



An Exploratory Study On The National Programme For Organic Production Of India

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Abstract: The National Programme for Organic Production (NPOP) launched by the Ministry of Commerce and Industry in 2001, sets standards for organic production, certification procedures, and the accreditation of certification bodies in India. It has played a pivotal role in the promotion and regulation of organic farming in India. This paper makes a review and examines the program's background, key components, impact, and achievements, alongside the challenges and limitations it faces. A comparative analysis with international organic standards, supplemented by case studies and success stories, highlights the program's effectiveness and areas for improvement. The study concludes with recommendations for future directions to enhance the efficacy of NPOP, ensuring the sustainable growth of organic farming in India.

Index Terms - Programme for Organic Production (NPOP), organic farming, certification, India, sustainable agriculture, government policy

1. Introduction

The organic farming, which avoids the use of synthetic fertilizers and pesticides, is seen as a way to ensure sustainable agricultural practices, improve soil health, and enhance the quality of food products. It is an agricultural practice that prioritizes sustainability, biodiversity, and ecological balance, has gained significant attraction globally. In India, the National Programme for Organic Production (NPOP) has been instrumental in promoting organic farming practices in the country. The NPOP is a significant initiative of the Government of India launched in 2001 aimed to provide a reliable framework for the certification of organic products, ensuring their adherence to international standards and enhancing their marketability. This paper makes a review and analysis into the various aspects of NPOP, exploring its structure, objectives, implementation, impact, and the challenges it faces in the Indian context.

2. Objectives of the Paper

The primary objectives of this paper are to:

- To provide a comprehensive review of the National Programme for Organic Production (NPOP).
- To analyze the impact and achievements of NPOP in promoting organic farming in India.
- To identify the challenges and limitations faced by NPOP.
- To compare NPOP with other international organic standards.
- To highlight case studies and success stories of NPOP's implementation.
- To provide recommendations for future directions to enhance the effectiveness of NPOP.

3. Methodology

This paper adopts a qualitative and an exploratory research approach with collection of secondary data from various sources, including government reports, academic articles, industry publications, and case studies. The review and analysis include a detailed examination of NPOP's official documents, policy papers, and evaluations conducted by relevant authorities. Comparative analysis with international organic standards is based on published guidelines and reports. Case studies are selected to illustrate the practical implementation and outcomes of NPOP.

4. Background of National Programme for Organic Production (NPOP)

The roots of organic farming in India are deeply embedded in traditional agricultural practices that predate the Green Revolution. However, the latter half of the 20th century saw a significant shift towards chemical-intensive farming methods, resulting in various environmental and health issues. Recognizing the need to return to more sustainable practices, the Government of India launched the NPOP in 2001. This initiative was spearheaded by the Agricultural and Processed Food Products Export Development Authority (APEDA) under the Ministry of Commerce and Industry (Chandrashekar, 2010). The reasons for establishing NPOP includes but not limited to those listed here-below:

- a) To support sustainable food production.
- b) To provide a system for certifying organic products according to internationally recognized standards.
- c) To promote the export of Indian organic products by ensuring their quality and reliability .

In other words, the NPOP's inception was driven by the growing demand for organic products both domestically and internationally. The program aims to support sustainable agricultural practices, reduce the environmental impact of farming, and improve the socio-economic conditions of farmers. By providing a credible certification system, NPOP seeks to build consumer confidence in organic products and promote their wider adoption.

The primary objective of NPOP is to promote organic farming and ensure the credibility of organic products through a structured certification process. NPOP provides a comprehensive framework for the development and certification of organic agriculture, aligning with international standards to facilitate global market access for Indian organic products (Ministry of Commerce and Industry, 2001). The different objectives of the NPOP can be listed as follows:-

- a) **Establishment of Standards:** Develop and enforce national standards for organic production, processing, and labeling.
- b) **Certification:** Implement a credible certification system to ensure that organic products meet the defined standards.
- c) **Promote Organic Farming:** Encourage the adoption of organic farming practices among Indian farmers.
- d) **Export Promotion:** Facilitate the export of organic products by ensuring they meet international standards.
- e) **Consumer Awareness:** Increase consumer awareness about the benefits of organic products.
- f) **Environmental Sustainability:** Promote agricultural practices that are environmentally sustainable and contribute to biodiversity conservation (APEDA, 2023).

The National Programme for Organic Production (NPOP) in India ensures the integrity of organic products through the following measures and mechanism in place:-

- a) **Comprehensive Standards:** NPOP sets detailed standards for organic crop production, processing, and handling at all stages, including trading and export requirements.
- b) **Third-Party Certification:** It operates as a third-party certification program, where accredited certification bodies certify that organic products meet the required standards.
- c) **International Recognition:** NPOP standards are recognized by the European Commission and Switzerland, allowing certified Indian organic products to be accepted by importing countries.
- d) **Quality Control:** The system for grading and quality control of organic products under NPOP is equivalent to that for conventional products.
- e) **Regulations:** Food Safety and Standards (Organic Food) Regulation 2017 governs the trading of NPOP certified products in both export and domestic markets.

These measures ensure that organic products certified under NPOP maintain their organic integrity from farm to market (APEDA, n.d.; Vakilsearch, n.d.; Press Information Bureau, n.d.).

The legislative framework supporting the NPOP includes various acts, rules, and guidelines designed to regulate and promote organic farming. The primary legislative intervention is the Agricultural and Processed Food Products Export Development Authority (APEDA) Act of 1985, which provides the legal basis for the NPOP. The act empowers APEDA to develop and enforce standards for organic production and certification. Additionally, the Food Safety and Standards Authority of India (FSSAI) has developed regulations for organic food labeling and certification under the Food Safety and Standards (Organic Foods) Regulations, 2017. These regulations ensure that all organic products sold in the domestic market meet the NPOP standards, thus protecting consumers and maintaining the credibility of organic labels (FSSAI, 2017).

The NPOP has been operational since its launch in 2001. Over the years, it has undergone several revisions and updates to keep pace with evolving organic standards and market requirements. The program has steadily expanded its reach and impact, with increasing numbers of farmers, processors, and exporters participating in the organic movement (Chandrashekar, 2010).

While the NPOP is customized to the Indian agricultural context, it incorporates best practices and standards from successful organic certification programs worldwide. The program draws inspiration from established frameworks such as the European Union (EU) organic standards, the United States Department of Agriculture (USDA) organic certification, and the Japanese Agricultural Standards (JAS). By aligning with these international standards, the NPOP ensures that Indian organic products are globally recognized and accepted, thus facilitating international trade (Willer & Lernoud, 2019).

The scope of the NPOP is extensive, covering various aspects of organic agriculture including crop production, animal husbandry, beekeeping, aquaculture, and wild harvest collection. It also includes processing and handling standards for organic products. The significance of the NPOP lies in its comprehensive approach to promoting organic agriculture. By setting stringent standards and certification processes, it ensures the integrity of organic products, thereby building consumer trust and market credibility. Moreover, the NPOP's alignment with international standards opens up global markets for Indian organic products, enhancing the country's agricultural export potential (Panneerselvam et al., 2012).

Since its initial implementation, the NPOP has undergone several policy changes and updates to address emerging challenges and align with international standards. Some of the significant changes include:

- a) **Revision of Standards:** The NPOP standards have been periodically revised to incorporate new practices and technologies in organic farming.
- b) **Simplification of Certification:** Efforts have been made to simplify the certification process and reduce costs, particularly for small and marginal farmers.
- c) **Promotion of Participatory Guarantee Systems (PGS):** The introduction of PGS, a locally focused organic quality assurance system, has provided a more accessible and cost-effective alternative to third-party certification.
- d) **Increased Funding:** The government has increased funding for organic farming initiatives, including subsidies for certification costs and financial support for organic inputs and infrastructure development.
- e) **Integration with Government Schemes:** The NPOP has been integrated with various government schemes such as Paramparagat Krishi Vikas Yojana (PKVY) and the Mission Organic Value Chain Development for North Eastern Region (MOVCDNER) to promote organic farming across the country (APEDA, 2023).

These changes reflect the program's adaptability and commitment to continuous improvement.

5. Key Components and Structure of NPOP

5.1 Certification Process and Standards: The certification process under NPOP is rigorous, ensuring that all organic products meet specified standards. This process involves several stages, including application, inspection, compliance verification, and certification issuance. The NPOP's certification process is designed to ensure that organic products meet specific standards for production, processing, and labeling. The certification is granted by accredited certification bodies, which conduct inspections and audits to verify compliance with NPOP standards. These standards cover various aspects of organic farming, including soil management, pest control, crop production, livestock management, and processing methods (APEDA, 2019).

5.2 Accreditation Bodies and Their Roles: Accreditation bodies play a crucial role in NPOP by overseeing the certification process and ensuring that certification bodies operate according to established guidelines. The Agricultural and Processed Food Products Export Development Authority (APEDA) is the primary accreditation body under NPOP, responsible for accrediting certification agencies and maintaining the integrity of the certification process (APEDA, 2019).

5.3 Certification Agencies and Their Functions: The certification agencies, accredited by APEDA, are responsible for certifying organic farms, processors, and handlers. These agencies conduct thorough inspections, including on-site visits and documentation reviews, to ensure compliance with NPOP standards. They also provide guidance and support to farmers and processors in meeting certification requirements (APEDA, 2019).

5.4 Organic Standards and Regulations NPOP standards are comprehensive, covering various aspects of organic production, including:

- a) Soil fertility management using organic inputs and practices that enhance soil health.
- b) Pest and disease management through biological control methods and natural inputs.
- c) Crop production standards that prohibit the use of synthetic fertilizers and pesticides.
- d) Livestock management standards emphasizing natural feed, animal welfare, and health management practices.
- e) Processing standards that ensure the integrity of organic products through all stages of production, handling, and labeling (Ministry of Commerce and Industry, 2001).

5.5 Inspection and Compliance Mechanisms: Inspection and compliance are critical components of the NPOP certification process. Accredited certification agencies conduct regular inspections to verify that certified entities comply with NPOP standards. Non-compliance can result in the suspension or revocation of certification. Continuous monitoring and periodic audits by APEDA ensure the reliability and credibility of the certification process (APEDA, 2019).

6. Impact and Achievements of NPOP

6.1 Growth of Organic Farming in India: NPOP has had a profound impact on Indian farmers, particularly those engaged in small-scale and subsistence farming. By adopting organic practices, farmers have been able to improve soil health, reduce input costs, and access premium markets. Since its inception, NPOP has significantly contributed to the growth of organic farming in India. The program has led to an increase in the number of certified organic farms, covering millions of hectares of agricultural land. The adoption of organic farming practices has resulted in improved soil health, enhanced biodiversity, and reduced environmental pollution (Sharma et al., 2013).

The adoption of the NPOP has seen varying degrees of success across different states and union territories in India. States like Sikkim, Kerala, and Uttarakhand have been at the forefront of the organic movement, with substantial areas under organic cultivation. Sikkim, in particular, has achieved the distinction of becoming the first fully organic state in India, with all its farmland certified under the NPOP (Government of Sikkim, 2018).

Other states like Madhya Pradesh, Rajasthan, and Maharashtra have also made significant strides in organic farming, supported by state government policies and initiatives. However, the adoption rate in some states has been slower due to various challenges such as lack of awareness, inadequate infrastructure, and financial constraints. Despite these disparities, the overall trend shows a growing interest and participation in organic farming across the country (Willer & Lernoud, 2019).

6.2 Increase in Certified Organic Farms and Products: The number of certified organic farms and products has grown steadily under NPOP. This growth has been driven by increased consumer demand for organic products, both domestically and internationally. NPOP's certification system has enabled Indian organic products to gain access to global markets, enhancing their competitiveness and marketability (APEDA, 2019). NPOP has significantly influenced the growth of organic farming in India. Between 2010 and 2020, the area under organic cultivation in India expanded from 1.2 million hectares to 3.56 million hectares (Willer & Lernoud, 2021). This growth is attributed to the rigorous certification processes and market development initiatives driven by NPOP. Notably, India has become a leading exporter of organic products, including tea, spices, and rice, with export revenues reaching \$515 million in 2020 (APEDA, 2021).

6.3 Export Opportunities and Market Development: NPOP has played a crucial role in expanding export opportunities for Indian organic products. By aligning with international organic standards, NPOP has facilitated the entry of Indian organic products into major global markets, including the United States,

European Union, and Japan. The certification process ensures that Indian organic products meet the stringent quality and safety standards required by these markets, boosting their acceptance and demand (Ministry of Commerce and Industry, 2001). The NPOP ensures the credibility of organic farming practices and facilitate the export of organic products (Chandrashekar, 2010).

6.4 Environmental and Socio-Economic Benefits: The adoption of organic farming practices under NPOP has yielded significant environmental and socio-economic benefits. Organic farming reduces the reliance on chemical inputs, thereby minimizing soil and water pollution. It promotes biodiversity and enhances soil fertility, contributing to sustainable agricultural development. Socio-economically, organic farming has provided better income opportunities for farmers, improved their livelihoods, and fostered rural development (Ray & Bhattacharyya, 2016).

7. Challenges and Limitations of NPOP

Despite its tremendous successes, the implementation of the NPOP faces several limitations and challenges. These include but not limited to the followings:-

- a) **Awareness and Training:** Lack of awareness among farmers about the benefits and practices of organic farming remains a significant hurdle. There is also a need for more extensive training programs to educate farmers on organic methods.
- b) **Certification Costs:** The cost of certification can be prohibitive for small and marginal farmers, limiting their participation in the NPOP.
- c) **Market Access:** While there is a growing market for organic products, access to these markets remains a challenge for many farmers, especially those in remote areas.
- d) **Infrastructure:** Inadequate infrastructure for processing, storage, and transportation of organic products hinders the growth of the organic sector.
- e) **Research and Development:** There is a need for more research and development to develop region-specific organic farming techniques and inputs.
- f) **Pest and Disease Management:** Organic farmers often struggle with pest and disease management due to the limited availability of organic inputs and biological control agents (Panneerselvam et al., 2012).

7.1 Issues in Certification and Compliance: Despite its achievements, NPOP faces several challenges in the certification and compliance process. One significant limitation is the high cost of organic certification, which can be prohibitive for small and marginal farmers (Panneerselvam et al., 2012). The stringent certification requirements and the associated costs can be prohibitive for small-scale and marginal farmers. Ensuring compliance with NPOP standards requires regular inspections and monitoring, which can be resource-intensive and challenging to implement uniformly across diverse agricultural regions (Bordoloi, 2018).

7.2 Barriers to Adoption by Small-Scale Farmers: Small-scale farmers often face significant barriers to adopting organic farming practices and obtaining NPOP certification. These barriers include the high cost of certification, limited access to organic inputs, and inadequate technical knowledge and training. Additionally, the transition period from conventional to organic farming can result in temporary yield reductions, posing economic challenges for small farmers (Chandrashekar, 2010). Besides, the lack of awareness and technical knowledge about organic farming practices among farmers hinders the widespread adoption of organic agriculture. Research by Bhattacharyya and Chakraborty (2005) highlights the inadequacy of extension services and the need for better support systems to address these gaps.

7.3 Market and Infrastructure Challenges: Developing a robust market infrastructure for organic products remains a challenge under NPOP. Farmers often struggle with inadequate access to markets, limited storage and transportation facilities, and lack of market information. These challenges can hinder the growth of the organic sector and limit the benefits of NPOP for farmers and consumers (Sharma et al., 2013).

7.4 Policy and Regulatory Hurdles: The implementation of NPOP is sometimes hampered by policy and regulatory hurdles. These include inconsistencies in policy implementation across states, lack of coordination between various government agencies, and limited awareness and understanding of NPOP standards among stakeholders. Addressing these issues requires comprehensive policy reforms and effective coordination at all levels of governance (Ray & Bhattacharyya, 2016).

8. Comparative Analysis with Other International Organic Standards

8.1 Comparison with USDA Organic Standards: The USDA Organic Standards, established by the United States Department of Agriculture, are among the most recognized organic standards globally. Both NPOP and USDA Organic Standards share common principles, such as the prohibition of synthetic inputs, emphasis on soil health, and requirement for certification. However, differences exist in specific requirements, such as allowed substances and certification processes. Aligning NPOP with USDA standards has facilitated the export of Indian organic products to the US market (USDA, 2018).

8.2 Comparison with EU Organic Standards: The European Union (EU) Organic Standards are another benchmark for organic certification. NPOP's alignment with EU standards has enabled Indian organic products to access the European market. Both standards emphasize sustainability, biodiversity, and strict compliance with organic principles. The EU's recognition of NPOP has been crucial in promoting Indian organic products in Europe (European Commission, 2018).

8.3 Strengths and Weaknesses of NPOP Relative to International Standards: NPOP's strengths include its comprehensive framework, alignment with international standards, and robust certification process. However, its weaknesses lie in the challenges faced by small-scale farmers, the high cost of certification, and the need for better market infrastructure. Comparative analysis highlights the need for NPOP to address these issues to enhance its effectiveness and competitiveness (Bordoloi, 2018). The guidelines provided by NPOP are in alignment with international norms, thus making Indian organic products acceptable globally (APEDA, 2021). When compared to international standards like the USDA Organic and EU Organic certifications, NPOP has similarities in its stringent certification processes and standards. However, distinct differences exist in terms of residue testing, inspection frequency, and the scope of certification (Chandrashekar, 2010).

8.4 Mutual Recognition Agreements and Trade Implications: Mutual recognition agreements (MRAs) between NPOP and other international organic standards, such as USDA Organic and EU Organic, have significant trade implications. These agreements facilitate the export of Indian organic products by recognizing the equivalence of certification standards. MRAs enhance market access, reduce trade barriers, and promote the global competitiveness of Indian organic products (Ministry of Commerce and Industry, 2001).

9. Case Studies and Success Stories

Several case studies highlight the successful implementation of NPOP. The Sikkim Organic Mission, for instance, led to Sikkim becoming India's first fully organic state, benefiting over 66,000 farming families (Government of Sikkim, 2018). Another example is the successful export of organic turmeric from Andhra Pradesh, which saw a significant increase in income for local farmers due to certification under NPOP standards (APEDA, 2021).

9.1 Case Study 1: Sikkim - India's First Organic State: Sikkim's transition to organic farming is a notable success story under NPOP. The state government launched the Sikkim Organic Mission aiming to convert the entire agricultural land to organic farming. By 2016, Sikkim achieved the milestone of becoming India's first fully organic state, with all agricultural practices aligned with NPOP standards. The initiative has improved soil health, increased biodiversity, and enhanced the socio-economic well-being of farmers (Government of Sikkim, 2016).

9.2 Case Study 2: Organic Farming in Nagaland: Nagaland has made significant strides in organic farming through community-based initiatives supported by NPOP. The Nagaland Organic Certification Agency (NOCA) has been instrumental in promoting organic farming practices and providing certification to farmers. These initiatives have led to the cultivation of organic crops like ginger, turmeric, and Naga chillies, boosting the income of local farmers and contributing to sustainable agriculture (Nagaland State Agriculture Department, 2017).

9.3 Case Study 3: Meghalaya - Integrating Tradition with Innovation: In Meghalaya, traditional agricultural practices have been integrated with modern organic farming techniques under NPOP. The state's organic farming initiatives focus on crops like broom grass, bay leaf, and turmeric. The certification process, supported by the Meghalaya State Agriculture Department, has enhanced market access for these products and improved the livelihoods of farmers. The initiative highlights the potential of combining traditional knowledge with modern organic practices (Meghalaya State Agriculture Department, 2018).

10. Future Directions and Recommendations

To enhance the effectiveness of NPOP, several recommendations can be made, which can be listed but not limited to the followings:-

- a) **Subsidizing Certification Costs:** Introducing subsidies or financial support for small and marginal farmers can alleviate the burden of certification costs (Panneerselvam et al., 2012).
- b) **Improving Extension Services:** Strengthening extension services to provide better training and technical support to farmers will facilitate the adoption of organic practices (Bhattacharyya & Chakraborty, 2005).
- c) **Enhancing Market Linkages:** Developing robust market linkages and promoting domestic consumption of organic products can provide stable income for organic farmers (Chandrashekar, 2010).
- d) **Harmonizing Standards:** Efforts to harmonize NPOP standards with international norms can improve market access and competitiveness of Indian organic products globally (Willer & Lernoud, 2021).

10.1 Potential Areas for Policy Improvement: To enhance the effectiveness of NPOP, several policy improvements are recommended. These include simplifying the certification process, reducing the cost of certification for small-scale farmers, and providing financial incentives and subsidies for organic farming. Policy reforms should also focus on improving market infrastructure and ensuring better coordination between government agencies (Sharma et al., 2013).

10.2 Strategies to Overcome Challenges: Addressing the challenges faced by NPOP requires a multi-faceted approach. Strategies to overcome these challenges include:

- a) Providing technical training and support to farmers to enhance their understanding of organic farming practices.
- b) Establishing more local certification bodies to reduce the cost and complexity of certification.
- c) Developing robust market linkages and infrastructure to facilitate the marketing and distribution of organic products (Chandrashekar, 2010).

10.3 Recommendations for Enhancing the Effectiveness of NPOP: To enhance the effectiveness of NPOP, the following recommendations are made:

- a) Strengthening the capacity of certification agencies and accreditation bodies to ensure rigorous compliance with NPOP standards.
- b) Promoting awareness and education about organic farming among farmers, consumers, and stakeholders.
- c) Encouraging public-private partnerships to invest in the organic sector and develop innovative solutions for sustainable agriculture (Ray & Bhattacharyya, 2016).

10.4 Future Trends in Organic Farming and Their Implications for NPOP: The future of organic farming in India looks promising, with increasing consumer awareness and demand for organic products. Trends such as digital agriculture, precision farming, and sustainable supply chains are likely to shape the organic sector. NPOP must adapt to these trends by incorporating innovative technologies, enhancing transparency in the certification process, and promoting sustainable agricultural practices (Sharma et al., 2013).

Looking ahead, NPOP is poised to play a pivotal role in shaping India's agricultural landscape. With an emphasis on sustainability and quality, NPOP will continue to support farmers in their transition to organic farming.

11. Conclusion

The turn of the millennium saw a global shift towards sustainable agriculture, with India recognizing the need to support its vast agrarian community. The introduction of NPOP was a strategic move to align India's agricultural practices with global standards and tap into the burgeoning international market for organic products. In this context, the NPOP represents a significant policy initiative of the Government of India to foster sustainable agricultural practices and promote organic farming. Therefore, implementation of the NPOP stands as a testament to India's commitment to sustainable agriculture and organic farming. Through its comprehensive framework for certification and support for farmers, NPOP has set a benchmark for organic production both nationally and internationally.

The NPOP has significantly contributed to the growth and development of organic farming in India. By providing a credible certification framework, NPOP has facilitated the entry of Indian organic products into global markets, enhanced consumer confidence, and promoted sustainable agricultural practices. While it

has achieved significant milestones, addressing the identified challenges and implementing the recommended strategies can further bolster its impact. The prominent challenges such as the high cost of certification, barriers for small-scale farmers, and market infrastructure issues need to be addressed to maximize the program's impact. Comparative analysis with international standards, coupled with successful case studies, underscores the need for continuous improvement and innovation. Future directions and recommendations aim to strengthen NPOP, ensuring its effectiveness and sustainability in promoting organic farming in India while continued research and policy support will be essential in ensuring the sustainable growth in organic farming.

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