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Economic Viability Of Organic Farming:Insights From Kozhikode District

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Abstract:
In the decades following independence, India struggled to produce enough food to meet the needs of its growing population. Traditional agricultural practices, passed down through generations, proved inadequate. Heavy reliance on food imports and the politics of food aid prompted a push for self-sufficiency. The Green Revolution helped achieve this by modernizing agriculture and transforming India into a food-exporting nation.However, this success came at a significant ecological and social cost. The Western model of intensive farming led to environmental degradation, raising concerns about its long-term sustainability. The global movement for sustainable development has brought renewed focus on the need for sustainable agriculture.The FAO defines sustainable agriculture as the responsible management of resources to meet evolving human needs while preserving environmental quality and conserving natural resources. Among the approaches to achieve this, organic farming stands out as a viable solution. In Kerala, the shift from traditional to intensive farming over recent decades has negatively impacted the environment, economy, and social fabric. The widespread use of chemical fertilizers, pesticides, and machines has polluted air and water, degraded soil health, and introduced harmful residues into food. These side effects have sparked public concern and growing consumer demand for organic produce. Given this context, the present study explores the progress, current status, and importance of organic farming, with a specific focus on Kozhikode district.
Key words: *Organic farming, economic viability, farm income, agriculture*

INTRODUCTION

India's agricultural heritage, rooted in sustainable practices since the Indus Valley Civilization, reflects a deep connection between culture and farming. Traditional methods, like Kerala's practice of resting farmland after harvest, prioritized ecological balance and long-term soil health.However, the Green Revolution introduced high-yielding varieties reliant on chemical inputs, leading to ecological damage. Soil fertility declined, water demand surged, and biodiversity plummeted. The use of pesticides, exemplified by aerial spraying in Kerala, caused widespread harm to non-target species and human health. Modern agricultural practices have resulted in polluted air, water, and soil, contaminating food and harming aquatic ecosystems. The shift towards cash crops and economic liberalization has further burdened farmers, leading to debt and increased suicides.

Recognizing the detrimental effects of conventional agriculture, many farmers are returning to sustainable, organic practices. Organic farming, with its focus on ecological balance, offers a promising path towards food security and environmental health. Studies indicate that organic agriculture can achieve comparable or even higher yields, particularly in low-input systems, while using significantly less energy. Bemwad Geier (1999) asserts that organic agriculture is uniquely governed by well-defined standards and regulations. With decades of experience, the organic movement has successfully promoted ecologically sound practices and established reliable inspection and certification systems, thereby ensuring consumer trust. Emphasizing reduced external inputs and a holistic farming approach, Geier highlights the global success of organic farming, particularly in Western countries, and notes the growing scale of international trade in organic products. On the question of global food security, he contends that neither chemical nor organic systems alone can achieve this goal—only farmers can.

Kaushik (1997) examines the challenges and policy implications associated with adopting sustainable agriculture, emphasizing the significance of trade-offs at both individual and national levels. Key considerations include balancing public and private benefits, current and future incomes, and immediate consumption versus long-term growth.

Sharma (2001) advocates for organic farming as the most prominent alternative to conventional agriculture. While outlining the drawbacks of conventional methods, the study also discusses other approaches such as biological, natural, and permaculture farming, with particular emphasis on organic

farming as the most viable and extensively explored option.

India has a rich agricultural heritage dating back to the 6th millennium BC, rooted in the sustainable practices of the Indus Valley Civilization. Agriculture shaped not only the economy but also the culture and ethos of the land, with harvests celebrated nationwide. In Kerala, farmland was revered as Mother Earth, with rituals like resting the land for three months post-harvest—an ecologically sound practice that prevented soil erosion during monsoons.Traditional Indian agriculture was inherently sustainable, relying on indigenous crops suited to local climates and minimal organic inputs. However, modern farming methods disrupted this balance. The Green Revolution replaced native varieties with high-yielding, high-input crops that demanded excessive fertilizers and pesticides, triggering a cascade of ecological issues.Soil fertility declined, water usage surged, and traditional crop varieties vanished. The deep bond between farmer and land weakened. Rising cultivation costs, stagnant farmer incomes, and threats to food security followed. Biodiversity suffered severely. Once-vibrant fields are now silent—frogs, birds like the Baya weaver, drongo, bee-eater, and even house sparrows have disappeared, signaling the collapse of farmland ecosystems and their intricate food webs. Pesticide use in forestry has been minimal, but aerial spraying began in Kerala in 1965 to control teak defoliators in Konni, causing the death of over 160 non-target arthropod species within 48 hours. The long-term health impacts, as seen in Padri village in Kasargode, underline the dangers of such interventions.

Modern farming practices have led to serious environmental degradation. Pesticide runoff polluted water bodies, while chemical industries contributed heavy metals, contaminating aquatic life and food chains. As a result, health issues increased and the healthcare industry expanded, often prioritizing profits.Traditional food crops declined as cash crops, especially rubber, expanded—now covering 16% of farmland. Mono-cultures led to soil degradation and loss of fertility. Liberalization and global trade policies drove farmers into debt, escalating farmer suicides and shifting profits to agro-industries.In response, many farmers are returning to eco-friendly traditional methods. Organic farming, guided by the principle of "live and let live," is gaining global traction. A 2007 FAO report found that organic farming could meet global food needs, increase yields by up to 56% in developing countries, and use significantly less energy. Today, over 22.8 million hectares are farmed organically, with Cuba leading as a fully organic nation.

Concept of Organic Farming : Organic farming has deep roots in India and China, where farmers have practiced sustainable agriculture for over 4,000 years. It is not a modern invention but a revival of traditional methods that preserved soil fertility and ecological balance for centuries. The core principles of organic farming include:

- Emulating nature, which thrives without synthetic inputs or excess water.
- Understanding and working with natural processes rather than exploiting them.
- Treating soil as a living entity, rich with microbes and organisms essential for long-term fertility.
- Maintaining the entire soil environment, from its structure to its protective cover.

Modern organic farming focuses on cultivating land using organic wastes (like crop residues, animal manure, and aquatic waste) and bio-fertilizers to nourish the soil and promote sustainable crop production without polluting the environment. According to the USDA, organic farming avoids synthetic inputs—such as chemical fertilizers, pesticides, and hormones—and relies on crop rotations, organic residues, and biological methods for nutrient management and pest control. The FAO defines it as a system that enhances agro-industry health through agronomic, biological, and mechanical practices, while excluding synthetic off-farm inputs. Philosophically, organic farming is about interconnections—it views the farm as part of a larger system, emphasizing the relationship between soil, water, plants, animals, humans, and the broader environment. This holistic approach forms the foundation of organic agriculture. Organic farming promotes sustainable agriculture by prioritizing the health of soil, crops, people, and the environment. It avoids harmful chemicals, relying instead on natural processes and inputs to maintain productivity and ecological balance.The key practices include:

Soil fertility: Using composted crop waste, animal manure, green manures, legumes, mulching, timely soil cultivation, and crop rotation.

Pest and disease control: Adopting resistant crop varieties, encouraging beneficial predators, using natural pesticides, enhancing genetic diversity, and implementing careful crop planning and rotation.

Water and livestock management: Emphasizing responsible water use and good animal husbandry.

Organic farming blends traditional wisdom with modern science to build resilient systems that improve soil structure, enhance water retention, and sequester carbon. It's not a return to the past but a forward-looking approach that works with nature—not against it—to support healthy farming ecosystems.

Growth of Organic Agriculture in India: Organic farming in India has evolved along three dimensions:

Traditional Organic Farmers: Located in low or no-input zones, these farmers practice organic farming by tradition or due to lack of resources for conventional methods. They are mostly uncertified.

Reactive Adopters: These farmers shifted to organic practices in response to the negative impacts of conventional farming, such as declining soil fertility, rising costs, or food safety concerns. Some are certified, while others are not.

Commercial Organic Farmers: Motivated by market demand and premium prices, these farmers and enterprises have strategically adopted certified organic farming. Most available data on organic agriculture pertains to this group.

Certified organic farming expanded from 42,000 hectares in 2003–04 to over 4.48 million hectares by March 2010 and to 7.62 hectares by 2024 . Of this, 1.08 million hectares is cultivated land, while 3.4 million hectares are wild forest collection areas. India accounts for nearly half of the world's organic producers, largely due to its large number of smallholders. Out of 2,099 organic operators, 753 are individual farmers and 427 are processors. A vast majority—over 597,000 farmers—are part of 919 grower groups, mostly comprising small and marginal farmers.

Effects of Modern Farming Technology: Modernization of Indian agriculture began in the mid-1960s with the Green Revolution, transforming the country from a food-deficient to a food-surplus nation. This shift relied heavily on high-yielding seed varieties, chemical fertilizers, pesticides, irrigation, and multiple cropping systems. However, these practices exerted immense pressure on natural resources, especially land and water. Over time, concerns have emerged about the sustainability of this model due to the overuse of non-renewable resources and the environmental degradation it causes. Studies indicate that modern farming methods have led to ecological imbalances and long-term harm to soil and water systems due to excessive chemical usage.

Benefits of Organic Farming : Organic agriculture makes farming more sustainable, rewarding, and respected. It preserves soil fertility by preventing erosion and nutrient loss, while enriching biodiversity by protecting soil organisms, plants, and animals. Relying mainly on renewable, on-farm resources, it promotes water conservation, reduces the use of external inputs, and encourages the adoption of renewable energy sources. Domestic animals are integrated into the system, contributing to soil health and farmer income. Organic practices maintain pollution-free air, water, and soil, and enhance the agro-ecosystem and natural landscape. They also support traditional knowledge in farming, seed improvement, and food processing, ensuring its preservation for future generations. By reducing production costs and food mileage, organic farming lowers carbon emissions and produces nutritious, high-quality food that supports a healthy food culture.

2. OBJECTIVES

In this context, the present study aims to assess the relevance, progress, and current status of organic farming in Kerala, with a special focus on farm income in Kozhikode district.

The specific objectives are:

i. To evaluate the significance of organic farming in the current agricultural landscape.

ii. To examine the present status of organic farming in Kerala and review government policies supporting its promotion.

iii. To analyze farm income from selected case studies to assess the economic viability of organic farming.

3.MATERIALS AND METHODS

The study is based on both primary and secondary data. Secondary data were collected from published sources, including the websites of the European Union, IFOAM, books, journals, and newspaper reports, covering the historical development and progress of organic farming in India and abroad.

Primary data were gathered through a structured questionnaire and field visits to selected farms. In Kozhikode district, there are four certified organic farmer groups, out of which two were selected for the study. A total of 35 farmers were randomly chosen. Data on both qualitative and quantitative aspects were collected through direct observation and farm record verification to understand farming practices, identify

challenges, and assess farm productivity and profitability.

The study focuses solely on certified organic farmers in Kozhikode district and therefore does not represent the entire organic farming landscape of Kerala. As the sector is still emerging and largely unorganized, many farmers do not maintain proper records. Data were collected through personal interviews, relying on respondents' memory, which may have introduced recall bias.

A brief history of organic farming in Kerala: Organic farming in Kerala expanded to include seed conservation, women's empowerment, value addition, and food security. Today, certified organic farmers grow export crops like spices and tea, while non-certified farmers focus on food crops and biodiversity, all emphasizing soil health. The state also has an accredited certification agency.Traditional practices like Pokkali, Kaipad, and homestead farming remain viable organic systems. Community-based models like Adat (Thrissur) and Marappanmoola (Wayanad) further promote organic methods.

Organic markets have emerged in Thiruvananthapuram, Thrissur, Kozhikode, and Kannur, supported by women's groups involved in vegetable farming. Kerala's lower chemical use—60 kg/ha of fertilizers and 224 g/ha of pesticides, below the national average—makes it ideal for organic farming.Recognizing this, the Agriculture Department initiated organic farming programs in 2002–03, established a promotion cell, and launched brands like 'Kerala Organic' and 'Kerala Naturals'. Around 7,000 farmers now follow certified organic practices over 5,750 hectares, with much more land under non-certified cultivation.

The highest concentration of organic farmers is found in Kannur, Alappuzha, and Thrissur districts, largely due to the active presence of major farmer groups such as 'Grama' in Kannur, Mediamate/Jeevarekha (a network of environmental activists) in Alappuzha, and the Vandana Organic Farmers' Society in Thrissur. In contrast, the low participation from Idukki and Wayanad may be attributed to their remote locations.The Government of Kerala, acknowledging the harmful effects of chemical-based agriculture on human health and the environment, has introduced a comprehensive organic farming policy. This initiative aligns with the state's Biodiversity Strategy and Action Plan and seeks to safeguard Kerala's rich ecological heritage while promoting sustainable livelihoods. By moving towards ecological farming methods, the policy aims to ensure agricultural sustainability, protect natural resources, and enhance food and nutritional security.The core objectives of the policy are to make farming more sustainable, economically viable, and socially dignified. It emphasizes improving soil fertility, conserving water resources, and securing the agricultural ecosystem from chemical contamination. The approach also supports the development of farmer-controlled domestic markets, promotes safe and healthy food systems, and strives to preserve traditional agricultural knowledge and biodiversity. Seed and food sovereignty are integral to the policy, along with efforts to eliminate agro-chemicals and ensure quality assurance in organic inputs and produce.

To implement this vision, the government has planned a phased strategy, converting at least 10% of the cultivable land to organic farming each year, aiming for complete conversion within five to ten years. An expert committee will assess the outcomes after three years to identify and address any gaps before further expansion. The action plan includes establishing seed sovereignty, strengthening soil and water conservation, promoting mixed farming systems, and ensuring the availability of quality organic inputs. Infrastructure for storage, transportation, and marketing will be developed to support the organic value chain. A state-wide awareness campaign—"Jaiva Keralam"—will be launched to build public support, while a simplified certification process and financial incentives will encourage adoption. Furthermore, organic farming will be introduced in educational curricula, and agricultural research and extension services will be reoriented to support the organic transition. Over time, the use of chemical fertilizers and pesticides will be gradually phased out, supported by a robust institutional framework dedicated to organic farming promotion. An in-depth case study of organic farms in Kozhikode district has been undertaken, highlighting the critical role and growing significance of organic farming in Kerala. Kozhikode, historically renowned as the heart of Malabar and a global hub for spice trade even before the Common Era, has a deep-rooted agricultural heritage. Covering a total area of 2345 sq. km, the district comprises 336 sq. km of urban and 2009 sq. km of rural land. Agriculture, along with fisheries and industry, remains a major source of livelihood, with over 15% of the working population engaged in it full time. More than half of the district's income is derived from agriculture and allied sectors.The region's agricultural landscape is marked by diversity in cropping patterns and cultivation practices. Crops like coconut, paddy, tapioca, ginger, arecanut, and pepper dominate the lowland and midland areas, while the highlands are known for plantation crops such as cocoa and coffee.In recent years, a noticeable shift has occurred in the district's

farming practices. There is increasing support from the government and local communities to adopt organic farming and promote the use of organic manure. This transition is driven by a vision to revive traditional agricultural practices, instill farming values in the younger generation, reduce environmental pollution caused by chemical fertilizers, produce toxin-free food, and conserve energy for future sustainability.

Organic farmers are defined as those who have practiced organic or eco-friendly farming for a minimum of two years, with reduced or no use of chemical fertilizers and biocides, relying instead on organic inputs and sustainable technologies.In Kozhikode district, only four registered organic farming groups are present. This study focuses on two: an individually owned farm in Anakkampoyil and 'Niravu', a community-based initiative in Vengeri comprising 101 households and approximately 640 members. From Niravu, 34 households were selected through simple random sampling. Data collection involved structured interviews, farm visits, direct observations, and inputs from farmers, covering both qualitative and quantitative aspects.

4.RESULTS AND DISCUSSIONS

Analysis of the case study : The socio-economic background of the farmers is examined from two perspectives: the size of their landholdings and their reliance on agriculture as a primary source of income. The remaining section focuses on describing the organic farming methods adopted by these farmers.

Title to cultivating land : In some instances, farmers may lease in or lease out land for cultivation, and there are also cases where owned land has been pledged. The ownership details are provided below.

Table 1: Title to cultivating land

Sl.No.	Type of farm	No. of farmers	%
1.	Own	1	2.9
2.	Lease	-	-
3.	Tharavad	4	11.4
4.	Own & lease	-	-
5.	Own & pledge	-	-
6.	Own & Others	30	85.7
7.	No information	-	-
Total		35	100

Source: Field survey

In the sample study, only 2.9% of farmers solely own land, while 11.4% cultivate on jointly owned tharavad land. The majority (85.7%) farm on their own land and also receive unused land freely from its owners. In the case of 'Niravu', land is provided free of cost by the landowners.In addition to farming, the majority of farmers are involved in allied activities such as cattle rearing, poultry, and mushroom cultivation.

Water sources :All farmers primarily rely on seasonal rainfall as the main water source for their farmland. Additionally, they use well water, ponds or tanks, canals, and rivers. In water-scarce areas, bore wells are also utilized.

Table 2: Water Sources

Sources	No. of farmers using	%
Well	26	74.3
Pond/tank	8	22.9
Canal		
River	1	2.8
Bore well		
Total	35	100

Source: Field Survey

Method of irrigation in the cultivated lands: Most small and marginal farmers find motorized irrigation too costly. Instead, many adopt innovative and effective traditional or locally developed methods for channeling, bunding, water retention, and rainwater harvesting.

Table 3: Method of Irrigation in the cultivated Lands

Sl.No.	Methods	No. of farmers using	%
1	Diesel Motor	3	8.6
2	Electric Motor	18	51.4
3	Traditional motor	4	40
4	Solar		
5	Wind		
6	Others		
	Total	35	100

Source: Field Survey

Use of agricultural machinery: The use of machinery is limited to a few farmers, with large-scale farmers consistently relying on it. Many farmers pointed out a severe shortage of labor, leading to an increased need to substitute human labor with machine power.

Table 4: Use of agricultural machinery

Sl. No.	Activities	No. of farmers
1	Tractor	-
2	Tiller	3
3	Harvester	-
4	MethiYanthram	-
5	Coconut climber	11
6	Pump set	22
7	Wood cutter	16
8	Traditional equipments	28
9	Others	4

Source: Field Survey

Many farmers continue to rely on traditional equipment for their work. However, most of the machinery they use is rented rather than owned, with only a few farmers possessing certain types of equipment.

Size of land holdings : The majority of farmers are small and marginal, with land holdings of up to 2.00 acres. The details are provided below.

Table 5: Size of land holdings

Sl.No.	Size	No. of farmers owning	%
1	½ acre	2	5.7
2	½ - 1.00 acres		
3	1.00 – 2.00 acre	25	71.4
4	2.00 – 3.00 acre	5	14.3
5	3.00 – 5.00 acre	2	5.7
6	5.00 – 10.00 acre		
7	10 acre & above	1	2.9
	Total	35	100

Source: Field Survey

Farmers perception of his farming method : The questionnaire categorized farming practices into three types: modern, partially organic, and fully organic. Among the respondents, 54.3% practice fully organic farming, 28.6% follow partially organic methods, and 11.4% use a combination of organic and modern techniques. The primary driving force behind the spread of organic farming appears to be the farmers themselves, as reflected in the growing number of local organic farming groups.

Duration of Organic Farming: Out of the total, 20 farmers (57%) have been practicing organic farming for 5 to 10 years. Additionally, 8 farmers (22.9%) and 4 farmers (11.4%) have been engaged in organic farming for 3–5 years and 3 years, respectively. A small proportion (2.9% each) have been cultivating organically for 1 year, 2 years, or more than 10 years.

Nature of application of organic techniques :The three fundamental principles of organic farming are: (i) no use of chemical pesticides, (ii) no use of chemical fertilizers, and (iii) the use of traditional seeds. Details on the extent to which these organic practices are followed are provided below.

Table 6: Nature of application of organic techniques

Application	No. of farmers using	%
Only organic	19	54.3
Only chemical	-	-
Both	12	34.3
Others	-	-
None	4	11.4
Total	35	100

Source: Field Survey

According to the farmers, minimal use of chemical inputs is limited to cash crops. They stated that the lack of availability of organic pesticides and manure often compels them to resort to limited chemical use. A similar issue exists with seeds, as traditional varieties of many crops have become rare or even extinct.

Crop Preferences : The question regarding crops cultivated by organic farmers revealed a wide variety of crops. Crop preferences were assessed based on the area allocated to each type of crop. The details of these preferences are provided below.

Table 7: Crop preferences among organic farmers

Crops	No. of farmers cultivating the crops
Other fruit trees	7
Cashew	-
Coffee	1
Jack	8
Tapioca	18
Mango	9
Banana	23
Paddy	3
Rubber	-
Pepper	8
Tubers	24
Arecanut	5
Vegetables	34
Coconut	26

Source: Field Survey

Crop preference was assessed using the ranking method. The figure below illustrates farmers' preferences for major crops based on the extent of cultivated area. Vegetables ranked highest, with 34 farmers engaged in vegetable cultivation, followed by coconut, tubers, and banana.

Market identity : Many farmers identified poor marketing prospects for organic produce as a major challenge. They stressed the need for improved marketing strategies and greater support at both government and policy levels to promote the sale of organic products. It was observed that most farmers felt organic products lack distinct market identity. They suggested measures such as increasing consumer awareness about the superior quality of organic produce, implementing Eco-labeling, and ensuring competitive pricing to enhance the marketing of organically grown products.

Reason for change over to organic farming :Transitioning to organic farming is considered risky due to the lack of external support, which often leads to isolation from fellow farmers, the broader community, and even family members. Additionally, there is limited access to essential inputs such as indigenous seeds and organic manure, and the absence of a well-defined market further discourages adoption. The farmers cited the following reasons, listed below in descending order of frequency.

Table 8: Reasons for change over to organic farming

Sl.No.	Reasons	Rank
1	Concern for human health	1
2	Self-dependence and freedom in farming	2

3	Decreasing farm income due to increasing costs of input like labour fertilizer etc.	2
4	Increasing pest infestations and crop disease	3
5	Depleting health of the soil	3
6	Influence of other organic farmers	4
7	Increasing risk	5
8	Concern for environment	5
9	Preservation of traditions	6

Source: Field Survey

The majority of farmers shifted to organic farming primarily due to the rising incidence of diseases in the current generation, with concern for human health being the foremost motivation. In addition to this primary reason, several other factors also influenced their decision to transition to organic practices.

Changes observed during or after transition: Based on the field survey, the farmers reported several changes observed during or after their transition to organic farming.The most significant change noted was the production of healthy and nutritious food. They also experienced a notable reduction in pest infestations and crop diseases. Alongside this, there was an increase in biodiversity on their farms and a reduction in labour requirements. Many farmers reported becoming less dependent on external inputs and were able to meet their manure needs independently. Some also enjoyed an increase in leisure time due to reduced farm-related stress. A few farmers observed an increase in crop yield, while others reported the development of live and healthy soil, indicating improved soil quality.

Farm-Income Analysis (Case I: Area - Anakkampoyil):

The farmer possesses a 15-acre homestead plot, with the primary crops cultivated being coconut, arecanut, pepper, cocoa, and banana. In addition to these, the farm engages in various allied agricultural activities, including poultry farming, goat rearing, and the rearing of turkeys, ducks, cows, and honey bees. The plot is also enriched with more than 2,000 teak trees, 500 mahogany trees, 300 jackfruit trees, and 300 Aini trees. The expenditure details related to cultivation are presented below.

Table 9: Labour input (Case I)

Particulars	Rate (Mandays x wage) (inRs.)	Amount(Rs)
Land preparation - Banana	30 x 500	15,000.00
Manuring	40 x 500	20,000.00
Harvesting coconut	Varying rate	20,000.00
Transportation of manure		5,000.00
Other miscellaneous labour charges		2000.00
Total		62,000.00

Source : Computed on the basis of information available from the field survey

Table 10: Other expenses (Case I)

Particulars	Rate (Mandays x wage (inRs.)	Amount(Rs)
Bio pesticides (Neem oil)	25 ltrs (1 x 100 per litr)	2500.00
Garlic soap		5,000.00
Cost of materials for supporting pepper and banana		12,000.00
Green manure and bone meal		60,220.00
Total		79,720.00

Source : Computed on the basis of information available from the field survey

The total expenditure incurred by the farmer, including labour input and other associated costs, amounts to ₹1,41,720.

Table 11: Harvest Output (Case I)

Item	QtyPdn	Value in Rs.
Coconut	25602 (varying rate)	3,58,428
Pepper	Flat rate	30,000

Cocoa	Varying rate	80,810
Banana	1500 Kg	36,000
Arecanut	Varying rate	25,000
Total		5,30,238

Source : Computed on the basis of information available from the field survey

The total value of the harvest amounted to approximately ₹5,30,238. In addition to crop production, various allied agricultural activities were also carried out alongside farming operations. The details of both expenditure and revenue are outlined below.

Table 12: Income and expenditure of allied activities (Case I)

Particulars	Expenditure	Income
Cow-bought	5 x 8000 = 40,000	
Goat bought	700 x 12 = 8400	
Cost of cattle feed	30,800	
Straw bought from outside	26,700	
Cows sold 2 nos)		2 x 40,000 = 80,000
Sale proceeds of milk		24000
Hens – bought	9000	
Hens Egg		1500 x 5 = 7500
Duck – bought	1200	
Duck Egg		750 x 7 = 5250
Total	116100	116750

Source : Computed on the basis of information available from the field survey

In addition to farm income, earnings from allied agricultural activities—such as cattle rearing, goat farming, and poultry—were also included. The total expenditure for maintaining these activities was ₹1,16,100, while the income generated amounted to ₹1,16,750. The net income from the farm is calculated below.

Table 13: Net Income from farm (Case I)

Particulars	Expenditure (in Rs)	Particular	Income (In Rs.)
Labour input	62,000	Harvest output	530238
Other expenses (Manure & Bio-particles	79,720	Income from allied activities	116750
Expenditure on allied activities	116100		
Total	257820	Total	646988

Net Profit = Rs. 389168

It is evident that the net profit from the farm, including both the harvest output and the income from allied activities, amounted to ₹3,89,168 per year.

Farm-Income Analysis (Case II 'Niravu' – Residence association)

A representative study was conducted within this residents' association, selecting 34 households for participation. These families cultivated crops on their own land as well as on 18 acres of land provided rent-free by landowners. Each household cultivated on plots of 2 acres or less. The majority of them grew banana, paddy, pepper, and vegetables, with vegetables being the primary focus of their farming activities. The main vegetables cultivated during the season included brinjal, ladies' finger, bitter gourd, snake gourd, and tomato.

Table 14: Labour Input (Case II)

Particulars	Rate (Man-days x wage in Rs)	Amount (Rs)
Land preparation – paddy	2 x 500	1000
Land preparation Banana	10 x500	5000
Transportation of manure		1000
Transportation of vegetables		1500
Total		8500

Source: Field survey

The total expenditure on labour input amounted to ₹8,500. This relatively low cost is attributed to the minimal use of hired labour, as the majority of the work is carried out by family members.

Table 15: Manure Input (Case II)

Type of manure	Quantity	Cost (Rs)
Cow dung	60 baskets	3000
Neem oil cake	260 kg	2500
Ground nut cake	50 kg	1000
Wood ash	400 baskets	2800
Green manure	-	1000
Lime	50 kg	400
Bone meal	500 kg	7000
Total		17700

Source: Field survey

Table 16: Other Expenses (Case II)

Particulars	Rate	Amount (Rs)
Cost of bio-pesticides	3 ltr	450
Neem oil & garlic soap	6 kg	450
Cost of materials for vegetable arcade		10000
Total		10900

Source: Field survey

The total expenditure incurred by the farmers amounts to ₹37,100, which includes costs related to labour input, manure, and other miscellaneous expenses. It is noteworthy that the materials used for constructing the vegetable arcade are reused in subsequent years, thereby minimizing recurring costs.

Table 17: Harvest output (Case II)

Item	Quantity Production	Value (in Rs)
Pepper		17600
Banana	1000 Kg (varying rate)	26000
Green chilli	350 Kg (varying rate)	14000
Amaranthus	30 Kg (varying rate)	540
Cucumber	800 Kg (varying rate)	19200
Ash Gourd	450 Kg (varying rate)	8100
Bitter Gourd	350 Kg (varying rate)	7700
Snake Gourd	3000 Kg (varying rate)	54000
Paddy – grain	507 Kg (varying rate)	12168
Paddy straw	600 Kg (varying rate)	4200
Ladies finger	300 Kg (varying rate)	6000
Tomato	80 Kg (varying rate)	1440
Brinjal	1000 Kg (varying rate)	16000
Total		186948

Source: Field Survey

The total value of the harvest output is estimated at ₹186,948. A significant portion of the vegetables produced is utilized for household consumption. However, this primarily comprises non-saleable produce. In addition, several other varieties of vegetables are cultivated exclusively for personal use.

Table 18: Net income from farm (Case II)

Expenditure particulars	Amount	Income particulars	Amount
Labour	8500	Harvest output	186948
Manure	17700		
Other expenses	10900		
Total	37100	Total	186948

Net profit = Rs.149848

The average net profit earned by a household is ₹1,49,848. Most household members are engaged in other occupations, making this agricultural income an additional source of earnings. Simultaneously, a substantial portion of the produce is cultivated for household consumption.

Problems faced by the farmers : Organic farmers have identified several challenges affecting their cultivation practices. These include unpredictable climatic changes and erratic rainfall, which disrupt crop cycles. They also face difficulties due to the unavailability of labour and the high cost of wages. Pest infestations and plant diseases pose additional threats to crop yield. The farmers have also reported a lack of access to high-quality seeds. Moreover, the construction of roads has led to silt blockage, adversely impacting their fields. A significant concern is the lack of a dedicated market for organic produce, resulting in unsatisfactory prices for their products.

5.CONCLUSION

Rising healthcare costs, unemployment, a sluggishly recovering economy, environmental degradation, and the pressing need to combat climate change are among the most critical challenges of our time. In this context, the promotion of organic farming for health and prosperity emerges as a timely and relevant solution, offering viable responses to these interconnected issues.Organic farming practices are increasingly recognized for their ability to enhance soil fertility, preserve water quality, support biodiversity, and contribute to the mitigation of global climate change, while simultaneously fostering long-term economic sustainability.The adverse impacts of conventional agricultural systems—such as declining productivity and environmental degradation—underscore the urgency of transitioning to more sustainable practices. Therefore, there is a compelling need to actively promote organic farming as a viable and necessary alternative for achieving both ecological balance and economic resilience.

Organic farming in Kerala faces significant challenges on multiple fronts. Once rooted in traditional practices, it has experienced considerable erosion over time. As a system that relies heavily on natural resources, its sustainability is contingent upon the responsible stewardship of those resources by the local population. Environmental changes have further compounded these difficulties, with altered micro-climates in many study areas. There has been a noticeable decline in humidity levels, increasingly erratic rainfall patterns, and a gradual depletion of soil fertility.In a society that remains largely unwilling to critically examine its past and implement necessary corrective measures, organic farming is often perceived as a regressive approach rather than a progressive solution.Expanding the role of organic farming presents a three-fold challenge:i) Enhancing public awareness regarding the benefits and significance of organic farming;ii) Implementing policy reforms that support and facilitate organic agricultural practices to meet the growing consumer demand; and iii) Promoting research aimed at achieving necessary technological advancements in the field.

These objectives can be realized by cultivating a strong and widespread network of advocates for organic farming and by increasing the number of dedicated supporters and champions within the sector. The success of an organic farmer contributes to the well-being of society as a whole, as organic farming serves as a foundation for both health and prosperity.

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