

PROMOTING SUSTAINABILITY AND FOOD SECURITY THROUGH ORGANIC FOOD PRODUCTS: A STUDY OF SMALL-SCALE BUSINESSES IN TAMIL NADU

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Abstract

The global food system faces significant challenges in ensuring sustainability and food security, driven by the increasing demand for organic and environmentally friendly products. Small-scale businesses have emerged as key players in promoting sustainable agriculture practices and contributing to food security. This study analyzes the role of organic food products in achieving sustainability and food security, with a specific focus on small-scale businesses in Tamil Nadu, India. This paper explores the challenges faced by small-scale businesses in promoting organic food products, including limited resources, market competition, and consumer awareness. The study also examines the strategies employed by these businesses to overcome these challenges and promote sustainability and food security. The production and marketing of organic food products by these businesses not only support local economies but also promote environmentally friendly practices, improve food security, and contribute to the well-being of communities. This study contributes to the existing literature on sustainability and food security by highlighting the importance of small-scale businesses in promoting organic food products. The findings have implications for policymakers, practitioners, and consumers, emphasizing the need to support small-scale businesses that prioritize sustainability and food security.

Keywords: Sustainability, Food Security, Organic Food Products, Small-Scale Businesses, Tamil Nadu.

Introduction

In today's fast-paced world, speed has become an ultimate imperative. From production to delivery, every stage of the food industry is driven by the need for rapid turnaround. To meet this demand, large corporations often resort to chemical inputs to accelerate natural production processes, and these chemicals also enable prolonged storage of food products, further prioritizing efficiency over sustainability (Tits, 2023). However, this reliance on chemicals comes at a steep cost. The disregard for organic, natural processes undermines sustainability and food security. Small businesses have stepped in to fill this void by focusing on the production of organic food products. By operating on a smaller scale, these enterprises not only promote sustainable practices but also contribute to the local economy. Locally sourced products ensure the well-being of the community, as consumers gain access to fresh, wholesome food. Hence, small businesses foster economic growth and community development. As consumers become increasingly aware of the importance of sustainability and food security, demand for organic, locally sourced products is expected to continue growing (Cachero-Martínez, 2020). This research paper highlights several notable small-scale businesses in Tamil Nadu that are driving the production and promotion of organic food products. These enterprises have demonstrated a steadfast commitment to sustainable practices, prioritizing the well-being of people. By showcasing these businesses, this research aims to underscore the significance of small-scale organic food production in Tamil Nadu. These businesses serve as models for environmentally conscious and socially responsible entrepreneurship, contributing to the state's local economy while promoting food security and sustainability.

Need for Sustainability in Agriculture

The term "sustainability" in agriculture describes methods and frameworks that preserve the land's fertility and health, protect natural resources, and promote the welfare of farmers, communities, and the environment (Konstantinov, 2023). Sustainability in agriculture has three dimensions: environmental, economic, and social. Environmental sustainability entails preserving ecosystems, cutting pollution, and conserving natural resources. Economic sustainability requires robust and viable farming systems, encouraging economic growth and effective resource management. Social sustainability promotes human rights, social fairness, and fair access to opportunities and resources. Several fundamental principles contribute to sustainable agriculture. One of the most crucial is soil conservation, which includes reducing soil erosion, preserving soil fertility, and fostering biodiversity in the soil. Efficient use of water resources, waste reduction, and maintenance of water quality are essential components of water conservation. Sustainable agriculture also encourages crop rotation, intercropping, organic amendments, reduced or no-till farming, agroforestry, integrated pest management, and biodiversity conservation — practices aligned with recognized organic certification frameworks such as the IFOAM Family of Standards (IFOAM, 2024). Sustainable farming offers several advantages. By implementing sustainable practices, farmers can boost crop yields, improve ecosystem services, enhance soil health, reduce their environmental impact, and improve their livelihoods. By lowering chemical residues, increasing nutritional value, and reducing the risk of food-borne illnesses, sustainable agriculture also helps improve food safety and quality. Despite its advantages, sustainable agriculture faces several drawbacks and obstacles. One primary challenge is the higher initial cost associated with implementing sustainable practices and technologies. Many farmers lack access to training, education, or expertise, making it difficult to adopt sustainable agricultural practices. Developing markets and improving access, investing in research and development, fostering partnerships and collaborations, establishing supportive policy and regulatory frameworks, and offering extension services and training are all critical to advancing sustainable agriculture. Governments, businesses, civil society, and farmers can work together to support sustainable farming methods and build a more resilient food system for future generations.

Achieving Food Security

Food security is a basic human right, necessary to promote economic growth, sustain life, and advance public health (Leisinger, 1996). It refers to the ability of the food supply to be accessed, used, and stabilized in order to meet the nutritional requirements of individuals, groups, and countries. Due to a complex web of interrelated issues, food security has emerged as a critical concern in the modern era. Eradicating hunger and malnutrition are imperative to ensure that everyone has access to enough wholesome food to live, active and healthy lives. Economic development also depends on food security, because a healthy workforce is more productive, and food insecurity can result in significant financial losses. Food security faces many obstacles despite its significance. Soil erosion, population growth, water scarcity, climate change, and food waste are among the factors endangering food security. Climate change poses a particular threat, as it can disrupt food production, processing, and distribution through rising temperatures, altered precipitation patterns, and an increase in extreme weather events (Ericksen et al., 2009). Addressing these issues requires a complex strategy. This includes advocating for sustainable farming methods that improve soil health, conserve water, and reduce artificial inputs, such as regenerative agriculture and agroecology. Climate-smart agriculture — which involves implementing climate-resilient agricultural strategies — is also essential to ensuring food security in the face of climate change (FAO, 2017). Food security also depends on reducing food waste, improving the efficiency of the supply chain, and strengthening safety nets and social protection systems. Given the global scope of food security issues, international collaboration and policy support are equally essential.

Together, these measures can help ensure that enough wholesome food is available for everyone to lead active, healthy lives.

Case Study

In Puducherry, a leading business, Arenga Natural Foods, is championing sustainability and food security through the production of organic food products. Their approach focuses on making noodles, pasta, and macaroni using wheat and millets, while avoiding the use of refined flour i.e., Maida. The company's product line also features a range of sauces made from different vegetables, including spinach, beetroot, carrot, and tomato, each offering a distinct flavour. The process of creating these organic sauces involves several stages. First, the vegetables are carefully cleaned and cut, followed by grinding to extract their natural liquids. The extracted liquid is then blended with wheat flour and moulded into the desired shape using specialized machinery. Finally, the boiled mixture is sun-dried, packaged, and distributed to local hotels, dealers, and households. This small-scale initiative has a significant impact on promoting sustainability and food security within the local community. By utilizing organic farming practices, reducing reliance on refined flour, and incorporating locally sourced ingredients, Arenga Natural Foods is contributing to a more environmentally conscious and resilient food system. Their commitment to sustainable food production serves as a model for others to follow, fostering a healthier and more sustainable future for generations to come.

Atchaya Siruthaniya Products, a pioneering business founded by T. S. Urmila in 2011, is dedicated to promoting sustainability and food security through the production of organic millet-based food products. By harnessing the nutritional benefits of millets, the company offers a range of innovative products, including dosa mix, sola putu, horse-tail millet, drumstick dosa health mix, and a unique porridge mix. The porridge mix, in particular, is a standout product that showcases the company's commitment to sustainability and food security. This easy-to-prepare mix can be consumed by people of all ages, making it an ideal option for households seeking healthy and convenient meal solutions. The company's dedication to sustainability and food security is evident in its production processes. It uses natural and organic methods to process millets, ensuring that the final products are not only healthy but also environmentally friendly. By promoting the use of millets, the company supports sustainable agriculture practices, reduces the environmental impact of food production, and contributes to food security by providing nutritious food options. The company's products are available in 200-gram quantities, making them accessible to a wide range of consumers. By choosing Atchaya Siruthaniya Products, customers invest not only in their own health and well-being but also in sustainable agriculture and food security initiatives.

Dinesh Mani founded Dhaniyas Natural Products with a mission to promote sustainable living. The business offers organic products, including palm jaggery, dry ginger, and coriander-seed coffee powder, as well as naturally processed beauty products and oils. Despite facing numerous challenges, including a shortage of employees, Dhaniyas Natural Products remains committed to its core values. The company's motto "selling organic products" drives its determination to overcome obstacles. However, distributing these products in the market poses a significant challenge: compared to commercial products, Dhaniyas Natural Products often struggles to gain traction and build a base of regular customers. These struggles are all too familiar for small-scale businesses in the organic sector. Despite their best efforts, they often earn only modest profits. This financial reality can be daunting and may lead some businesses to compromise on sustainability. The key to overcoming this challenge lies in raising consumer awareness about the benefits of organic products and the importance of supporting sustainable practices (Cachero-Martínez, 2020).

G K Kitchen, founded by Gayatri in Tiruchirappalli, specializes in crafting a variety of readymade mixes (thokku) and masala powders for households. These convenient products have proven to be a boon for bachelors and busy professionals, who can now easily prepare delicious and authentic meals. To align with the values of sustainability and organic production, G K Kitchen insists on making its products from scratch using natural ingredients. By adopting this approach, the business not only promotes environmentally friendly practices but also ensures that its products are healthy and nutritious. This commitment to sustainability is a hallmark of G K Kitchen's brand philosophy, setting it apart from food businesses that prioritize convenience over quality and sustainability.

Conclusion

In conclusion, sustainability and food security are intertwined concepts that are crucial for ensuring the well-being of individuals, communities, and the planet. The alarming rate of environmental degradation, climate change, and social inequality necessitates a paradigm shift in the way food is produced, consumed, and distributed. The extraordinary businesses highlighted in this research — Arenga Natural Foods, Atchaya Siruthaniya Products, Dhaniyas Natural Products, and G K Kitchen — demonstrate that sustainability and food security can be achieved through innovative and environmentally conscious practices. These businesses have successfully integrated sustainability into their core values, prioritizing the use of organic and natural ingredients, reducing waste, and promoting eco-friendly production methods. Despite facing numerous challenges, including limited resources, market competition, and consumer awareness, these businesses have remained committed to their sustainability goals. Their dedication has not only contributed to the well-being of their customers but also supported local economies, promoted biodiversity, and hopefully mitigate climate change in the long run. The success of these businesses underscores the importance of supporting small-scale, local food producers who prioritize sustainability and food security. By choosing to purchase from these businesses, consumers can play a critical role in promoting environmentally friendly practices, improving food security, and contributing to the well-being of their communities. Ultimately, achieving sustainability and food security requires a collective effort from individuals, businesses, governments, and civil society organizations (FAO, 2017). By working together and adopting environmentally conscious practices, it is possible to create a more sustainable food system that prioritizes the health and well-being of people and the planet.

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