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Impact of Training Programme on Adoption of Organic Farming Technology in Central Zone

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ABSTRACT

National Centre of Organic Farming, Jabalpur is organizing various training programmes on organic farming since last 15 years. The participants in such programmes are from state government departments viz., Department of Agriculture, Horticulture, Krishi Vigyan Kendras and Non government Organizations (NGO) etc. During the year 2011-2013, more than 300 trainees have been trained by this institute. To study the impact of these training programmes the data regarding gain in knowledge and adoption level about organic farming technology before and after training were recorded. The finding of the study revealed that extension officers had gained knowledge about organic farming technology ranging from 97.5 per cent for land preparation to 45.0 per cent for seed treatment after acquiring training. Likewise, only 1.2 per cent of extension officers knew about the soil treatment with *punchgavya/jeevamrut*, crop rotation (15.0%), plant protection (45.0%) before training whereas after training they adopted seed treatment with *puncvhgavya* (45.0%) crop rotation (60%) and plant protection by (95.0%). The study also revealed that they were adopting the organic farming technologies ranging from 20.0 per cent to 48.0 per cent for storage and marketing after attending the training programme.

Key Words:-Training, Organic farming technology, Impact, Adoption

INTRODUCTION

The success of any training programme depends on periodic appraisal so that required changes can be made to improve the efficiency and effectiveness of the programmes. The concept of training programmes on organic farming through National Centre of Organic Farming (NCOF)/Regional Centre of Organic Farming (RCOF) grew well due to greater demand for promotion of organic farming among field functionaries. All extension officers are directly or indirectly responsible for promotion of any technology that is beneficial for the farming community. These training programmes were framed to impart latest knowledge to the extension officers/ agricultural students through work experiences by applying the principles of "Teaching by doing and "Learning by doing". Organic farming is being adopted in more than 100 countries of the world. Adoption of organic farming is gradually increasing and it is practiced in nearly 100 countries (The Hindu , 2014). Due to ill effect of various chemicals and pesticides utilized in agriculture, there is change in mindset of not only producers but of consumers also. Awakened consumers are now purchasing the organic foods at premium prices. The organic farming technology is gaining momentum across the world. India has also developed National Standards under National Programme for Organic Production (NPOP) programme. The NCOF and its six RCOF under Ministry of Agriculture are promoting organic farming across the country and providing various kind of assistance to organic entrepreneurs, extension officers and farmers. Keeping in view of an effective extension approach of trainings for dissemination of technology, it was thought to assess the impact of training programmes organized by RCOF, Jabalpur with the specific objective to find out the extent of knowledge and adoption of organic farming technology by the RCOF trainees.

MATERIALS AND METHODS

Regional Centre of Organic Farming, Jabalpur, is promoting organic farming as facilitator across the central part of India and providing various trainings with a view to ensure healthy food stuffs

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and attractive source of rural income generation. For the selection of respondents, a list of RCOF, Jabalpur during preceding three years (2011-12 to 2013-14) was prepared. Out of 360 participants, 80 extension officers were randomly selected from RCOF Jabalpur training programmes. A knowledge test was developed to study the knowledge level of trainees before and after the training programme. Knowledge test comprised the statements regarding land preparation, seed treatment, organic insect pest and disease control measures, organic fertilizers and marketing etc. Total twelve practices were selected to find out the level of knowledge and extent of adoption of organic farming technology. The data were collected through personal discussions during training programmes and after training programmes with the help of well designed interview schedule to study the gain in knowledge and extent of adoption. The gathered data were processed tabulated, classified and analyzed in terms of percentage.

RESULTS AND DISCUSSION

It was assumed that the knowledge of extension officers depend upon the extent of exposure given to them about the technology. The data in relation to level of knowledge before and after training were recorded on the basis of different questions asked by the training coordinator before and after training with reference to different technological parameters of organic farming viz., land preparation, seed treatment, crop rotation, storage and market development etc. Knowledge level of the respondents were studied in relation to 12 practices of the organic farming technology, the frequency and percentage of respondents having correct knowledge before and after trainings were calculated aspect-wise and are presented in Table 1. The data given in Table 1 depicts that the beneficiary extension officers of the training programmes gained knowledge about all the aspects of organic farming. Maximum knowledge gain was in case of seed treatment with culture/ cow urine where 73 participants (91.3 %) had correct knowledge after completion of training while before training only five (6.3 %) of the participants had correct knowledge. Soil treatment with *punchgavya/jeevamrut* was the aspect about which none of the participant had correct knowledge before the training while after training 90.0 per cent of the respondents had correct knowledge. More than eighty percent of the respondents had correct knowledge about 8 aspects of organic farming technology after the trainings. More than 80 per cent (81.3 %) respondents gained knowledge about organic inputs (vermi-compost, city compost , rock phosphate etc) followed by knowledge of certification (70%) green manuring (57.5%) weed management (52.5%), multi-cropping system (55.0 %). The finding of the study also revealed that they had gained knowledge ranging from 22.5 per cent in case of land preparation to 91.3 per cent in case of seed treatment after training

Table 1. Impact of RCOF Jabalpur training programme about organic farming technology on gain in knowledge of participants. (n = 80)

Sr. No.	Technology	Before Training	After Training	Gain in knowledge
1.	Land Preparation	62 (77.5)	80(100.0)	18 (22.5)
2.	Soil treatment with *punchgavya/jeevamrut*	00 (00.0)	72 (90.0)	72 (90.0)
3.	Seed treatment with culture / cow urine	05 (6.2)	78 (97.5)	73 (91.3)
4.	Multi cropping system	25 (31.2)	69 (86.2)	44 (55.0)
5.	Crop rotation	32 (40.0)	73 (91.2)	41 (51.2)
6.	Use of Organic Inputs (Vermi-compost, city compost, Rock phosphate etc)	11 (13.7)	76 (95 .0)	65 (81.3)
7.	Green Manuring	32 (40.0)	78 (97.5)	46 (57.5)
8.	Nutrient Management	14 (17.5)	48 (60.0)	34 (42.5)
9.	Weed Management	18 (22.5)	60 (75 .0)	42 (52.5)
10.	Plant Protection Measures	16 (20.0)	47 (58.7)	31 (38.7)
11.	Certification System	21 (26.2)	77 (96.2)	56 (70.0)
12.	Storage & Marketing	13 (16.2)	36 (45 .0)	23 (28.8)

Figure in parentheses indicated percentage

Table 2. Extent of adoption among of organic farming technology among trainees.

(n = 80)

Sr. No.	Technology	Before Training	After Training	Extent of adoption
1.	Land Preparation	60 (75.0)	78 (97.5)	18 (21.5)
2.	Soil treatment with *jeevamruth*	10 (12.5)	36 (45.0)	26 (32.5)
3	Seed treatment with culture / cow urine	05 (6.2)	40 (50.0)	35 (43.8)
4.	Multi-cropping system	20 (25.0)	60 (75.0)	40 (50.0)
5.	Crop rotation	12 (15 .0)	48 (60.0)	36 (45.0)
6.	Use of Organic Inputs (Vermi-compost)	25 (31.2)	65 (81.2)	40 (50.0)
7.	Green Manuring	23 (28.7)	70 (87.5)	47 (58.8)
8.	Nutrient Management	20 (25 .0)	60 (75 .0)	40 (50.0)
9.	Weed Management	25 (31.2)	72 (90.0)	47 (58.8)
10.	Plant Protection	36 (45.0)	76 (95.0)	40 (50.0)
11.	Certification	35 (43.7)	50 (62.5)	15 (18.7)
12.	Storage & Marketing	16 (20.0)	48 (60.0)	32 (40.0)

Figure in parentheses indicated percentage

programnmes. These finding were similar with Meena and Gupta (2013) who reported that the knowledge levels were found to be increased for land preparation, soil treatment, seed treatment, high yielding variety, seed rate and spacing, plant protection and storage and marketing of garlic production technology after attending the training programme by KVK(s). This may be due to the fact that trainees were convinced through training programme about importance of organic farming technology by RCOF, Jabalpur which was designed to import latest knowledge through teaching and practical demonstrations in the laboratories and through work experiences etc.

Extent of adoption

As per the data presented in Table 2, about 15 per cent of the respondents had adopted organic practice of crop rotation, 10 participants (12.5%) had adopted organic practice of soil treatment while only five participants (6.2%) had adopted the practice of seed treatment with culture and cow urine. After attending training programme 43.8 per cent of the respondents adopted seed treatment and soil treatment practice followed by crop rotation which was adopted by 45.0 per cent of the respondents. Seventy five per cent of the respondents were already practicing land preparation but after attending training programmes 97.5 per cent of the respondents practices land preparation practices recommended in training programmes, thus there was adoption extent to the tune of 21.5 per cent. Extent of adoption in case of plant protection practices was 50.0 per cent. Regarding use of organic inputs, about one third (31.2 %) of the participants were using organic inputs before attending trainings, but after training programmes more than eighty per cent (81.2 %) started using organic inputs in their concerned area.

Maximum extent of adoption in terms of number of trainees was in case of green manuring (58.8%) and weed management (58.8%) practices. One fourth (25.0%) of the participants were following multi-cropping system and nutrient management before attending training programmes but after the training programmers 75.0 per cent of the trainees started following these practices. Earlier only less than fifty per cent (43.7 %) of the participants were used to follow the certification system but after the training 62.5 percent trainees adopted the procedure of certification. Similarly, storage and market their organic products major problem due to lack of linkages with organic certification agencies and organic entrepreneurs/ exporters etc but after attending training programmes 60.0 percent after trainees adopted proper marketing system.

The range of extent of adoption of organic farming technology among extension officers was from 18.7 per cent for certification to 58.8 per cent for weed management and green manuring. This might be due to the fact that increase in knowledge, skills and confidence level of extension officers through training programme resulted in adoption of different aspect organic farming practices viz., land preparation, soil