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Research Paper

Socio-economic status of the organic and conventional farming families of the selected agro-climatic zones of northern Karnataka

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■ **ABSTRACT :** Socio-economic status (SES) is a measure of a family's economic and social position in the society. The present study is designed to study the socio-economic status of the conventional and organic farming families of selected northern agro climatic zones of Karnataka. The total sample of the study comprised of 300 farm women. The socio-economic scale of Aggarwal *et al.* (2005) was used to assess the socio-economic status of the farming families. The organic farming families of all the three selected zones were comparatively better as compared to conventional farming families of the respective zone with respect to education, possession of land holdings, annual income, farming experience and livestock possession. Irrespective of the agro-climatic zones, very few households had pucca houses *i.e.*, about 16 per cent of the organic and nine per cent of the conventional farming families had pucca houses. Slightly higher percentage of the organic farmers belonged to upper middle class as compared to conventional farmers in NDZ and NTZ while, cent per cent and majority of the organic and conventional farming families belonged to lower middle socio-economic status in NHZ. These results revealed that shift to organic production had positive impact on the socio-economic status of the farming in all the agro-climatic zones. This call for farmers' sensitization and encouragement to adopt organic farming that will not only cater for food and nutritional security but also quality life of farming families and sound management of the environment.

■ **KEY WORDS:** Organic farming, Conventional farming, Socio-economic status, Housing conditions

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Socio-economic status (SES) is a measure of a family's economic and social position in the society. Sociologists often use socio-economic status as a means of predicting quality of life. The socio-economic status components includes, educational level, occupation, annual income, possession of land holdings, live stock, household assets and housing condition.

In India agriculture is regarded as the largest sector

of the country's economic activity. It is the major sector of the economy, in which the majority of people earn their livelihood and it assumes a pivotal role in the rural economy. Green revolution with high input use has boosted the production output in most crops but now is sustained with diminishing return of falling dividends. Moreover, with the increase in population our compulsion would not be only to stabilize agricultural production but also to increase it further in a sustainable manner. The extensive use of external inputs *viz.*, chemical fertilizers and pesticides has led to ecosystem damage and improper use of natural resources. These factors have forced the farmers, scientists and the policy makers to look at the sustainable farming techniques through organic farming. Organic farming then is considered to be one way of alternative farming, whose approaches are found to be sustainable and safe. Hence, the present study is designed to study the socio-economic status of the conventional and organic farming families of selected northern agro climatic zones of Karnataka with the following objectives, to study the socio-economic status of the selected conventional and organic farming families, to study the housing conditions of the selected conventional and organic farming families.

■ RESEARCH METHODS

The present study was conducted in three northern agro climatic zones of Karnataka *viz.*, Northern Dry Zone -3 (NDZ), Northern Transitional Zone-8 (NTZ) and Northern Hilly Zone-9 (NHZ) of Karnataka. Further, three villages *viz.*, Hirehandigol, Ammangi and Kamadheneu were selected from these selected agro-climatic zones, respectively. From each village, fifty farm women involved in organic farming were selected for collecting the required information for the study. Thus, 150 farm women involved in organic and conventional farming were selected for collecting the required information for the study. The total sample of the study comprised of 300 farm women. The pre-structured questionnaire schedule was the research tool used to collect the required information from the sample under the study. The socio-economic scale of Aggarwal *et al.*, 2005 was used to assess the socio-economic status of the farming families. Percentage, mean and standard deviations were used to represent the data.

■ RESEARCH FINDINGS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Socio demographic characteristics of the organic and conventional farming families of agro-climatic zones of northern Karnataka :

The socio demographic characteristics of the organic and conventional farming families of agro-climatic zones of northern Karnataka is shown in Table 1. Regarding socio demographic characteristics of the selected respondents, mean age of the selected organic and conventional farm women in all the zones ranged from 41-44 years and it was found to be in the category of middle age group. Poyyamoli and Padmavaty (2011) also found in their study that majority of the organic farmers were middle aged (40-45 years) in Pondicherry region. With respect to caste, majority of both the organic and conventional farm women belonged to upper caste.

Educational level of the respondent and her counterpart is important for acquisition, comprehension and acceptance of information about improved farming. With respect to educational level of the selected organic and conventional farm women under the study, majority of the organic farm women were literate with formal education up to higher standard. However, majority of the conventional farm women (73%) studied up to primary school. These results are similar to the results of study conducted by Lalitha *et al.* (2000), which disclosed that farm women (90%) were educated up to primary level.

Similarly, majority of the organic farm women's counterparts studied up to middle school and one third of them studied up to pre university, while, less than half percentage of the counter parts of conventional farm women (40.66%) studied up to middle school and only 14.68 per cent of them studied up to pre university. These findings are at par with the results of Singh and George (2012) which revealed that largest percentage of the organic farmers were high school educated and few were college educated. Thus, the researcher opines that education of the farmers motivated them towards organic farming.

The main occupation of the cent per cent of the selected respondents of both the organic and conventional farming was agriculture. More than one third (33.33%)

Table 1 : Socio-demographic characteristics of the organic and conventional farmers of agro-climatic zones of northern Karnataka (n=300)

Socio-demographic characteristics	NDZ		NTZ		NHZ		Total	
	OF (n=50)	CF (n=50)	OF (n=50)	CF (n=50)	OF (n=50)	CF (n=50)	OF (n=150)	CF (n=150)
Age								
Young (< 40 years)	13 (26.00)	11 (22.00)	18 (36.00)	18 (36.00)	10 (20.00)	10 (20.00)	41 (27.34)	39 (26.00)
Middle (40-47 years)	22 (44.00)	22 (44.00)	18 (36.00)	12 (24.00)	23 (46.0)	23 (46.00)	63 (42.00)	57 (38.00)
Old (> 47 years)	15 (30.00)	17 (34.00)	14 (28.00)	20 (40.00)	17 (34.00)	17 (34.00)	46 (30.66)	54 (36.00)
Mean	43	44	41	43	44	44	43	44
Caste								
Upper caste	50 (100)	50 (100)	42 (84.00)	45 (90.00)	50 (100)	50 (100)	142 (94.67)	145 (96.67)
OBC	-	-	08 (16.00)	05 (10.00)	-	-	08 (5.33)	05 (3.33)
Dalits	-	-	-	-	-	-	-	-
Education								
Illiterate	-	-	-	-	-	-	-	-
Functional literate	-	-	-	-	-	-	-	-
Primary school	-	27 (54.00)	03 (06.00)	40 (80.00)	-	43 (86.00)	03 (2.00)	110 (73.33)
Middle school	37 (74.00)	18 (36.00)	35 (70.00)	10 (20.00)	50 (100)	07 (14.00)	122 (81.33)	35 (23.33)
High school	13 (26.00)	05 (10.00)	12 (24.00)	-	-	-	25 (16.67)	05 (3.33)
Marital status								
Married	50 (100)	50 (100)	50 (100)	50 (100)	50 (100)	50 (100)	150(100)	150(100)
Education of the respondent's husband								
Illiterate	-	-	-	-	-	-	-	-
Functional literate	-	-	-	-	-	-	-	-
Primary school	-	-	-	-	-	-	-	-
Middle school	-	18 (36.00)	02 (04.00)	12 (24.00)	11 (22.00)	37 (74.00)	13 (8.67)	67 (44.67)
High school	30 (60.00)	20 (40.00)	30 (60.00)	28 (56.00)	33 (66.00)	13 (26.00)	93(62.00)	61(40.66)
Pre university	20 (40.00)	12 (24.00)	18 (36.00)	10 (20.00)	06 (12.00)	-	44 (29.33)	22 (14.68)
Occupation								
Main occupation								
Agriculture	50 (100)	50 (100)	50 (100)	50 (100)	50 (100)	50 (100)	150 (100)	150 (100)
Subsidiary occupation								
Agricultural labourers	-	10(20.00)	12 (24.00)	12 (24.00)	38 (76.00)	28(56.00)	50(33.33)	50(33.33)
Horticulture	06 (12.00)	-	-	-	12 (24.00)	-	18(12.00)	
Others	-	15(30.00)	-	-	-	22(44.00)		37(24.67)
Family size					-	-		
Small (upto 5 members)	02 (04.00)	03 (06.00)	15 (30.00)	10 (20.00)	23 (46.00)	27 (54.00)	40 (26.67)	40 (20.67)
Medium (6-10 members)	37 (74.00)	40 (80.00)	33 (66.00)	40 (80.00)	27 (54.00)	23 (46.00)	97 (64.67)	103 (68.67)
Big (>10 members)	12 (24.00)	07 (14.00)	02 (04.00)	-	-	-	13 (8.66)	07 (4.66)
Mean	08	07	05	06	05	05	06	06
Possession of land holdings								
Marginal (>2.5 acres)	-	-	02 (4.00)	05 (10.00)	10 (20.00)	10 (20.00)	12 (8.00)	15 (10.0)
Small (2.51 to 5 acres)	03 (6.00)	-	10 (20.00)	13 (26.00)	33 (66.00)	37 (74.00)	46 (30.67)	50 (33.33)
Medium (5.01-10 acres)	04 (8.00)	08 (16.00)	18 (36.00)	08 (16.00)	07 (14.00)	03 (6.00)	29 (19.33)	19 (12.67)
Large (> 10 acres)	43 (86)	42 (84.00)	20 (40.00)	24 (48.00)	-	-	63 (42.00)	66 (44.00)
Mean	22	23	12	12	6	5	13.33	13.33

Table 1: Contd…

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Annual income								
Low (<Rs. 2,202,60/-)	02 (04.00)	03 (06.00)	15 (30.00)	22 (44.00)	47 (94)	50 (100)	64 (42.66)	75 (50.00)
Medium (Rs. 2,202,60/- to 396604/-)	23 (46.00)	22 (44.00)	18 (36.00)	13 (26.00)	03 (06.00)	-	44 (29.33)	35 (23.33)
High (Rs. 3,96,604/-)	25 (50.00)	25 (50.00)	17 (34.00)	15 (30.00)	-	-	42 (28.00)	40 (26.67)
Mean	4,44,780	4,13,417	300,633	2,99,198	2,21,600	1,70,800	3,22,338	2,94,472
Farming experience of the respondent's husband								
< 7 years	13 (26.00)	22 (44.00)	13 (26.00)	20 (40.00)	07 (14.00)	30 (60.00)	33 (22.00)	72 (48.00)
7-13 years	17 (34.00)	22 (44.00)	15 (30.00)	17 (34.00)	23 (46.00)	17 (34.00)	55 (36.67)	55 (36.67)
> 13 years	20 (40.00)	07 (14.00)	22 (44.00)	13 (26.00)	20 (40.00)	03 (06.00)	62 (41.33)	23 (15.33)
Mean	20	15	18	18	21	12	20	15
Livestock Possession								
No animals	-	15 (30.00)	-	27 (54.00)	-	37 (74.00)	-	79 (52.67)
1 animal	12 (24.00)	28 (56.00)	17 (34.00)	16(32.00)	37 (74.00)	13 (26.00)	66 (44.00)	57(38.00)
2-3 animals	30 (60.00)	02 (04.00)	25 (50.00)	07 (14.00)	13 (26.00)	-	68 (45.33)	09 (6.00)
4 or more animals	08(16.00)	05 (10.00)	08 (16.00)	-	-	-	16 (10.67)	05 (3.33)
Mean	03	01	02	01	0.260	0.26	02	01

(Figures in the parenthesis indicate percentage)

of both the organic and conventional farm women/men were working as agricultural labourers. About 12 per cent of the organic farming families and one third of the conventional farming families had horticulture and either employment or business as their subsidiary occupation, respectively.

Irrespective of the agro-climatic zones, majority of the organic and conventional farming families (64.67 % and 68.67 %, respectively) had medium size family with 6-10 members followed by small family size of up to five members (26.67 % and 20.67 %, respectively). The mean family size of both the organic and conventional farming families was six *i.e.* medium family. Karki *et al.* (2011) and Adesope *et al.* (2012) and also found in their studies that the organic respondents belonged to medium size family with 6-10 members.

Size of the land holding is an important component of socio-economic status. The respondents of three agro-climatic zones differed significantly from each other in respect of this variable. The mean land holdings of both organic (22 acres) and conventional farming families (23 acres) from NDZ was higher than organic and conventional farming families of NTZ (12 acres each). The organic and conventional farming families of NHZ possessed least land holdings *viz.*, six and five, respectively among all the three agro-climatic zones. In NDZ and NHZ, complete land holding was being cultivated under organic farming. However, the organic farmers of NHZ-8 had converted 50 per cent of their land holdings to organic farming. Ramesh *et al.* (2007) revealed that higher percentage of large and medium farmers were involved in organic farming compared to small farmers in the study area of Madhya Pradesh. The findings of Poyyamoli and Padmavaty (2011) were also similar to these results *i.e.*, majority of the organic farmers possessed small level of farm size in Pondicherry region.

Accordingly, average annual income of the organic (Rs. 444,780/-) and conventional farming families (Rs. 413417/-) from NDZ was comparatively higher than other two agro-climatic zones, which was identified as high income category. The average annual income of both the organic and conventional farming families of NTZ-9 was almost equal (Rs. 3,00,633/- and Rs. 2,99,198/-, respectively). The average annual income of the organic and conventional farming families of NHZ was lower compared to other two agro-climatic zones *i.e.*, (Rs. 221,600/- and Rs. 170800/-, respectively) which was identified as medium and low income categories.

The average farming experience of organic farm women's counterparts was comparatively more (20 years) than conventional farm women's counterparts (15 years). This yielded the finding that farming experience encouraged the organic farming. The similar results were found in the studies conducted by Chouichom and Yamao (2010); Rezvanfar *et al.* (2011) and Adesope *et al.* (2012) which revealed that the farming experience of the organic farmers was more than ten years.

On an average, the organic farming families possessed two animals, while, conventional farming families had only one animal. The data regarding the

possession of draft and milch animals revealed that irrespective of the agro-climatic zones, the organic farmers possessed more number of draft and milch animals when compared to conventional farmers. Possession of cow was the main component of the organic farming. The possession of cattle at home is an advantageous condition for organic farming. Cultivation of fodder was the major constraint in rearing of animals. Since, the organic respondents from NDZ had larger size of land holding, they could afford to cultivate fodder crops and hence they could maintain 2-3 animals. In case of respondents from the other two zones, only one or two animals were found and they grew forage crops along the bunds.

The organic farming families of NDZ were comparatively better as compared to other agro-climatic zones with respect to education, possession of land holdings, annual income, farming experience and livestock possession.

The housing conditions of the farming families :

Type of house is a component determining the respondent's socio-economic status. The housing conditions of the selected respondents of both organic and conventional farming families in different zones varied. It is interesting to know that irrespective of the agro-climatic zones, very few households had pucca houses *i.e.*, about 16 per cent of the organic and nine per cent of the conventional farming families had pucca houses. This result is at par with the findings of the study conducted by Suresha and Mylarappa (2012), who revealed that small percentage of the farming families were residing in pucca houses. However, a majority of them in NDZ and NTZ were residing in partially pucca houses and in NTZ-9, none of them were residing in pucca houses (Table 2).

Socio-economic status of the organic and conventional farming families :

The socio-economic status scale as per Aggarwal *et al.* (2005) was used to assess the socio-economic status of the selected farming families. It comprised of components related to occupation, land holding, caste, education, socio-political participation, possessions and

Table 2 : Housing condition of the organic and conventional farming families of agro-climatic zones of northern Karnataka (n=300)

Particulars	NDZ		NTZ		NHZ		Total	
	OF (n=50)	CF (n=50)	OF (n=50)	CF (n=50)	CF (n=50)	CF (n=50)	OF (n=150)	CF (n=150)
Type of house								
Kachha	03 (06.00)	06 (12.00)	07 (14.00)	09 (18.00)	17 (34.00)	14 (28.00)	27 (18.00)	29 (19.33)
Partially Pucca	35 (70.00)	38 (76.00)	30 (60.00)	33 (66.00)	33 (66.00)	36 (72.00)	98 (65.33)	107 (71.34)
Pucca	12 (24.00)	06 (12.00)	13 (26.00)	08 (16.00)	-	-	25 (16.67)	14 (9.33)
Facilities available								
Water and electricity								
Both tap /bore water supply and electricity	50 (100)	50 (100)	50 (100)	50 (100)	50 (100)	50 (100)	150 (100)	150 (100)
Sanitary								
Bath room inside the kitchen	21 (42.00)	23 (46.00)	26 (52.00)	27 (54.00)	40 (80.00)	43 (86.00)	87 (58.00)	93 (62.00)
Separate bath room	29 (58.00)	27 (54.00)	24 (48.00)	23 (46.00)	10 (20.00)	07 (14.00)	63 (42.00)	57 (38.00)
Latrine	47 (94.00)	44 (88.00)	43 (86.00)	41 (82.00)	33 (66.00)	36 (72.00)	123 (82.00)	121 (80.67)

(Figures in the parenthesis indicate percentage)

Table 3 : Socio-economic status of the selected organic and conventional farming families (n=300)

Socio-economic status	NDZ		NTZ		NHZ		Total	
	OF (n=50)	CF (n=50)	OF (n=50)	CF (n=50)	OF (n=50)	CF (n=50)	OF (n=150)	CF (n=150)
Upper high (>76)	-	-	-	-	-	-	-	-
High (61-75)	-	-	-	-	-	-	-	-
Upper middle (46-60)	28 (56.00)	20 (40.00)	14 (28.00)	06 (12.00)	-	-	42 (28.00)	26 (17.33)
Lower middle (31-45)	22 (44.00)	30 (60.00)	36 (72.00)	44 (88.00)	50 (100)	42 (84.00)	108 (72.00)	116 (73.33)
Poor (16-30)	-	-	-	-	-	08 (16.00)	-	08 (5.34)
Very poor (<16)	-	-	-	-	-	-	-	-

(Figures in the parenthesis indicate percentage)

housing conditions. Based on the total scores obtained by each farming family, they were classified into six categories namely upper high (>76), high (61-75), upper middle (46-60), lower middle (31-45), poor (16-30), very poor (<16). It is studied from the Table 3 that slightly higher percentage of the organic farmers (56 % and 28 %, respectively) belonged to upper middle class as compared to conventional farmers in NDZ (40 %) and NTZ-9 (12 %), while, cent per cent and 84 per cent of the organic and conventional farming families belonged to lower middle socio-economic status in NHZ. This was due to the reason that the average family income drawn by the organic farmers was slightly higher in NDZ and NHZ. The educational level of the respondent and her counterpart, household possessions and housing conditions of the organic farming families was comparatively better than the conventional farming families (Table 1 and 2). The social participation of the organic farming families was higher than those of conventional farming families as the organic farming families were the members of the organic farming association and they participated in the meetings with the progressive farmers frequently. These results are supported by the research findings of Chand and Sharma (1999); Lalitha *et al.* (2000) and Wakle *et al.* (2003). The reported findings by Chand and Sharma (1999) indicated that two thirds of the farming families had low socio-economic status in tribal area of Himachal Pradesh. About 32 per cent of them had medium socio-economic status. Only two per cent were found to have high socio-economic status. Lalitha *et al.* (2000) conducted a study in Bangalore rural area and found that almost equal percentage of the farm women (36.70 % and 35 %) belonged to medium and high socio-economic status. One fourth of the sample belonged to low socio-economic status. Wakle *et al.* (2003) revealed that majority of the rural women (70.50 %) were from low socio-economic status followed by medium (28.10 %) and high (1.40 %) socio-economic status in western and central Maharashtra.

Conclusion :

The shift to organic production had positive impact on the socio-economic status of the farming in all the agro-climatic zones. The organic farmers experienced a decrease in the total production costs, even though they experienced higher labour costs. The organic farming can help small family farms survive, increase farm productivity, repair decades of environmental damage and lead to sustainable agriculture and improved food security and better socio-economic status and housing condition. This call for farmers' sensitization and encouragement to adopt organic farming that will not only cater for food and nutritional security but also quality life of farming families and sound management of the environment.

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