A STUDY ON PERCEPTION OF ORGANIC FARMERS TOWARDS ORGANIC FARMING IN MANDYA DISTRICT

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ABSTRACT:

Organic farming is getting high popularity all over the world, as it can concentrate agricultural production systems towards achieving improved productivity, farm income and food, as well as environmental safety. The aim of this study was therefore to assess farmer's perception of organic farming and the issues linked with it. The present study was conducted in Mandya District, Karnataka. The District of Mandya consists of 7 Taluk out of these a convenient and purposive sampling technique was used to select 200 respondents. Descriptive statistics are used to present the findings of the study while the One way ANOVA and One sample t Test was used to test the study hypotheses. Study revealed that 95 % of respondents have positive perception towards organic farming. Also, 8 out of 10 variables selected, affects respondents perception towards organic farming. There were significant relationships ($p \leq 0.05$) between respondents' age, educational, income, farm size, Investment, and government subsidies, high income, safety and healthy, high yield, Cost of produces and perception of organic farming.

Keywords: Organic farming, perception, satisfaction, Knowledge source, organic market channels.

INTRODUCTION:

The country faced severe food scarcity due to the ever increasing population and several natural calamities during 1950s and 1960s.The government imported the food grains from foreign countries. To increase food security, the government decided to increase food production in India. The Green Revolution (under the leadership of M. S. Swaminathan) became the government's most important program in the 1960s. Several hectares of land were used for cultivation using hybrid seeds, chemical fertilizers and chemical pesticides. As a result of that the country reduced its imports every passing year. In 1990s, India had surplus food grains and once again became an exporter of food grains.

But due to the ill effects of chemical farming such as increased cost, loss of soil fertility, environmental problems caused by the pesticides etc., both consumers and farmers are now slowly shifting back to organic

farming in India. Customers believe that the organic products are healthier and are willing to pay higher premium for the same. Several farmers in India are adopting to organic farming due to the Local and international demand for organic food.

In India organic farming was practiced since thousands of years. In traditional India, where organic farming was the backbone of the economy, entire agriculture was practiced using organic techniques, where the fertilizers, pesticides, etc., were obtained from plant and animal products. The Indian organic food sector has a huge potential to produce almost a wide variety of organic products due to its various agro climatic conditions at different regions. In many parts of the country, the adoption of organic farming is an added benefit. This holds secure for the organic producers to knock the market which is steadily raising domestic market due to a relation with the vitality of the export market. As per the statistics available, Indian ranking in terms of world's Organic farming land was 15 as per 2013 data (source FIBL & IFOAM year book 2015). The total area under organic certification is 5.71 million Hectare (2015-16). It covers 26% agricultural area with 1.49 m. h (Million hectors) and the rest 74% (4.22 million hectare) forest and wild area for collection of minor forest produces.

Production: India produced around **1.35 million MT (2015-16)** of certified organic products. Which includes all varieties of food products like Cereals & Millets, sugarcane, Oil Seeds, Cotton, Medical Plants, Pulses, tea, coffee, Fruits, Spices, Dry Fruits, Vegetables, etc. The production is not limited to the edible sector but also produces organic cotton fiber, functional food products etc. In India the main states like Madhya Pradesh, Himachal Pradesh and Rajasthan are occupied the maximum area under organic farming certification.

Exports: The total volume of export during 2015-16 was 263687 MT. The organic food export realization was around 298 Million USD. Organic products are exported to US, European Unions, Switzerland, Korea, Canada, South East Asian countries, Australia, New Zealand, South Africa, Middle East etc. Oil seeds (50%) lead among the products exported followed by processed food products (25%), Cereals & Millets (17%), Tea (2%), Pulses (2%), Spices (1%), Dry Fruits (1%), and others.

India is an exporting country and does not import any organic products. The main market for exported products is the European Union. Another growing market is the USA. External certification bodies introduced inspection and certification programmes in 1987. In 2001 June, the government of India declared the (NPOP) National Programme for Organic Production, which aims to promote sustainable production, environmental conservation, reduction in the use and import of agrochemicals, the promotion of export and rural development (FAO2002). The Indian Standards are modeled on the IFOAM Basic Standards and the seal "India Organic" has been established. In October 2001, the export of organic products was brought under government regulation, while imports and the domestic market (Mahale, 2002).

Organic Products and Markets in India

Major organic produces in India include plantation crops(tea, coffee, and cardamom), spices (ginger, turmeric, chilies and cumin), cereals (wheat, rice, jowar, and bajra), pulses (pigeon pea, chickpea, green gram, red gram, and black gram) ,oilseeds(groundnut, castor, mustard and sesame) ,fruits (banana, sapota, custard apple and papaya),vegetables(tomato, brinjal, and other leafy vegetable), Navadanyas (Same, Sajje, Bajra, Ragi, Udala), besides honey, cotton and sugarcane especially for jaggery (GOI, 2001). The organic products available in the Local market are tea, coffee, rice, wheat, pulses and vegetables. On the other hand, products available for export market, besides these, include cashew nuts, cotton, oilseeds, various fruits, ayurveda products and medicinal herbs. The major export markets for Indian organic products are the EU, the USA, Canada, Australia and the Middle East Asian countries.

Organic Production and Marketing in Karnataka

Being the first state to come out with an organic policy, Karnataka will have a firs –mover advantage as the center too makes moves towards a policy shift in agriculture. Karnataka Organic Policy, 2017 being released at the organics and millets National Trade Fair. The policy will push not only to take farmers to the next level but also make them engage in many ways, from organizing them to educating them, from pushing them towards certification to helping them to final proper connect with retailers. This policy will enable the next level of development in organic farming. The main aim is to bring organic farming into the mainstream in Karnataka and change in agricultural practices and remunerative operation to encourage production of nutritious and healthy food by promoting eco-friendly organic farming and marketing systems.

Organic farming in Karnataka: The total cultivated area under certification (including in-conversion) are 93,963 ha, the total certified production is 2, 82,633 tons. The total area under wild harvest collection are 39,683 ha, the total number of certified operators are 246. The total numbers of organic farmers are 96,612. The number of organic farming research institutes is 08. The number of model private farms is 109. The number of NGOs involved in promotion of organic farming is 129.The Number of marketers are 19. Number of private outlets/ retailers/stores are 513. Numbers of mega stores with organic shelves are 48. The sum of selected organic caterers, restaurants, in Bengaluru is 20.The No of processors or operators and exporters are 124.

Agricultural land holding in Karnataka: The Marginal farmers (<1 ha) 38.49 lakhs, Area operated (000 ha) are 1851. Small Farmers (1-2 ha) are21038 lakhs, area Operated (000 ha) are 3020. Medium to large farmers (2 to 10 ha) are17.78 lakhs, and Area operated (000 ha) are 6297.

Important crops grown under organic farming and also exported from the state are:

Crops grown under organic farming	Organic commodities exported directly from the state
Cereals and Millets: Non-basmati paddy, Maize, Bajra, and ragi., **Fruits:** Mango (Alphanso, neelam, totapuri, kesar, Sindura), Pineapple, Banana.Dry	Mango pulp, Cane sugar, (based on Export TC issued by certification bodies)

Fruits: Cashew nuts	
Spices and condiments: Arecanut, black pepper, chilli, cinnamon, cloves, ginger, turmeric, nutmeg, parsley, bay leaves	Cashew nuts and pineapple juice.
Sugar crops: Sugarcane **Plantation:** Coffee, Coconut **Oilseeds:** Sesame, groundnut, soyabean	**Crops having high export potential:** Coffee, coconut, spices, pulses, medicinal and aromatic plants
Pulses: Black gram, green gram, Bengal gram, horse gram, pigeon pea	**Future potential crops / Products:** fruits and fruit products, vegetables and millets.
Medicinal & aromatic plants: amla, ashwagandha, brahmi, tulsi, citronella, chia, gymnena, lemon grass, moringa, palmarosa	

REVIEW OF LITERATURE:

Cheema and Gowri Shankar (2011)[1] had undertaken a study to examine the "A study on the awareness level of the farmers towards green marketing". The objective of this article is to focus on the marketability of the green fertilizers which are environment friendly, to know the factors influencing the green marketing through understanding their level of awareness from the farmers This study helps not only in understanding their level of awareness but also in creating the awareness among the farmers for creating sustainable green marketing which is an essential ingredient to the Indian Agricultural system. This finding reinforces that, Newspaper, Television, Company & NGO's/Voluntary Organizations are positively correlated and it can influence in creating the awareness for farmers about the Green Marketing practices in fertilizers.

Chaminda S Herath and RusithaWijekoon (2013)[2]: this study was focused on, "attitudes and perceptions of organic and non-organic coconut growers towards organic coconut farming". The study highlights that control, attitude and social factors contributed significantly to the adoption of organic farming. Other than that attitude contributes greatly to adopt organic farming, followed by social and control factors. Knowledge of organic farming, environmental aspects, age, education and time spent on farming contributed significantly to attitude formation. However, knowledge was the most important factor. The perception of organic growers and non-organic growers towards organic farming was statistically different in the knowledge, environmental and marketing aspects. Finally the researcher observed that there was no

[1]**Cheema and Gowri Shankar (2011)[1]**"A study on the awareness level of the farmers towards green marketing".Summer Internship Society, Volume III Issue-1, Pg.No-158 to 163.

[2]**Chaminda S Herath and RusithaWijekoon (2013)[2]:** "Study on attitudes and perceptions of organic and non-organic coconut growers towards organic coconut farming", IDESIA (Chile) Volume no 31, Pg.No-5 to 14.

difference in the benefit and cost aspect between two groups. Further, extension worker contacts significantly contributed to enhance organic farming knowledge.

Faghiri & et.al. (2014)[3]: This article makes investigation and analyzes "the attitudes of agricultural extension workers towards organic farming in Kermanshah Township, Iran". This paper reveals that there were no differences in attitude based on age, gender, marital status, and work experience, level of education or amount of time reading newspapers. The study says the attitude of organic farmers who are having more data sources, read more science magazines or read more scientific research journals, and using the internet showing favorable response. They finally explores that, more informed agricultural extension workers will express more favorable attitudes towards organic farming.

Tina Vukasovic (2015) [4]"Attitudes towards organic fruits and vegetables" This paper gives the latest insight into buying behavior and attitudes of organic fruits and vegetables consumers. The results of the research could be used for planning further marketing activities. According to the research results an important key factors for the development of the organic market in EU member state are education and information to consumers about organic agriculture and products, adequate marketing activities especially point-of-sale promotional activities and clear labeling of organic products.

Mary Prihtanti (2016)[5] "Farmer group as social determinant of farmer's perceptions on organic farming concepts and practice", this paper examined farmers' perception of organic paddy farming practices, which is especially useful to set research agendas, for planning campaign strategies and developing messages for communication. Only a few organic farmers were apply local seed and managing irrigation and none of them apply the crop rotation. Farmers' major sources of knowledge on organic farming concept and practice were a person as organic farming figure in the village who was farmer group leader. Farming experience and membership in farming group were associate with the perception of organic farming concepts.

STATEMENT OF THE PROBLEM:

The present agricultural practices, along with inconsistent use of chemical inputs over the past four decades have resulted in not only loss of natural habitation balance and soil strength but have also caused many hazards like soil attrition, depletion of groundwater level, contamination due to fertilizers and pesticides, genetic erosion, ill effects on environment, reduced food quality and increased the cost of cultivation, expose the farmer poorer year by year. Farmers do not find agriculture as a possible proposal anymore and in fact, a large number of farmers have committed suicides, And looking towards Industries for their lively food. To overcome from this problem organic farming is a best suitable substitute. Thus, to

[3]Shiri, Faghiri, Pirmoradi&Agahi (2014)[3]: "Attitudes of agricultural extension workers towards organic farming in Iran". Journal of Organic Systems, 9(1), ISSN 1177-4258 Pg no. 5-15.

[4]Tina Vukasovic (2015)[4]"Attitudes towards organic fruits and vegetables". Agricultural economics review,Vol number 16, No 1, Pg.No-158 to 163.

[5]Tinjung Mary Prihtanti (2016)[5] "Farmer group as social determinant of farmer's perceptions on organic farming concepts and practice", RA Journal of Applied Research, Volume 2, Issue 02, ISSN (e): 2394-6709, Pages-407-415.

analyze the perception of farmers to adopt organic farming is very important. So, in the view of the forgoing discuss, the current study was undertaken.

OBJECTIVES OF THE STUDY:

1. To highlight the theoretical background of organic farming in Indian scenarios.
2. To assess the perception of organic farmers about organic farming.
3. To study the satisfaction level of organic farmers.
4. To depict the main channels used for selling /marketing organic produces.
5. To analyze the farmers' present sources of information on organic farming.

HYPOTHESES OF THE STUDY:

1. Ho: There is no significant association between perceptions of organic farmers about organic farming.
2. Ho: There is no significant association between satisfaction levels of organic farmers.
3. Ho: There is no significant association between the main channels used for selling/marketing organic produces.
4. Ho: There is no significant association between the farmers' present sources of information on organic farming.

RESEARCH METHODOLOGY:

The present study has been collected from both primary and secondary sources. The primary data was collected on the basis issue of questionnaire, The study area has been identified organic farmers in Mandya District. The questionnaire was designed and contained several questions for collection of data from the Organic farmers. The overall population or sample size for study was 200 respondents of organic farmers. The method of sampling used is convenient and purposive sampling technique. The secondary data was collected from related research publications in books, journals and periodicals, annual reports of available on chosen topic. And also collect information on website to develop theoretical background of the study. The data drawn from various sources are analyzed with the help of statistical tools and techniques such as one way ANOVA, Independent sample T-test,Composite reliability and Cronbach Alpha, descriptive statistics such as mean, standard deviation etc.

ANALYSIS AND INTERPRETATION

1. **Perception of organic farmers about organic farming:**

Table No.1 represents the perception of organic farmers about organic farming. For Composite Reliability and Cronbach Alpha, the variables of each construct should be greater than 0.7.In our study the Composite Reliability and Cronbach Alpha of all constructs are more than 0.7, which shows that the data is reliable.

According one sample T-Test the highest mean and standard deviation was recorded in farming helps in conserving natural resources and Organic farming produces are safe and healthy for consumption, there

assigned mean value of 4.83 and 0.377 respectively. As the against lowest mean was recorded organic farming requires more investments and government provides incentives for organic farming, the assigned mean values of 3.95, 2.61 and 1.613, 1.359 respectively. This was followed by conversion of land to make it suitable for organic farming is time consuming and organic farming helps in protecting the environment assigned there mean values of 4.39 , 4.75 and 1.410,0.434 respectively.

Table No. 1 showing the perception of organic farmers about organic farming.

Descriptive and exploratory statistics (One sample t –test)												
Perception factors	**N**	**M**	**S.D**	**SA**	**A**	**N**	**DA**	**SDA**	**Cronbach's Alpha**	**T value**	**d.f**	**P value**
more investments	200	3.95	1.613	126	26	0	8	40	.927	8.331	199	.000
Conversion of land	200	4.39	.410	166	4	0	2	28	.923	13.942	199	.000
protecting the environment	200	4.75	.434	150	50	0	0	0	.928	57.012	199	.000
improving soil fertility	200	4.73	.445	54	146	0	0	0	.928	54.970	199	.000
increases the income	200	4.78	.688	176	14	0	10	0	.927	36.565	199	.000
conserving natural resources	200	4.83	.377	166	34	0	0	0	.929	68.725	199	.000
safe and healthy for consumption	200	4.83	.377	166	34	0	0	0	.929	68.725	199	.000
High prices	200	4.46	1.017	144	30	0	26	0	.918	20.309	199	.000
The demand is high	200	4.73	.445	146	54	0	0	0	.929	54.970	199	.000
Government provides incentives	200	2.61	1.359	38	18	0	116	28	.940	-4.058	199	.000
Sold easily	200	4.77	.735	178	10	0	12	0	.927	34.070	199	.000
produces high yield	200	4.80	.401	160	40	0	0	0	.928	63.480	199	.000
I am satisfied	200	4.74	.440	148	52	0	0	0	.928	55.959	199	.000

Sources: Field Survey.

From the above one Sample T-Test to calculate T-test, degrees of freedom at 5% level of significance, Organic farming requires more investment, Conversion of land to make it suitable for organic farming is time consuming, Organic farming helps in protecting the environment, Organic farming helps in improving soil fertility, Organic farming increases, the income of farmers Organic farming helps in conserving natural resources, Organic farming produces are safe and healthy for consumption, Organic produces have high prices, The demand for an organic produces is very high, Government provides incentives for organic farming, Organic products can be sold easily and they satisfied with organic farming the calculated p value is 0.000 in all the respective categories its less than 0.05 therefore the null hypotheses is rejected and alternative hypotheses is accepted.

2. **Satisfaction level of organic farmers:**

Table No.2 depicts that satisfaction level of organic farmer. In the context of place majority of the respondents belongs to the Mandya and Pandavapura district numbering 68 and 58 respectively. Majority of the respondents are male category numbering 160 practiced female category numbering 40 respectively. Majority of the respondents between 30-39 and 40-49 years age group are opted organic farming numbering 114, and 48. Below 29 to less than 20 are not interested in doing organic farming. Majority of the respondents who finished Matriculation numbering 145 are interested in doing organic farming. The people who have higher education than Matriculation numbering 68 are not much interested. The Majority of the farmer's among 194 are practicing fulltime organic farming, and part tine practitioners are very few like 6. The Majority of the farmers who are having yearly income of Rs. 50000 to 2, 50,000, numbering 180 farmers are interested in organic farming. The remaining higher income group farmers numbering 20 are not much interested. The Majority of 198 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 108 families. The majority of the farmers numbering 194 who are doing organic farming are having 1 -20 acres of land.

Table No. 2 showing the satisfaction level of organic farmers. (One way ANOVA)

SI. No	Personal Factors	Classification	F	%	M	S.D	F value	D.f	P -value
1.	Place	Mandya	68	34	2.54	1.256	8.209	199	.005
		Maddur	18	9					
		Srirangapatna	54	27					
		Pandavapura	58	29					
		Mallavalli	2	1					
2.	Gender	Male	160	80	1.20	.401	488.4	199	.000
		Female	40	20					
		Between 21-29Years	18	9					

3.	**Age Pattern**	Between 30-39 Years	114	57	**3.35**	**.781**	**23.33**	**199**	**.000**
		Between 40-49years	48	24					
		Above 50 Years	20	10					
4.	**Educational Background**	Matriculation	145	73	**1.34**	**.605**	**19.027**	**199**	**.000**
		Pre-university	40	20					
		Graduate	14	20					
		Post Graduate	14	7					
5.	**Agricultural Practicing**	Full Time	194	97	**1.03**	**.171**	**2.175**	**199**	**.142**
		Part Time	6	3					
6.	**Annual Income**	Below Rs.50,000	54	27	**2.20**	**.992**	**48.119**	**199**	**.000**
		Rs50,001 to 1, 50,000	76	38					
		Rs1,50,001to2,50,000	50	25					
		Rs2,50,001to3,50,000	16	8					
		Above Rs 3, 50,000	4	2					
7.	**Marital Status**	Married	198	99	**1.01**	**.007**	**.705**	**199**	**.402**
		Un married	2	1					
8.	**Type of Family**	Joint family	190	95	**1.05**	**.218**	**34.886**	**199**	**.000**
		Nuclear family	10	5					
9.	**No of dependents**	One	2	1	**3.41**	**.569**	**44.492**	**199**	**.000**
		Two	2	1					
		Three	108	54					
		More than Three	88	44					
10.	**Farm Size (in Acres)**	0-5	82	41	**1.62**	**.545**	**31.871**	**199**	**.000**
		6-20	112	56					
		21-50	6	30					
		More than 50	0	0					

Sources: Field Survey

To calculate the one way ANOVA test, In the context of place, category degrees of freedom at 5% level of significance, the calculated p value is 0.005, it is less than 0.05 therefore the null hypotheses is rejected and alternative hypotheses is accepted. Further the Gender, Age pattern, Education, , Annual income, type of family, Number of dependents, and Farm Size category degrees of freedom at 5% level of significance, the calculated p value is 0.000, it is less than 0.05, therefore the null hypotheses is rejected and alternative hypotheses is accepted. The Variables like Agricultural practicing and marital status the calculated P value is .142 and .402 which is more than 0.05, therefore the null hypothesis is accepted and Alternative hypothesis is rejected.

Table No. 3 showing the main channels used for selling /marketing organic produces.

Personal	Classification	F	%	Mean	S.D	SEM	t-value4	d.f	P-value

Factors									
Where do you generally sell organic products	Farmers Market	112	56	2.90	2.336	.165	**-6.659**	**199**	**.000**
	Wholesales	12	6						
	Organic store	54	27						
	Own shops	14	7						
	RMC Market	8	4						
	Retail shops	0	0						

Sources: Field Survey.

The table No.3 Describes Descriptive and Exploratory statistics regarding Channels used for selling /marketing organic produces. In the above case one Sample T-Test is used to calculate T-value, degrees of freedom at 5% level of significance, it indicates that the Majority of the farmers they are selling there produce to Farmers Market numbering 112, around 54 farmers selling to Organic stores. 14 of them heaving their own shops, and 12 of them selling to wholesalers, the balance of them to RMC market. The study reveals that the t value is (-6.659), d .f is 199, and calculated p value is 0.000 which is less than 0.05, so it indicates that the null hypothesis is rejected and Alternative hypothesis is accepted.

Table No. 4 showing the farmers' present sources of information on organic farming.

Personal Factors	Classification	F	%	Mean	S.D	SEM	t-value 4	d.f	Pvalue
How do you know about organic farming	Radio	2	1	5.38	1.242	.088	**15.710**	**199**	**.000**
	Newspapers/Pamphlet	16	8						
	Friends	122	61						
	Govtprogramme	8	4						
	Farmers Association	50	25						
	Extension agents	2	1						

Sources: Field Survey.

The above table describes about the sources of information the farmers received about organic farming. The study reveals that the Majority of 122 respondents received information from friends, 50 from Farmers association, the least is from Newspapers numbering 16, Government programmes 8, and Extension agents around 2. In the above case One Sample T-Test is used to calculate t-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.

THE FOLLOWING ARE THE MAJOR FINDINGS OF THE STUDY:

- Majority of the respondents are male category numbering 160 practiced female category numbering 40 respectively.
- In the context of age pattern, majority of the respondents numbering, 114 belongs to age group between 30-39 years.

- In the context of income level of the farmers, Majority numbering, 54, 76, and 50 respondents were belongs to income level of between yearly 50 Thousand to 2 lakhs fifty thousand.
- In the context of Education Majority of the respondents 145 who finished Matriculation are interested in doing organic farming.
- The Majority of the farmer's among 194 are practicing fulltime organic farming for their daily life.
- The Agricultural practicing pattern and marital status are not making any impact on satisfaction level of the farmers. The rest of the factors making an impact on satisfaction level of the farmers.
- The source of information and channel of distribution are also influencing for the perception of organic farmers.
- All the factors relating to perception are influencing for adoption of organic farming.

THE FOLLOWING ARE THE MAJOR SUGGESTIONS FOR THE STUDY:

- The more support, incentives, information, and training programme are required from Government to strengthen the organic farming area.
- They are lack of marketing infrastructure facilities for organic farmers to sell their products.
- To Empower and create awareness towards female and youngsters is very essential.

CONCLUSIONS:

It can be concluded that the current study focused on the perception of the farmers towards organic farming. The main purpose of this article is to describe the important demographical factors like Age pattern, No of dependents, Income and Land size, Investment pattern, Government subsidies which influence more on respondent's perception towards organic farming. Therefore this study suggests that encouraging organic farming is very much essential which is an alternative solution for the current situation to eradicate un employment issues, Chemical farming, empowering famers and economically and socially.

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