Comparative knowledge level of the organic and conventional farmers regarding organic farming practices in Jaipur district of rajasthan" was undertaken with following specific

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objectives :

1. To study the knowledge of organic and conventional farmers regarding organic farming practices.
2. To study the extent of knowledge of organic and conventional farmers regarding different practices of organic weed management.

METHODOLOGY

The present study was under taken in the purposely selected Govindgarh panchayat samiti of Jaipur district, because Govindgargh Panchayat samiti had maximum number of organic farmers as identified by Morarka Foundation so it was selected purposely. There were 42 adopted organic villages of Morarka Foundation in the Govindgarh panchayat samiti, out of which six organic villages having maximum number of organic farmers were selected for the study purpose.

From the selected villages a sample of 50 organic farmers was selected randomly in such a manner that the number of organic farmers selected from a village was proportional to the total number of organic farmers of that village. Equal number of conventional farmers (50) were also selected randomly from the selected villages for comparison purpose. Thus, a total sample size was 100 farmers was selected for study purpose.

An interview schedule consisting of measuring devices of dependent and independent variables along with the face data of farmers was used for collecting response of the farmers. The knowledge level of the farmers about organic farming practices was measured by the knowledge test developed by Thalor (2004) which was modified by getting experts opinion and used for the study purpose. The data were classified, tabulated and inferences were drawn after subjecting the data to appropriate statistical analysis, which led to the following major findings:

RESULTS AND DISCUSSION

To get an overview of the selected respondents, they were categorized into three knowledge groups on the basis of mean and standard deviation of their knowledge scores viz., high, medium and low. The results have been presented in Table-1.

The perusal of the data presented in Table-1 visualizes that more than half (56.00 per cent) of the organic farmers possessed medium level of knowledge followed by 44.00 per cent with high level of knowledge. No organic farmer could be placed in low level of knowledge category, whereas half of the conventional farmers (50.00 per cent) were found having medium level of knowledge, followed by 50.00 per cent in the low level of knowledge regarding organic farming.

Table 1: Distribution of organic and conventional farmers according to their knowledge levels about organic farming practices (N =100)

S.No.	Knowledge level	Organic farmers (N =50)		Conventional farmers (N =50)		'Z' value
		F	%	F	%	
1.	Low knowledge (less than 33.24)	0	0.00	25	50.00	
2.	Medium knowledge (from 33.24-75.94)	28	56.00	25	50.00	40.75**
3.	High knowledge (more than 75.94)	22	44.00	0	0.00	
	Total	**50**	**100.00**	**50**	**100.00**	

**Significant at 1% level of significance

From the data in Table-1, it is concluded that majority of the respondents of both the categories fell under medium level of knowledge about organic farming. At the same time it is to be noticed that organic farmers having high knowledge (44.00 per cent) is higher than the conventional farmers in which none of the farmer was having high level of knowledge regarding organic farming.

The analysis of the data further indicates that the "Z" value (40.75) between the scores of the level of knowledge of organic and conventional farmers is significant at 1 per cent level of significance. Thus, the hypothesis formulated in null form ($Ho_{1.1}$) that there is no significant difference between organic and conventional farmers in their knowledge levels about organic farming was rejected and the alternative hypothesis was accepted.

It means that there was a significant difference between organic and conventional farmers in their knowledge levels about organic farming.

The findings are in close conformity with the results of Borkar and Chothe (2000) who found that majority of respondents (58.67 per cent) belonged to medium knowledge level category.

2. Knowledge of organic and conventional farmers regarding different aspects of organic farming :

A perusal of the data in table 2 indicate that out of total seven aspects of organic farming, the organic farmers had maximum knowledge about "General information about compost" (MPS 69.09), while conventional farmers possessed highest knowledge regarding "Organic weed management" (MPS 43.10) with knowledge gap of 30.91 and 56.90, respectively. The organic farmers possessed least knowledge regarding the practices of "HaNPV" (MPS 22.26), whereas in case of conventional farmers had least knowledge regarding "Vermicompost" (MPS 10.43) with knowledge gap of 77.74 and 89.57, respectively.

To determine the difference between the organic and conventional farmers with regard to their knowledge about organic farming, 'Z' test was also applied. The examination of table 2 depicts that the 'Z' values between the organic and conventional farmers regarding their knowledge about general information about compost was found to be 93.38, whereas the 'Z' values for vermicompost, NADEP compost and organic weed management were found 81.89, 75.74 and 71.60 respectively, which were statistically significant at 1 per cent level of significance. Similarly the 'Z' values for trichocards, biofertilizer and HaNPV were found to be 50.07, 49.83 and 17.32 respectively, which were also statistically significant at 1 per cent level of significance. Thus the hypothesis formulated in null form was rejected and alternative hypothesis was accepted, which means there had been highly significant difference between organic and conventional farmers in context with their knowledge about these 7 aspects of organic farming.

Table 2 : Knowledge of organic and conventional farmers regarding different aspects of organic farming (N=100)

S. No.	Aspects of organic farming	Organic farmers(N=50)		Knowledge gap (%)	Conventional farmers (N=50)		Knowledge gap (%)	Z' Value
		MPS	Rank		MPS	Rank		
1.	General information about compost	69.09	I	30.91	42.00	II	58.00	93.38**
2.	NADEP compost	48.50	IV	51.50	13.07	IV	86.93	75.74**
3.	Vermicompost	28.36	VI	71.64	10.43	VII	89.57	81.89**
4.	HaNPV	22.26	VII	77.74	11.60	VI	88.40	17.32**
5.	Trichocards	34.33	V	65.67	12.00	V	88.00	50.07**
6.	Organic weed management	62.90	II	37.10	43.10	I	56.90	71.60**
7.	Biofertilizer	53.33	III	46.67	29.33	III	70.67	49.83**
	Overall	**45.54**		**54.46**	**23.08**		**76.92**	

**significant at 1 % level of significance MPS = Mean per cent score

Hence it can be concluded that the organic farmers of the study area possessed higher knowledge about organic farming. It might be obviously due to their involvement in trainings regarding organic farming. On the basis of the ranking of knowledge it can also be concluded that the organic respondents of the study area possessed high knowledge with regards to "General information about compost" followed by "Organic weed management". Organic farmers know a little about "HaNPV" and conventional respondents had negligible knowledge about "Vermicompost", "HaNPV", "Trichocards" and "NADEP compost".

Further, the spectacular difference between organic and conventional respondents about knowledge of organic farming is no doubt due to the trainings imparted by the KVK, Agriculture department and Morarka Foundation on organic farming. Hence, the efforts in this direction must be intensified.

On the basis of results of table 2, it is strongly recommended that the agencies (Govt., Universities and NGOs) should make a point and divert their concerted efforts to equip the organic and conventional respondents with latest know-how of organic farming. The strategic

and well-planned intensive training programmes in the phased way for the needy clienteles would definitely enable them to learn ways of organic farming. Though both the groups of respondents need training regarding all these aspects, but conventional respondents need more attention during trainings on organic farming practices.

3. Knowledge of organic and conventional farmers regarding different practices of organic weed management:

In the similar pattern in-depth view was also analysed regarding the level of knowledge of organic and conventional farmers about different practices of organic weed management. The results are presented in table 3.

Table 3 : Knowledge of organic and conventional farmers regarding different practices of organic weed management

(N=100)

S. No.	Practices	Organic farmers (N=50)		Knowledge gap (%)	Conventional farmers (N=50)		Knowledge gap (%)
		MPS	Rank		MPS	Rank	
1.	Knowledge about losses caused by weeds	100.00	I	0.00	100.00	I	0.00
2.	Different method of weed control	70.00	IV	30.00	64.66	III	35.34
3.	Reliable sources for purchasing weed free seeds	80.00	II	20.00	66.66	II	33.34
4.	Natural substances or plant extract which can control weeds	20.00	VII	80.00	0.00	VIII	100.00
5.	Methods of safe guarding crops against insects and pathogens to give competitive advantage to your crop	74.00	III	26.00	32.80	V	67.20
6.	Awareness about community sanitation in the village	20.00	VII	80.00	14.00	VII	86.00
7.	Benefits of utilizing inter row space	24.00	VI	76.00	14.00	VII	86.00
8.	Type of crops to be grown in inter row space	24.00	VI	76.00	16.00	VI	84.00
9.	Crop rotations which help in checking weeds which might come up by monoculture	62.50	V	37.50	40.00	IV	60.00
	Overall	**52.72**		**47.28**	**38.68**		**61.32**

MPS = Mean per cent score

Table 3 depicts that both the organic as well as conventional farmers gave first priority to the practice "Knowledge about losses caused by weeds" (MPS 100.00) , which was followed by "Reliable sources for purchasing weed free seeds" (MPS 80.00 and 66.66, respectively) and ranked second with knowledge gap of 0.00, 20.00 and 33.34, respectively.

The least knowledge among the organic farmers was found to have regarding the practices "Natural substances or plant extract which can control weeds" and "Awareness about community sanitation in the village" with equal MPS 20.00 and were ranked last with knowledge gap of 80.00, whereas in case of conventional farmers the least knowledge was found to have regarding "Awareness about community sanitation in the village" and "Benefits of utilizing inter-row space with equal MPS 14.00 and were ranked seventh rank with knowledge gap of 86.00. The conventional farmers had no knowledge regarding "Natural substances or plant extract which can control weeds" (MPS 0.00), which was ranked last with knowledge gap of 100.00.

The overall MPS of organic and conventional farmers was 52.72 and 38.68, respectively which indicates the glaring gap in level of knowledge of different practices of organic weed management with 47.28 and 61.32 per cent, respectively in case of organic and conventional farmers, which shows that the knowledge of organic farmers is higher than conventional farmers regarding organic weed management.

Hence the conclusion can be drawn on the basis of findings that the organic and conventional farmers

possessed maximum knowledge about "Losses caused by weeds". At the same time the mean per cent scores of both the groups reveal higher knowledge among organic farmers about all the aspects, that might be due to their involvement in training and conducting organic farming practices on their fields.

Therefore, it is suggested that the farmers should be trained and informed by the agencies concerned about "Community sanitation" and "Natural substances, which can control weeds". The conventional farmers should also be included for trainings under such programmes.

CONCLUSION

(i) Majority of the organic farmers (56.00%) fall under medium level of knowledge about organic farming, whereas equal percentage of conventional farmers fall in low and medium category (50.00% each). At the same time it was noted that 44.00 per cent organic farmers were falling in high knowledge category, whereas none of the conventional farmers could be placed in high knowledge category.

(ii) There was a significant difference ('Z' value 40.75) between the organic and conventional farmers in their knowledge levels about organic farming at 1 per cent level of significance.

(iii) There existed a significant difference in the knowledge level of organic and conventional farmers regarding general information about compost (Z-value 93.38), NADEP compost (Z-value 75.75), vermicompost (Z-value 81.90), HaNPV (Z-value 17.33), trichocards (Z-value 50.07), organic weed management (Z-value 41.60), and biofertilizers (Z-value 49.83) which shows that the organic farmers had more knowledge about organic farming than those of conventional farmers in these aspects of organic farming.

(iv) As far as the overall knowledge of the organic farming practices is concerned, the knowledge gap was higher in case of conventional farmers (76.92%) as compared to organic farmers (54.46%).

(v) Regarding the aspect of organic weed management both the organic and conventional farmers had highest knowledge about "Knowledge about losses caused by weeds" with an equal MPS of 100.00. The organic farmers had lowest knowledge about "Natural substances or plant extract which can control weeds" and "Awareness about community sanitation in the village" with an equal MPS of 20.00. Whereas the conventional farmers had no knowledge about "Natural substances or plant extract which can control weeds".

(vi) In case of organic weed management the knowledge gap was higher in case of conventional farmers (61.32%) as compared to organic farmers (42.27%).

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