

## Original Research Article

# Effect of Innovative Training on Knowledge Level and Adoption of Different Organic Manures Production Technology in Janjgir – Champa District (C.G.)

Khema Das Mahant<sup>1\*</sup>, Jayant Kumar Sahu<sup>2</sup>, Shashi Kant Yadav<sup>3</sup> and Manoj Kumar Sahu<sup>4</sup>

<sup>1</sup>(Soil Science) ICAR, KVK Janjgir –Champa (C.G.), India

<sup>2</sup>(Plant Pathology) ICAR, KVK Janjgir – Champa (C.G.), India

<sup>3</sup>(Soil Science) ICAR, KVK Azamgarh (U.P.), India

<sup>4</sup>(Plant Pathology) ICAR, KVK Janjgir – Champa (C.G.), India

*\*Corresponding author*

## ABSTRACT

The relevance and need for an eco-friendly alternative farming system arose from the ill effect of the chemical farming practices adopted worldwide during the second half of the last century. The Organic agriculture sustains the health of soils, ecosystem and people. Organic farming is considered to be the best among all of them because of its scientific approach and wider acceptance all over the world. The aim of present study was to know the effect of KVK innovative training cum demonstrative approaches on knowledge level and adoption of different organic manures production technology by rural farmer. The present study was carried out at Baheradih Village under KVK, Janjgir–Champa IGKV Raipur (C.G.) among 150 beneficiary and non-beneficiary farmers were selected for the study. The present investigation was based on the experimental design of social research considering beneficiary as an experimental group and non-beneficiary as a control group. The findings showed that majority of trained farmers had high level of knowledge with respect to making different organic manures like FYM, Vermicompost, Vermiwash, Trichoderma based Vermicompost, Green Manures, Nadeb compost, CPP, Jivamrit, Biogas Slurry, than the untrained participants. It was concluded that there is significant role of KVK in promotion of innovative organic manures production technology and demonstration to ensure the adoption process and entrepreneur development as a source of income for promotion of organic farming in the district Janjgir–Champa towards sustainability of agro-ecosystem.

### Keywords

Trainings,  
knowledge level,  
organic farming,  
adoption level,  
organic manures

## Introduction

Every individual reacts differently to different technologies indifferent situation. Some people adopt the new technology while other resists it. Adoption depends on the fact that what is once perception regarding technology and attitude or opinion towards it. It is obvious that adopting organic farming not only to increase the farmer income but also to protect

environmental pollution by avoiding the toxic chemical and fertilizer. In the connection with the study training is the process of acquiring specific skill to perform a job better and changing the attitude of on individual for improvement. Along with the changing situation, the people also need to acquire new knowledge, skill and attitude to keep up with the changing environment.

Rural youth farmers spend much of their time in unpaid and work. Therefore training has been considered as the most important for development an individual and improving his work efficiency. The principle of organic cultivation is attracting farmers' world over due to its various advantages over modern agricultural practices. Sustaining crop production, productivity without damaging the resources and environment are big challenge and this problem can be overcome by several ways but the first and foremost way is organic farming. Organic farming system in India is not new and is being followed from ancient time. It is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (biofertilizers) to release nutrients to crops for increased sustainable production in an eco-friendly pollution free environment. Out of the major work of KVK is to provide and improve the level of knowledge of the trainees about the improved the farm practise (Gupta and Verma 2013). Analyzing the technology gap and innovated demonstrations were conducted for rural farmer youth and school drop- out both on and off campus. Mainly emphasis was given on production of different organic manures suited for Janjgir–Champa conditions. KVK Janjgir-Champa conducted training with the aim to make them competent in performing various activities related to production of organic manure. Approximately 150 farmer were benefited from the training programme from Baheradih village which is KKK adopted village. Financial assistance was rendered by Nabard, Mission hospital Champ, Life manrega and ATMA Janjgir – Champa (C.G.) in conducting many of these programme. Hence the present study was

designed to know the effect of innovative training and demonstrative approach on knowledge and adoption for organic manures production technology.

### **Materials and Methods**

The study was conducted in Janjgir-Champa of Chhattisgarh state where the krishi vigyan Kendra is situated. The present investigation was based on the experimental design of social research considering beneficial as experimental group. The investigation is confined under Life manrega and ATMA funded during the year 2016 – 2017 for the selection of respondent, 100 trainers (beneficiary for knowledge level adoption level were selection randomly from the list of beneficiaries who participated in the training and innovated demonstration on production of different organic manures. After selecting beneficiaries 50 no. of non-beneficiary were also selected randomly as a control group to measure knowledge and adoption level. This in all 150 respondents constituted the sample of this study. The role of KVK was assessed in term of gain in knowledge and adoption by the beneficiary as a result of innovative training and demonstrated approach imparted to them compared to non – beneficiary. The trainings attended by a farmer sharpen his knowledge, skills and comprehension abilities to acquire, process understand and apply the information in his own field.

The continuous guidance provided by the KVK Janjgir-Champa to supports them to examine and adopt the new technologies in the farming. A farmer who is having more competency to choose the best alternative among the given choices helps him to adopt innovative technologies in the field. Hence the variables extension contact, trainings received and decision making behaviour were positively and significantly related

with the extent of adoption and Knowledge for organic manures production technology.

Role was measured in farms of impact index with the help of following formula.

$$\text{Impact index} = (\text{MIK of beneficiary} - \text{MIK of non-beneficiary}) \times (\text{MIA of beneficiary} - \text{MIA Non beneficiary})/2$$

MIK = mean index of knowledge

MIA = -----“-----index of adoption

$$\text{Impact (\%)} \text{ change} = \frac{\text{Sum of diff of index of knowledge adoption}}{2}$$

**Results and Discussion**

This study attempts to bring together knowledge and adoption of organic manures production by farmers in the light of recent developments in organic farming. The after effects of green revolution have encouraged the farmers to take up organic farming. Over all it can be concluded that, good adoption of organic farming practices among respondents but it can be improved to very

high extent of Knowledge and adoption this will definitely help in agriculture production. Knowledge about different organic manures production techniques and their adoption level was measured for the beneficiary and non-beneficiary respondents using a group discussion and short type exam

The data (Table 1) revealed that all the beneficiary farmer had knowledge about different organic manures production for vermicompost, vermiwash, Trichodrema based Vermicompost and biogas slurry, whereas responding knowledge level for the same product for non-beneficiary were 23, 24, 35 and 16 percent respectively.

In case of adoption, percent beneficiary farmers had adopted FYM, vermicompost, and Trichodrema based Vermicompost where as in case of FYM (38%) this was followed by FYM (92%) Green manures (88%) Nadep compost (85%) for beneficiary the least adoption product was Nadep compost (38%).In case of non – beneficiary CPP (4%) and vermiwash (6%) were least adopted.

**Table.1** Knowledge and adoption of different organic manures production technology by the respondents

S.N.	Particular	Knowledge		Adoption	
		Beneficiary (%)	Non Ben. (%)	Beneficiary (%)	Non Ben (%)
1	FYM	92	38	100	38
2	Vermicompost	100	23	100	16
3	Nadep compost	85	25	38	8
4	Vermiwash	100	24	46	6
5	Trichodrema based Vermicompost	100	35	100	9
6	Jivaamrit	84	20	56	31
7	Green manures	88	27	61	11
8	Biogas slurry	100	16	52	12
9	CPP	75	24	56	04

**Table.2** Effect of training in terms of knowledge and adoption

Sr. No.	Particular	Beneficiary	Non-Beneficiary	Difference
1	Mean knowledge index	92.5	25.7	65.8
2	Mean adoption index	67.6	15	52.6
	Total	160.1	40.7	118.4
3	Impact (per cent) = $\frac{\text{sum of difference of index}}{2}$ = $\frac{118.4}{2} = 59.2\%$			

Photograph: Different activities during training at KVK farm and farmers field



1. Preparing raw Material for Vermicomposting



2. Mixing of Cowdung for Filing at Vermi pit



3. Filling of raw material at pit



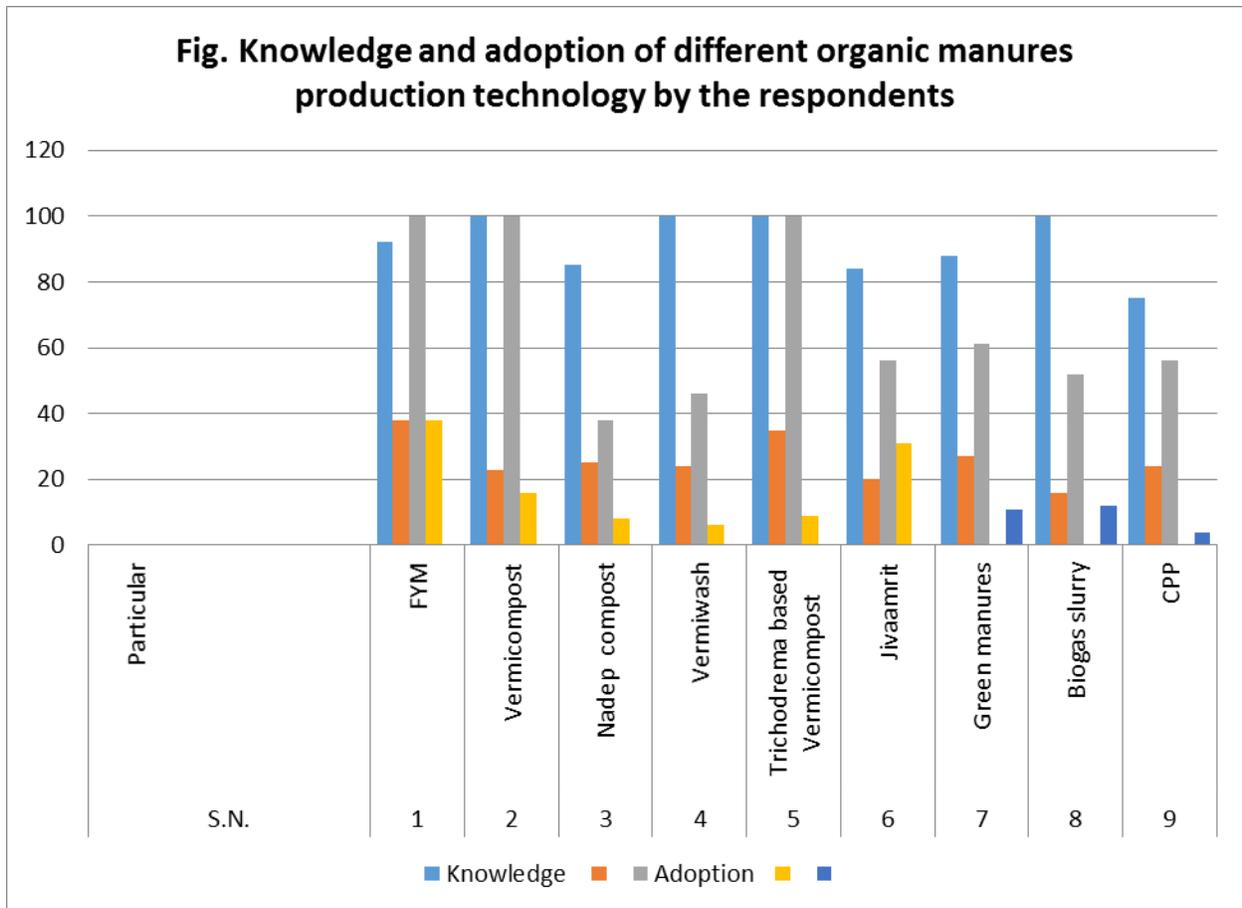
4. Vermiwash Production



5. Trichodrema based Vermicomposting



6. Organic Formers Field Visit at Baheradih



The effect of KVK training and demonstration as whole was computed as the sum total of the differences of both the indices i.e. mean index of knowledge and adoption divided by two. The data thus adoption have been presented in Table no.02

It was evident (Table 2) that There was an effect of KVK training and demonstrative approaches up to 59.2% over the existing knowledge and adoption by beneficiary which was found to be substantial over the non – beneficiary farmers. Therefore it could be stated that there was a remarkable effect of training cum demonstrative approach on those respondents who attended the training programme and participated in demonstrative conducted by KVK Janjgir – Champa in terms of the knowledge about organic manures production and its adoption by them as compared to their counterparts

i.e. The respondents who did not participate in the training programme and demonstrations.

The changing agro-ecosystem environment has put up a question mark before us on agricultural crop production and productivity without damaging the resources and environment. In the face of these agricultural and food production challenges, organic farming provides viable methods of maintaining and building healthy soil. Organic farming rely on crop rotations, crop residues, animal manures, legumes, green manures, off farm organic wastes, and aspects of biological pest control to maintain soil productivity and tilt, to support plant nutrient and to control insects, weeds and other pests. FYM, Vermicompost and Trichoderma based Vermicompost was found to high extent of adoption by the

beneficiary. As for as Knowledge was concerned Vermicompost, Vermiwash, Trichoderma Based Vermicompost and Biogas slurry was found to be high extent by the beneficiary.

Hence it was concluded that there is significant role of KVK in promotion of different organic manure production and ensuring their adoption it was also noted that there was substantial effect of training cum demonstrative approaches over the beneficiary respondents than the non – beneficiary respondents.

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