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Farmer's perception towards training programme of Krishi Vigyan Kendra on adoption of organic farming practices in Katihar, Bihar

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Abstract

The environment – friendly agriculture has got to be discussed in the backdrop of the environmental burden of the chemical input-intensive agricultural production practices, followed in this country with the advent of the First Green Revolution. Agrochemicals which are produced from fossil fuel and are not renewable are diminishing in availability. It may also cost heavily on our foreign exchange in future. It is in this context that the scope and potential of organic agriculture has got to be discussed. Basically, the purposes of organic farming are for recycling wastes of plant and animal origin in order to return nutrients to the land. The KVK is designed to impart need based and skill oriented training to the practicing farmers, rural youth and extension functionaries. The study was conducted in five adopted villages of KVK with a structured interview schedule with 150 trained farmers of Katihar district where the KVK run by Bihar agricultural university, Sabour, Bhagalpur is carrying out its activities. Only 4.67 percent of the respondents had high perception in organic farming practices before participation of training and after the participation of training this figure increased up to the 28.00 percent. Constraints perceived by farmers while during adoption of organic farming practices difficult methods of preparation of organic inputs was major problem as reported by the farmers (73.33%) and was ranked first, high cost of inputs was ranked second with 69.67 percent.

Keywords: Training, impact, adoption, knowledge, organic farming practices

Introduction

The eco-friendly agriculture has got to be discussed in the backdrop of the environmental burden of the chemical input-intensive agricultural production practices, followed in this country with the advent of the first Green Revolution. Agrochemicals which are produced from fossil fuel and are not renewable are diminishing in availability. It may also cost heavily on our foreign exchange in future. It is in this context that the scope and potential of organic agriculture has got to be discussed. FAO defines "Organic farming as holistic food production management system, which promotes and enhances agro- ecosystem health, including biodiversity, biological cycles and soil biological activity. It emphasizes the use of management practices in preference to the use of off – farm inputs, taking into account that regional conditions require locally adapted system. This is accomplished by using, where possible, agronomic, biological and mechanical methods, as opposed to using synthetic materials, to fulfill any specific function within the system". Organic farming is not only a specific agricultural production system, it is also a systemic and encompassing approach to sustainable livelihoods in general, where due account is given to relevant factors to influence for sustainable development and vulnerability, be this on physical, economic, or Socio-cultural levels (Eyhorn, 2007) [16]. Organic farming has a long tradition as a farming system and it has been adapted for many climate zones and local conditions; as a result, much and detailed situation – specific information on organic farming is available.

Basically, the purposes of organic farming are for recycling wastes of plant and animal origin in order to return nutrients to the land, thus minimizing the use of non-renewable resources; reduce global warming by lowering emission of greenhouse gases hence temperature rise;

enhances biological diversity within the whole system and increase soil biological activity minimizes indiscriminate use of pesticides affects on human and animal health, biodiversity of wildlife etc. & cause of environmental pollution; maintains long – term soil fertility and overcome micronutrient deficiency; reduce energy loss of both animal and machines, and risk of crop failure; promote the healthy use of soil, water, and air, as well as minimize all forms of gaseous pollution that may result from agricultural practices; highly adaptive to climatic change due to application of traditional skills, farmers knowledge, soil fertility building techniques and a high degree of diversity.

Krishi Vigyan Kendra work with the farmers and farm women for increase agricultural production. For that KVK organize the different types of training programme for change of knowledge, attitude and behavior of farmers and farm women and motivate the adoption of new appropriate technology among the farmers. The requirement of maintaining relevance and high degree of responsiveness necessitate that KVK must have a continuous flow of new technology from institutions of Agriculture research mainly agricultural universities and ICAR Institutes.

To find out the success of any programme a periodic appraisal and evaluation of what is being done is essential, so that suitable changes can be made to make the programme more effective. This creates a need to do some serious evaluation of the Impact of training programme on adoption of organic farming practices organized by KVK, Katihar attached to

Bihar Agricultural University Sabour, Bhagalpur. Keeping these facts in mind, the present studies were conducted with the following objectives:

1. To assess the perception of organic farming practices training programmes among the trained farmers from Krishi Vigyan Kendra.
2. To study the constraints perceived by the farmers during adoption of organic farming practices.

Materials and Methods

The investigation is an attempt to study the Impact of training programme on adoption of organic farming practices. The study was conducted in Katihar district of Bihar state during 2015-16. A list of trainees was obtained from KVK Katihar who were imparted training on organic farming practices. Out of sixteen blocks of Katihar district, highest numbers of trainees were observed in Korha, Mansahi & Katihar blocks. From each block final selection of villages were made based on availability of farmers trained from KVK, Katihar. The selected villages were Musapur from Korha block; Sirsa from Katihar block; Bhermara, Fulhara & Lahsa from Mansahi block were purposively selected due to adopted villages by KVK, Katihar. A list of trained farmers was prepared and a total of 150 trained farmers were selected as respondents for the study. The collected data were analyzed with help of suitable statistical test like percentage.

Results and Discussion

Table 1: Extent of perception of training programme among the trained farmers about organic farming practices

S. No.	Organic farming practices	Extent of perception (n=150)					
		Low	(%)	Medium	(%)	High	(%)
1	Application of FYM	9	6.00	59	39.33	82	54.67
2	Green Mannuring	42	28.00	46	30.67	62	41.33
3	Vermicomposting	38	25.33	69	46.00	43	28.67
4	Azolla	40	26.67	68	45.33	42	28.00
5	Blue Green algae	29	19.33	77	51.33	44	29.33
6	Use of Neem oil	40	26.67	78	52.00	32	21.33
7	Use of cow urine	28	18.67	74	49.33	48	32.00
8	Use of Azotobactor & PSB	39	26.00	76	50.67	35	23.33

The data presented in table 1 revealed that in case of application of FYM majority of the trained farmers (54.67%) had high perception in application of FYM followed by 39.33 percent of trained farmers had medium and only 6.00 percent trained farmers had low perception with application of FYM .In terms of green manure, most of the trained farmers (41.33%) had high perception about green manure, followed by 30.67 percent of trained farmers had medium and 28.00 percent trained farmers had low perception about green manure. Regarding vermi-composting majority of the trained farmers (46.00%) had medium perception about vermi-composting, followed by 43.00 percent of trained farmers had high and 25.33 percent trained farmers had low perception about vermicomposting. In case of application of Azolla majority of the trained farmers (45.33%) had medium perception about Azolla, followed by 28.00 percent of trained farmers had high and 26.67percent trained farmers had low perception about Azolla. In case of blue green algae, majority of the trained farmers (51.33%) had medium perception about blue green algae followed by 44 percent of trained farmers had high and 19.33 percent trained farmers had low perception about blue green algae. Regarding uses of neem oil, majority of the trained farmers (52.00%) had medium perception about use of neem oil, followed by 32.00 percent

of trained farmers had high and 26.67 percent trained farmers had high perception about use of neem oil. With Regards to use of Cow urine, majority of the trained farmers (49.33%) had medium perception about use of Cow urine, followed by 32.00 percent of trained farmers had high and 18.67 percent trained farmers had low perception about use of Cow urine. In case of use of Azotobactor & PSB, majority of the trained farmers (50.67%) had medium perception about use of Azotobactor & PSB, followed by 35.00 percent of trained farmers had high and 26.00 percent trained farmers had low perception about use of Azotobactor & PSB.

Table 2: Distribution of respondents according to their perception in relation to organic farming practices before and after participating in training programme

S. No.	Categories	Respondents (n=150)			
		Before		After	
		No.	%	No.	%
1	Low	84	56.00	47	31.33
2	Medium	59	39.33	61	40.67
3	High	7	4.67	42	28.00
4	Total	150	100.00	150	100.00

It is clear from the data presented in table 2 that in case of before participation in training programme, most of the beneficiaries (56.00%) belonged to low perception category in relation to organic farming, followed by 39.33 percent of them medium perception category in relation to organic farming and only 4.67 percent of them high perception category in relation to organic farming. Whereas, after attending the training programme, the total respondents (40.67%) belonged to medium category of perception about organic farming practices, followed by low category (31.33%) and high category (28.00%) of the respondents for perception in relation to organic farming practices. Thus, it may be referred that after participation of training programme, most of the respondents had medium to high perception about organic farming. This finding is in conformity with the finding of Saxena & Singh (2000) [13].

Table 3: Distribution of respondents according to various constraints faced by them in using organic farming practice

S. No.	Constraints	Beneficiaries		Rank
		No.	(%)	
1	Difficult method of preparation of organic inputs	110	73.33	I
2	High cost of inputs	103	69.67	II
3	Poor credit facilities	96	66.00	III
4	Lack of inputs & Raw materials	88	61.67	IV
5	Climatic Conditions	79	56.67	V
6	Lack of training	66	49.00	VI
7	Poor financial conditions	61	46.67	VII
8	Non availability of Extension literature	53	42.33	VIII

Constraints perceived by farmers while during adoption of organic farming practices: The data presented in table 3 indicates that in the study area, difficult method of preparation of organic inputs was major problem as experience by the farmers (73.33%) and was ranked first, High cost of inputs reported by 69.67 percent respondents and ranked second. Poor credit facilities was reported by 66.00 percent respondents and ranked third. Lack of inputs and Raw materials was reported by 88 percent respondents and ranked fourth. Climatic conditions ranked by respondents on fifth with 56.67 percent. The problem was justified by farmers that the 49.00 percent of the respondents reported lack of proper training. Respondents also reported about his poor financial conditions related for the adoption of organic farming practices with 46.67 percent and ranked seventh. The other constraint in was as non availability of extension literature (42.33%) ranked eighth.

Table 4: Relationship between attributes of trained farmers and their perception about organic farming practices

S. No	Particulars	Correlation Coefficient
1	Age	0.028 *
2	Education	0.521**
3	Caste	0.075*
4	Size of Family	0.029*
5	Social participation	0.075*
6	Size of land holding	0.314**
7	Credit availability	0.298**
8	Annual income	0.521**
9	Source of information	0.278**
10	Contact with extension personnel	0.412**
11	Innovativeness	0.245**
12	Knowledge about organic farming	0.473**

* Non Significant ** Significant at p=0.005 level

The correlation coefficient of attributes of trained farmers with their perception about organic farming practices is

furnished in table 4. It can be observed from the table that correlation coefficients in respect of education (0.521), size of land holding (0.314), credit availability (0.298), annual income (0.521), Annual income (0.511), Source of information (0.278), Contact with extension personnel (0.412), innovativeness (0.245) and knowledge about organic farming (0.473) were found positive and significant relationship with perception of trained farmers about organic farming practices at 5% level of probability, while age (0.028), caste (0.075), size of family (0.029), social participation (0.075) were found no significant relationship with the perception of trained farmers about organic farming practices. This finding supports the view expressed by Badodiya *et al.* (2009) [4] and Borkar *et al.* (2000) [7].

Conclusion

This study concluded that only 4.67 percent of the respondents had high perception in organic farming before participation of training and after the participation of training programme this figure is increased up to 28.00 percent. In this study Difficult method of preparation of organic inputs & high cost of inputs were major problem experienced by the farmers during adoption of organic farming practices.

References

1. Abebaw D, Belay K. Factors influencing adoption of high yielding maize varieties in Southwestern Ethiopia: An application of logit. *Journal of International Agriculture*. 2001;40(2):149-167.
2. Ahire IM, Shenoy S, Reddy CV. A study on adoption level of growers of Krishna district of Andhra Pradesh. *Journal of Research Angra*. 2007;35(1):73-76.
3. Ahmed T, Hasan S, Haneef R. Entrepreneurial characteristics of the Agripreneurs under the scheme of Agriclincs & Agri-business Centres. *Journal of Community Mobilization and Sustainable Development*. 2011;6(2):145-149.
4. Badodiya SK, Daipuria OP, Jaulkar M, Dhakad U. Management of eco-friendly practices by winter vegetable growers. *National Seminar on Organic Farming, RVSKVV, Gwalior; c2009*.
5. Bala B, Sharma SD, Sharma RK. Knowledge and adoption level of improved technology among rural women owing to extension programs. *Agricultural Economics Research Review*. 2006;19:301-310.
6. Binkadakatti JS. Impact of Krishi Vigyana Kendra trainings on use of bio-fertilizers and bio-pesticides by tur farmers in Gulbarga district. M.Sc. (Agri.) Thesis, Univ. Agric. Sci., Dharwad, Karnataka (India); c2008.
7. Borkar MM, Chothe GD, Lanjewar AD. Characteristics of farmers influencing their knowledge about the use of bio-fertilizers. *Maharashtra Journal of Extension Education*. 2000;19:59-63.
8. Borua S, Brahma AK. A study on the knowledge level and extent of adoption of selected technology by rural youth trained in KVKs of AAU in Assam. *Journal of Academia and Industrial Research*. 2012;1(7):374-378.
9. Cavane E. Farmer's attitude and adoption of improved maize varieties and chemical fertilizers in Mozambique. *Indian Research Journal of Extension Education*. 2011;11(1):1-6.
10. Dubey AK, Srivastava JP. Impact of KVK Training Programme on knowledge and adoption of Brinjal Crop technologies in Allahabad District. *Indian Journal of Extension Education*. 2005;5(2 & 3):130-132.

11. Kharatmol SN. Impact of trainings conducted on vermicompost by Krishi Vigyan Kendra, Bijapur. M. Sc. (Agri.) Thesis, Univ. Agric. Sci., Dharwad, Karnataka (India); c2006.
12. Neupane RP, Sharma KR, Thapa GB. Adoption of agroforestry in the hills of Nepal: a logistic regression analysis. *Journal of Agricultural Systems*. 2002;72:177-196.
13. Saxena KK, Singh RL. Adoption of organic farming practices by farmers of Malwa Region. *Maharashtra Journal of Extension Education*. 2000;21:53-54.
14. Sidram. Analysis of organic farming practices in pigeon pea in Gulbarga district of Karnataka state. M. Sc. (Agri.) Thesis, University of Agricultural Sciences, Dharwad (India); c2008.
15. Singh DK, Singh BK, Yadav VPS, Singh L. Adoption behavior of commercial vegetable growers in district Ghaziabad (UP). *Indian Research Journal of Extension Education*. 2010;10(3):66-70.
16. Eyhorn F, Ramakrishnan M, Mäder P. The viability of cotton-based organic farming systems in India. *International journal of agricultural sustainability*. 2007 Jan 1;5(1):25-38.