



## Research Article

# SOCIO-ECONOMIC ATTRIBUTE AND ATTITUDE OF THE FARMERS TOWARDS ORGANIC FARMING IN EASTERN UTTAR PRADESH

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**Abstract:** This study was undertaken in three districts selected randomly from each Zone namely (1) North Eastern Plains Zone (2) Eastern Plains Zone (3) Vindhyan Zone in Eastern Uttar Pradesh. From each selected district, two blocks were selected randomly. Thereafter two villages from each block was selected randomly, thus make a total 12 villages. The majority of respondents were of middle aged and literate including formal and informal education. General caste farmers were dominantly engaged in organic farming and nuclear family system was dominantly in existence having 5 to 8 members in their families. Maximum organic farmer were marginal farmers reported agriculture as their main occupation. Mixed type of houses was more. Electric motor and Diesel engine were dominant farm power along with farm implements. The cycle was main conveyance with all farmers. The majority of respondents were (26.03%) exhibited Agree category of attitude response. The variables like extension contact, education, material possession, occupation, social participation and value orientation were very important factors for the positive attitude towards organic farming practices by the farmers.

**Keywords:** Block, Proportionate, Organic, Extension, Attitude

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## Introduction

Organic farming is a production system which includes agriculture with biodiversity, ecosystem and biological cycle and excludes all chemical and synthetic inputs. It avoids chemical fertilizers, hormones, feed additives and pesticides and promotes natural techniques like crop rotation, animal manure, off-farm waste, crop residues, plant protection and nutrient mobilization. The farmers may be aware of the benefits of going organic but what matters most is the attitude and preparedness of farmers to convert to organic farming. The nature of the attitude depends upon the cognitive component which is largely dependent upon the information, beliefs and facts associated with the attitudinal object. The cognitions developed leads to the affective component which decides the feelings positive/ negative eventually leading to the conative or the behavioural component i.e. the action.

## Material and Methods

This study was undertaken in three districts selected each randomly from Zone namely (1) North Eastern Plains Zone (2) Eastern Plains Zone (3) Vindhyan Zone in Eastern Uttar Pradesh. From each selected district, two blocks were selected randomly. Thereafter two villages from each block was selected randomly, thus make a total 12 villages. A list of farmers was made and stratified according to their land size and categories of farmers viz. marginal, small and medium + large. And, a total of 240 farmers as respondents were selected through proportionate random sampling technique, considering the farmer categories viz. marginal, small and medium + large. The data was collected with the help of semi-structured interview schedule specially to be developed incorporating standard indices/scales with suitable modifications in the light of the objectives of the present study. To analyze the data suitable statistical methods would be used and draw the inferences.

## Findings

### Age composition

The above [Table-1] reveals that majority of the respondents (74.16%) belonged to middle age group (35-55 years) followed by (16.25%) of respondents belonged to old age group (56 and above) and only (9.58%) of respondents belonged to the young age group (Up to 34), respectively. The age of the selected respondents ranged from 28 to 72 years. The mean age of the respondents was observed to be 45.01 years. A similar finding was also reported that majority of the respondents was observed in the middle age Savitha (2009) [1].

Table-1 Distribution of the respondents on the basis of age, N=240

SN	Categories (years)	Respondents	
		Frequency	Percentage
1	Young age (up to 34)	23	9.58
2	Middle age (35-55)	178	74.16
3	Old age (56 and above)	39	16.25
	Total	240	100

Mean=45.01, S.D. =10.83, Min. =28, Max. =72

### Education

The [Table-2] reveals that the majority of the respondent's 87.5 percent literate and 12.5 percent illiterate. Further, the educational level was worked out and given in descending order as 36.66%, 15.41%, 14.16%, 12.91% and 08.33% intermediate, high school, middle, graduate & post graduate, and primary school, respectively.

Hence, it may be said that the educational standard of the respondents was considerably good in comparison to average literacy rate of the state and country as such. The similar findings were also reported by Asih (2008) [2].

Table-2 Distribution of the respondents on the basis of education, N=240

SN	Categories	Respondents	
		Number	Percentage
A.	Illiterate	30	12.5
B.	Literate		
I.	Primary school	20	8.33
II.	Middle school	34	14.16
III.	High school	37	15.41
IV.	Intermediate	88	36.66
V.	Graduate & Post graduate	31	12.91
	Total	240	100

**Caste category**

The [Table-3] depicts that majority of respondents (45.41%) belonged general caste, followed by scheduled caste (30.83%) and other backward caste category (23.75%), respectively. Thus, it may be concluded that the general caste was found dominantly engaged in organic farming in the area of study. The results of the study are in same line of findings reported by Pawar (2009) [3].

Table-3 Distribution of the respondents on the basis of caste, N=240

SN	Categories	Respondents	
		Number	Percentage
1	General caste	109	45.41
2	Other Backward classes	57	23.75
3	Scheduled caste	74	30.83
	Total	240	100

**Type of family**

The [Table-4] shows that nuclear/single families were more in number than joint families. In terms of percentage 52.91% respondents belonged to nuclear/single families, while, remaining 47.08% belonged to joint families. It means, nuclear family system is dominant in the area of study. The results of the study are in same line of findings reported by Saini *et al.* (2017) [4].

Table-4 Distribution of the respondents on the basis of family type, N=240

SN	Family type	Respondents	
		Number	Percentage
1	Nuclear/Single family	127	52.91
2	Joint family	113	47.08
	Total	240	100

**Size of family**

The [Table-5] shows that majority of respondents (56.66%) belonged to medium category of those had 5-8 members in their families followed by 28.75 percent and 14.58 percent to the category of (up to 4) and (9 and above) members in their families, respectively. The average size of family was observed to be 6 members with minimum and maximum in the range of 03 to 15 numbers of family members. It might be due to dominant nuclear family system existence in the study area.

Table-5 Distribution of the respondents on the basis of family size, N=240

SN	Categories (members)	Respondents	
		Number	Percentage
1	Small (up to 4)	69	28.75
2	Medium (5-8)	136	56.66
3	Large (9 and above)	35	14.58
4	Total	240	100

Mean= 6.16, S.D. =2.49, Min=3, Max=15.

**Size of land holding**

The [Table-6] depicts that 48.33 percent of respondents were having less than 1 ha of land who belonged to marginal farmers category. Respondents belonged to small farmers and medium + large farmers were 38.33 percent and 13.33 percent, respectively. Therefore, it may be said that marginal farmers mostly there in the study area. It might be due to fragmentation of the family.

Table-6 Distribution of the respondents on the basis of land holding (hectares), N=240

SN	Categories (hectares)	Respondents	
		Number	Percentage
1	Marginal farmers	116	48.33
2	Small farmers	92	38.33
3	Medium +Large farmers	32	13.33
	Total	240	100

**Occupation**

It is evident from the [Table-7] that the maximum (66.25%) respondents were observed such who had their main occupation as agriculture, followed by (10%) services (Govt. + Private), (9.16%) caste based occupation, (7.5%) business, (7.5%) agro-based enterprises and (7.5%) dairying, respectively. The maximum (26.25%) respondents were observed such who had their subsidiary occupation as agriculture labour, followed by (15%) services (Govt. + Private), (12%) caste based occupation, (8.33%) agriculture, (7.5%) dairying, (2.91%) gardening and (2.08%) agro-based enterprises, respectively.

Hence, it may be noticed that a considerable number of the respondents had occupations other than agriculture for their livelihood. A similar finding was also reported that majority of the respondents was observed in their main occupation as agriculture, Kachhiapatel (2007) [5].

Table-7 Distribution of the respondents on the basis of occupation, N=240

SN	Occupation	Main		Subsidiary	
		No.	%	No.	%
1	Agriculture labour	0	0	63	26.25
2	Caste based occupation	22	9.16	31	12.91
3	Services (Govt. + Private)	24	10	36	15
4	Agriculture	159	66.25	20	8.33
5	Business	18	7.5	9	3.75
6	Agro-based enterprises	13	5.41	5	2.08
7	Dairying	4	1.66	18	7.5
8	Gardening	0	0	7	2.91

**Annual income**

The [Table-8] reveals that maximum number of the respondents were 63.33% belonged to the annual income of Rs. (93624-295483) whereas, 18.75% and 17.91%, respondents were belong to income range from Rs. (295484 and above) and Rs. up to 93623, respectively. The maximum number of the respondents was found in the annual income range of Rs, 46000 to 425000 with an average of Rs.194583. The results of the study are in same line of findings reported by Singh *et al.* (2018) [6].

Table-8 Distribution of the respondents on the basis of annual income (Rs.), N=240

SN	Annual income (Rs.)	Respondents	
		Number	Percentage
1	Small (up to 93623)	43	17.91
2	Medium (93624-295483)	152	63.33
3	High (295484 and above)	45	18.75
	Total	240	100

Mean =194583, S.D. =100899.9, Min. =Rs 46000, Max. =425000.

**Housing pattern**

It is apparent from the data shown in the [Table-9] pertaining to type of house possession, the mixed type of habitation was observed to be 57.5% followed by 30% pucca houses and 12.5% kuchcha house.

So, it can be concluded that respondents were having quality houses. The results of the study are in same line of findings reported by Mishra and Ghadei (2015) [7].

Table-9 Distribution of the respondents on the basis of housing pattern, N=240

SN	Housing pattern	Respondents	
		Number	Percentage
1	Kuchcha	30	12.5
2	Semi-Pucca/Mixed	138	57.5
3	Pucca	72	30
	Total	240	100

**Social participation**

The [Table-10] shows that the 42.5 percent of the respondents were found having membership of two organizations/office bearer, while 40% were the member of one organization. In this way, 82.5% of respondents were associated with the organizations like panchayats, cooperatives, youth-club, religious and political organization, while 17.5% of organic farming farmers did not take participation in any organization.

Less participation in social organization might be due to probable reason that respondents are found less social participation.

Table-10 Distribution of the respondents on the basis of social participation, N=240

SN	Participation	Respondents	
		Number	Percentage
1	No participation any organization	42	17.5
2	As a member in one organization	96	40
3	As a member of two organizations/office bearer	102	42.5
	Total	240	100

**Materials possession**

**Farm Power**

The [Table-11] presents the possession of farm power machinery among the respondents. It shows that 37.8 percent of respondents had their own pumping set/ tube well, 30 percent respondents possessed electric motor, 28.33 percent diesel engine, 10.83 percent owned tractor and 4.16 percent owned bullock, respectively.

Table-11 Distribution of the respondents on the basis of farm power, N=240

SN	Farm power	Respondents	
		Number	Percentage
1	Bullock	10	4.16
2	Pumping set/ tube well	89	37.08
3	Diesel engine	68	28.33
4	Electric motor	72	30
5	Tractor	26	10.83

Note: More than one items have been shown by respondents, hence the total percentage of all items would be more than 100.

**Agriculture implements**

The [Table-12] reveals the possession of agricultural implements among respondents. It is clear from the table that 100 percent of the respondents reported having Sickle followed by Shovel (91.66%), Kudal (81.66%), Chaffcutter (81.25%), Khurpi (78.33%), Pata (33.13), Sprayer (11.66%), Thresher (10%), Cultivator (9.16%), Rotavater (6.66%), Duster (6.25%), Deshi plough (3.33%), Potato planter (2.91%) and Seed drill (2.08%) .

Table-12 Distribution of the respondents on the basis of agriculture implements, N=240

SN	Farm implements	Respondents	
		Number	Percentage
1	Thresher	24	10
2	Sprayer	28	11.66
3	Deshi plough	8	3.33
4	Chaff cutter	195	81.25
5	Seed drill	5	2.08
6	Rotavater	16	6.66
7	Khurpi	188	78.33
8	Duster	15	6.25
9	Pata	32	33.13
10	Kudal	196	81.66
11	Shovel	220	91.66
12	Cultivator	22	9.16
13	Potato planter	7	2.91
15	Sickle	240	100

Note: More than one items have been shown by respondents, hence the total percentage of all items would be more than 100

**Houses hold materials**

The [Table-13] clearly indicates that 100 percent members were reported having cots and crockery each followed by fan/cooler (90.83%), wrist watch (87.5%), chairs (81.66%), solar lantern (74.16%), bed (70.83%), gas cylinder and gas chullah each (68.75%), electric press (61.25%), pressure Cooker (58.33%) sewing machine (36.66%), stove (28.33%), heater (23.33%) and dressing table (7%), respectively. The condition of house hold materials seems to be good.

**Transportation material**

The [Table-14] clearly indicates that 79.16 percent respondents were found having cycle as a means of transportation followed by 60.83 percent moter cycle/scooter, 15.83 percent jeep/car, 10 percent tractor/ tractor trolley, 9 percent pickup and 1.66 percent bullock cart, respectively. Note: It would be better to note here that the maximum farmers were having marginal or small piece of land, but the condition of farm power, farm implements and transportation materials was

considerably good because the farmers use these materials for providing services to other farmers on hired basis.

Table-13 Distribution of the respondents on the basis of house hold materials N=240

SN	Particulars	Respondents	
		Number	Percentage
1	Fan/Cooler	218	90.83
2	Sewing machine	88	36.66
3	Stove	68	28.33
4	Bed	170	70.83
5	Cots	240	100
6	Gas Cylinder/Gas Chulah	165	68.75
7	Heater	56	23.33
8	Pressure Cooker	140	58.33
9	Electric Press	147	61.25
10	Watch	210	87.5
11	Chair	196	81.66
12	Dressing Table	12	5
13	Crockery	240	100
14	Solar lantern	178	74.16

Note:More than one items have been shown by respondents, hence the total percentage of all items would be more than 100.

Table-14 Distribution of the respondents on the basis of transportation materials, N=240

SN	Medium of Transportation	Respondents	
		Number	Percentage
1	Bullock cart	4	1.66
2	Motor Cycle/ Scooter	146	60.83
3	Pick Up	22	9.16
4	Cycle	190	79.16
5	Tractor / Tractor Trolley	26	10.83
6	Jeep/ Car	38	15.83

Note:More than one items have been shown by respondents, hence the total percentage of all items would be more than 100.

**Overall materials possession**

The overall material possession was categorized into three main categories on the basis of scores as low (up to 32), medium (33 to 44) and high (45 and above).

The [Table-15] reveals that highest number of the respondents 55.83% were observed in the medium category (33 to 44) of materials possession followed by 25.41% low (up to 32) and 18.75% high (45 and above), respectively. Thus, it can be concluded that the materials possession of respondents was appreciably better. The mean of scores for materials possession was observed to be mean 38.10, with a minimum 27 and maximum 54 scores.

Table-15 Distribution of the respondents on the basis of overall material possession, N=240

SN	Categories (score value)	Respondents	
		Number	Percentage
1	Low (up to 32)	61	25.41
2	Medium (33-44)	134	55.83
3	High (45 and above)	45	18.75
	Total	240	100

Mean=38.10, S. D. =6.41, Min. =27, Max. =54.

**Attitude of the farmers towards organic farming**

The [Table-16] reveals the attitude of respondents towards organic farming practices. It is clear that the highest number of respondents (26.03%) exhibited Agree category of attitude response, followed by strongly disagree (23.98%), Neutral (23.18%), strongly agree (17.96%) and Disagree (7.89%), respectively. Its mean that the maximum number of respondents have positive attitude and interested towards organic farming practices.

Table-16 Extent of farmer's attitude towards organic farming practices, N=240

SN	Categories of Attitude Response	Total Score	Mean of Total Score	% on Mean of Total Score
1	Strongly agree	1946	139	17.96
2	Agree	2820	201.42	26.03
3	Neutral	2512	179.42	23.18
4	Strongly disagree	2598	185.57	23.98
5	Disagree	855	61.07	7.89
	Total	10833	773.78	100

**Correlation coefficient (r) between independent variables and attitude towards organic farming practices**

It is evident from the [Table-17] that extension contact was found significant and positively correlated with attitude towards organic farming practices. The variables like education, material possession, occupation social participation and value orientation were found positively correlated but not significant with attitude towards organic farming practices. The variables like age, caste, family type, size of family, housing pattern, size of land holding, income, economic motivation, risk orientation and adoption were found negatively correlated but not significant with attitude towards organic farming practices. It is evident that variables like education, material possession, occupation, social participation and value orientation were very important factors for the positive attitude towards organic farming practices by the farmers. The results of the study are in same line of findings reported by Rana *et al.* (2017) [8] and Maurya *et al.* (2017) [9].

Table-17 Correlation coefficient (r) between different independent variables and attitude towards organic farming practices

SN	Independent Variable	Correlation Coefficient
1	Age	-0.07589
2	Education	0.051689
3	Caste Category	-0.15058
4	Family Type	-0.11774
5	Family Size	-0.08735
6	Housing Pattern	-0.14307
7	Material Possession	0.078631
8	Land Holding (ha.)	-0.07725
9	Occupation	0.016049
10	Total Income	-0.34006
11	Social Participation	0.0815818
12	Extension Contact	0.290153096*
13	Value Orientations	0.167214
14	Economic Motivation	-0.00612
15	Risk Orientation	-0.1630809
16	Awareness about organic farming practices	-0.0135667
17	Adoption level regarding organic farming practices	0.0354592

\*Significant at 0.05% probability level 0.197, \*\* Significant at 0.01% probability level 0.257

**Conclusion**

After completing this study, it concluded that most of the farmers were between age 35 to 55 years, having medium family size and nuclear/single families, marginal farmers category, intermediate level of education with medium annual income and agriculture is main occupation, and mixed type of habitation was observed, having membership of two organizations/office bearer, and medium category of materials possession. Most of the respondents had exhibited Agree category of attitude response. The maximum number of respondents have positive attitude and interested towards organic farming practices.

**Application of research:** Coefficient of correlation test indicated that extension contact showed positive significant relationship with the attitude of the farmers towards organic farming that means higher the above-mentioned characteristics of the respondents, higher was their attitude towards organic farming.

**Research Category:** Extension Education

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**Cultivar / Variety / Breed name:** Nil

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