

Achievement Motivation of Organic Farmers of Birbhum District of West Bengal

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ABSTRACT

The study was conducted in 2018 to know the achievement motivation of farmers practicing organic farming in the Birbhum district of West Bengal. The results of the study found a majority of the respondents falling under a medium level of socioeconomic status and achievement motivation. Among the ten independent variables, seven variables were having a positive and highly significant relationship with the dependent variable. Regression analysis shown that all the 10 independent variables put together influenced significant variation in achievement motivation to the extent of R^2 45.5 per cent and out of ten variables, only one variable was having positive significance at one percent level of confidence. Path analysis showed that the independent variable affected (direct and indirect effect) on the achievement motivation of farmers practicing organic farming. Sustainable organic farming activity holds significant importance in increasing the profit of crop cultivation in the study area.

Keywords: Achievement motivation, Organic farming, Path analysis, Sustainable agriculture, Vegetable growers

INTRODUCTION

Organic farming is a farming method that prevents or eliminates the use of synthetic inputs such as fertilizers, pesticides, hormones, feed additives, etc. and, to the maximum extent possible, relies on crop rotations, crop residues, animal waste, organic off-farm waste, rock additives of mineral quality and nutrient recovery and plant conservation biological systems. Organic farming is a method of the farming system primarily aimed at cultivating the land and raising crops in such a way that organic waste (crop, animal and farm waste, aquatic waste) and other biological materials, as well as beneficial microbes (Bio- Present Status and Future Prospects of Organic Farming in India 277 fertilisers),

are released to maintain the soil alive and in good health (Narayanan, 2005; Guruswamy and Gurunathan, 2010; Makadia and Patel, 2015). The emphasis of organic farming systems is on the use of organic matter to improve soil properties, minimise health hazards associated with the food chain and achieve closed nutrient cycles, the key factors for sustainable agriculture (Cardelli *et al.*, 2004). Following the International Organic Agriculture Movement Federation (Willer *et al.*, 2008). Although organic farms produce 10-15 per cent less on average than conventional farms, lower yields are balanced by lower input costs and higher margins. For the last decade, its annual growth rate has been about 20 percent (Lotter, 2003). Accounting for over 31 million hectares of land and generating more than \$26

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billion in worldwide annual trade (Escobar and Hue, 2007). The main driving forces for improved agricultural production and productivity were the technologies involved during the start of the green revolution, supported by policies and further propelled by agrochemicals, machinery, and irrigation (Rajib *et al.*, 2013). Although these technologies addressed India's food security, a significant setback was that the farmers using these technologies still had to rely on the inputs purchased (Charyulu and Biswas, 2010). The excess/ indiscriminate use of pesticides and fertilizers has resulted in the introduction of toxic substances into the food chain, the death of natural enemies, and the degradation of the ecosystem (Chitale *et al.*, 2012).

The organic nutrient source also helps to address the issue of multi-nutrient deficiency and low organic content in our soil that affects the productivity of major food crops in the field of farmers (Singh *et al.*, 2017). Ideally lethal for the target group only, insecticides and herbicides are safe for the non-target group and human group, but this principle is not strictly followed and the indiscriminate use of these chemicals puts human life and ecosystem health on the verge (Aktar *et al.*, 2009). Similarly, many farmers in various parts of the country have made efforts to grow their alternative farming methods. These farmers' projects and achievements are remarkable and very few of them. Organic farming needs less external and financial inputs and makes our country more dependent on the abundant natural and human resources on the farm. Keeping this in mind, the present study was undertaken to assess the Achievement motivation of farmers practicing organic farming and to find out the relationship between socioeconomic status and achievement motivation with profile characteristics.

METHODOLOGY

The research was conducted in the state of West Bengal during 2018 based on a purposeful sampling process. Purposive sampling procedure for the district, block, and village selection was followed. Four villages were selected from the Sriniketan block, namely Bahadurpur, Raipur, Binuria, Ballabhpur, and Lohagarh. The block was selected randomly, from the village randomly selected 22 farm respondents from five

villages to make the sample size 110. The data were collected through the standardized method, to make the results relevant and understandable. Statistical methods and techniques used included SPSS software and OPSTATE Website, for instance, frequency, percentage, arithmetical mean, standard deviation, correlation, and path analyses.

RESULTS AND DISCUSSION

The respondents were classified into three categories as low, medium, and high based on the number of the mean and standard deviation. It is evident from Table 1 that among the selected respondents 60.9 per cent belonged to medium socioeconomic status. 29.1 per cent of them were in high socioeconomic status while 10.0 per cent of them were in low socioeconomic status. To measure achievement motivation of farmers practicing organic farming attest was developed which consisted of 25 statements regarding different aspects of farming like the adoption of new varieties, investment, crop yield, etc. for each aspect there are two statements, and farmers were asked to choose any one of the two statements which suit their nature. In the present study, the Achievement motivation of the respondents has been categorised into three categories i.e. low (<11), medium (11 to 16), and high (>16). It is evident from Table 2. That among the selected respondents about 58.2 percent has belonged to the medium category. 23.6 percent of

Table 1: Overall Socioeconomic status of farmers practicing organic farming

Category	Frequency	Percentage
Low	11	10.0
Medium	67	60.9
High	32	29.1

$\bar{x}$ = 16; S.D. = 2

Table 2: Achievement motivation of farmers practicing organic farming (N=110)

Category	Frequency	Percentage
Low	20	18.2
Medium	64	58.2
High	26	23.6

$\bar{x}$ = 13.30; S.D.=2.59

Table 3: Correlation analysis

S.No.	Characteristics	Correlation Co-efficient 'r' value
X ₁	Age	-0.291**
X ₂	Education	0.216*
X ₃	Farming Experience	-0.226*
X ₄	Extension participation	0.165
X ₅	Annual income	0.025
X ₆	Mass media exposure	0.304**
X ₇	Economic motivation	0.115
X ₈	Cosmo politeness	0.236*
X ₉	Adoption	0.230*
X ₁₀	Overall Socio economic status	0.340**

**significant at 0.01 level, *significant at 0.05 level

them were in the high category while only 18.2 per cent of them were in a low category.

Association between achievement motivation of respondents with independent variables (X₁, X₂, X₃, X₄, X₅, X₆, X₇, X₈, X₉, X₁₀, X₁₁) was analysed statistically and presented in Table 3. It is evident that age, education, farming experience, annual income, extension participation, mass media exposure, economic motivation, overall socioeconomic status, and adoption, were significantly and positively correlated with achievement motivation of farmers practicing organic farming. On application of regression analysis only one of them,

shown their functional relationship with achievement motivation and found significant as shown in Table 4. The multiple regression analysis of the relationship between organic farming practicing farmer's socio-economic characteristics and achievement motivation, Socio-economic characteristics of respondents namely Age (X₁), Education (X₂), Farming experience (X₃), Extension participation (X₄), Annul income (X₅), Mass media exposure (X₆), Economic motivation (X₇), Cosmo politeness (X₈), Adoption (X₉), Socioeconomic status (X₁₀) were taken as independent variable. In the Regression analysis, all the 10 independent variables put together to show the influence and significant variation of these independent variables over achievement motivation of farmers practicing organic farming to the extent of R² 19.5 per cent and out of ten variables only 'Socioeconomic status' was having a positive significant relationship at one percent level of confidence.

Path analyzes was attempted to determine the direct and indirect effects between the numbers of variables and thus help to quantitatively interpret the interrelationships within a known or assumed casual system that existed in some specific populations (Kalantari, 2003). The Table 5 shows the direct and indirect effects among the interrelated independent variables with the level of achievement motivation of farmers practicing organic farming. The maximum total indirect effect on perception of vegetable growers

Table 4: Regression analysis between an independent variable with achievement motivation of farmers practicing organic farming

S.No.	Characteristics	Regression Coefficient	Standard Error	't' value
X ₁	Age	-0.090	0.063	-1.438
X ₂	Education	-0.191	0.478	-0.399
X ₃	Farming experience	0.055	0.062	0.896
X ₄	Extension participation	-0.344	0.337	-1.021
X ₅	Annual income	0.000001	0.000	0.193
X ₆	Mass media exposure	0.463	0.429	1.079
X ₇	Economic motivation	-0.028	0.114	-0.242
X ₈	Cosmo politeness	0.082	0.444	0.185
X ₉	Adoption	0.245	0.296	0.829
X ₁₀	Socioeconomic status	0.357**	0.116	3.072

R²=0.195; F=2.391

Table 5: Path analysis of achievement motivation of farmers practicing organic farming with independent variables

S.No.	Characteristics	Total Indirect Effect	Direct Effect	Total Effect
X ₁	Age	-0.4701 1st	0.137 3 rd	-0.333
X ₂	Education	0.161	0.351 1st	0.512 1st
X ₃	Farming experience	-0.384 2nd	-0.024	-0.408 3rd
X ₄	Extension participation	0.158	0.343 2nd	0.501 2nd
X ₅	Annual income	-0.061	-0.042	-0.103
X ₆	Mass media exposure	0.295	0.045	0.340
X ₇	Economic motivation	0.112	0.038	0.150
X ₈	Cosmo politeness	0.233	0.068	0.301
X ₉	Adoption	0.119	0.048	0.167
X ₁₀	Socioeconomic status	0.368 3rd	-0.109	0.259

towards excessive use of chemicals exhibited first position by Age (-0.4701) variable which was followed by Farming experience (-0.384) in the second position and third position was obtained by Socioeconomic status (0.368). The maximum total direct effect on achievement motivation of farmers practicing organic farming was shown by the education (0.351) variable as the first position which was followed the second position by extension participation (0.343) and the third position was achieved by age (0.137). The maximum total effect on achievement motivation of farmers practicing organic farming had shown by the education (0.512) variable as the first position which was followed the second position by extension participation (0.501) and the third position was obtained by Farming experience (-0.408).

CONCLUSION

The study concluded that the majority of the respondents fall under the medium level of all over socioeconomic status and achievement motivation of farmers practicing organic farming in the study area. Among ten independent variables, seven variables age, education, annual income, mass media exposure, cosmopolites, overall socioeconomic status, and adoption, were significantly and positively correlated with achievement motivation. In the regression analysis, all the 10 independent variables put together to show the influence and significant variation in achievement motivation of farmers practicing organic farming to the extent of R² 19.5 per cent and out of ten variables only

one variable socio-economic status was positively significant at one percent level of confidence. Path analysis showed that independent variables affected (direct and indirect effect) on achievement motivation of farmers practicing organic farming where the maximum total indirect effect on the dependent variable was exhibited as the first position obtained by age (-0.4701) variable. The maximum total direct effect on the dependent variable was exhibited as the first position achieved by education (0.512) variable and the maximum total effect on the dependent variable was shown by achieving the first position by the farming experience (-0.408) variable.

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