An Analysis of Socio Economic Background of Organic Farmers: A Study with Special References to Mandya District

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Abstract

Organic farming is considered as an important system of agriculture and food production that is environmentally sustainable and can generate several positive impacts to our society. Development of the world food market in recent years, been marked by fast, unexpected and complex changes. Last three decades have observed dramatic change in Agri-food marketing system. The system, which has become more organized and customer-centric, is facilitating growth of organized food retailing. This study was an attempt to understand the opinions of farmers about sustainable farming in the study area. Therefore, this study was designed to study farmers' understanding towards organic farming in Mandya District. A convenient sampling technique was used to select 100 respondents on the basis of issue of questionnaire. For the purpose of analysis of data applied for descriptive statistics, Chi- square tests, and one way Anova. To explore the relationship between the concerned variables correlation coefficientwas computed by using SPSS. The highlights of this study revealed positive association of adoption of organic farming with socio-economic factors. And Hypothesis reveled that there is significant association between land holding pattern, major growing of organic produces, awareness level and Place, Gender, Agricultural practicing, Annual income, Type of family, No of dependents, and Farm size are influencing on adoption of organic farming.

KEYWORDS: Organic Farmers, Organic Farming, Awareness, Demographic Variables, Organic Produces. No of years practicing.

INTRODUCTION:

Organic farming is a mixture of earlier natural farming, modern innovative thinking and new knowledge of science which helps the shared surroundings and encourages fair affiliations and good quality of life for all involved. Organic farming is alternative ecological production system which gives highest importance on ecological protection. Organic farming is controlled by an environmental philosophy, giving particular priority to animal welfare concern and de motivates the use of man-made artificial chemical inputs during the course of the farming practice. For truly devoted organic producers, it is more of a individual belief system and a lifestyle rather than a business venture (Kaltoft, 1999).

A country like India can delight in a number of assistances from the adoption of organic production. Socio- Economical welfares like generation of rural employment, enhanced earning capacity of household, poverty mitigation, social upliftment, ensure the health of young generation, women empowerment, sustainable development, prevention of disasters caused by the pesticide, improving the environmental condition, protection of the natural resources, enhanced soil fertility, deterrence of soil erosion, preservation of natural and agro-biodiversity are the major benefits. The threat posed by the conventional

food products to the human health and the damage done to the ecosystem are being viewed seriously. Efforts are made to produce healthy foods and the demand for them is increasing.

The most important reason for buying organic food was the concern for the health of children. Organic food is expensive than Non organic food and customers have to pay a premium generally 20 -30% for that. Still many people are willing to pay this higher premium due to the perceived health benefits of organic products. Increasing in their incomes, urbanization, the development of retail trade, changing life styles, and rapid economic growth have been the other key drivers of the increase in sales of organic foods.

FAO (1999) describes organic farming as a universal production management system which encourages and improves agro-ecosystem health, including biological cycles, biodiversity, and soil biological events. It highlight the use of management practices in preference to the use of off-farm inputs, taking into account that local conditions require locally adapted systems. This is accomplished by using agronomist, organic, and automated methods, as disparate to using artificial materials, to fulfill any definite function within the system.

One leading international federation which concern on promoting organic agriculture is IFOAM (International Federation of Organic Agriculture Movements) (2009). It was established in 1972. The World Board of the International Federation of Organic Agriculture Movements (IFOAM) agreed the Organic farming is a production system that sustains the fitness of soils, ecology and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic cultivation is a combination of ancient, innovative and new science which helps to protect the environment and encourage the good relationship and a quality of life for who are involved in that.

IFOAM published regulations to certify organic production, which is needed to get organic label. The essential standard for organic production and processing under IFOAM that have been widely adopted by many countries around the world. According to IFOAM, there are four basic principles of organic agriculture. 1) Principle of fitness, Organic farming should sustain and enhance the health of the soil, plant, animal, human and planet as one and indivisible. 2) Principle of ecofriendly, Organic farming is based on living ecofriendly systems and cycles, works with them, follow them and help to sustain them. 3) Principle of equality, Organic farming should build a relationships that safeguard equality with regard to the common environment and life opportunities. 4) Principle of care; Organic agriculture should be managed in a protective and responsible manner to protect the health and well-being of current and future generations and the environment.

STATEMENT OF THE PROBLEM:

Agriculture is the existence of humankind. Any change in agriculture practices will result in corresponding change in the life of people and of nature and vice versa too. In the study area, more than 100 farmers are cultivating pesticide-free organic farming. It is notable that all the farmers are cultivating similar sized plots, using similar initial subsidies under the same environmental conditions. Thus, determining what factors are influencing the adoptions of organic farming of interest. So, in the view of the forgoing discussion, the current investigation was undertaken.

NEED OF THE STUDY:

The side effects of the modern agricultural technologies foster serious question about it are the overall benefits. The use of compound fertilizers and pesticide pollute the air and water. The use of Non organic compounds, including hormones and antibiotics results in residue in food which causes cancer or genetic damage. Therefore, soil and energy resources are being fatigued. Instead of recycling wastes back onto land as fertilizer, it is allowed to pollute water. The unsustainable modern agricultural practices leads look for other alternative. The majority of these alternatives agricultural practices are derived from traditional, ecofriendly practices; organic farming is one among them. Organic farming over the last few decades has proved to be successful; but the differences in culture, ecology and geographical factors compel adoption of situation-specific principles and techniques.

LITERATURE REVIEW:

ZeinKallas, Teresa Serra and Jose M. Gil (2009)[1]: This study attempts to understand andidentify "Farmer's objectives as determinant factors of organic farming adoption", Farmers' objectives are found to influence the conversion decision. Moreover, farmers who are not risk averse are more likely to adopt organic farming. The Results identify the policy changes that have been more relevant in motivating. And this article suggests that the commitments towards generation of income activity and preservation of environment are the both important factors for conversion. The results demonstrate that the aspect of generating employment is an important factor for conversion and highlights the social role of the vineyard organic agriculture in Catalonia.

Thamaraiselvan and Arunkumar (2013)[2]: This article tries to focus on "the knowledge,attitude and practice on organic farming among the beneficiaries of Kolunji Farm". As the present study aims at analyzing the Knowledge, Attitude and Practices of the researcher has adopted. They adopted the Descriptive research design, in order to analyze the knowledge, attitude and practices on organic farming. The present study has given an in-depth analyzing on the challenges and difficulties faced by the farmers who have moved over to organic farming. They agreed that NGOS play a crucial role in promoting traditional and sustainable agriculture however. The NGOs' interventions should be combined with government support and social Workers' initiatives.

Ali Asadollahpour, Maryam OmidiNajafabadi, Seyed Jamal Hosseini (2014)[3]: Thepurpose of this research was to examine factors affecting the conversation to organic farming by rice producers in Mazandaran Province, north of Iran. The results highlights that variables affecting the conversion into organic agriculture are main two categories are Implementers and obstacles. The facilitating factors include: Motivations and profits. Health and safety motivations, environmental motivations, knowledge motivations, Ideological and philosophical motivations and economic motivations were important motivating factors mentioned by rice Producers. The benefits identified by the

[1]ZeinKallas, Teresa Serra and José M. Gil (2009): "Farmer's objectives as determinant factors of organic farming adoption", 113th EAAE Seminar "A resilient European food industry and food chain in a challenging world", Chania, Crete, Greece Pg no: 1-19.

[2]ThamaraiselvanMsw, Pgdc and Arunkumar (2013): "Knowledge Attitude and Practices on Organic Farming among Beneficiaries of KudumbamKolunji Farm, Pudukkottai District", IOSR Journal Of Humanities And Social Science (IOSR-JHSS), e-ISSN: 2279-0837, p-ISSN: 2279-0845. PP 24-32.

[3]Ali Asadollahpour, Maryam OmidiNajafabadi, Seyed Jamal Hosseini (2014): "Factors Affecting the Conversion to Organic Farming in Iran: A Case Study of Mazandaran Rice Producers", Sci. Int. (Lahore), 26(4), 1665-1670, ISSN 1013-5316; Coden: Sinte 8 1665

interviewed farmers were categorized into three themes, namely: economic; environmental; health and safety. The second category is the barriers to conversion to organic farming that consists of: challenges and costs. The challenges include: knowledge, lack of government supports, Fear of the future and production and costs are included financial and spend more time and energy.

Ranasinghe,Mahaliyanaarachchi, And Sivashankar,(2015)[4]: this study was conducted on"Factors affecting vegetable farmers' preference towards organic farming", The study shows that among several socio economic factors farmers' preference to engage with organic agriculture depends on their income, educational level, gender and cultivated land area. Among that increasing the educational level and cultivated land area affect negatively to increased likelihood of preference to engage with organic agriculture. According to farmers' view health benefits is the most potential factor in organic agriculture and short supply of inputs stands for the most constraint factor and most of the farmers believe high risk is involving in organic farming. Finally the study says that there is an association between extension services and farmers' awareness in existing market and also there is an association between extension services and preference to engage with organic agriculture.

Rana, Hasan, Alam, and Islam, (2017)[5]: had undertaken a study to examine the **"**Farmerattitude towards organic vegetable cultivation in RanguniaUpazila, Chittagong, Bangladesh". The study was focused on the attitude of farmers towards organic vegetable cultivation and explores the relationships between their selected characteristics with their attitude. Descriptive statistics were used to describe the variables. Majority of the farmers (95.4%) had positive attitude towards organic vegetable cultivation. Correlation analysis indicates that level of education, extension media contact and agricultural training received had positive and significant relationship with their attitude score.

SCOPE OF THE STUDY:

The present study is conducted to examine the influence of demographical factors on farmers to opt organic farming in Mandya district. The analysis includes the 100 organic farmers in Mandya district from 5 taluks, like Mandya, Maddur, Srirangapatna, Pandavapura, Mallavalli. The scope of this report is confined to awareness level, demographical factors, land holding pattern, major organic produces, and how long they are practicing of organic farming in Mandya district.

OBJECTIVES OF THE STUDY:

1. To highlight the theoretical background and importance of organic farming.
2. To study the demographic profile of the organic farmer in Mandya District.
3. To assess the land holding pattern of organic farmers in Mandya District
4. To depict the major organic crops grown in Mandya District.
5. To study from how long they are practicing the organic farming.
6. To analyze the level of awareness relates to practicing the organic forming.

HYPOTHESES OF THE STUDY:

1. Ho: There is no significant difference between Demographical profiles of organic farmers.

[4]Ranasinghe,Mahaliyanaarachchi, And Sivashankar,(2015):"Factors affecting vegetable farmers' preference towards organic farming", faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanaka.Pg No 1-4.

[5]Rana, Hasan, Alam, and Islam, (2017): "Farmer attitude towards organic vegetable cultivation in RanguniaUpazila, Chittagong, Bangladesh".

2. Ho: There is no significant difference between land holding pattern of organic farmers.
3. Ho: There is no significant variation between major organic produces in Mandya District.
4. Ho: There is no significant variation between numbers of years practicing organic farming.
5. Ho: There is no significant difference between awareness levels of organic farmers.

RESEARCH METHODOLOGY:

The data required for the present study has been collected fromboth primary and secondary sources of data collection. Primary data collection is done through administering questionnaires, conducting face-to-face interviews and by observation within the area of study. In addition to these books, articles published in journals, thesis submitted to the universities and working papers of various institutions also considered. Internet and other sources also used to light of the study. The analysis and interpretation of data is done using percentages and graphical representation. For the purpose of analysis of data, descriptive statistics, Chi- square tests and t- test are applied.

ANALYSIS AND INTERPRETATION:

1. **The demographic profile of the organic farmer in Mandya District.**

Table No.1 represents the Demographical profile of the organic farmers in Mandya District. According to the descriptive statistics the highest mean and Standard deviation was recorded in no of dependents, Age Pattern, place and Annual Income are the main factors which influence the adoption of organic farming. The mean and S.D values of No of dependents are 3.4 and .570 respectively. As against the lowest mean and S.D was recorded for marital status, Agricultural practicing and family type. The mean and S.D values for Martial status are 1.01 and .100 respectively, type of agricultural practicing like full time and part-time the values are 1.03 and .171, and the Mean and S.D values for family type like Joint family and nuclear family are 1.05 and .219 respectively. The Average mean and S.D recorded are farm size, education background, and Gender. The mean and S.D values for farm size is 1.62 and .546, education background is 1.34 and .607, and Gender 1.20 and .402 is recorded respectively.

In the context of place majority of the respondents belongs to the Mandya and Pandavapura district numbering 34 and 29 respectively. Majority of the respondents are male category numbering 80 practiced, female category numbering 20 respectively. Majority of the respondents between 30-39 and 40-49 years age group are opted organic farming numbering 57, and 24. Below 29 to less than 20 are not interested in doing organic farming. Majority of the respondents who finished Matriculation numbering 73 are interested in doing organic farming. The people who have higher education than Matriculation numbering 27 are not much interested.The Majority of the farmer's among 97 are practicing fulltime organic farming, and part tine practitioners are very few like 3. The Majority of the farmers who are having yearly income of Rs. 50000 to 2, 50,000, numbering 63 farmers are interested in organic farming. The remaining higher income group farmers numbering 27 are not much interested. The Majority of 99 farmers who are all doing organic farming are married, and they are from Joint family. The majority of the farmers who opted organic farming are having No of dependents are more than three are 54 families. The majority of the farmers numbering 97 who are doing organic farming are having 1 -20 acres of land.

Table No. 1 showing the demographic profile of the organic farmer in Mandya District. (Descriptive statistics)

SI.N	Factors	Classification	F	%	Mean	S.D	SEM	Min	Max
1.	Place	Mandya	34	34	**2.54**	**1.259**	.126	1	5
		Maddur	9	9					
		Srirangapatna	27	27					
		Pandavapura	**29**	29					
		Mallavalli	1	1					
2.	Gender	Male	**80**	80	1.20	.402	.040	1	2
		Female	20	20					
3.	Age Pattern	Between 21-29Years	9	9	**3.35**	**.783**	.078	1	5
		Between 30-39 Years	**57**	57					
		Between 40-49years	24	24					
		Above 50 Years	10	10					
4.	Educational Background	Matriculation	**73**	73	1.34	.607	.061	1	3
		Pre-university	20	20					
		Graduate	7	7					
		Post Graduate	0	0					
5.	Agricultural Practicing	Full Time	**97**	97	1.03	.171	.017	1	2
		Part Time	3	3					
6.	Annual Incom	Below Rs.50,000	27	27	**2.20**	**.995**	.099	1	5
		Rs50,001 to 1, 50,000	**38**	38					
		Rs1,50,001to2,50,000	**25**	25					
		Rs2,50,001to3,50,000	8	8					
		Above Rs 3, 50,000	2	2					
7.	Marital Status	Married	**99**	99	1.01	.100	.010	1	2
		Un married	1	1					
8.	Type of Family	Joint family	**95**	95	1.05	.219	.022	1	2
		Nuclear family	5	5					
9.	No of dependents	One	1	1	**3.41**	**.570**	.057	1	4
		Two	1	1					
		Three	**54**	54					
		More than Three	44	44					
10.	Farm Size (in Acres)	0-5	41	41	1.62	.546	.055	1	3
		6-20	**56**	56					
		21-50	3	3					
		More than 50	0	0					

Sources: Field Survey.

2. **The land holding pattern of organic farmers in Mandya District**

Table No.2 depicts Descriptive statistics for the landholding pattern of organic farmers in Mandya District. The study reveals that the Majority of 80 respondents are Male and 20 are female respectively. From that 42 respondents are having 0-5 acres of land, and 56 are having 6-20 acres of land, the rest of them who are having more than 20 acres of land are not much interested in organic farming.

Table No. 2 showing the land holding pattern of organic farmers in Mandya District

Land size - Descriptive and One way Anova												
particulars	N	Mean	S.D	Std. Error	95% Confidence Interval for Mean		Min	Max	Between-Component Variance	F value	D.F	P value
					L. Bound	U Bound						
Male	**80**	1.52	.573	.064	1.40	1.65	1	3	.105	**13.633**	**99**	**0.000 (Ho= Rejected)**
Female	20	2.00	.000	.000	2.00	2.00	2	2				
Total	100	1.62	.546	.055	1.51	1.73	1	3				

Sources: Field Survey.

In the above case One way Anova is used to calculate F-value, degrees of freedom at 5% level of significance, The study reveals that the calculated P value if .000 which is less than 0.05, so the alternative hypothesis is accepted, and Null hypothesis is rejected. It indicates that there is significant difference in the land holding pattern of organic farmers in Mandya District.

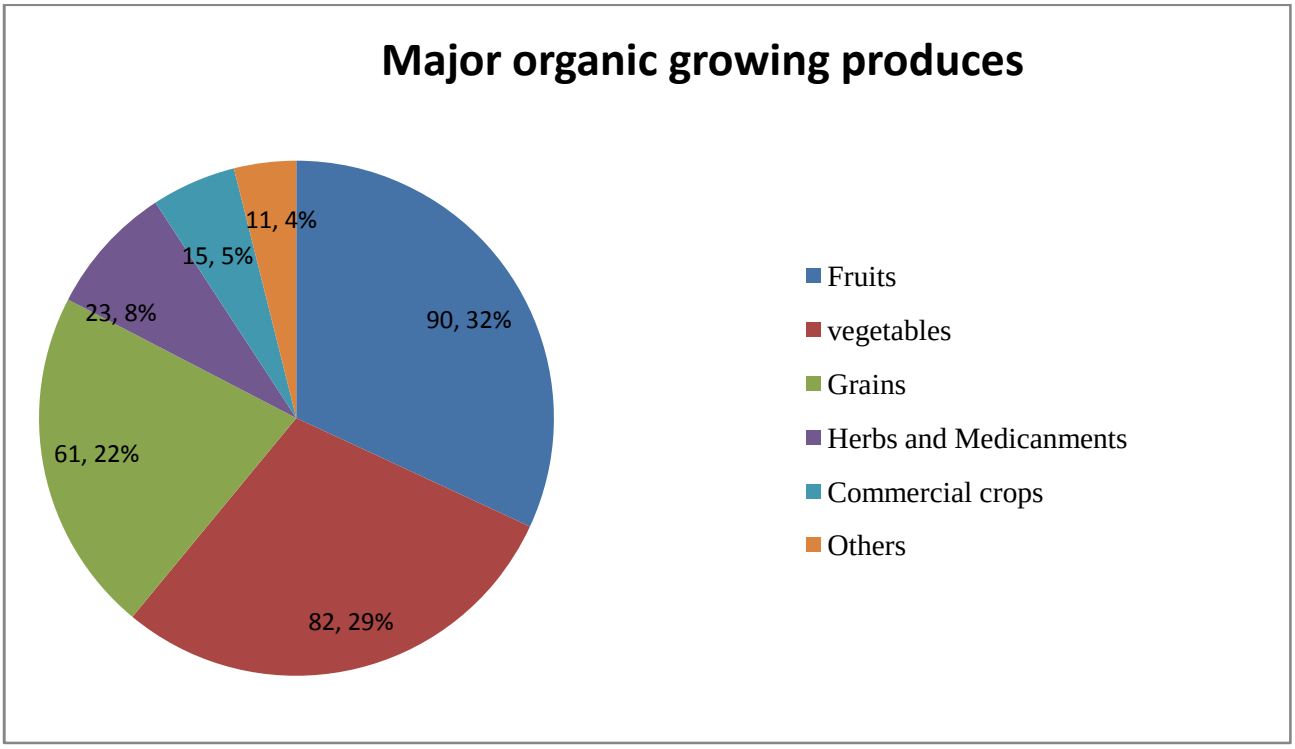
Table No. 3 showing the major organic crops grown in Mandya District.

Organic produces	yes	No	Total	Mean	S.D	SEM	t- value	D.F	(Sig 2-tailed)
Fruits	90	10	**100**	**1.10**	**.302**	**.030**	**3.317**	**99**	**.001(Ho= Rejected)**
Vegetables	82	18	**100**	**1.18**	**.386**	**.039**	**4.662**	**99**	**.000(Ho= Rejected)**
Grains	61	39	**100**	**1.39**	**.490**	**.049**	**7.956**	**99**	**.000(Ho= Rejected)**
Herbs and Medicaments	23	77	**100**	**1.77**	**.423**	**.042**	**18.205**	**99**	**.000(Ho= Rejected)**
Commercial crops	15	85	**100**	**1.85**	**.359**	**.036**	**23.685**	**99**	**.000 (Ho= Rejected)**
Others	11	89	**100**	**1.89**	**.314**	**.031**	**28.302**	**99**	**.000(Ho= Rejected)**

Sources: Field Survey.

The above table No.3 reveals the Hypothetical statistics. One Sample T-Test used to calculate T-test, degrees of freedom at 5% level of significance,the major organic produces grown in Mandya district Fruits, the calculated t value is 3.317, d.f (99) p value is 0.000, which is less than 0.05. and the rest of the produces like Vegetables t –value is 4.662, d.f (99), Grains t –value is 7.956, d.f is (99), Herbs and medicaments t-value is 18.205, d.f (99), Commercial crops t-value is 23.685, d.f is (99), and others t-value is 28.302, d.f (99), and in all the respective categories the calculated p –value is 0.000 which less than 0.05. Therefore the null hypotheses are rejected and alternative hypotheses are accepted. It says there is significant difference between the major produces grown in Mandya district.

Chart No. 1 showing Classification of the Major organic produces grow in Mandya district



The table No.3 Describes Descriptive and Exploratory statistics regarding major organic crops grown in Mandya district. The above table shows the types of crops or produces they grow in their agricultural land. Among them90 respondents grow fruits, 82 respondents grow vegetables, and 61 respondents grow grains. While herbal and medicinal plants are grown by 23 respondents, 15 respondents grow commercial crops, and 11 respondents grow other crops. The major crops grown by the respondents are fruits and vegetables.

Table No. 4 showing from how long they are practicing the organic farming. (Descriptive and Pearson Chi–Square test statistics)

How long you are practicing	M	F	S.D	Pearson Chi-Square test	D.F	(Sig 2 Tailed)
0-6 Months	4.88	16	.342	**28.989**	**4**	**0.000 (H0= Rejected)**
6 to 12 Months	4.65	23	.487			
1 to 3 years	4.31	26	.471			
3 to 5 years	4.95	20	.224			

Sources: Field Survey.

The above table no.4 describes from how long they are practicing the organic farming.The study reveals that the Majority of 26 respondents practicing from 1 to 3 years, and 23 respondents practicing from 6 Months to 12 Months. 20 of them are practicing from 3 to 5 years, and the rest of 16 respondents are practicing from 0 to 6 Months. The Highest mean and S.D value recorded is 4.95 and .224 for 3 to 5 years, and 4.88 and .342 for 0-6 Months respectively, The Lowest mean and S.D recorded is 4.65 and .487 for 6 to 12 Months, and 4.31 and .471 for 1 to 3 Years respectively.

In the above case chi-square Test is used to calculate X^2-value, degrees of freedom at 5% level of significance, and the study reveals that the calculated P value is 0.000 which is less than 0.05, so the alternative hypothesis is accepted, and Null hypothesis is rejected.

The study finds that there is significant association between the no of years they are practicing organic farming.

Table No. 5 showing the level of awareness of organic forming. (Pearson Chi – Square test)

SI.No	Factors	Classification	F	Person Chi-square test	D.F	(sig 2-tailed) @ 5 % Significance P Value P>_ 0.05 (A) Ho P<_ 0.05 (R) Ho
1.	Place		34	75.438	4	0.000 (H0 = Rejected)
		Maddur	9			
		Srirangapatna	27			
		Pandavapura	29			
		Mallavalli	1			
2.	Gender	Male	80	55.645	1	0.000 (H0 = Rejected
		Female	20			
3.	Age Pattern	Between 21-29Years	9	63.359	3	0.095 (H0 = Rejected
		Between 30-39 Years	57			
		Between 40-49years	24			
		Above 50 Years	10			
4.	Educational Background	Matriculation	73	6.884	2	0.032 (H0 = Rejected)
		Pre-university	20			
		Graduate	7			
		Post Graduate	0			
5.	Agricultural Practicing	Full Time	97	1.390	1	0.238 (H0 = Rejected)
		Part Time	3			
6.	Annual Income	Below Rs.50,000	27	29.296	4	0.000 (H0 = Rejected)
		Rs50,001 to 1, 50,000	38			
		Rs1,50,001to2,50,000	25			
		Rs2,50,001to3,50,000	8			
		Above Rs 3, 50,000	2			
7.	Marital Status	Married	99	.454	1	0.501 (H0 = Rejected)
		Un married	1			
8.	Type of Family	Joint family	95	11.715	1	0.001 (H0 = Rejected
		Nuclear family	5			
9.	No of dependents	One	1	23.817	3	0.000 (H0 = Rejected
		Two	1			
		Three	54			
		More than Three	44			
10.	Farm Size (in Acres)	0-5	41	17.756	2	0.000 (H0 = Rejected
		6-20	56			
		21-50	3			
		More than 50	0			

Sources: Field Survey

The above table no .5 describes the awareness level of organic farmers in organic farming. To calculate thePerson Chi-square test, in the context of place, X^2value is 75.438, d .f (4), Gender X^2value is55.645, d .f (1), Agricultural practicing X2 value is 1.390, d .f (1), Annual income X^2value is 29.296, d .f (4), Type of family X^2value is

11.715, d .f (1), No of dependents X^2value is 23.817, d .f (3), Farm size X^2 value is 17.756, d .f (2), in all the respective categories the calculated p –value is 0.000 which less than 0.05. Therefore the null hypotheses are rejected and alternative hypotheses are accepted. It says there is significant association between the awareness level and Place, Gender, Agricultural practicing, Annual income, Type of family, No of dependents, and Farm size respectively.

And Age pattern X^2value is 63.359, d .f (3), p-value is 0.095, education background X^2value is 6.884, d .f (2), p value is 0.032, Marital status X^2value is .454, d .f (1), p value is 0.501.in all this respective categories the calculated p –value is more than 0.05. Therefore the null hypotheses are accepted and alternative hypotheses are rejected. It says there is no significant association between awareness level and Age pattern, education background and marital status.

THE FOLLOWING ARE THE MAJOR FINDINGS OF THE STUDY:

- Majority of the respondents are male category numbering 80 practiced female category numbering 20 respectively.
- It indicates that the land holding pattern of organic farmers influence on adoption of organic farming.
- It says that there is major produces grown in Mandya district are influencing on adoption of organic farming.
- The study finds that the no of years they are practicing organic farming also influencing them to adoption of organic farming.
- It reveals that the awareness level and Place, Gender, Agricultural practicing, Annual income, Type of family, No of dependents, and Farm size are influencing on adoption of organic farming. Respectively. And at the same time Age pattern, education background and marital status not influencing much.

THE FOLLOWING ARE THE MAJOR SUGGESTIONS FOR THE STUDY:

- Developing strong linkage between producer and consumer.
- Reducing the cost of certification and it is easily approachable to farmers.
- Making the organic inputs available to small land holders.
- Improve infrastructural facilities like cold storage and transportation.
- Providing regular training on organic agriculture.

CONCLUSIONS:

The highlights of this study revealed positive association of organic farming with awareness level and Place, Gender, Agricultural practicing, Annual income, Type of family, No of dependents, and Farm size are influencing on adoption of organic farming.This study helps not only in understanding their level of awareness but also in creating the awareness among the farmers for adopting sustainable organic farming which is an essential component to the Indian Agricultural system.

REFERENCES:

Ali,Maryam, &Hosseini (2014): “Factors Affecting the Conversion to Organic Farming in Iran: A Case Study of Mazandaran Rice Producers”, Sci. Int. (Lahore), 26(4), 1665-1670, ISSN 1013-5316; Coden: Sinte 8 1665.

FAO (Food and Agricultural organization) (1990):“the state of food and agriculture 1990”, ISBN 92-5-102989-X.

IFOAM (International Federation of Organic Agriculture Movements) (2009): The contribution of organic agriculture to climate change mitigation.

Kaltoft P. (1999): "Values about nature in organic farming practice and knowledge", SocioligiaRuralis, Vol.39, No1, pg. 39-53.

Rana, and et.al. (2017): "Farmers attitude towards organic vegetable cultivation in RanguniaUpazila, Chittagong, Banglasesh.

Ranasinghe,Mahaliyanaarachchi, And Sivashankar,(2015): "Factors affecting vegetable farmers' preference towards organic farming", faculty Of Agricultural Sciences, Sabaragamuwa University of Sri Lanaka. Pg. No 1-4.

ThamaraiselvanMsw, Pgdc and Arunkumar (2013): "Knowledge Attitude and Practices on Organic Farming among Beneficiaries of KudumbamKolunji Farm, Pudukkottai District", IOSR Journal of Humanities and Social Science (IOSR-JHSS), e-ISSN: 2279-0837, p-ISSN: 2279-0845. Pg. 24-32.

ZeinKallas, Teresa Serra and Jose M. Gil (2009): "Farmer's objectives as determinant factors of organic farming adoption", 113th EAAE Seminar "A resilient European food industry and food chain in a challenging world", Chania, Crete, Greece Pg. no: 1-19.