



E-ISSN: 2278-4136
P-ISSN: 2349-8234
JPP 2017; 6(4): 1779-1781
Received: 05-05-2017
Accepted: 06-06-2017

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Study of constraint's faced by the farmers in adoption of organic farming practices of soybean crop under ATMA programme.

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Abstract

The study was undertaken regarding the constraint's faced by the beneficiary in adoption of organic farming practices of soybean crop under ATMA programme in Guna district of Madhya Pradesh. The sample constituted 60 beneficiaries and 60 non-beneficiaries. Thus a total numbers of respondents for present study were 120. The study indicated non-significant relationship with adoption of organic farming in respect of age, family size, annual income and risk preference. However the selected variables viz. land holding, education, extension contact, social participation, mass media exposer, innovativeness and economic motivation of farmers showed significant relationship with the adoption of organic farming practices by the farmers. Major constraints expressed by the respondent in adoption of organic farming practices of soybean crop were lack of capital, lack of bulk local demand for organic soybean, long process of organic manure preparation, lack of knowledge about bio-pesticides, application time, method and proper dose, lack of published information regarding various practices of organic soybean farming.

Keywords: Constraint, Adoption, organic farming, ATMA

Introduction

Madhya Pradesh is a leading state of India in terms of area and production of oilseeds and recognized as Soya State in the country. It alone contributes about 72 per cent and 65 per cent of the total area and total production of India respectively. It is popular cash crop giving pronounced yield and profit. Due to suitable agro-climatic condition and better price, soybean crop gets prominence in the cropping pattern of the cultivator of Madhya Pradesh.

Organic farming in Madhya Pradesh has gone for organic soya cultivation. Plans are also ready to convert maize, wheat and pulse cultivation to organic on the principle of crop rotation. Farmers who have not used chemical fertilizers and pesticides during the last two years on the land offered for organic farming are selected. This condition was necessary to restore the soil health to make the land suitable for organic cultivation. In Madhya Pradesh, organic farming is being implemented under the guidance of a team of experts consisting of scientists, environmentalists and food management personnel. Nutrients to the crops are provided through green manuring, composts, phospho-composts and fermented preparations prepared from cow dung and urine. Pests are managed through the use of neem and cow urine based fermented preparations. Eight different ways of composting are recommended in Madhya Pradesh. Hence, present study was undertaken with the objectives of the study of the constraints faced by the farmers in adoption of organic farming on soybean crop and to study of the relationship between selected independent variables and dependent variables.

Material & Methods

Guna district of Madhya Pradesh was selected purposively for the present study. Guna district comprises of 5 blocks namely Guna, Aaron, Bamori, Raghogah and Chachora. Out of which three Guna, Aaron and Raghogah blocks was selected purposively for this study due to awareness and convenience of researcher. 6 villages will be selected through simple random sampling method for beneficiaries and for non-beneficiaries. 10 beneficiaries were selected from each of the village randomly. Similar numbers of non-beneficiaries were also selected randomly. The sample constituted 60 beneficiaries and 60 non-beneficiaries. Thus a total numbers of respondents for present study were 120.

Result & discussion

A study pertaining to constraints faced by the farmers in the adoption of organic farming practices and its correlation with adoption level was conducted using 120 farmers from Guna

District of Madhya Pradesh. The results obtained are presented in Table 1 and Table 2

The results presented in Table 1 showed non-significant relationship with adoption levels of organic farming practices in respected age; family size and risk preference. Borude (1998) [1]. Reported non-significant relationship between age of the respondents and their fertilizer utilization pattern. The selected variables viz., education, land holding, annual income, socio-economic status, scientific orientation, extension contact showed significant relationship with adoption levels of organic farming practices by the farmers. Ranganatha et.al. (2001) [6]. revealed that socioeconomic characteristics selected for study, only characteristics (education, extension participation, innovativeness) were having significant relationship with the adoption level of small farmers.

Data presented in Table 2, revealed that 77.50 per cent respondents from the technological/ production constraints faced a major constraints of lack of capital followed by 68.33 and 63.33 per cent of lack of knowledge of recommended package of practices on organic soybean growing and lack of proper trainings by Govt. Personnel / NGOs / research institutes, Namdev *et al.* (2011) [4]. reported the major

constraints of organic farming included lower yield, organic farming was a slow process coupled with lack of knowledge about the recommended package of practices and lack of capital.

Table 1: Correlation between independent variables with extent of adoption of beneficiaries and non-beneficiaries about organic farming practices

Sr. No.	Independent variables	Coefficient of correlation (r)	
		Beneficiaries	Non beneficiaries
1.	Age	0.0852 ^{NS}	0.2759*
2.	Education	0.3337**	0.4899**
3.	Family size	0.0718 ^{NS}	0.0856 ^{NS}
4.	Land holding	0.3747**	0.1492 ^{NS}
5.	Annual income	-0.0793 ^{NS}	0.1650 ^{NS}
7.	Innovativeness	0.2813*	0.4777**
8.	Extension contact	0.2838*	0.0892 ^{NS}
9.	Social participation	0.2605*	0.0177 ^{NS}
10.	Mass Media exposure	0.2668*	0.2636*
11.	Economic motivation	0.3305**	0.3624**
12.	Risk preference	0.1699 ^{NS}	0.0892 ^{NS}

Significance Levels 0.01 (1 %) **

Significance Levels 0.05 (5 %) *

NS – Non Significant

Table 2: Constraints faced by farmers regarding adoption of organic farming practices in soybean crop.

Sr.	Constraints	frequency	Percentage	Rank
A. Technological / Production constraints in organic soybean farming practices				
1	Lack of knowledge of recommended package of practices on organic soybean growing	82	68.33	II
2	Lack of proper trainings by Govt. Personnel / NGOs / research institutes	76	63.33	III
3	Lack of capital	93	77.50	I
B. Economic Constraints				
1	Low premium price for organic soybean	73	60.83	II
3	No minimum support price for organic soybean	70	58.33	III
4	Lack of bulk local demand for organic soybean	97	80.83	I
C. Manures and bio fertilizers constraints				
1	Inadequacy of required manures & bio fertilizers	81	67.5	III
2	Long process of organic manure preparation	91	75.83	I
3	Costly manures and bio fertilizers	87	72.50	II
D. Plant Protection Constraints				
2	Lack of knowledge about bio-pesticides, application time, method and proper dose	102	85.00	I
3	Lack of supply centre	63	52.50	II
4	Difficult method for preparation of bio-pesticides	49	40.83	III
E. Marketing Constraints				
1	Dependence / interference of middleman for disposal	84	70.00	I
2	Lack of marketing news	65	54.16	III
3	Lack of storage facilities	77	64.16	II
F. Constraints related to transfer of technology				
1	Lack of timely and appropriate transfer of organic soybean growing practices by extension organization / Agri. Deptt. / private agencies	70	58.33	II
2	Lack of co-ordination between various service, supply and marketing agencies/ organic promoting organizations.	61	50.83	III
4	Lack of published information regarding various practices of organic soybean farming	73	60.83	I

Among the economic constraints, 80.83, 60.83 and 58.33 per cent respondents faced lack of bulk local demand or organic soybean, low price of organic soybean, no minimum support price for organic soybean. Soni *et al.* (2012) [7]. reported non-availability of loans and lack of government subsidies. Pattanapant and Shivakoti (2009) [5]. identified that prices have an important influence on the financial performance of organic agriculture.

In Manures and bio fertilizers constraints 75.83, 72.50 and 67.5 per cent respondents faced major constraints of long process of organic manure preparation, costly manures and bio fertilizers and inadequacy of required manures & bio fertilizers respectively. Bhople and Borkar (2002) [2].

observed that non availability of bio fertilizers in nearly market, long process of organic manure preparation were the major constraints in adoption of bio fertilizer by the farmers, Singhal and Sengar (2003) reported that reasons for unpopularity of bio fertilizers were lack of education, lack of proper manufacturing and distribution channels. Besides being on-toxic and cheaper, bio fertilizers could provide employment to large number of graduates, if given a short training.

In respect of the plant protection constraints, 85.00 and 64.16 per cent respondents faced major constraints of lack of knowledge about bio-pesticide, application time, methods and proper dose and inclination toward use of chemical

pesticides. In marketing constraints lack of storage facilities (77.50%), dependence / interference of middleman for disposal (70.00%) and lack of marketing news (54.16%), Namdev et al. (2011) ^[4]. reported the major marketing constraints were purchase agencies at long distance, dependence of middlemen for disposal and lack of marketing news, non-remunerative prices and lack of storage facilities, Singh and Varshney (2010) reported that due to the absence of regulated market at village level, farmers sell their produce to middle men and get lower price for their produce..

In respect of the transfer of technology constraints 60.83, 58.33 and 50.83 per cent respondents faced major constraints of lack of published information regarding various practices of organic soybean farming, lack of timely and appropriate transfer of organic soybean growing practices by extension organization / Agri. Deptt. / Private agencies and lack of co-ordination between various service, supply and marketing agencies/ organic promoting organizations. Most similar results were reported by Baker (2012) ^[3]. reported that low production of organic produce, lack of published information regarding various practices of organic soybean farming, lack of timely and appropriate transfer of organic soybean growing practices by extension organization / Agri. Deptt. / Private agencies and lack of co-ordination between various services, supply and marketing agencies/ organic promoting organizations.as major constraints in organic farming. There is need of competent extension personnel.

Conclusion

The present study indicated non-significant relationship with adoption of organic farming on soybean crop in respect of age family size and risk preference. However, the selected variables viz., education, land holding, annual income, socio-economic status, scientific orientation, extension contact showed significant relationship with adoption levels of organic farming practices by the farmers. Major constraints expressed by the respondent in adoption of organic farming practices of soybean crop were lack of capital, lack of bulk local demand for organic soybean, long process of organic manure preparation, lack of knowledge about bio-pesticides, application time, method and proper dose, lack of published information regarding various practices of organic soybean farming.

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