COMPARE AND CONTRAST THE BENEFITS OF ORGANIC AND CONVENTIONAL FARMING – A STUDY WITH REFERENCE TO BANGALORE RURAL DISTRICT

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ABSTRACT

The purpose of organic agriculture is to help the environment become more sustainable. Sustainability in agriculture refers to the successful management of agricultural resources to meet human needs while also maintaining or improving the environment's quality and conserving natural resources for future generations. Organic farming's sustainability must therefore be seen holistically, taking into account ecological, economic, and ethical considerations. The goal of this research is to compare and contrast the advantages of organic and conventional farming. It also intends to conduct a comparison study on the advantages of organic and conventional farming in the Bangalore rural district. A purposive sampling strategy was used to recruit 191 farmers, with 113 being organic and 78 being conventional. The questionnaire, which was created on a 5-point Likert scale, was the primary data collection tool. The study discovered that organic farming is more advantageous than conventional farming through this survey. Based on this, the researcher made some sound recommendations for improving the benefits of organic farming in order to ensure its long-term viability.

Key words: Organic Farming, Conventional Farming, Benefits, Sustainability

I. INTRODUCTION

Sustainable development has caught the imagination and action all over the world for more than a decade. Sustainable agriculture is necessary to attain the goal of sustainable development. According to the Food and Agriculture Organisation, sustainable agriculture "is the successful management of resources for agriculture to satisfy changing human needs while maintaining or enhancing the quality of environment and conserving natural resources". All definitions of sustainable agriculture lay great emphasis on maintaining an agriculture growth rate, which can meet the demand for food of all living things without draining the basic resources.

Organic farming is one of the several approaches found to meet the objectives of sustainable agriculture. Many techniques used in organic farming like inter-cropping, mulching and integration of crops and livestock are not alien to various agriculture systems including the

traditional agriculture practices in old countries like India. However, organic farming is based on various laws and certification programmes, which prohibit the use of almost all synthetic inputs, and health of the soil is recognised as the central theme of the method.

Organic farming has been considered a possible model that could further advance the development of modern agriculture which faces with many obstacles nowadays. Previous literature has discussed the importance and impacts of organic farming for human society, local economy, agricultural sustainable development, and people's daily lives. Firstly, organic farming could produce enough food on a global per capita basis without increasing the burden on and pollution problems associated with local agriculture. Secondly, organic hotspots have a positive and significant impact on local economic indicators. The quantity and quality of human capital will affect local wealth, and the existence and effective utilization of resources may affect local development. Thirdly, conversion to organic farming is not only an agroeconomic practice, but also a multidimensional subject, involving farmers' motivations, technical problems, natural conditions, and government policies. Fourthly, the development of organic farming is influenced by multiple factors such as social, structural, and intellectual factors. Therefore, the complexity of organic farming could notably affect the society and economy in return.

II. REVIEW OF LITERATURE

Howard's (1940) Agricultural Testament draws attention to the destruction of soil and deals with the consequence of it. It suggests methods to restore and maintain the soil fertility.

Kaushik (1997) analysed the issues and policy implication in the adoption of the sustainable agriculture. Public vis-à-vis private benefits, current vis-à-vis future incomes, current consumption and future growth, etc., are very pertinent issues. While this study makes a contribution at the conceptual level, it has not attempted to answer the practical questions in the minds of the farmers and other section of the people.

Sharma (2001) makes a case for organic farming as the most widely recognised alternative farming system to the conventional one. The disadvantages of the latter are described in detail. Other alternatives in the form of biological farming, natural farming and per, culture are also described.

Singh and patel (2001), recording the experiments on rice-chick pea cropping sequence using organic manure, found the yield substantially higher compared to the control group. Similar results were obtained for rice, ginger, sunflower, soya bean and sesame.

RahudkarandPhate(1992) narrate the experience of organic farming in maharashtra individual farmers growing sugarcane and grapes after using vermin compost saw the soil fertility increased irrigation decreased by 45 percent and sugarcane quality improved the authors say that net profits from both the sugarcane and grapes crops are high in organic farms.

The foregoing overview of the literature makes it clear that opinions about organic farming are divided both among the farmers and experts disputes about the profitability and yield increase in organic are acute but there is a consensus on its eco-friendly nature and inherent ability to protect human health.

III. NEED FOR THE STUDY

There are three categories of opinions about the relevance of organic farming for India the first one simply dismisses it as a fade or craze the second category which includes many farmers and scientists opinions that there are merits in the organic farming but we should proceed cautiously considering the national needs and conditions in which Indian agriculture functions. Though there is an awareness on environmental problems created by the conventional farming, many of the farmers believe that yields are lower in organic cultivation during the initial period

and also the cost of labour tends to increase therein. The third one all for organic farming and advocates its adoption wholeheartedly. It is true that that tomorrow's ecology is more important than today's conventional farm benefits. At this juncture, it is required to analyse the beneficial difference between organic and conventional farming.

IV. OBJECTIVES OF THE STUDY

1. To understand the organic farming in Bangalore rural district.
2. To assess and evaluate profitability of organic and conventional farming.
3. To examine the environmental and ethical benefits between organic and conventional farming.
4. To suggest measures to improve the farming based on the study.

V. ORGANIC FARMING IN BANGALORE RURAL DISTRICT

The Department of Agriculture has developed organic village site programmes of 100 ha. blocks in all taluks with the primary goal of promoting organic farming as an environmentally friendly, sustainable manner of farming and optimising natural resource use.

Based on the provisions of the Organic Farming Policy of 2017, the "Market Based Specific Organic Crop Cluster Development Programme" is being implemented from 2017 to 2018 in the already certified area with the goal of strengthening the supply chain mechanism by supporting activities such as production, collection, grading, value addition, processing, packing, brand development, whole sale, and retail marking of organic products.

Organic farming and certification: The main goal of this programme is to promote organic farming by increasing certified organic area over the next three years, as well as to focus on market-oriented commodities in potential areas to generate bulk quantities of genuine organic produce through farmer groups to meet the growing demand of the domestic and export markets, as well as to ensure a continuous supply of required organic produce to the market. This initiative will be implemented on a project basis by the Karnataka State Organic Certification Agency (KSOCA).

Workings of the Organic Produce Marketing Federation: Fourteen Regional Federations have been established to strengthen and consolidate the gains obtained via the Savayava Bhagya Yojane in 13 hoblis encompassing 1300 hectares. Collection, grading, value addition, processing, packing, brand development, and marketing of organic produce, as well as consumer awareness programmes and other activities, are proposed by federations in order to improve the economic situation of organic farmers through better pricing for organic produce.

VI. METHODOLOGY

The present study is descriptive research which analysed the economic aspects of organic and conventional farming comprises of primary data and secondary data. Primary data collected through the well-structured questionnaire from farmers in Bangalore rural district. The sample size is 191 which consist of 113 organic farmers and 78 conventional farmers which were collected at random. Secondary data were collected from published journals, magazine and internet. The collected information and data are processed, verified and then it is presented in the form of tables. Each table and pie charts are to be analysed in that research concerned and also using an appropriate statistical method like simple percentage analysis and ANOVA table. The following hypotheses are formulated for the study:

H1: There is no significant between in the profitability (economic benefit) of Organic and conventional farming

H2: There is no significant difference in the ecological benefit of organic and conventional farming

H3: There is no significant difference in the ethical benefit of organic and conventional farming

VII. DATA ANALYSIS AND DISCUSSION

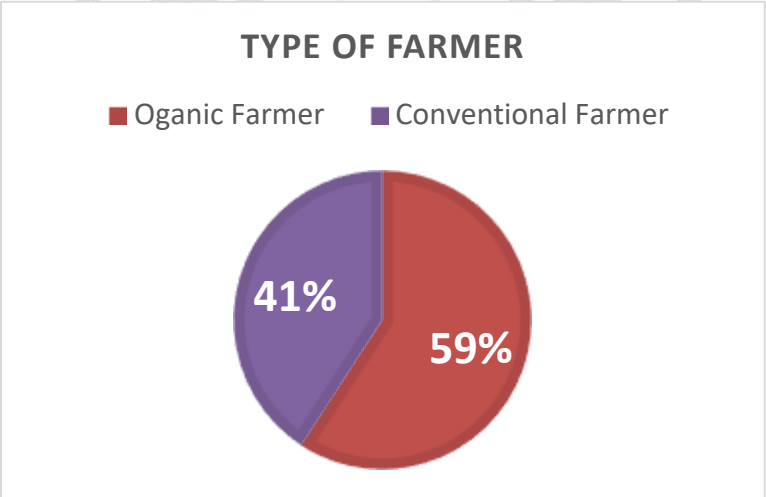
In this section the researcher intended to relate the benefits between organic and conventional farming The demographic classification of respondent farmers is collected and tabulated as follows:

Table 1 : Demographic Profile of Respondents

Gender	Frequency	Percent
Male	163	85%
Female	28	15%
Total	**191**	100%
Age		
Upto 25 years	22	11.5%
25 to 34 years	93	49%
35 to 44 years	56	29%
Above 45 years	20	10.5%
Total	**191**	100%
Type of Farmer		
Organic Farmer	113	59%
Conventional Farmer	78	41%
Total	**191**	100%

Source: Primary data

Figure 1 : Pie chart showing Type of farmer



Source: Primar data

Table 1 exemplifies that the majority 163 (85%) respondents are male and 28 respondents are female farmers. With regard to age group, majority 93 (49%) farmer respondents are belongs to 25 – 34 years old. Among total farmer respondents, 113 (59%) of them are organic farmers and the remaining 78 (41%) of them are conventional farmers.

The benefits of organic and conventional farming are measured through economical, environmental and ethical benefits of the same.

Testing of hypothesis, I

There is no significant between in the profitability (economic benefit) of Organic and conventional farming

Table 2 : Descriptive statistics of determinants of profitability in organic and conventional farming

		N	Mean	Std.Deviation	Std.Error Mean	T	Sig.
Land ownership	ORGANIC	113	4.1364	.86180	.08217	-2.496	.013
	CONVENTIONAL	78	4.3241	.63490	.07189	-2.626	.009
Diversified crop system	ORGANIC	113	4.4690	.72050	.06754	2.756	.006
	CONVENTIONAL	78	4.1667	.77989	.08830	2.716	.007
Yield	ORGANIC	113	4.6195	.57194	.05380	3.027	.003
	CONVENTIONAL	78	4.3590	.60247	.06822	2.998	.003
Expenses on direct materials	ORGANIC	113	4.0265	1.00410	.09446	2.503	.013
	CONVENTIONAL	78	3.6667	.93513	.10588	2.536	.012
Technological practices	ORGANIC	113	4.2301	.69448	.06533	2.107	.036
	CONVENTIONAL	78	4.0000	.80582	.09124	2.050	.042

Source: Primary data

From the above table, it is observed that Land ownership, diversified crop system, the yield, expenses on direct material are statistically differ with organic and conventional farming as its significant value is less than 0.05 (significantly different at 5% level). Whereas there is no significant difference between organic and conventional farming with regard to technological practices. Further from this data analysis, it can be said that organic farming is more beneficial than the conventional farming with respect to 'Diversified crop system', 'Yield', 'Technological practices'.

Testing of hypothesis, II

There is no significant difference in the ecological benefit of organic and conventional farming

Table 3 : Descriptive statistics of ecological benefits of organic and conventional farming

		N	Mean	Std.Deviation	Std.Error Mean	T	Sig.
Soil fertility	ORGANIC	113	4.5225	.63025	.05982	2.192	.030
	CONVENTIONAL	78	4.3077	.70817	.08018	2.147	.033
Climatic Condition	ORGANIC	113	4.3333	.74264	.07049	2.758	.006
	CONVENTIONAL	78	4.0256	.77249	.08747	2.739	.007
Topography	ORGANIC	113	4.4259	.68637	.06605	3.813	.005
	CONVENTIONAL	78	4.1299	.73181	.08340	2.783	.006
Water Quality	ORGANIC	113	4.6667	.54687	.05262	3.016	.003
	CONVENTIONAL	78	4.3766	.76156	.08679	2.858	.005
Ecology balance	ORGANIC	113	4.6481	.63120	.06074	2.709	.007
	CONVENTIONAL	78	4.3896	.64204	.07431	2.694	.008

Source: Primary Data

From Table 3, it is identified that 'Soil fertility', 'Climatic Condition', 'Topography', 'Water Quality' and 'Ecology balance' are statistically differ with organic and conventional farming as its significant value is less than 0.05 (significantly different at 5% level). And also, it can be said that organic farming is more beneficial than the conventional farming in the aspect of all ecological benefits namely 'Soil fertility', 'Climatic Condition', 'Topography', 'Water Quality' and 'Ecology balance'.

Testing of hypothesis, III

There is no significant difference in the ethical benefit of organic and conventional farming

Table 4 : Descriptive statistics of ethical benefits of organic and conventional farming

		N	Mean	Std.Deviation	Std.Error Mean	T	Sig.
Diseases	ORGANIC	113	4.1728	.91910	.10212	2.157	.033
	CONVENTIONAL	78	3.8382	.97139	.11780	2.146	.034
Pollutants	ORGANIC	113	4.0299	.84729	.09414	2.494	.014
	CONVENTIONAL	78	3.8382	.97139	.11780	2.465	.015

Exposure of toxic material	ORGANIC CONVENTIONAL	113 78	4.0265 3.6667	1.00410 .93513	.09446 .10588	2.503 2.536	.013 .012
Animal friendly farming	ORGANIC CONVENTIONAL	113 78	4.1364 4.3241	.86180 .63490	.08217 .07189	-2.456 -2.622	.011 .009

Source: Primary Data

From Table 3, it is identified that 'Diseases', 'Pollutants', 'Exposure of toxic material 'and 'Animal friendly farming' are statistically differ with organic and conventional farming as its significant value is less than 0.05 (significantly different at 5% level). And also, it can be said that organic farming is more beneficial than the conventional farming in the aspect of all ethical benefits namely 'Diseases', 'Pollutants', 'Exposure of toxic material 'and 'Animal friendly farming'.

VII. FINDINGS OF THE STUDY

- The sample size consists of 59% and 41% of Organic farmer respondents and Conventional farmer respondents respectively.
- Majority 163 (85%) respondents are male and 28 (15%) respondents are female farmers.
- Majority 93 (49%) farmer respondents are belonging to 25 – 34 years old.
- The ANOVA result shows that there is a significant difference in the economic benefit between organic and conventional farming. The diversified crop system used in organic farming gives more benefit to farmers. The organic farmers opined that the yield is more in organic farming.
- The conventional farmers understood that organic farming is beneficial while they are responding for this survey.
- It is found that organic farming is more beneficial than conventional farming in the aspects such as economically, environmentally and ethically.

VIII. SUGGESTIONS

The organic farming is beneficial than the conventional farming and the same is being understand by conventional farmer, the suggestions are offered for the improvement of organic farming.

- ✓ The awareness among the general public is to be created so as to increase their consumption
- ✓ Once the consumption is getting increase, the cost will get down.
- ✓ As the organic farming foods having shorter life span, it is to be sold out immediately and hence the organic farmers may use the digital marketing concept.
- ✓ Educate the Organic farmers on Digital Marketing tools
- ✓ The organic farmers should focus on both rural and urban areas
- ✓ The organic farmers can use social network media to increase their market size

IX. CONCLUSION

The negative impacts of current agricultural practises have been thoroughly documented all over the world, not only on the farm but also on the health of all living beings and consequently on the ecosystem. People have been encouraged to think aloud by the use of technology, notably in terms of the use of chemical fertilisers and pesticides everywhere around us. Soil erosion, water scarcity, salination, soil contamination, genetic erosion, and other negative environmental impacts are examples. Organic farming is also more environmentally friendly and has a higher

socioeconomic influence on a country. The negative impacts of current agricultural practises have been thoroughly documented all over the world, not only on the farm but also on the health of all living beings and consequently on the ecosystem. People have been encouraged to think aloud by the use of technology, notably in terms of the use of chemical fertilisers and pesticides everywhere around us. Soil erosion, water scarcity, salination, soil contamination, genetic erosion, and other negative environmental impacts are examples. Organic farming is also more environmentally friendly and has a higher socioeconomic influence on a country. The economical, ecological and ethical benefits of organic farming will lead to sustainability.

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