RESEARCH NOTE

Farmers Knowledge Level on Organic Cultivation in Madhya Pradesh

Sarvesh Kumar[1] S.R.K. Singh[2] and R.C. Sharma[3]

1. Scientist (Agril. Ext.) & 3. Programme Coordinator, JNKVV, KVK- Harda (MP)
2. Senior Scientist (Agril. Ext.) Zonal Project Directorate, Zone VII, Jabalpur (MP)
Corresponding author email: sarveshbhu84@gmail.com

ABSTRACT

Organic farming system in India is not new but 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 and other biological materials along with beneficial microbes to release nutrients to crops for increased sustainable production in an eco friendly pollution free environment. The area under organic farming in India has been increasing steadily since 2000 after launching National Programme for Organic Production. The study was conducted to find out the farmers knowledge level on organic and inorganic cultivation in Madhya Pradesh during year 2012. A total of 180 farmers comprising 90 organic farmers and 90 inorganic farmers were selected randomly from Harda districts of Madhya Pradesh treated as the sample for this study. A knowledge test was conducted through interview schedule for assessing their knowledge. Organic farmers had better knowledge than inorganic farmers in average with the mean score difference of 2.80.

Key words: *Organic cultivation; Knowledge level; Innovativeness; Environmental protection;*

Organic agriculture has grown almost 29 fold during the last five years. By March 2010 India has brought more than 4.48 million ha area under organic certification process. Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activities. With the increase in population need not only to stabilize agricultural production but to increase it further in sustainable manner. Organic cultivation protects the long term fertility of soils by maintaining organic matter levels and careful mechanical intervention; thus, a natural balance needs to be maintained at all cost for existence of life and property**.** Hence assessment of farmer's knowledge level on organic cultivation in Madhya Pradesh has become an important issue which needs to be explored. Therefore this study was conducted to assess the knowledge of organic and inorganic farmers on organic cultivation.

METHODOLOGY

The present study was completed in Harda district of Madhya Pradesh in the year 2012. A total of 180 farmers comprising 90 organic farmers and 90 inorganic farmers were selected randomly from three blocks of Harda districts, namely, Timarani, Khirkiya and Harda taking into account the maximum number of organic vegetable and fruits (banana, orange) growers of Timarani and Harda blocks and organic wheat growers from Khirkiya block. However, 30 organic and inorganic farmers were randomly selected from each block. Ex-post facto research design was used under this study. A standardized knowledge test was conducted through interview schedule for assessing the knowledge of farmers taking into consideration the procedures adopted by *Sulaiman (1989), Bonny (1991)* and *Jaganathan (2010).* However the knowledge index was calculated by the following formulae:

$$\text{Knowledge Index} = \frac{\text{Respondent's total score}}{\text{Total possible score}} \times 100$$

RESULTS AND DISCUSSION

Results presented in Table 1 shows the extent of knowledge of organic and inorganic cultivators about organic farming, where the majority of organic cultivators (68.87%) and inorganic cultivators (65.56%)

had medium level of knowledge followed by low (14.45 % organic and 13.33% inorganic) and high (12.23% organic and 11.11% inorganic) levels of knowledge. Few farmers both in organic and inorganic group had very low and high levels of knowledge as earlier reported by *Jaganathan (2010)*. However *Elakkia (2007)* opined that majority of the farmers had high level of knowledge about organic farming.

Table 2 reveals that knowledge level of organic and inorganic cultivators were found to be significantly different at 1 per cent level, which may be due to the fact that organic cultivators had better interest, voluntarily inspiration, better education, mass media exposure, environmental orientation and belief in organic farming, that being presented and justified by calculating the Z value to find the mean score difference between organic and inorganic cultivators as such.

The variables of organic cultivators played a vital role in determining their knowledge level about organic farming. Correlation analysis at 1 per cent and 5 per cent level is presented in Table 3 to assess the relationship between the independent variables and knowledge level of organic cultivators. The results in Table 3 reveals that innovativeness, education, mass media exposure, risk orientation, economic motivation, market orientation, extension orientation, livestock possession, social interaction, decision making behaviour, self confidence and experience in organic farming had a significant and positive relationship with knowledge level at 1 per cent level, but environmental protection showed a significant and positive relationship with knowledge at 5 per cent level.

Venkatesan (2000) and *Jaganathan (2010)* also reported the significant and positive relationship between innovativeness and knowledge. As per adopter category, innovative farmers were more interested to adopt all organic cultivation practices relatively earlier than others for most up-to-date information on organic farming system. Education also had a significant and positive relationship with knowledge level resulting that educated farmers have more information than less educated one or laggard category. Moreover, highly educated farmers collect information regarding organic cultivation and value of organic produce from various agricultural information sources like mass media (television, newsletters and extension literature etc.) as well as through interaction with agricultural-experts. The results

Table 1. Knowledge level of organic and inorganic cultivators about organic farming

Organic (n=90)	Index range	No.	%
Very low (Mean-2SD)	<46.51	3	3.34
Low (Mean-SD)	46.51 – 53.77	13	14.45
Medium (Mean ±SD)	53.78- 68.29	62	68.87
High (Mean+ SD)	68.30 – 75.55	11	12.23
Very high (Mean+2SD)	>75.55	1	1.11
Total		90	100
Inorganic (n=90)			
Very low (Mean-2SD)	<27.27	7	7.78
Low (Mean-SD)	27.28-37.29	12	13.33
Medium (Mean ±SD)	37.30 – 57.33	59	65.56
High (Mean+ SD)	57.34 – 67.35	10	11.11
Very high (Mean+2SD)	>67.35	2	2.22
Total		90	100

Mean: 61.03, SD: 7.26   Mean: 47.31, SD: 10.02

Table 2. Significant difference in knowledge level between organic and inorganic cultivators

Variable	Mean values	
	Organic (n=90)	Inorganic (n=90)
Knowledge	12.20	9.40
Mean score difference	2.80	
Z value	9.354**	

**- Significant at 1 per cent level

Table 3. Relationship between the independent variables and knowledge level of organic cultivators (N=90)

Profile characteristics	(r)
Age	0.123
Education	0.432**
Total farming experience	0.085
Organic farming Experience	0.216**
Farm size	0.125
Area under organic farming	0.113
Livestock possession	0.261**
Social interaction	0.254**
Extension orientation	0.370**
Mass media exposure	0.404**
Innovativeness	0.435**
Economic motivation	0.379**
Risk orientation	0.380**
Market orientation	0.376**
Decision making behaviour	0.252**
Environmental protection	0.136*
Self confidence	0.223**
Belief in organic farming	0.084

**- Significant at 1 per cent level

*- Significant at 5 per cent level

also reported by *Jaganathan (2010)* and *Elakkia (2007)* are in same line of present study.

The results further reveals that there was a significant and positive relationship between environmental protection and knowledge level. Since farmers felt that highly polluted environment through inorganic or conventional farming may be protected for future generations if opting organic cultivation practices from now as also reported by *Jaganathan (2010).*

CONCLUSION

Farmer's knowledge level on organic cultivation was found maximum under the medium level of knowledge category as revealed by the 68.87 per cent of the organic cultivators in Harda district of Madhya Pradesh. The proper extension strategy like training, sangosthi, exhibition, farm visits and kisan mela may be found more important in updating the knowledge level of organic cultivators under organic farming system. The characteristics like innovativeness, market orientation, extension orientation and mass media exposure were significant with knowledge level of organic cultivators. Profile characteristics of organic and inorganic cultivators, namely, age, social interaction, economic motivation, market orientation, environmental protection and belief in organic farming also had the significant and positive impact on knowledge level except economic motivation which had negative persuade on knowledge about organic cultivation.

Organic cultivation was found superior than conventional cultivation in the relation of increased human employment, low cost of cultivation, more profits, enhanced input use efficiency and reduced risk; boost self reliance and livelihood security of the farmers. Moreover, organic cultivation has positive impact on human health, soil conservation and water holding capacity, increased biomass, maintain pH value, soil aeration and fertility. Hence, farmers must be encouraged for high knowledge level on organic cultivation immediately by all stakeholders and line departments, agricultural institutions, NGOs, SAUs, KVKs in India for sustainable production for betterment of future agriculture and mankind as well.

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