

KNOWLEDGE LEVEL OF ORGANIC AND CONVENTIONAL FARMERS REGARDING DIFFERENT ORGANIC FERTILIZERS

M.K. Jangid*, I. M. Khan** and Sangram Singh**

ABSTRACT

Organic fertilizers are the micro-organisms (bacteria, fungi, fern, algae etc.) which are used to fix atmospheric nitrogen (N), to solubilize and make available nutrients like phosphorus (P) and to synthesize other growth promoting substances. These play an important role in improving the soil health and thereby sustaining the agricultural production. The present study was conducted in the 6 selected villages of purposely selected Govindgarh Panchayat Samiti of Jaipur district. From these villages 50 organic farmers were selected by simple random sampling technique for the study purpose by proportional allocation methods. Equal number of conventional farmers was also selected randomly from these selected villages. In HaNPV the organic farmers had highest knowledge about "Appropriate time of the day for spraying", whereas the conventional farmers had highest knowledge about "Precautions needed before spraying HaNPV". Regarding trichocards the organic farmers had highest knowledge about "Part of plant where trichocards should be attached", whereas the conventional farmers had highest knowledge about "Cautions to be followed after introduction of trichogramma in the crop". Regarding biofertilizers both the organic and conventional farmers had highest knowledge about "The seed treated with biofertilizers should be dried or not before sowing". In all the three cases i.e. HaNPV, trichocards and biofertilizers the knowledge gap was found higher in case of conventional farmers as compared to organic farmers.

INTRODUCTION

In India there is very low level of organic farming when compared with other developed countries. It is still low in Rajasthan. This leads to think and analyze the reasons for such wide gap between the use of organic farming by the farmers. The problem has, since recently attracted the attention of some extension researchers, that the adoption of organic farming practices has not been studied in depth. Low level of Adoption of organic farming practices may also be due to the constraints involved in conducting the organic farming.

Organic farming is one of the several approaches to sustainable agriculture, which is a necessity in today's unstable and degrading environment. In Rajasthan, RAU, Bikaner and Morarka foundation are stepping up efforts to promote organic farming. Typically, organic exports are sold at impressive premiums, often at prices 50 per cent higher than identical products produced

on non-organic farms. Thus, it is more viable and sustainable farming system, which provides a lucrative option to the farmers.

The present study is the novel one and only of its kind as nobody has tried to conduct such study on adoption of organic farming practices, the study takes care of determination of profile of organic and conventional farmers of the study area. The results will be helpful for the KVK and department of agriculture to concentrate their efforts for promotion of organic farming as per the characteristics of farmers. The findings regarding knowledge profile of organic farming practices will pave the way for future line of action regarding the training programmes for organic and conventional farmers.

Keeping in mind, the above facts and importance of organic farming the study entitled "Adoption of Organic Farming Practices in Govindgarh Panchayat Samiti of Jaipur District

* Ph.D. Scholar, Department of Extension Education, SKN College of Agriculture, Jobner, Jaipur.

** Associate Professor, Department of Extension Education, SKN College of Agriculture, Jobner, Jaipur.

(Rajasthan)" was undertaken with the following specific objective: "Knowledge level of the organic and conventional farmers regarding organic fertilizers"

RESEARCH METHODOLOGY

The present study was under taken in the purposely selected Govindgarh panchayat samiti of Jaipur district, because Govindgarh 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) was also selected randomly from the selected village for comparison purpose. Thus, the total sample size would be 100.

RESULTS AND DISCUSSION

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

The Knowledge level of the organic and conventional farmers regarding organic fertilizers was studied under following three sub- heads:

1. Knowledge of organic and conventional farmers regarding different practices of HaNPV:
2. Knowledge of organic and conventional farmers regarding different practices of trichocards
3. Knowledge of organic and conventional

farmers regarding different practices of biofertilizers

1. Knowledge of organic and conventional farmers regarding different practices of HaNPV:

Under this sub-head the in-depth view was studied regarding different aspects of HaNPV (Helicoverpa Nuclear Polyhedrosis Virus). The results have been presented in table 1.

The observations of table 1 reveal that the organic farmers possessed highest knowledge regarding "Appropriate time of the day for spraying" (MPS 50.00) and was ranked first with knowledge gap of 50.00. This was followed by "Precautions needed before spraying HaNPV" (MPS 48.00) and "Storage of HaNPV" (MPS 28.00), which were ranked second and third, respectively with knowledge gap of 52.00 and 72.00, respectively.

They possessed least knowledge regarding the practices of "Stage of insect and ETL at which HaNPV used" (MPS 20.00), followed by "Recommended dose of HaNPV" (MPS 14.00), which were ranked seventh and eighth, respectively with knowledge gap of 80.00 and 86.00, respectively.

In case of conventional respondents had maximum knowledge about the practice "Precautions needed before spraying HaNPV" (MPS 30.00) and was ranked first, followed by "Appropriate time of the day for spraying" (MPS 24.00) and "Duration of spraying HaNPV again" (MPS 16.00), which were ranked second and third, respectively with knowledge gap of 70.00, 76.00 and 84.00, respectively. The least knowledge possessed by the conventional farmers was regarding the practice of "Storage of HaNPV" (MPS 12.00), followed by "Recommended dose" (MPS 8.00), which were ranked seventh and eighth, respectively with knowledge gap of 88.00 and 92.00, respectively.

It is also obvious that both the organic and conventional farmers had no knowledge regarding "Recommended quantity of tinopol in HaNPV", "Quantity of egg white in HaNPV" and "Care taken during purchase of biopesticides", whereas the conventional farmers had no knowledge regarding "Quantity of jaggery solution in HaNPV".

The overall MPS of organic and conventional farmers was 21.72 and 11.03, respectively which

indicates the glaring gap in level of knowledge of different practices of HaNPV with 78.28 and 88.97 per cent, respectively in case of organic and

conventional farmers, which shows that the knowledge of organic farmers is higher than conventional farmers regarding HaNPV.

Table 1. Knowledge of organic and conventional farmers regarding different practice of HaNPV

(n=100)

S. No.	Practices	Organic farmers (N=50)		Knowledge gap (%)	Conventional farmers (N=50)		Knowledge gap (%)
		MPS	Rank		MPS	Rank	
1.	Acquaintance with term HaNPV	24.00	VI	76.00	14.00	V	86.00
2.	Stage of insect and ETL at which HaNPV used	20.00	VII	80.00	15.00	IV	85.00
3.	Recommended dose	14.00	VIII	86.00	8.00	VIII	92.00
4.	Material to be added in HaNPV	26.66	IV	73.34	13.33	VI	86.67
5.	Recommended quantity of tinopol in HaNPV	0.00	IX	100.00	0.00	IX	100.00
6.	Quantity of jaggery solution in HaNPV	26.00	V	74.00	0.00	IX	100.00
7.	Quantity of egg white in HaNPV	0.00	IX	100.00	0.00	IX	100.00
8.	Appropriate time of the day for spraying	50.00	I	50.00	24.00	II	76.00
9.	Duration of spraying HaNPV again	24.00	VI	76.00	16.00	III	84.00
10.	Care taken during purchase of biopesticides	0.00	IX	100.00	0.00	IX	100.00
11.	Storage of HaNPV	28.00	III	72.00	12.00	VII	88.00
12.	Precautions needed before spraying HaNPV	48.00	II	52.00	30.00	I	70.00
Overall		21.72		78.28	11.03		88.97

MPS = Mean per cent score

Hence the conclusions can be drawn on the basis of above findings that the organic and conventional respondents possessed maximum knowledge about "Precautions needed before spraying HaNPV". When we compare mean per cent score of both categories, the knowledge of organic respondents was found higher than the conventional respondents regarding different practices of HaNPV which might due to their involvement in training programmes regarding organic farming. Hence it is recommended that in the practices in which the farmers lack knowledge

should be strengthened by providing trainings to the farmers so as to achieve success in organic farming and the trainings should cover maximum farmers specially conventional farmers.

2. Knowledge of organic and conventional farmers regarding different practices of trichocards

As depicted in table 2 that out of total four practices of trichocards the organic farmers had highest knowledge about "Part of plant where trichocards should be attached" (MPS 80.00) and was ranked as first with knowledge gap of 20.00,

whereas the conventional farmers had highest knowledge about "Cautions to be followed after introduction of trichogramma in the crop" (MPS 16.66) and "Acquaintance with term trichocards"

(MPS 12.00), which were ranked first and second, respectively with knowledge gap of 83.34 and 88.00, respectively.

Table 2. Knowledge of organic and conventional farmers regarding different practices of trichocards

(n = 100)

S. No.	Practices	Organic farmers (N = 50)		Knowledge gap (%)	Conventional farmers (N = 50)		Knowledge gap (%)
		MPS	Rank		MPS	Rank	
1.	Acquaintance with term trichocards	30.00	I	70.00	12.00	II	88.00
2.	Recommended quantity of trichogramma egg/ha	16.00	IV	84.00	10.00	III	90.00
3.	Part of plant where trichocards should be attached	80.00	I	20.00	0.00	IV	100.00
4.	Cautions to be followed after introduction of trichogramma in the crop	26.66	III	73.34	16.66	I	83.84
Overall		38.17		61.83	9.67		90.33

MPS = Mean per cent score

It was also observed that least knowledge was possessed by both organic (MPS 16.00) and conventional (MPS 10.00) farmers in "Recommended quantity of trichogramma eggs/ha" with knowledge gap of 84.00 and 90.00, respectively. The conventional farmers had no knowledge regarding "Part of plant where trichocards should be attached".

The overall MPS of organic and conventional farmers was 38.17 and 9.67, respectively which indicates the glaring gap in level of knowledge of different practices of trichocards with 61.83 and 90.33 per cent, respectively in case of organic and conventional farmers, which shows that the knowledge of organic farmers is higher than conventional farmers regarding trichocards which no doubt, was due to the trainings imparted by KVK, Department of Agriculture and Morarka Foundation to organic farmers on organic farming practices. Hence it recommended that the farmers need to be educated and trained about the lacking aspects like recommended quantity of trichogramma eggs/ha.

3. Knowledge of organic and conventional farmers regarding different practices of biofertilizers

As depicted in table 3 the organic farmers (MPS 60.00) as well as conventional farmers (MPS 40.00) possessed highest knowledge regarding "The seed treated with biofertilizers should be dried or not before sowing" and ranked first with knowledge gap of 40.00 and 60.00, respectively, followed by "Biofertilizers known" (MPS 57.14) and ranked second by the organic farmers with knowledge gap of 42.86, whereas the practice "The biofertilizers are environment friendly" (MPS 32.00) was ranked second by the conventional farmers with knowledge gap of 68.00.

The least knowledge possessed by the organic farmers regarding "Sequence of treating seeds with biofertilizer, fungicide and insecticide" and "The biofertilizers are low cost agriculture input playing significant role in improving nutrient availability to the plants" which were jointly placed at last rank with equal MPS 40.00 and knowledge gap of 60.00. Whereas the conventional farmers possessed least knowledge regarding "Sequence of treating seeds with biofertilizer, fungicide and insecticide" (MPS 24.00) and was ranked last with knowledge gap of 76.00.

Table 3. Knowledge of organic and conventional farmers regarding different practices of biofertilizers
(n=100)

S. No.	Practices	Organic farmers (N=50)		Knowledge gap (%)	Conventional farmers (N=50)		Knowledge gap (%)
		MPS	Rank		MPS	Rank	
1.	Biofertilizers known	57.14	II	42.86	28.57	IV	71.43
2.	Sequence of treating seeds with biofertilizer, fungicide and insecticide	40.00	IV	60.00	24.00	VI	76.00
3.	The seed treated with biofertilizers should be dried or not before sowing	60.00	I	40.00	40.00	I	60.00
4.	The biofertilizers reduce the consumption of chemical fertilizers	50.00	III	50.00	30.00	III	70.00
5.	The biofertilizers are environment friendly	50.00	III	50.00	32.00	II	68.00
6.	The biofertilizers are low cost agriculture input playing significant role in improving nutrient availability to the plants	40.00	IV	60.00	26.00	V	74.00
Overall		49.52		50.48	30.10		69.90

MPS = Mean per cent score

CONCLUSION

- Both the organic and conventional farmers had no knowledge about "Recommended quantity of tinopol in HaNPV", "Quantity of egg white in HaNPV" and "Care taken during purchase of biopesticides".
- 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 highest knowledge gap in the aspect of HaNPV, whereas conventional farmers had highest knowledge gap in the aspect of vermicompost.

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