Review Of Research
ISSN 2249-894X

Impact Factor : 3.1402(UIF)
Volume - 4 | Issue - 10 | July - 2015

IMPACT OF ORGANIC FARMING IN VIRUDHUNAGAR DISTRICT IN TAMILNADU

Dr. R. Sankarakumar
Assistant Professor, Economics Wing, Directorate of Distance Education, Annamalai University, Annamalai Nagar.

ABSTRACT

Traditional farming method is based on organic farming method. It is followed more than 2000 years before in India. Organic farmers are mainly utilized nearby accessible resources for their cultivation and it is eco-friendly to nature, human and animals. Before 1960's or implementation of green revolution in our country, most of the Indian farmers were followed traditional way of farming. After this revolution, it creates various impacts and they are as follows: Farmers were utilized synthetic and inorganic chemicals, high yielding varieties of seeds and mechanization. In this reason, Indian agricultural sector were developed rapidly most of the places and attained self-sufficiency in agricultural sector. After certain period of time, some of farmers were realized that soil became infertility and crops affected by different types of diseases. In this reason, farmers are willing and go back to the organic farming method. In recent days, farmers and consumers are more aware of organic farming and food and it is rapidly developing in all over the world. This study gives detail about impact of organic farming in Virudhunagar district. For this research, totally 50 samples selected on the basis of purposive sampling techniques.

KEYWORDS: Organic, Farming, Hazardous Chemicals, Sustain Soil Fertility.

1. INTRODUCTION:

Concept of organic farming is an important method of farming activities for all the nations. This type of farming is ecological oriented method and safeguards the entire available resources. It helps to improve socio-economic conditions, environmental and cultural benefits for developing countries like India. Primary aim of this farming is "**give back to nature**". It simple means that avoid utilization of artificial inputs and their substitute by organic alternatives or inputs. Crop, animal, farm and aquatic unwanted and unused parts are main inputs for prepare the organic fertilizers and pesticides. It helps to increase agricultural production and productivity, sustain soil fertility, enriches beneficial organisms, microbes and nutrients to crops, avoid and reduce resource wastages and environmental degradation, natural way of pest control management. According to Thirukkural "*To cast manure is better than to plough; Weed well; to guard is more than watering now*" (Kural – Kudiyiyal - Ulavu 1038)

Another important aim of this farming is to produce healthy and unpolluted agricultural products for rural communities and livestock (MacRae et al.2007). According to United States Department of agriculture (USDA 2000) defined on organic farming "organic farming is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc) and to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection". According to IFOAM's (2009) definition, "Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved".

Almost 55 per cent of populations are living in rural area and they are doing agricultural and its related works in India. Nearly 17 per cent of the GDP received from this sector. But, in the time of Independence, India suffered from food

scarcity because low level agricultural production and productivity. In this reason, most of the people were hungry and famished. Government of India aimed to rectify this problem. For this purpose, government introduced green revolution in mid 60's. Due to green revolution, India had been attained various advantages in particularly self-reliance in food production. But, some of disadvantages were also occurred from this revolution and they are as follows: Fertilizer and pesticide companies were recommended to consume high dosages. Higher quantities of these chemicals were imported from overseas and India had to pay higher amount of foreign exchange to these exporting countries. Farmers followed and utilized heavy quantity of fertilizer and pesticides. After a certain period of time, lands were unproductive or infertile and agricultural products' poisoning level was high.

Before the Green Revolution, most of the farmers in India made natural way of agriculture. This method of agriculture is not an innovative thing that makes it was oldest practice in the world (Jules Pretty, 2008). Farmers prepared and utilized their own natural fertilizers and pesticides or bought from others. Most of these raw materials are locally available. It means that agricultural production produces through absence of inorganic fertilizers, pesticides and genetically modified seeds. This method of farming helps to improve soil productivity, successfully handling pest control management and recovering cycles in harmony with environmental friendly procedures. This kind of farming has a variety of names; organic farming, natural farming, zero-budget farming, low external input sustainable agriculture, bio-dynamic or ecological agriculture.

This part of the study explains about effects of organic farming in Virudhunagar district. In this district, agricultural production and productivity is low to compare with other districts of Tamilnadu. There are various reasons beyond the low productivity particularly (a) smaller of part this district have well fertile soil and irrigated conditions and most of the part did not have above mentioned conditions (b) improper and lack knowledge about utilisation of fertilisers and pests control management.

2. OBJECTIVE AND HYPOTHESIS OF THE STUDY:

This study has to analyse the primary data on the basis of following objectives. Important goal of this investigation is (a) to realise the socio-economic situation of respondents in this research area (b) to identify the advantages and difficulties of organic farming.

3. METHODOLOGY OF THE STUDY:

This study is based on primary data. Purposive sampling groups' participants according to pre-selected criteria relevant to a particular research question or this research question example organic farming cultivators in Virudhunagar district in Tamilnadu, India. Sample size depends on availability of time and resources. 50 samples were taken for sample survey. These samples were collected from 15 villages in this district. These respondents are following organic farming method in their lands. This data collected from various sources of information and they are follows: Panchayati Raj Institutions Personnel, Farmers, Villagers, Sellers of organic inputs (Fertilisers and Pesticides), Buyers of Organic agricultural products and Non-governmental Organisations. For this research, data is analysed by various statistical method. Statistical Package for Social Science (SPSS) is used to analyse the primary data following Percentage, Correlation and Cluster analysis are used to analyse the primary data.

Figure No. 1
District-Wise Tamil Nadu Map

■ - **Virudhunagar District**
Source: https://virudhunagar.nic.in/

4. ANALYSIS

This part of the study is classified in to three parts and they are as follows: (a) Socio-economic conditions of respondents are included following variables: sex, age, caste, religion, education, type of family, income (b) Land Size are comprised on marginal, small, medium and land farmers and Knowledge about organic farming or experience in organic farming activities (c) impact of this farming helps to understand the advantages and disadvantages of this method of farming in the study area.

- Percentage analysis is used to analyse the socio-economic conditions, land size and familiarity about organic farming (Table No.1, Table No.2 & Table No.3).
- Clustering analysing technique is applied to evaluate the impact of organic farming

4.1. Socio-economic Conditions:

Table No. 1.
Socio-Economic Conditions

Particulars		Freq.	%	Particulars		Freq.	%
Sex	Male	39	*78*	Type of Family	Nuclear	33	66
	Female	11	*22*		Joint	17	34
	Total	100	*100*		Total	100	100
Age	>25 Years (Young)	11	22	*	Own	47	94
	25 – 50 Years (Middle)	21	42		Lease	3	6
	Above 50 Years (Elder)	18	36		Total	100	100
	Total	100	*100*	Additional Income	Yes	29	58
Caste	BC	13	26		No	21	42
	MBC	32	64		Total	100	100
	SC/ST	5	10	Sources	Business	27	54
	Total	100	*100*		Industry	2	4
Religion	Hindu	46	92		Not Applicable	21	*42*
	Christian	3	6		Total	100	100
	Muslim	1	2	Income	Below □1,00,000	2	*4*
	Total	100	*100*		□1,00,000 - □2,00,000	39	78
Education	Up to Elementary Level	0	0		Above □2,00,000	9	18
	Up to Secondary Level	7	14		Total	100	*100*
	Up to Higher Secondary Level	13	26	Family Income	Below □1,00,000	1	2
	Diploma	10	20		□1,00,000 - □2,00,000	36	72
	Degree	20	40		Above □2,00,000	13	26
	Total	100	100		Total	100	*100*

Source: Primary Data. **(Freq. –** Frequency: **% -** Percentage). * - House Ownership

Above table no.1 describes about socio-economic conditions of respondents in Virudhunagar district.

4.1.1. Sex: More than three of four of the respondents are male (78 per cent). This analysis shows that greater part of the bloke samples are following organic farming method.

4.1.2. Age: A close investigation of the table points out that more than 40 per cent of the respondents are 25 – 50 years old. This analysis shows that middle group of people have attracted by sustainable agriculture.

4.1.3. Caste: Almost two-third of the respondents (64 per cent) comes in Most Backward Class (MBC). Out of 50 respondents, just 5 per cent of respondents (10 per cent) are belongs to Scheduled Caste and remains are backward class community.

4.1.4. Religion: Majority of the respondents believes the Hindu religious conviction. Other religion devotees are very low.

4.1.5. Educational Qualification: More than secondary level of education occupies major share. It means that up to higher secondary (26 per cent), diploma (20 per cent) and under graduate degree or post graduate degree (40 per cent). This analysis shows that higher educated people are willing to do this type of farming method.

4.1.6. Type of Family: About two – third of the Virudhunagar district respondents are residing in nuclear household method.

4.1.7. House Ownership: Major portion of samples (94 per cent) have possession of own house.

4.1.8. Additional Income: Nearly 60 per cent of the organic farming operators (58 per cent) are receiving additional income. Mostly marginal and small farmers are employing for additional income in non-cultivating season. Other samples like medium and large do not have any interest to do business or industrial activities.

4.1.9. Sources of Additional Income: About 54 per cent of the respondents are doing own business for extra income

4.1.10. Income of the respondents: More than three - fourth of the organic cultivators are earnings □ 1 lakh to □ 2 lakhs per annum.

4.1.11. Total Family Income: Almost 100 per cent of the respondents' family income (98 per cent) is reaching □1 lakh □ 2 lakhs per annum.

5. LAND SIZE OF ORGANIC FARMING:

Table No. 2.
Respondents' Land Size of Organic farming

Sl. No.	Particulars	Freq.	%
1.	Below 1 hectare (Marginal Farmers)	16	32
2.	1 – 4 hectare (Small Farmers)	24	48
3.	4 – 10 hectare (Medium Farmers)	7	14
4.	Above 10 hectare (Large Farmers)	3	6
Total		100	*100*

Source: Primary Data: Freq. **–** Frequency: **% -** Percentage

Table no. 2 represents that respondents' land size of farming. Nearly 50 per cent of respondents (48 per cent) have 1 – 4 hectare/s of cultivate lands in their area. Less than 10 per cent of samples (6 per cent) hold more than ten hectares of land assets. Above analysis shows that most of these farmers are acquired small size of land holdings and they are marginal and small farmers in this district.

6. Experience in organic farming

Table No. 3.
Respondents' Experience in Organic farming

Sl. No.	Particulars	Freq.	%
1.	Less than 5 Years	6	*12*
2.	5 – 10 Years	12	*24*
3.	More than 10 Years	32	*64*
Total		100	*100*

Source: Primary Data. **(Freq. –** Frequency: **% -** Percentage).

Above table explains about Knowledge or experience about Organic farming. Almost two-third of respondents is accepted that they are following organic farming more than one decade those who are comes under more than 50 years old category. About 12 per cent of samples are agreed to do above method farming activity and these respondents are mostly less than 25 years old.

7. EFFECTS OF ORGANIC FARMING:

This effect creates positive or benefits and negative or constraints in organic farming in the study. These two effects are analysed by clustering techniques. This analysis is applied to categorize variables into groups. This study is considered within group linkage method and measures the interval through Pearson correlation analysis. The dendogram are given in figure no. 2 & 3. It is summary of statistical information are given in table no. and it is cluster code given in table No. .

7.1. Benefits of Organic Farming

Dendrogram obtained through cluster analysis for this study area is given in figure no.2. The aspect considered for analysis is benefits of

organic farming and their respondents have been summed up and in Table No. 5.

Figure No. 2
Benefits of Organic Farming
Dendogram Using Average Linkage
(Between Groups)
Rescaled Distance Cluster Combine

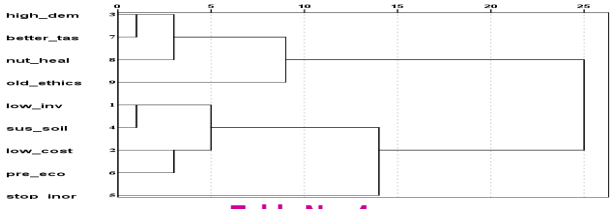

Table No. 4.
Cluster code for Benefits of Organic Farming

Code	Variables	Code	Variables
low_inv	Low Investment	pre_eco	Prevent ecological conditions
low_cost	Low Cost of Production	better_tas	Better Taste
high_dem	Higher Demand	nut_heal	Better Nutrients & Healthier Food
sus_soil	Sustain Soil Fertility	old_ethics	Pursue oldest Proficient ethics
stop_inor	Stoppage of hazardous Chemicals		

Table No. 5.
Cluster Analysis for Benefits of Organic Farming

Cluster	Variables	Yes Range (%)	NO Range (%)
1.	High Demand, Better Taste, Nutrients and Healthier Food & Pursue oldest proficient ethics.	22 – 44	56 – 78
2.	Low Investment, Sustain Soil Fertility, Low Cost of Production, Prevent Ecological Conditions & Stoppage of Hazardous Chemicals	64 – 100	0 – 36

Table No. 6.
Benefits of Organic Farming

Sl. No.	Variables	Particulars	Yes		No	
			Freq.	%	Freq.	%
1.	Economic	Low Investment	41	82	9	18
		Low Cost of Production	36	72	14	28
		Higher Demand	22	44	28	56
2.	Environmental	Sustain Soil fertility	39	78	11	22
		Stoppage of hazardous Chemicals	50	100	0	0
		Prevent ecological conditions	32	64	18	36
3.	Other	Better Taste	20	40	30	60
		Better Nutrients & Healthier Food	17	34	33	66
		Pursue oldest proficient ethics	11	22	39	78

Source: Primary Data: Freq. **–** Frequency: **% -** Percentage

Cluster analysis clearly indicates that there are two groups in Virudhunagar district. A close examination of the summary statistics indicates the following:

Cluster No.1 represents that least benefits are achieved by respondents. About 60 – 78 per cent of sample organic farmers are accepted that they did not aquired any other advantages from this type of farming. More than 50 per cent of respondents felt that demand for these products are very low.

Cluster No. 2 explains about higher advantages are received by samples. About 64 – 100 per cent of these farmers exposed that environmental and some of economic factors are main cause to follow this farming activities.

Hence it is concluded that respondents reported that consumers did not know difference between organic and inorganic farming. In this reason, they did not aware of better taste, nutrients and healthier foods .There is no proper marketing and distribution channels available in this agricultural product. These respondents are very conscious about ecological conditions.

7.2. Constraints of Organic Farming

What have been the various difficulties that have been faced by the organic farmers in the study area who have not been benefited by organic farming? To group the various difficulties mentioned by these farmers cluster analysis technique has been adopted. Dendrogram obtained in the analysis have been presented as in figure no. 3. Summary statistics has been presented in Table no.8.

Figure No. 3
Constraints of Organic Farming
Dendogram Using Average Linkage
(Between Groups)
Rescaled Distance Cluster Combine

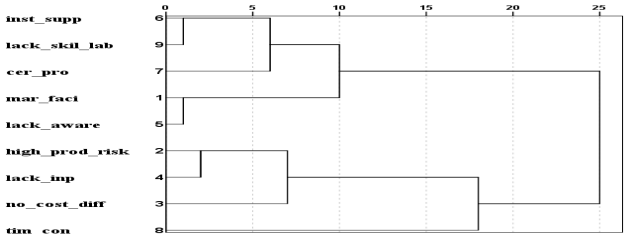

Table No. 7.
Cluster code for Constraints of Organic Farming

Code	Variables	Code	Variables
mar_faci	Lack of Marketing Facilities	inst_supp	Lack of Institutional Support
high_prod_risk	High Production Risk	cer_pro	Certification Procedures
no_cost_diff	No Cost Differences	tim_con	Time Consuming
lack_inp	Lack of Inputs	lack_skil_lab	Lack of Skilled Labour
lack_aware	Lack of awareness Creation		

Table No. 8.
Cluster Analysis for Constraints of Organic Farming

Cluster	Variables	Yes Range (%)	No Range (%)
1.	Lack of Institutional Support, Lack of Skilled Labour, Certification Procedure, Lack of Marketing Facilities & Lack of Awareness	74 – 96	4 - 26
2.	High Production Risk, Lack of Inputs, No Cost Differences & Time Consuming	30 – 62	38 - 70

Table No. 9.
Constraints of Organic Farming

Sl. No.	Variables	Particulars	Yes		No	
			Freq.	%	Freq.	%
1.	Economic	Lack of Marketing Facilities	38	76	12	24
		High Production Risk	25	50	25	50
		No Cost Differences	31	62	19	38
		Lack of Inputs	27	54	23	46
2.	Organisational	Lack of awareness Creation	37	74	13	26
		Lack of Institutional Support	44	88	6	12
		Certification Procedures	48	96	2	4
3.	Other	Time Consuming	15	30	35	70
		Lack of Skilled labour (Intensive)	43	86	7	14

Source: Primary Data: Freq. **–** Frequency: **% -** Percentage

Two groups emerge from the cluster analysis at Virudhunagar district. Nearly 75 – 96 per cent of respondents have mentioned cumbersome certification agencies about organic products. Banking sectors (institutional) are following lengthy procedures to provide loans and credit facilities. Lacks of skilled labour, marketing and distribution channels are available in this district and finally government and NGO's did not initiated to create aware between farmers and consumers (**Cluster – I**). Nearly one-third to two-third of this farmers accepted that they are suffering by production risk, lack of inputs (Manures & pesticides).They felt that there is no differences in cost of production between organic and inorganic farming & no longer period to prepare cultivation of land.(**Cluster – II**).

8. SUGGESTIONS

Farmers should easily access the information related to this farming activities from Implementing agencies and NGOs. Central and state Governments should initiated to implement various organic farming development programmes in all over India. Institutional sector (Banking & Insurance Sector) should facilitate credit facilities and crop insurance coverage for this type of agricultural products. Government and private sectors should establish marketing and distribution channels to reach the consumers.

9. CONCLUSIONS

Organic farming is a holistic approach for food production. It focuses on enhance and protect the soil health, bio-diversity and utilise locally available resources like natural resources and human resources. It is suitable for dry land and water scarcity area cultivators and its implementation is easier this type of lands to compare with other lands. It helps to avoid over exploitation and consumption of renewable and non-renewable resources. This type cultivation is suitable for maintain the ecological system. In recent years, demand for organic food is increased in developed nations.

REFERENCE:

- United States Department of agriculture (USDA 2000)
- MacRae, R. J. Frick, B. and Martin, R. C., "Economic and social impacts of organic production systems", Canadian Journal of Plant Science, 2007, 87(5): 1037-1044
- https://virudhunagar.nic.in
- Kural – Kudiyiyal - Ulavu 1038
- Jules Pretty, "Agricultural Sustainability: Concepts, Principles and Evidence", Philosophical Transactions of the Royal

Society B Biological Sciences", 2008, 363(1491), 447 – 455.

- The International Federation of Organic Agriculture Movements (**IFOAM** - Organics International), 2009.