Content is available at: CRDEEP Journals
Journal homepage: http://www.crdeepjournal.org/category/journals/ijes/

International Journal of Environmental Sciences
(ISSN: 2277-1948) (Scientific Journal Impact Factor: 6.043)

UGC Approved-A Peer Reviewed Quarterly Journal

Full Length Research Paper

Sustainable Agriculture as a Pathway to a Self-Reliant India: Vision 2047

Anoop Kumar[1]
Assistant Professor, Department of Economics, U.N.P.G. College Padrauna, Kushinagar

ARTICLE DETAILS

Corresponding Author:
Anoop Kumar

Key words:
Sustainable agriculture, Pathway, India, Self reliant

ABSTRACT

India is an agrarian country, where nearly half of the population depends directly or indirectly on agriculture for its livelihood. Amid challenges such as rapid population growth, climate change, degradation of natural resources, and instability in farmers' income, sustainable agriculture emerges as the most viable pathway to make India economically, socially, and environmentally self-reliant. By the year 2047, when India will complete 100 years of independence, the vision of *Atmanirbhar Bharat* (Self-reliant India) can be realized only if the agricultural sector becomes sustainable, profitable, and inclusive. This research paper analyzes the concept of sustainable agriculture, its necessity, challenges, government initiatives, and its role in achieving the Vision 2047.

1. Introduction

The Indian agricultural system has traditionally been nature-based; however, after the Green Revolution, excessive dependence on chemical fertilizers, pesticides, and mono cropping systems increased significantly. While this led to short-term growth in production, it adversely affected soil fertility, water resources, and biodiversity in the long run. Today, there is a pressing need for an agricultural system that establishes a balance between production, environmental conservation, and farmers' welfare. This balance forms the core foundation of sustainable agriculture.

1.1 Organic Farming and the Vision of a Strong India: 2047

The vision of *Developed India 2047* is not limited to rapid economic growth alone; rather, it envisions a nation that is environmentally sustainable, socially inclusive, and economically self-reliant. From this perspective, organic farming emerges as a crucial pillar that not only conserves natural resources but also strengthens rural society and ensures a dignified life for every citizen. This vision centers on four key social groups—youth, the poor, women (Nari Shakti), and farmers (Annadata)—all of whom share a direct and deep connection with organic agriculture. Organic farming frees farmers from dependence on chemical inputs, reduces cultivation costs, increases income, and ensures the production of health-safe food. This strengthens farmers' economic conditions and paves the way for a dignified livelihood.

Organic farming also plays a vital role in women's empowerment. Women's participation increases in activities such as seed conservation, organic manure preparation, processing, and marketing, thereby enhancing their economic independence and decision-making capacity. This process translates the constitutional values of equality and social justice into practical reality.

From the perspective of poverty alleviation, organic farming offers a multidimensional solution. Being a low-cost, locally resource-based agricultural system, it can serve as a sustainable livelihood option for small and marginal farmers. It contributes to addressing rural poverty, malnutrition, and unemployment, thereby strengthening the concept of *justice for all*. For youth, organic farming opens new avenues of innovation, entrepreneurship, and employment. The expanding global market for organic products, agricultural start-ups, value addition, and digital marketing help attract youth toward agriculture. This aligns with the spirit of *Atmanirbhar Bharat* and *Make in India* by strengthening the rural economy. In terms of good governance and environmental security, organic farming promotes a responsible and forward-looking governance model. Through digital technologies and certification systems, transparency in organic products is increasing,

[1]*Corresponding Author can be contacted at: : Kupintu9455@gmail.com*
Received: 10-01-2026; Sent for Review on: 15-01-2026; Draft sent to Author for corrections: 25-01-2026; Accepted on: 30-01-2026; Online Available from 05-02-2026
DOI: 10.5281/zenodo.18490052

building trust between farmers and consumers. This reduces the gap between governance and citizens and reinforces people-centric administration.

Thus, organic farming plays a decisive role in realizing the vision of Developed India 2047. It has the potential to establish India not only as an economically prosperous nation but also as a healthy, equitable, and environmentally friendly society. This requires collective efforts by citizens, farmers, policymakers, and youth to adopt organic agriculture with innovation, ethics, and environmental responsibility, thereby translating constitutional commitments to sustainable development and social justice into practice.

2. Concept of Sustainable Agriculture

Sustainable agriculture is an agricultural system that:

- Meets the food needs of the present generation
- Does not compromise the resource capacity of future generations
- Maintains environmental balance
- Provides economic security to farmers

It includes organic farming, natural farming, crop diversification, water conservation, soil health management, and judicious use of local resources.

2.1 Objectives of IFOAM (International Federation of Organic Agriculture Movements)

IFOAM is an international organization working to promote organic agriculture globally. Its major objectives include:

1. Promotion of Organic Agriculture: To establish organic farming as a strong and sustainable alternative worldwide.
2. Environmental Protection: Conservation of natural resources such as soil, water, air, and biodiversity.
3. Protection of Human Health: Encouraging the production of chemical-free and safe food products.
4. Development and Dissemination of Organic Standards: Ensuring quality and credibility of organic products through global standards.
5. Improvement of Farmers' Livelihoods: Enhancing income, social status, and economic security of organic farmers.
6. Promotion of Fair and Transparent Trade: Ensuring fair prices to farmers through ethical trade practices.
7. Research and Knowledge Sharing: Promoting research, innovation, and exchange of traditional knowledge.

2.2 Four Principles of Organic Farming (IFOAM)

1. Principle of Health: Focuses on the integrated health of humans, animals, plants, soil, and ecosystems.
2. Principle of Ecology: Emphasizes farming in harmony with natural ecological systems.
3. Principle of Fairness: Ensures social and economic justice for farmers, workers, consumers, and future generations.
4. Principle of Care: Advocates responsible and cautious use of technologies considering long-term impacts.

3. Atmanirbhar Bharat and the Agricultural Sector:

Agricultural self-reliance implies:

- *Complete food security*
- *Stable farmers' income*
- *Reduced dependence on external inputs*
- *Strengthened rural economy*

Sustainable agriculture is a powerful means to achieve these objectives.

4. Role of Sustainable Agriculture in Vision 2047

4.1 Food and Nutritional Security: Sustainable agriculture promotes high productivity along with nutrient-rich crops, helping to reduce malnutrition.

4.2 Environmental Conservation: It mitigates climate change impacts through reduced chemical use, lower carbon emissions, and biodiversity conservation.

4.3 Increase in Farmers' Income: Lower costs, resource recycling, and value addition enhance farmers' net income.

5. Government Initiatives Promoting Sustainable Agriculture

- *National Mission on Organic Farming (NMOF)*
- *Paramparagat Krishi Vikas Yojana (PKVY)*
- *Soil Health Card Yojana (SHCY)*
- *Natural Farming Initiatives (BPKP)*

5.1 National Mission on Organic Farming (NMOF)

The National Mission on Organic Farming (NMOF) was launched in 2015–16 with the objective of promoting organic farming practices across India and reducing excessive dependence on chemical fertilizers and pesticides. The mission focuses on improving soil fertility, enhancing biodiversity, and ensuring environmentally sustainable agricultural production. Under NMOF, financial assistance is provided to farmers for the adoption of organic inputs such as compost, bio-fertilizers, and bio-pesticides. It also supports certification of organic produce, capacity building, and awareness

generation among farmers. The scheme encourages the development of organic clusters, value chains, and market linkages to ensure better income opportunities for farmers. By promoting eco-friendly farming methods, NMOF contributes to soil health improvement, water conservation, and climate-resilient agriculture. Overall, the mission plays a crucial role in strengthening sustainable agriculture while ensuring food safety and long-term environmental protection.

5.2. Paramparagat Krishi Vikas Yojana (PKVY)

The Paramparagat Krishi Vikas Yojana (PKVY) was introduced in 2015 to promote cluster-based organic farming in India. The scheme encourages farmers to adopt traditional and organic farming practices by forming clusters of 50 or more farmers over a defined area. Under PKVY, farmers are provided financial assistance for organic inputs, certification, and training without the use of chemical fertilizers or pesticides. The scheme emphasizes participatory guarantee systems (PGS) for organic certification, making the process affordable and accessible to small and marginal farmers. PKVY aims to reduce input costs, improve soil fertility, and enhance farm productivity in the long run. It also focuses on capacity building, knowledge sharing, and strengthening local supply chains. By promoting sustainable and chemical-free agriculture, PKVY helps improve farmers' income while ensuring environmental conservation and consumer health.

5.3. Soil Health Card Yojana (SHCY)

The Soil Health Card Yojana (SHCY) was launched in 2015 to provide farmers with scientific information about the nutrient status of their soil. Under this scheme, soil samples are collected and tested to assess parameters such as macro and micronutrients, pH levels, and organic matter content. Based on these tests, farmers receive Soil Health Cards containing crop-wise recommendations for balanced fertilizer use. The primary objective of SHCY is to promote judicious use of fertilizers, reduce input costs, and improve soil productivity. By encouraging balanced nutrient management, the scheme helps prevent soil degradation and enhances long-term agricultural sustainability. SHCY also supports increased crop yields, improved soil structure, and efficient resource utilization. Overall, the Soil Health Card Yojana plays a vital role in promoting scientific farming practices and strengthening sustainable agriculture in India.

5.4. Natural Farming Initiatives (BPKP)

The Natural Farming Initiatives under Bharatiya Prakritik Krishi Paddhati (BPKP) were launched in 2020 to promote chemical-free and low-cost natural farming practices. The initiative encourages farmers to adopt traditional Indian farming techniques using natural inputs such as cow dung, cow urine, botanical extracts, and bio-enhancers. BPKP aims to reduce farmers' dependence on expensive chemical fertilizers and pesticides, thereby lowering cultivation costs and increasing net farm income. The scheme also focuses on restoring soil health, improving microbial activity, and conserving biodiversity. Training programs, demonstrations, and awareness campaigns are conducted to educate farmers about natural farming methods. By promoting environmentally friendly agriculture, BPKP contributes to climate resilience, water conservation, and sustainable rural livelihoods. The initiative supports the long-term vision of sustainable agriculture and plays an important role in achieving food security and environmental sustainability

6. Current status of organic farming in india

- Number of Organic Farmers: Approximately 4.099 million farmers are certified under NPOP and PGS systems. *(Down to Earth – Hindi; Drishti IAS)*
- Area Under Organic Farming: About 4.5 million hectares, accounting for nearly 2.5% of total agricultural land. Including land under conversion, this increases to 6.4 million hectares. *(Drishti IAS; SMERGERS)*
- Global Position: India has the largest number of organic farmers globally, though it does not rank first in certified organic area. *(Drishti IAS)*

7. Future Projection: Up to 2027 (Estimated): Based on current growth trends (approximately 7% annual growth in organic area):

- Organic farmers may increase to 60–70 lakh
- Organic agricultural land may reach 4–5% of total farmland

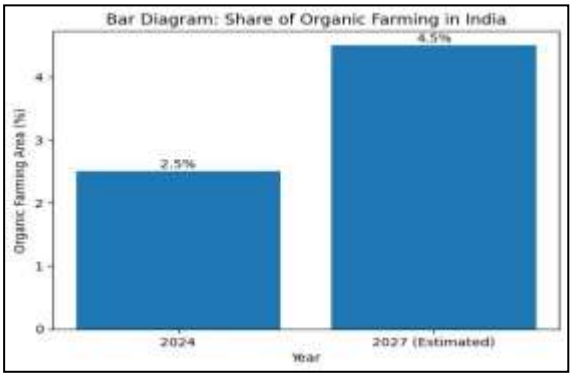

Fig 1: Present Status of Organic Farming in India (2024) and Projected Expansion up to 2027 (in Percentage)
Source: Ministry of Agriculture & Farmers Welfare, Government of India; FAO Reports; Compiled & Estimated by Author (2024–2027)

These projections are trend-based estimates, not official government targets. *(Down to Earth – Hindi).* The above graph shows that at present (around 2024), approximately 2.5% of the total agricultural land in India is under organic farming. Due to the impact of the government's sustainable agriculture policies, such as PKVY (Paramparagat Krishi Vikas Yojana), the National Mission on Organic Farming, and various schemes promoting natural farming, this share is expected to increase to around 4–5% by 2027. This trend indicates that India is moving slowly but steadily toward the goal of self-reliant agriculture by 2047.

6. Challenges

Although the prospects of sustainable agriculture are extensive, several key challenges remain:

- Lack of technical knowledge among farmers
- Decline in productivity during the initial transition period
- Limited market access and marketing facilities
- Weaknesses in research and extension services

These challenges can be addressed through effective policies, training programs, and institutional support.

7. Suggestions

- Strengthening agricultural education and farmer training programs
- Developing local markets for organic and natural farm products
- Aligning agricultural research with regional needs
- Promoting digital technology and smart agriculture

8. Conclusion

In conclusion, sustainable agriculture is the foundation of a self-reliant India by 2047. It not only ensures food security but also strengthens environmental conservation, rural development, and farmer welfare. If policymakers, farmers, and society work together in this direction, India can emerge as a strong, prosperous, and self-reliant agricultural nation by 2047. In addition, the Sustainable Development Goals (SDGs) set for 2030 can also be fulfilled.

Cited References

FAO (2018). Sustainable Agriculture Development.
Government of India (2020), Atmanirbhar Bharat Abhiyan Documents.
World Bank (2019), Climate Smart Agriculture in South Asia.
Swaminathan, M.S. (2015), From Green to Evergreen Revolution.
Planning Commission of India (2014), Agricultural Sustainability Report.
Ministry of Agriculture & Farmers Welfare (2022). Natural Farming Initiatives.
UNEP (2021), Sustainable Food Systems.
NABARD (2020), Rural Development and Sustainable Agriculture.
ICAR (2019), Soil Health and Sustainable Farming.
Government of India (2021), Vision India @2047 Report.