An analytical study on training needs of farmers on organic farming

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ABSTRACT

Organic farming is a popular agriculture system nowadays. Majority of the consumers is preferring organic products in market and price of the organic products is also higher as compared to others. The farmers are doing organic farming in their fields to get higher income, improve their farming and also for production of healthy produce. This study is about training need analysis of farmers on organic farming. The mango farmers of Krishnagiri district, Tamil Nadu were selected for the study. Saturated sampling method was adopted and the sample size was 30. All the farmers preferred their training subject as preparation of Panchakavya and vermicompost and use of bio-insecticides and fungicides. Majority (83.34%) of the famers needed peripatetic trainings followed by institutional trainings (16.66%). Half (50.00%) of the respondents preferred the place of trainings as agriculture office at their own village and majority of them preferred training duration of 3-5 days. Regarding training season, majority (66.68%) of the farmers preferred trainings in summer season and one-third of the famers preferred their trainers as scientists (33.33%). Half the farmers (50.00%) preferred their training inputs as pamphlets.

Keywords: Training need; training; organic farming; need analysis; mango growers

INTRODUCTION

Organic farming is an alternative agriculture system which originated early in the 20th century in reaction to rapidly changing farming practices. Organic farming continues to be developed by various organic agricultural organizations today. It relies on fertilizers of organic origin such as compost manure, green manure and bone meal and places emphasis on techniques such as crop rotation and companion planting. Globally 1.4 per cent of the farmland is organic. A total of 69.8 million hectares were organically managed at the end of 2017 representing a growth of 20 per cent or 11.7 million hectares over 2016, the largest growth ever recorded (Anon 2019).

In the current scenario organic agriculture can be said to be practiced by more than 100 countries in the world. The policy makers are also promoting organic farming for reasons like sustaining rural economy, improving soil health, creating good environment etc. In India organic farming has been in practice for decades.

In Tamil Nadu, Tamil Nadu Agricultural University is a pioneer institution providing training on various departmental aspects to farmers, entrepreneurs, youths, extension officers and other stakeholders. Department of Sustainable and Organic Agriculture is one of the departments in TNAU providing training about organic farming technologies. This department has been offering periodic trainings to farmers and other stakeholders. The TNAU organic agriculture department offered different types of trainings viz one day training on organic agriculture, organic farming training, certificate course on organic farming and training related to production of organic manures, preparation of vermicompost etc. The training need analysis is conducted on organic farming among the farmers.

Training need analysis (TNA) is the process of identifying the gap exiting in terms of knowledge and skill possessed by the farmers on organic farming. TNA is the first stage in the training process and involves a procedure to determine whether training will indeed address the problem which has been identified.

This study attempts to explore the training needs of mango growers on organic farming.

METHODOLOGY

Department of Sustainable Organic Agriculture, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu conducted one-day training programme to 30 Krishnagiri district mango farmers. Accordingly all the 30 mango growers were selected to analyze their training needs on organic mango production. Thus a saturated sample of 30 mango growers was considered for conducting the training need analysis. Ex post facto research design was used. The data required for the study were gathered through an interview schedule. The training need dimensions analyzed included the preferences of farmers on subject matter, type, venue, duration, season and method of training. To find out the preference to subject matter the responses were rated on a three-point continuum with 'most needed', 'needed' and 'not needed'. The scoring procedure followed by Mallika (1995) and Elakkia (2007) was adopted in this study. Regarding the training type, venue, duration and season the responses were rated on two-point continuum with the response of 'yes' and 'no'. Garrett ranking (Garrett 1962) was used to analyze the preferences towards training methods. For other variables the percentage analysis and cumulative frequency method were used.

RESULTS and DISCUSSION

Training is essential for farmers to gain new knowledge and skill. It is important to analyze the profile of the trainees to design an effective training programme. The results about the profile of the respondents are presented in Table 1.

A majority of the famers had high school (60.00%) followed by middle level education (16.66%). Through this educational knowledge the farmers were able to know the farming practices from different sources like magazines, news, radio etc.

As regards the occupational status, 86.67 per cent of the respondents were doing agriculture as primary occupation followed by 13.33 per cent as secondary occupation. Thus it can be inferred that a majority of farmers who did agriculture as primary occupation were interested in attending different trainings to know about new practices in organic farming.

Half (50.00%) of the farmers had more than 10 years experience followed by 5-10 years (33.34%) of experience. The extension agency contact was observed at medium level (56.66%) followed by low (23.33%) and high (20.00%). Regarding market perception 60.00 per cent of the farmers possessed

Table 1. Profile of the respondent famers (n= 30)

Component	Category	Respondents	
		Number	Percentage
Educational status	Illiterate	0	0
	Primary school	3	10.00
	Middle school	5	16.66
	High school	18	60.00
	College	4	13.34
Occupation	Agriculture as primary occupation	26	86.67
	Agriculture as secondary occupation	4	13.33
Experience in farming (years)	Low (<5)	5	16.6
	Medium (5-10)	10	33.34
	High (>10)	15	50.00
Extension agency contact	Low	7	23.33
	Medium	17	56.66
	High	6	20.00
Market perception	Low	0	0
	Medium	18	60.00
	High	12	40.00

Table 2. Field of the training needed by the farmers (n= 30)*

Field	Most needed		Needed		Not needed	
	Number	Percentage	Number	Percentage	Number	Percentage
Preparation of farmyard manure	25	83.34	5	16.66	0	0
Use of biogas slurry	5	16.66	10	33.34	15	50.00
Preparation of vermicompost	30	100.00	0	0	0	0
Use of sugarcane trash compost	5	16.66	12	40.00	13	43.34
Preparation of coir pith compost	12	40.00	13	43.34	5	16.66
Uses of biofertilizers	25	83.34	5	16.66	0	0
Preparation of pressmud	10	33.34	10	33.34	10	33.34
Preparation of bone meal/fishmeal	5	16.66	20	66.68	5	16.66
Use of oilcakes	20	66.68	5	16.66	5	16.66
Use of biopesticides	25	83.34	5	16.66	0	0
(a) Bio-insecticides	30	100.00	0	0	0	0
(b) Bio-herbicides	25	83.34	5	16.66	0	0
(c) Bio-fungicides	30	100.00	0	0	0	0
Use of biocontrol agents	10	33.34	15	16.66	5	16.66
Organic certification procedure	20	66.68	10	33.34	0	0
Organic to inorganic conversion practices	25	83.34	5	16.66	0	0
Preparation of Panchakavya and its usage	30	100.00	0	0	0	0
Organic produce marketing	15	50.00	7	23.33	8	26.67

*Multiple responses obtained

medium followed by high level (40.00%) of market perception. Therefore majority of the farmers were aware about organic market, prices of organic products and preference of organic products among people. At the same time the farmers were adequately having contact with extension agencies to get information about practices, marketing, trainings, schemes etc.

Training need analysis of farmers on organic farming

Training subject: From Table 2 it can be inferred that all the farmers preferred their training subject on preparation of Panchakavya, vermicompost, use of bio-insecticide and fungicide; 83.34 per cent each of the farmers preferred on the preparation of farmyard manure, use of biofertilizer, biopesticides, bioherbicides and conversion practices from organic to inorganic. Majority (66.68%) of the farmers preferred to get trained on the use of oilcakes and organic certification procedure. Half (50.00%) of the farmers needed trainings on marketing of organic produce.

Nowadays people are very conscious about pesticides which cause health issues. So the people preferred organic products in marketing. For this the farmers needed trainings on use of biofertilizers, biopesticides, insecticides etc. By utilizing these trainings the farmers were planning to use organic practices to increase the the marketability of their products.

The subjects that had moderate need for training were use of biogas slurry (16.66%), sugarcane trash (16.66%), fishmeal (16.66%), pressmud (33.34%) and preparation of coir pith compost (40.00%).

Training type and place of trainings: Table 3 reveals that majority (83.34%) of the farmers preferred to undergo peripatetic type of trainings followed by institutional trainings (16.00%). The reason might be that farmers mostly needed lively trainings than the institutional trainings.

Half (50.00%) of the respondents preferred the place of trainings as agriculture office in their own villages followed by farmer's field (40.00%) and agricultural college (10.00%). The farmers could have transportation problem or have work at their home. Therefore trainings may be organized in the villages itself as far as possible.

Table 3. Training type and place preferred by the respondents (n= 30)

Aspect	Respondents	
	Number	Percentage
Type of trainings		
Institutional trainings	5	16.66
Peripatetic trainings	25	83.34
Place of trainings		
Panchayat office	0	0
Agriculture office at their own village	15	50.00
Agriculture college (TNAU)	3	10.00
Farmer's field	12	40.00

Table 4. Duration and season of trainings preferred by the respondents (n= 30)

Aspect	Respondents	
	Number	Percentage
Duration		
Short duration (1-2 days)	12	40.00
Medium duration (3-5 days)	18	60.00
Long duration (1 week, 1 month)	0	0
Season		
Kharif	0	0
Rabi	10	33.32
Summer	20	66.68
Winter	0	0

Table 5. Choice of training methods and trainers of the farmers (n= 30)

Aspect	Mean score	Garrett ranking
Method of training		
Lectures alone	2.40	VIII
Lectures + AV aids (OHP, LCD)	6.40	II
Discussion	2.60	VII
Demonstrations/hands on experience	6.83	I
Field visits	6.23	III
Exhibitions	2.80	V
Study tours	2.63	VI
Video lessons	6.10	IV
Trainers		
Extension officers	2 (6.66)	
Scientists	10 (33.33)	
Progressive farmers	10 (33.33)	
University staff	8 (26.68)	

Figures in parentheses are per cent values

Training duration and training season: From Table 4 it can be observed that majority of the farmers (60.00%) preferred 3-5 days followed by 1-2 days trainings (40.00%). It shows that the farmers were of the view that 1-2 days trainings were of no use to them and they could not spare time for long duration trainings hence they preferred trainings of 3-5 days. At the same time majority (66.68%) of the farmers preferred summer followed by rabi season (33.32%) to undergo trainings.

Training methods and trainers: the respondent farmers preferred demonstration followed by lecture + AV aids, field visit and video lessons. Farmers least preferred on exhibitions, study tours and lectures alone. From this finding it was noticed that farmers preferred 'learning by doing' (Table 5).

One-third of the famers (33.33%) each preferred scientists and progressive farmers followed by university staff (26.68%) as their trainers. The scientists who had been developing or introducing a technology related to organic farming, the farmers had more confidence in them.

Their second preference was progressive farmers who had already achieved success in organic farming practices. The farmers were ready to discuss with progressive farmers and wanted to adopt organic farming practices as followed by the progressive farmers.

The farmers were interested in the trainings conducted by both scientists and progressive farmers. The practices were clearly explained and demonstrated by the scientists. After that the famers needed to visit the progressive farmers in their fields to see the actual performance of practices so that they could replicate these practices on their own farms.

Table 6. Preference of respondents for training inputs (n= 30)

Input	Respondents	
	Number	Percentage
Leaflets	10	33.34
Pamphlets	15	50.00
CDs	0	0
Folders	5	16.66

Training inputs

From Table 6 it can be inferred that half of the farmers preferred their training inputs such as pamphlets (50.00%) followed by leaflets (33.34%) and folders (16.66%). Majority of famers needed input to clarify their further doubts and queries in procedure. It gave extra support to farmers to know about the technology before and also after training.

CONCLUSION

This study has identified the training dimensions to conduct training programmes effectively. The needs of trainings vary according to subject, new inventions, practices, varieties etc. Hence in order to conduct an effective training programme, these needs have to be incorporated. A trainee is the major focus in any training programme and training improves the capability, provides enthusiasm and exposure to innovation towards farming etc. The study revealed that a majority of the farmers preferred peripatetic type of training organized in their own villages of duration of 3-5 days during summer by handling the session through demonstrations and lectures. The trainees also preferred to get trained by the scientists/progressive farmers. They also preferred to get the contents of the training given in the form of pamphlets/leaf folders.

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