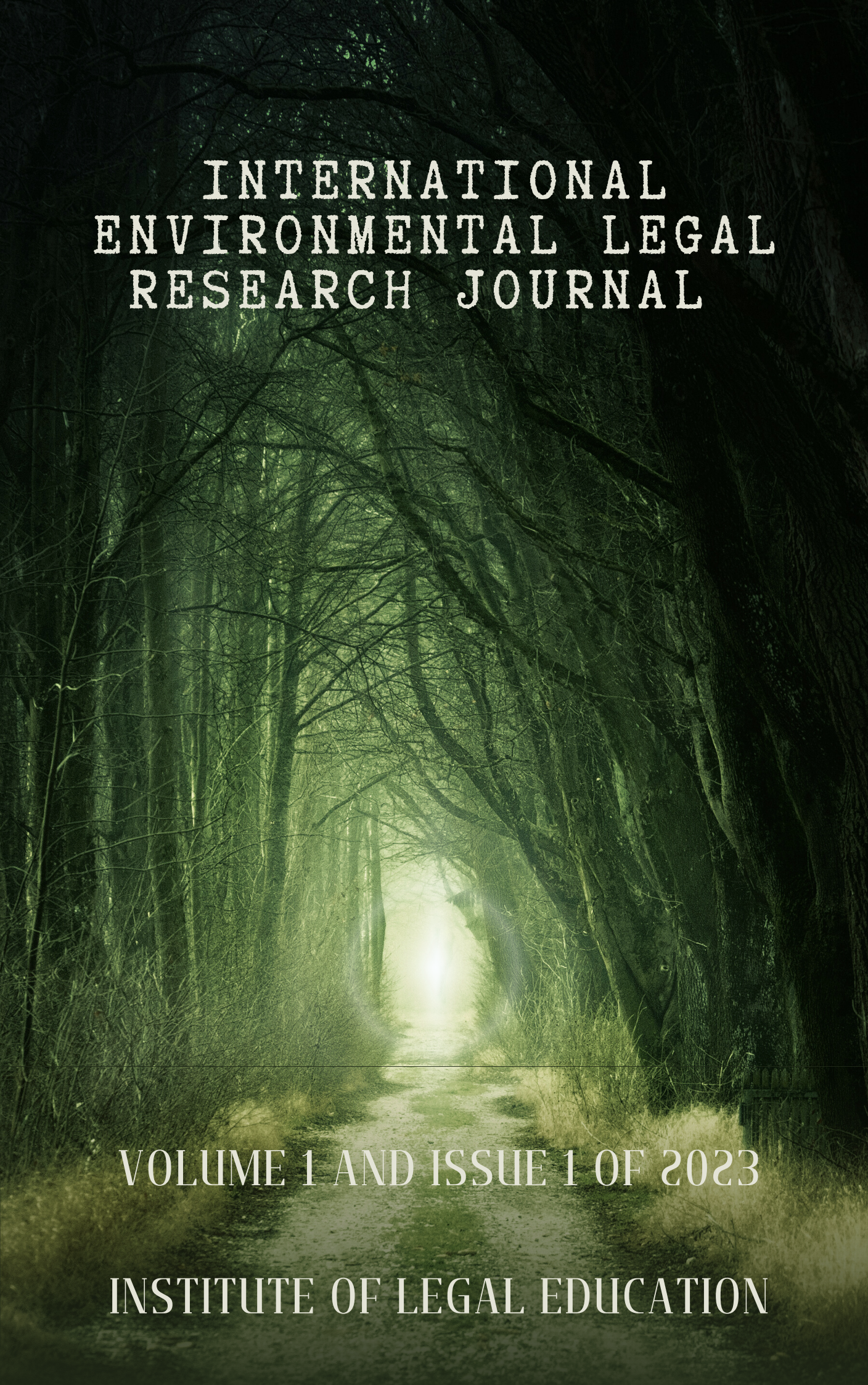

INTERNATIONAL ENVIRONMENTAL LEGAL RESEARCH JOURNAL

VOLUME 1 AND ISSUE 1 OF 2023

INSTITUTE OF LEGAL EDUCATION

International Environmental Legal Research Journal (Open Access Journal)

Journal's Home Page – https://ielrj.iledu.in/

Journal's Editorial Page - https://ielrj.iledu.in/editorial-board/

Volume 1 and Issue 1 (Access Full Issue on - https://ielrj.iledu.in/category/volume-1-and-issue-1-of-2023/)

Publisher

Prasanna S,

Chairman of Institute of Legal Education (Established by I.L.E. Educational Trust)

No. 08, Arul Nagar, Seera Thoppu,

Maudhanda Kurichi, Srirangam,

Tiruchirappalli – 620102

Phone : +91 94896 71437 - info@iledu.in / Chairman@iledu.in

INTERNATIONAL ENVIRONMENTAL LEGAL RESEARCH JOURNAL

Volume I and Issue I of 2023

ISBN - 978-81-960677-0-0

Published by

Institute of Legal Education

https://iledu.in

A STUDY ON THE CONTRIBUTION OF ORGANIC FARMING FOR THE PROMOTION OF SUSTAINABLE DEVELOPMENT

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Best Citation - S P Vidyassri, A STUDY ON THE CONTRIBUTION OF ORGANIC FARMING FOR THE PROMOTION OF SUSTAINABLE DEVELOPMENT, *INTERNATIONAL ENVIRONMENTAL LEGAL RESEARCH JOURNAL*, 1 (1) of 2023, Pg. 1, ISBN - 978-81-960677-0-0.

ABSTRACT

Organic farming is a type of agricultural practice that uses ecologically based pest controls and biological fertilizers. These products are usually made from the waste of animals and plants, as well as nitrogen-fixing cover crops. In India, the interest in organic farming has increased over the last few years as more and more people are shifting towards a healthy lifestyle. The move towards organic farming is also due to its lower cost and reliance on available natural resources instead of expensive fertilizers. The rising potential of organic farming is not only fuelled by public demand and their willingness to pay a premium but also due to the aggressive promotion and marketing of organic products. The main objective of the study is to know about organic farming and how it helps sustainable development. **The sample size was 200**. Dependent variables are **organic farming and sustainable development, organic farming which enables eco-friendly sustainable economic development, the difference between organic and Genetically modified organic farming, organic agriculture plays a major role towards sustainable utilisation of resources in food production and organic farming contribution towards less pollution and tree house gas.** Independent variables are **Age, gender.** Organic Agriculture has always been India's inherent advantage and strength. The shift in the global consumption patterns, health awareness among the consumers and the increasing significance of sustainability is now putting organic products to the forefront locally, nationally and also at international level. Efforts have been made to highlight various organizations/ institutions working towards promoting organic cultivation among the farming community. The study also focused on analyzing the farmer's perception, knowledge level and awareness related to organic farming and certification.

Keywords:-

Organic farming, sustainable development, ecological environment, genetically modified organic farming, biological fertilisers.

INTRODUCTION

Organic farming is a type of agricultural practice that uses ecologically based pest controls and biological fertilizers. These products are usually made from the waste of animals and plants, as well as nitrogen-fixing cover crops. In India, the interest in organic farming has increased over the last few years as more and more people are shifting towards a healthy lifestyle. The move towards organic farming is also due to its lower cost and reliance on available natural resources instead of expensive fertilizers. The rising potential of organic farming is not only fuelled by public demand and their willingness to pay a premium but also due to the aggressive promotion and marketing of organic products. More and more people are ditching chemical-infused food produce and embracing organic food because of its myriad health benefits. Studies have

shown that organic diets benefit growth, boost the immune system, and reduce weight gain. For sustainable development in agriculture, farmers are following a new practice called Polyculture, a method through which a variety of crops are simultaneously grown to meet the rising demand for food. This also ensures the soil quality doesn't deteriorate over a period of time. Organic farming emphasizes the use of natural methods, and genetic modification is, therefore, refrained from in this practice. It promotes sustainable development in agriculture since it doesn't use an artificial variety of the crop and retains the original taste, texture, and flavour of the crops and livestock. An organic movement began in the 1940s as a reaction to agriculture's growing reliance on synthetic fertilizers and pesticides. The history of this modern revival of organic farming dates back to the first half of the 20th century at a time when there was a growing reliance on these new synthetic, non-organic methods. The aim of the study is to find how organic farming helps in the promotion of sustainable development and to find how eco-friendly it is.

OBJECTIVES

1. To know about organic farming and how it helps sustainable development.

2. to study how organic farming enables eco-friendly sustainable economic development.

3. To analyse the difference between organic and genetically modified organic farming.

4. To analyse how organic agriculture plays a major role towards sustainable utilisation of resources in food production.

5. To study about organic farming contribution towards less pollution and tree house gas.

REVIEW OF LITERATURE

This issue has been largely unexplored in the literature. It is reported that conservation agriculture practices can minimize the drought sensitivity of crop yields in "normal" rainfall years but may also reduce crop yield in years of high or low rainfall .Previous research in Malawi suggests that use of organic manure increases with inorganic fertilizer use and fertilizer price knowledge of manure making and household labour availability. The probability of using maize-legume intercropping has been shown to be limited by the yield advantage of maize over legumes, pest susceptibility, and a lack of appropriate legume genotypes.**(Zhao and Zhang 2022)**

The probability of using maize-legume intercropping has been shown to be limited by the yield advantage of maize over legumes, pest susceptibility, and a lack of appropriate legume genotypes. Other factors shown to influence maize-legume intercropping are market access, output prices, availability and cost of improved legume seeds, farm size and exposure to weather shocks, also reported that use of maize-legume intercropping increases with previous sales of legumes and noted that technologies such as organic manure and inorganic fertilizer are likely to be applied on plots where intercropping is practiced.**(Seufert 2016)**

Organic agriculture has the potential to improve soil fertility, biodiversity and sustainability of agricultural production; conserve natural resources; improve agronomic and economic performance; make yields more stable, achieve better food quality and food security; provide access to attractive markets through certified products; provide new partnerships within the whole value chain as well as to encourage self-confidence and sustainability of the farmers .**(Izmaylov et al. 2022)**

This concept introduces new methods for getting sustainable development and has therefore developed actively over the past decade. Organic agriculture has the potential to improve soil fertility, biodiversity and

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sustainability of agricultural production; conserve natural resources; improve agronomic and economic performance; make yields more stable, achieve better food quality and food security; provide access to attractive markets through certified products; provide new partnerships within the whole value chain as well as to encourage self-confidence and sustainability of the farmers.**(Meena et al. 2021)**

United States and European countries are the main markets with 90% of the whole market while the other developing countries are having the remaining small share of 10% of the organic market. Organic farming is not only cost-effective but also is a good contributor to the development sustainability specially in the poor countries and is a good method to reduce the poverty specially for the small landholders and who have very limited resources available ,provided a metaanalysis regarding the concern over the economic competition of organic farming in five continents and found that although organic farming has low yields still it is more profitable (22-35%). **(Nandwani 2016)**

From an economic perspective, decreasing outside data sources and creating access to natural markets by natural ranchers and the chance to offer their items at premium costs are among the most vital monetary favourable circumstances OF for farmers. The cost premiums for natural items are in the vicinity of 10 and 300% and it is evaluated that ranchers get 44-50% of this cost premiums, therefore expanding the capability OF needs to annihilate destitution in creating nations.**(Dos Santos Junior et al. 2022)**

Organic agriculture is capable of contributing to meaningful socio-economic and ecologically sustainable development, especially in developing countries across the globe. On the other hand, asserts that organic farming can contribute to sustainable development with the application of organic principles, which translates into efficient management of local resources like manure and local seed varieties, which in turn, results in cost-effectiveness. In brief, organic farming is capable of contributing to sustainable development since it reduces the risk of yield failure and stabilizes returns, let alone improving the quality of life of small farmers' families.**(Patil 2014)**

On the other hand, asserts that organic farming can contribute to sustainable development with the application of organic principles, which translates into efficient management of local resources like manure and local seed varieties, which in turn, results in cost-effectiveness. In brief, organic farming is capable of contributing to sustainable development since it reduces the risk of yield failure and stabilizes returns, let alone improving the quality of life of small farmers' families. The pros of organic cultivation are such as supporting healthy soil, Sustainability, pollinators, pest control, being eco-friendly, and offering an opportunity for specializing more nutrition and premium price.**(Prasad, Gupta, and Jaiswal 2013)**

Furthermore, organic farming performs well in terms of social and economic indicators and generates high quality products. Some studies suggest lower yields in organic farms .which may have implications in terms of achieving food security .Many scholarly publications and technical reports highlight the environmental, social and economic benefits of organic farming, especially in developing countries .Organic agriculture plays an important role in the development of rural areas in developing countries.**(Eyhorn 2007)**

In addition, organic farmers use dung and compost manures to provide nutrients and terracing or check-dams to prevent erosion and conserve groundwater. They also cover their soils with dead or living vegetation and therefore OSMP has been found to restore degraded lands to fertility .The definition of organic agriculture, approved by the International Federation of Organic Agriculture Movements (IFOAM) in Italy in 2018, is that

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"Organic agriculture is a production system that sustains the health of soils, ecosystems and people.**(Sangeetha et al. 2022)**

Evidence indicates that OSMP has multiple benefits including reduction in production costs, environmental benefits and increased food production. The greatest constraints faced by poor farmers on the road to OSMP are lack of knowledge, access to markets, certification and agricultural inputs. In Bungoma County, OSMP has been supported by SACRED Africa, an indigenous NGO, with an aim of improving the livelihoods of resource-poor farmers, promoting sustainable use of natural resources and agrobiodiversity that seek to enhance food security and safety. **(Tyagi 2019)**

Studies have shown that organic farming contributes to sustainable development owing to its significant ecological and socioeconomic benefits. It also manages efficiency by mobilizing and using local resources such as local seeds and manure etc.; plus, getting rid of chemicals during the cultivation process significantly helps in terms of environmental benefits .The triple benefits of organic farming can be linked to the concept of sustainability that describes similar constructs of "people, planet and profit" .The literature review shows how organic farming contributes to sustainable development owing to its significant ecological and socioeconomic benefits.**(Etingoff 2017)**

After World War II, the agricultural sector has had its share from the rapid technological developments. Soil, water and air are contaminated, and the food produced by using various chemical drugs and fertilizers have caused serious health problems in humans. The conscious producers and consumers gathered together and developed the concept of organic agriculture for the elimination of these emerging problems and the production and consumption of healthier products. **(Arunachalam, n.d.)**

Organic agriculture "includes human-friendly and environment-friendly production systems to restore the natural balance that has been lost as a result of faulty practices in the ecological system, and it recommends the use of organic and green fertilization, alternation, soil conservation, plant resistance, parasites and predators instead of synthetic chemical drugs and fertilizers and it is a production method that takes the principle of increasing the quality of the product, not the quantity increase in production".**(Poonia et al. 2018)**

Nonetheless, green entrepreneurial farming can contribute to profound socio-economic upheaval and sustainable development, especially in emerging economies This is due to, on one hand, the adaptation and application of green practices, which means efficient allocation and management of locally available resources (i.e., manures, local seed varieties, etc.), and therefore cost-effective . On the other hand, the market for green products eat domestic and international level e offers tremendous growth prospects for both producers and exporters, and, thereby, can further facilitate the uptake of green practices in agriculture. **(Halberg 2006)**

On the other hand, the market for green products eat domestic and international level e offers tremendous growth prospects for both producers and exporters , and, thereby, can further facilitate the uptake of green practices in agriculture. Beside economic gains, frame that green entrepreneurial farming improves soil fertility, biodiversity, conserves natural resources, and ultimately aids sustainable development. **(Timofeeva, Galyamova, and Sedykh 2022)**

Possible reason for that is a fact that organic agriculture delivers wider benefits to: the agricultural system, the environment, society, the economy, and institutions. Especially in poorer countries organic agriculture can contribute to significant socio-economic and ecologically sustainable development. This way

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of agricultural production has the potential: "(1) to improve soil fertility, biodiversity and sustainability of agricultural production; (2) to conserve natural resources; (3) to improve agronomic and economic performance; to make yields more stable, especially in risk-prone tropical ecosystems, and to achieve better food quality and food security; (4) to provide access to attractive markets through certified products, and (5) to create new partnerships within the whole value chain as well as to strengthen self-confidence and autonomy of the farmers**.(He et al. 2022)**

Especially in poorer countries organic agriculture can contribute to significant socio-economic and ecologically sustainable development. This way of agricultural production has the potential: "(1) to improve soil fertility, biodiversity and sustainability of agricultural production; (2) to conserve natural resources; (3) to improve agronomic and economic performance; to make yields more stable, especially in risk-prone tropical ecosystems, and to achieve better food quality and food security; (4) to provide access to attractive markets through certified products, and (5) to create new partnerships within the whole value chain as well as to strengthen self-confidence and autonomy of the farmers" . **(Zhu et al. 2022)**

Due to the fact that a higher variety of crops is grown by organic farmers, the dependence on a few crops only in the market is reduced, and farmers and their families can also benefit from the variety of harvested crops. This ultimately contributes to improving FNS for organic farmers and their families. **(Ali et al. 2022)**

Finally, the OFS could potentially contribute to the SDG 4 (Quality education), since some organic initiatives have succeeded in providing access to education and training for their farmers. Additionally, organic farmers' organisations can act as catalysts of education bringing producers' together .Basis for monitoring the performance of Sustainable Development Goals in Organic Food Systems. **(Di Pierro et al. 2022)**

According to Katwal et al. (2011), agrodiversity plays a pivotal role in sustainable agriculture development, food security and poverty alleviation. Organic agriculture promotes soil fertility, conserves biodiversity (e.g., native flora and fauna), reduces the risk of yield failure, stabilizes returns helping in enhancing food security for small farmers' families' .Organic agriculture promotes diversity which in turn increases ecosystem function and helps protect pests**. (Luo, Kou, and Wang 2022)**

Performance on sustainability the stable productivity, increasing crop diversity, equitability, presence of solidarity and integration, and increasing production of safe food indicates organic agriculture is sustainable in Gasa. Also organic agriculture is recognized by the scientific community in terms of its multifunctionality .It is also seen as a solution to biodiversity loss and inhibit climate change. **(Soma Nathan et al. 2022)**

METHODOLOGY

For the purpose of this research, the primary data was collected in Chennai. The SPSS software by IBM was used to calculate the descriptive statistics. **The sample size was 200**. Dependent variables are **organic farming and sustainable development, organic farming which enables eco-friendly sustainable economic development, the difference between organic and Genetically modified organic farming, organic agriculture plays a major role towards sustainable utilisation of resources in food production and organic farming contribution towards less pollution and tree house gas.** Independent variables are **Age, gender.** Various tools like simple

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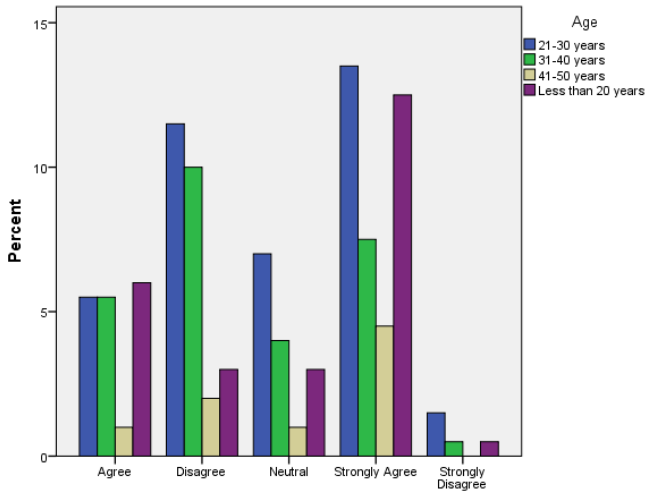
percentage analysis and graphical representation.

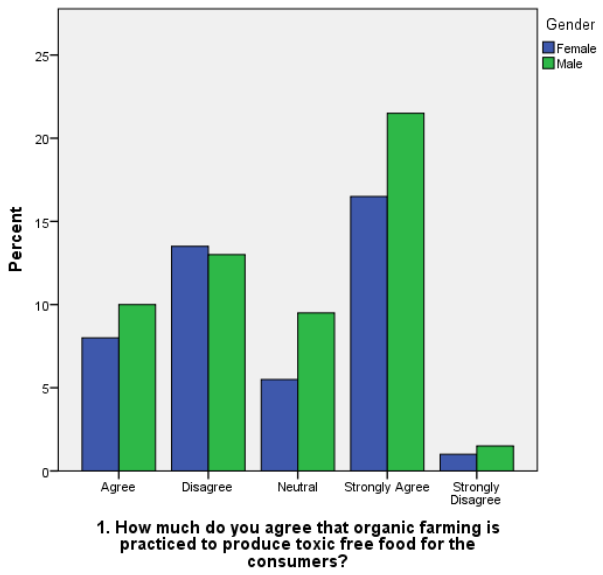
ANALYSI

Figure 1:-



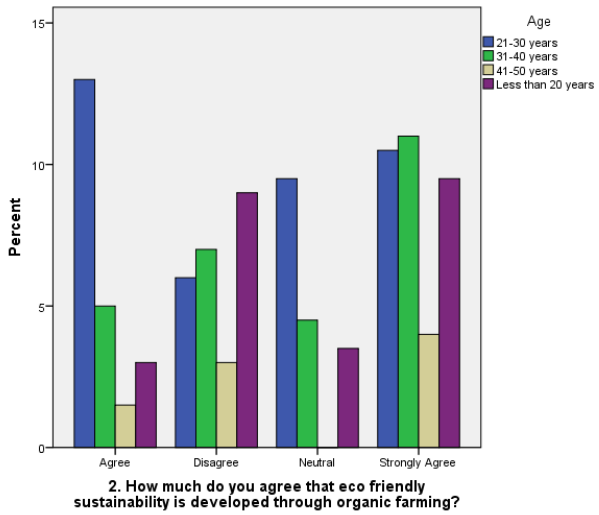
Legend: - This figure shows how much people agree that organic farming is practiced to produce toxic free food for the consumers which is compared with Age.

Figure 2:-



Legend: - This figure shows how much people agree that organic farming is practiced to produce toxic free food for the consumers which is compared with Gender.

Figure 3:-



Legend: - This figure shows how much people agree that eco-friendly sustainability is developed through organic farming which is compared with Age.

Figure 4:-

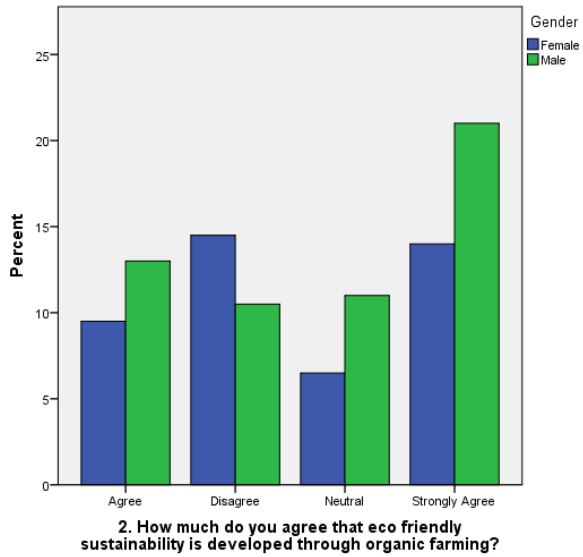


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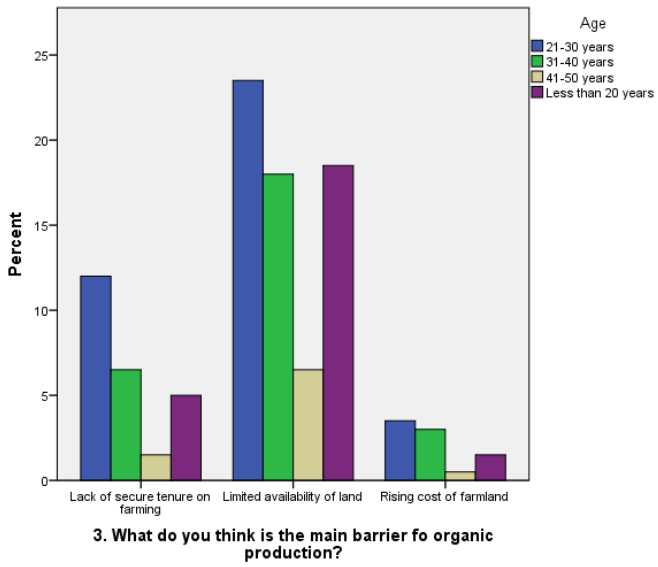
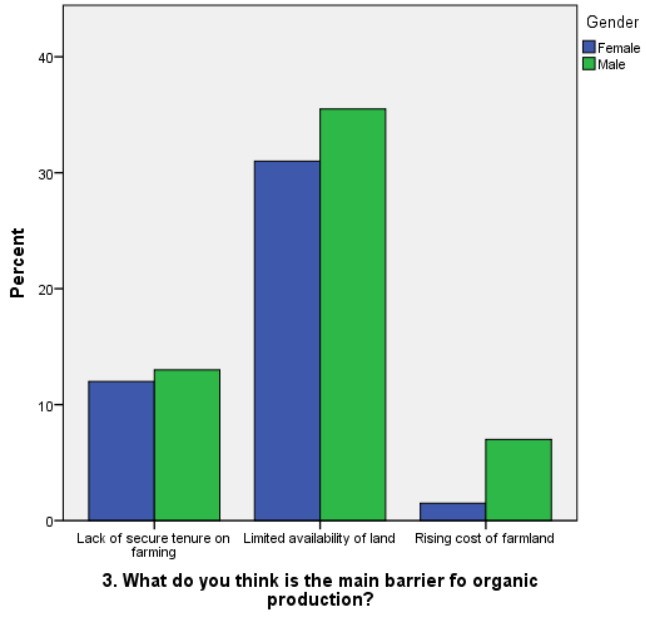
Figure 5:-



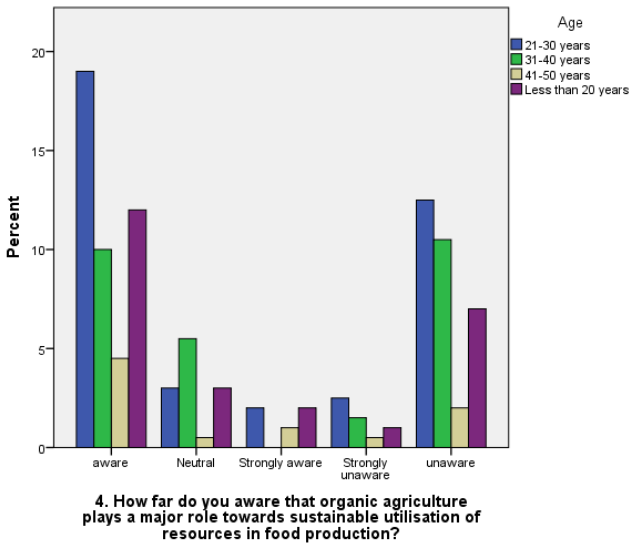
Legend: - This figure shows what the people think is the main barrier for organic production which is compared with Age.

Figure 6:-



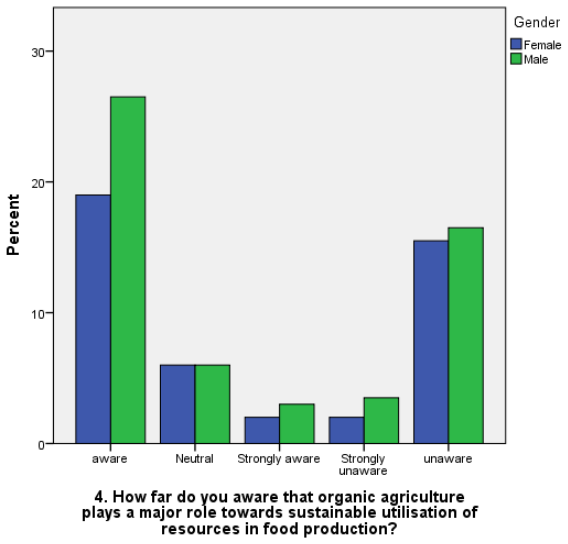
Legend: - This figure shows what the people think is the main barrier for organic production which is compared with Gender.

Figure 7:-



Legend: - This figure shows how much people are aware that organic agriculture plays a major role towards sustainable utilisation of resources in food production which is compared with Age.

Figure 8:-



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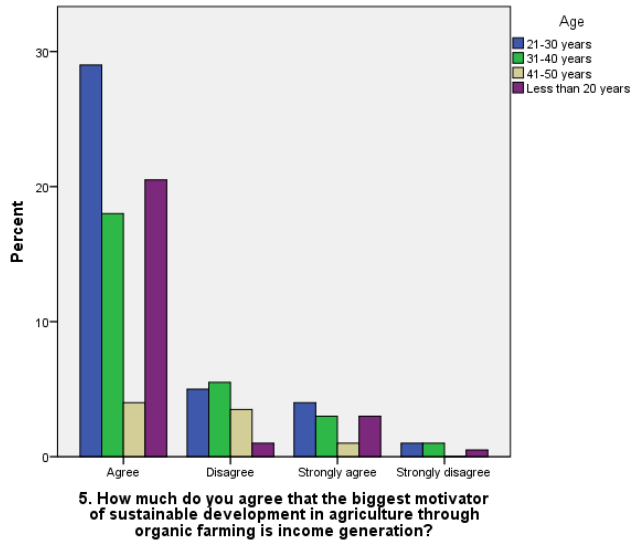
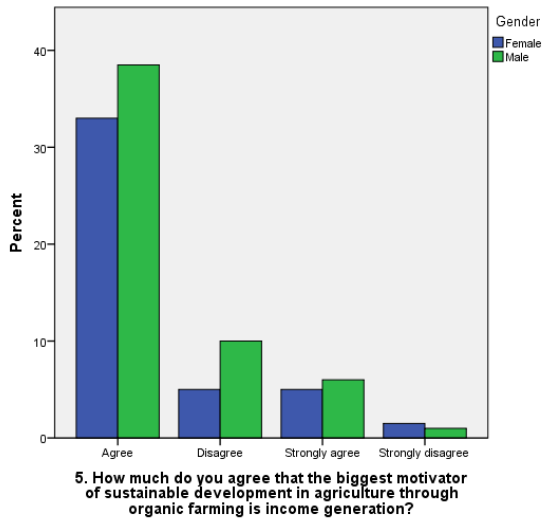
Legend: - This figure shows how much people are aware that organic agriculture plays a major role towards sustainable utilisation of resources in food production which is compared with Gender.

Figure 9:-



Legend: - This figure shows how much people agree that the biggest motivator of sustainable development in agriculture through organic farming is income generation which is compared with Age.

Figure 10:-



Legend: - This figure shows how much people agree that the biggest motivator of sustainable development in agriculture through organic farming is income generation which is compared with Gender.

RESULT

Figure 1:- Result of the survey shows that the people of all the age groups strongly agreed that organic farming is practiced to produce toxic free food for the consumers. **Figure 2:-** Result of the survey shows that both the male and female respondents strongly agreed that organic farming is practiced to produce toxic free food for the consumers. **Figure 3:-** Result of the survey shows that the people of the age group less than 20 years strongly agreed 10%, age group 21-30 years agreed 13%, age group 31-40 years strongly agreed 11% and age group 41-50 year also strongly agreed 4% that eco-friendly sustainability is developed through organic farming. **Figure 4:-** Result of the survey shows that both the male and female respondents strongly agreed 20% and 15% that eco-friendly sustainability is developed through organic farming. **Figure 5:-** Result of the survey shows that the people of all the age groups said limited availability of land is the main barrier for organic production. **Figure 6:-** Result of the survey shows that both the male and female respondents said limited availability of land is the main barrier for organic production. **Figure 7:-** Result of the survey shows that the people of all the age groups are aware that organic agriculture plays a major role towards sustainable utilisation of resources in food production. **Figure 8:-** Result of the survey shows that both the male and female respondents are aware that organic agriculture plays a major role towards sustainable utilisation of resources in food production. **Figure 9:-** Result of the survey shows that the people of all the age groups agreed that the biggest motivator of sustainable development in agriculture through organic farming is income generation. **Figure 10:-** Result of the

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survey shows that both the male and female respondents agreed that the biggest motivator of sustainable development in agriculture through organic farming is income generation.

DISCUSSION

Figure 1:- Result of the survey shows that the people of all the age groups strongly agreed that organic farming is practiced to produce toxic free food for the consumers. From this result people of all age groups agreed which shows that organic farming is practiced to produce toxic free food for the consumers. **Figure 2:-** Result of the survey shows that both the male and female respondents strongly agreed that organic farming is practiced to produce toxic free food for the consumers. From this result people of all the respondents agreed which shows that organic farming is practiced to produce toxic free food for the consumers. **Figure 3:-** Result of the survey shows that the people of the age group less than 20 years strongly agreed 10%, age group 21-30 years agreed 13%, age group 31-40 years strongly agreed 11% and age group 41-50 year also strongly agreed 4% that eco-friendly sustainability is developed through organic farming. From this result people of all age groups agreed and strongly agreed which shows that eco-friendly sustainability is developed through organic farming. **Figure 4:-** Result of the survey shows that both the male and female respondents strongly agreed 20% and 15% that eco-friendly sustainability is developed through organic farming. From this result people of all the respondents strongly agreed which shows that eco-friendly sustainability is developed through organic farming. **Figure 5:-** Result of the survey shows that the people of all the age groups said limited availability of land is the main barrier for organic production. From this result we came to know that the limited availability of land is the main barrier for organic production. **Figure 6:-** Result of the survey shows that both the male and female respondents said limited availability of land is the main barrier for organic production. From this result we came to know that the limited availability of land is the main barrier for organic production. **Figure 7:-** Result of the survey shows that the people of all the age groups are aware that organic agriculture plays a major role towards sustainable utilisation of resources in food production. From this result we came to know that organic agriculture plays a major role towards sustainable utilisation of resources in food production. **Figure 8:-** Result of the survey shows that both the male and female respondents are aware that organic agriculture plays a major role towards sustainable utilisation of resources in food production. From this result we came to know that organic agriculture plays a major role towards sustainable utilisation of resources in food production. **Figure 9:-** Result of the survey shows that the people of all the age groups agreed that the biggest motivator of sustainable development in agriculture through organic farming is income generation. From this result we came to know that the biggest motivator of sustainable development in agriculture through organic farming is income generation. **Figure 10:-** Result of the survey shows that both the male and female respondents agreed that the biggest motivator of sustainable development in agriculture through organic farming is income generation. From this result we came to know that the biggest motivator of sustainable development in agriculture through organic farming is income generation.

LIMITATIONS

The Major limitation of the study is the sample frame, since the sample was taken only within Chennai. The restrictive area of sample frame and sample size is another drawback of the research. So we could only come to an approximate conclusion of what the respondent is feeling to convey.

CONCLUSION

Organic Agriculture has always been India's inherent advantage and strength. The shift in the global consumption patterns, health awareness among the consumers and the increasing significance of sustainability is now putting organic products to the forefront locally, nationally and also at international level. With organic farming gaining the momentum and mounting demand for the organic products in the market, the present study is undertaken to understand the scope and potential for the development of organic farming among the farming community. The challenges faced by the organic sector at various levels have been emphasized. The demand for the organic products among the urbanites dwelling in the Bengaluru city and the reasons affecting the consumer behaviour towards these products were analysed in this study. Efforts have been made to highlight various organizations/ institutions working towards promoting organic cultivation among the farming community. The study also focused on analyzing the farmer's perception, knowledge level and awareness related to organic farming and certification.

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