Present Status and Prospects of Organic Farming in Ramanathapuram District

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ABSTRACT:

The impact of technology and interference in natural eco-systems often comes with side effects. Over the past fifty years, the widespread use of pesticides and herbicides to boost crop yields has led to a growing interest in alternative, chemical-free farming methods like organic farming. Organic farming not only aligns with natural processes but also provides the opportunity to command premium prices, particularly in markets such as Tamil Nadu. Given that organic farming requires fewer prerequisites compared to conventional chemical-based methods, there is an increasing demand for organic products both domestically and internationally. Consumers are willing to pay more for assurance that their food is produced through natural systems, highlighting the need for robust certification processes in the country.

The potential for organic food industries to expand and contribute to the Indian economy is significant. Agriculture, with a rich and enduring history, is celebrated as a noble profession by

Thiruvalluvar, who said, "They live, who plough for life; all others workship in the rear." Organic farming presents a viable alternative to conventional high-input practices that rely on synthetic fertilizers, fungicides, and pesticides. It focuses on the principle that soil is a living system, thus excluding synthetic products and relying instead on crop rotation, animal manures, crop residues, green manures, and biological pest control to maintain soil health and productivity. Organic crops often fetch higher market values, and their production is on the rise. Advanced markets heavily regulate the sale of organic products, ensuring their authenticity. Organic farming, with its low environmental impact, offers a way to rehabilitate and enhance degraded agricultural land. It represents one of several innovative farming systems poised to contribute significantly to future global food and ecosystem security.

KEYWORDS:

Organic farming, sustainable agriculture, organic certification, PGS, national production of organic products.

Introduction:

Organic farming based on "Nature can provide for everyone's need but not for greed" ..... Mahatma Gandhi.

Agriculture is a cornerstone of the Indian economy, with nearly 67% of the population and 55% of the workforce reliant on agricultural and related activities. This sector is crucial for meeting the needs of India's growing population. To achieve a double-digit GDP growth rate, agricultural growth of around 4% or more is necessary (Chandrashekar, H. M. 2010). Despite its potential, agriculture faces several challenges, including land fragmentation and costly energy, which contribute to significant environmental and health issues. The Intergovernmental Panel on Climate Change (IPCC) has highlighted that conventional farming practices account for about 20% of anthropogenic greenhouse gas emissions, including 50% of methane and 70% of nitrogen oxides (IPCC findings). The

intensive use of chemical inputs over the past four decades has led to a decline in natural habitat balance and soil health. Other issues associated with these practices include soil erosion, reduced ground–water levels, soil salinization, pollution from fertilizers and pesti–cides, genetic erosion, environmental damage, decreased food qual–ity, and increased cultivation costs (Ram, B. 2003). These problems have made agriculture increasingly untenable, leading to a crisis where some farmers face severe distress and even suicide during natural disasters (Deshpande, R. S. 2002). Contributing to this cri–sis are the high costs of factory–made inputs, reduced government investment, and a shift from subsistence to commercial farming, which has displaced traditional farming techniques with modern, unsustainable practices. Consequently, there is a growing interest in alternative farming methods, with organic farming emerging as a promising solution. Organic farming avoids the use of synthetic chemicals and biotechnological interventions, relying instead on natural biological processes. This method is productive and sustain–able (Reganold, J. P. et al. 1993; Letourneau, D. K. and Goldstein, B. 2001; Mader, P. et al. 2002), and has garnered attention from state–supported agencies, NGOs, and individuals advocating for its adoption.

Present status of organic farming:

A. Global:

Globally, organic farming covers 1.5% of farmland, equating to 72.3 million hectares. The countries with the largest organic ag–ricultural areas are Australia (35.7 million hectares), Argentina (3.7 million hectares), and Spain (2.4 million hectares). In 2019, the global organic farming area expanded by 1.1 million hectares, or 1.6%. India saw an increase of 0.36 million hectares, while Kazakh–stan's organic area grew by 0.1 million hectares compared to 2019. By the end of 2019, there were approximately 3.1 million organic producers worldwide. Asia accounts for 51% of these producers, followed by Africa (27%), Europe (14%), and Latin America (7%).

India and Uganda have the highest numbers of organic producers, with 1,366,226 and 210,353 respectively. The United States is the largest market for organic produce, representing 42% of the global market, followed by the European Union with 39% and China with 8%. Denmark, Switzerland, and Austria have the highest market shares for organic products, at 12.1%, 10.4%, and 9.3% respectively (Chandrashekar, H. M. 2010; Source: 22nd edition of FiBL World of Organic Agriculture).

B. Status in India:

India ranks fifth globally with a total organic area of 2.66 million hectares, which includes 1.49 million hectares certified and 1.17 million hectares under conversion. Among Indian states, Madhya Pradesh has the largest area under organic certification, followed by Maharashtra, Rajasthan, Gujarat, and Karnataka. In the 2020–2021 period, India produced approximately 3.48 million metric tons of certified organic products, including oilseeds, cereals, millets, cotton, pulses, and aromatic and medicinal plants. In terms of export value, processed foods lead with 45.87%, followed by oilseeds at 13.25%, and cereals at 7.61% (Chandrashekar, H. M. 2010).

C. Status in Tamil Nadu:

Tamil Nadu ranks 14th in India with 31,629 hectares dedicated to organic agriculture. This area comprises 14,086 hectares of certified organic land and 17,542 hectares under conversion. Dharmapuri and Krishnagiri lead the state in terms of total organic area. Tamil Nadu is 11th in organic production, with a total of 24,826 metric tons, including both farm and wild produce. In the 2020–2021 period, the state exported 4,223 metric tons of organic products, generating revenue of ₹108 crore.

MAIN PRINCIPLES OF ORGANIC FARMING:

The core principles of organic farming include:

» Operating within a closed system as much as possible and uti–

lizing local resources.

» Preserving soil fertility over the long term.

» Preventing pollution resulting from agricultural practices.

» Producing food with high nutritional value and adequate quantity.

» Minimizing the use of fossil fuels in agricultural practices.

» Ensuring that livestock conditions meet their physiological needs.

» Enabling agricultural producers to sustain a livelihood through their work and foster their personal development.

The main pillars of organic farming are:

» Establishing organic threshold standards.

» Implementing reliable certification and regulatory mechanisms.

» Developing technology packages.

» Creating efficient and viable market networks. [Roychowdhury, R., Banerjee, U., Sofkova, S., and Tah, J. 2013]

ORGANIC FARMING:

Global food security has become a critical concern worldwide, prompting the adoption of biosafety measures at various levels to ensure a more effective and comprehensive approach. The marketing of food is also a significant issue, as food production is influenced by fluctuating temperatures and various marketing constraints both nationally and internationally. Currently, there is a focus on the appearance and quantity of food rather than its intrinsic quality and nutritional value. The use of pesticides and fertilizers during crop development has led to their presence in food products. This reduced food quality has been linked to an increase in diseases, particularly cancers and conditions related to weakened immune systems. Additionally, the problem of eutrophication,

caused by excessive use of nitrogenous fertilizers, results in decreased oxygen levels in water bodies and can lead to harmful algal blooms. While fertilizers may boost short-term productivity, they have long-term detrimental effects on the environment, as they persist in the soil for years, contaminating groundwater and water bodies. Emphasizing sustainable practices offers the dual benefit of enhancing environmental health while also helping farmers become self-sufficient with agro-inputs at reduced costs.

CHALLENGES IN AGRICULTURE:

» Deterioration of soil health from the continuous use of agro-chemicals.

» Increased environmental pollution—affecting land, water, and air—due to agrochemicals.

» Emergence of new pests and diseases, resulting in crop losses.

» Rising cultivation costs, which reduce farmers' income and contribute to a cycle of debt.

» Decreased export potential for agricultural products due to pesticide residues.

Organic certification and marketing in India:

In India, the support for organic agriculture has recently expanded significantly at various levels. A national regulatory framework, including standards and accreditation regulations, was established in 2000. Various initiatives and events have been organized to promote and facilitate the export of organic products, such as the major conference "Indian Organic Products – Global Markets" held in Delhi in December 2002, which was primarily sponsored by the Indian Government. The Ministry of Agriculture has included support for organic producers, processors, and traders in its latest five-year plan. Additionally, the Ministry of Commerce has recognized six organizations as accreditation agencies for organic products:

1. Agricultural and Processed Food Products Export Development Authority (APEDA)
2. Tea Board
3. Spices Board
4. Coconut Development Board
5. Directorate of Cashew and Cocoa
6. Coffee Board

These accreditation boards authorize certifying agencies to certify organic products according to established norms. Certification by these boards and agencies is mandatory for exports. The Government of India has issued a public notice stating that no organic products may be exported unless certified by an inspection and certifying agency accredited by one of the designated accreditation agencies (Salvador and Katke, 2003). Several certifying agencies are currently operational in India.

TREND OFORGANIC FOOD CONSUMPTION AND EXPORT IN INDIA:

There is a common misconception that organic food is merely a trend, primarily relevant to developed countries. While it is true that around 50% of India's organic food production is geared toward exports, a growing number of Indians are also turning to organic food for domestic consumption. One major factor that initially deterred many from purchasing organic food was concern for children's health. Additionally, organic food in India is priced about 25% higher than conventional options. However, now that organic food has been deemed safe for domestic use, many parents are willing to pay the premium due to its perceived health benefits. The increasing demand for organic food in India is evident with the rise of organic food stores across the country. Organic products are now becoming a staple in various retail outlets and restaurants.

The consumption pattern of organic food in India differs significantly from that in developed countries. Many Indian consumers lack awareness regarding the distinction between natural and organic products, often confusing the two. Furthermore, the certification system for organic food is not well understood, and because certification is not mandatory for domestic retail, fake organic products are prevalent in the market. On the export side, India's organic food exports are rising, with more farmers transitioning to organic farming. India has become a leading exporter of organic herbs, spices, basmati rice, and other products. Presently, over 53% of India's organic food production is exported, a significant increase compared to just 6–7% in 2003–04.

Table 3 provides a breakdown of India's export performance in organic food products, showing tea, rice, fruits, vegetables, and herbs among the leading exports. It is important to note that while the inputs for organic farming are relatively low–cost, the transition from chemical farming to organic farming incurs higher costs. Most organic farmers in India are still in this transition phase, but as they fully adapt to organic practices, production costs are expected to decrease, positioning India as a major contributor in the international organic food industry

Currently, India exports a wide range of organic products, including cereals like wheat and rice; pulses such as red and black gram; fruits like bananas and mangoes; oil seeds and oils from soybeans and sunflowers; vegetables including potatoes and tomatoes; herbs and spices like turmeric and black pepper; as well as other products like tea, coffee, and cotton.

CONCLUSIONS:

Opinions on organic farming vary, but there is widespread consensus on its environmental benefits and its natural ability to protect human health. Numerous studies have also demonstrated that organic farming produces higher quality and more sustainable

outcomes. In industrialized nations, the cost of producing organic food tends to be higher due to expensive labor and the labor–intensive nature of organic farming. However, in a country like India, where labor is more affordable and readily available, organic farming presents a promising solution to the issues caused by chemical farming, benefiting both human health and the environment. The government has made efforts to promote organic farming across India, and several organizations have been established to raise awareness and encourage the adoption of organic practices among the Indian population.

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