



Extension Strategies for Promoting Organic Farming

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INTRODUCTION

Modern agriculture, characterized by intensive use of chemical fertilizers, pesticides, and monocropping, has significantly increased food production but at the cost of environmental sustainability. Issues such as declining soil fertility, groundwater contamination, biodiversity loss, and health hazards have prompted a shift towards sustainable farming systems. Organic farming, which relies on ecological processes, biodiversity, and natural inputs, is recognized globally as a viable solution.

Despite its benefits, adoption of organic farming is slow, particularly in developing countries, due to limited awareness, lack of technical knowledge, transition risks, and inadequate market access. Agricultural extension systems act as a vital link between research institutions, policymakers, and farmers, playing a decisive role in promoting organic farming practices. Effective extension strategies are therefore essential to enhance adoption, ensure compliance with organic standards, and improve farm profitability.



Source: <https://www.researchgate.net>

3. Concept and Principles of Organic Farming

Organic farming is a holistic production management system that enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It is based on four core principles:

1. **Principle of Health** – sustaining the health of soil, plants, animals, humans, and the planet.
2. **Principle of Ecology** – working with natural ecological systems and cycles.
3. **Principle of Fairness** – ensuring equity and justice in farming systems.
4. **Principle of Care** – managing agriculture responsibly to protect present and future generations.

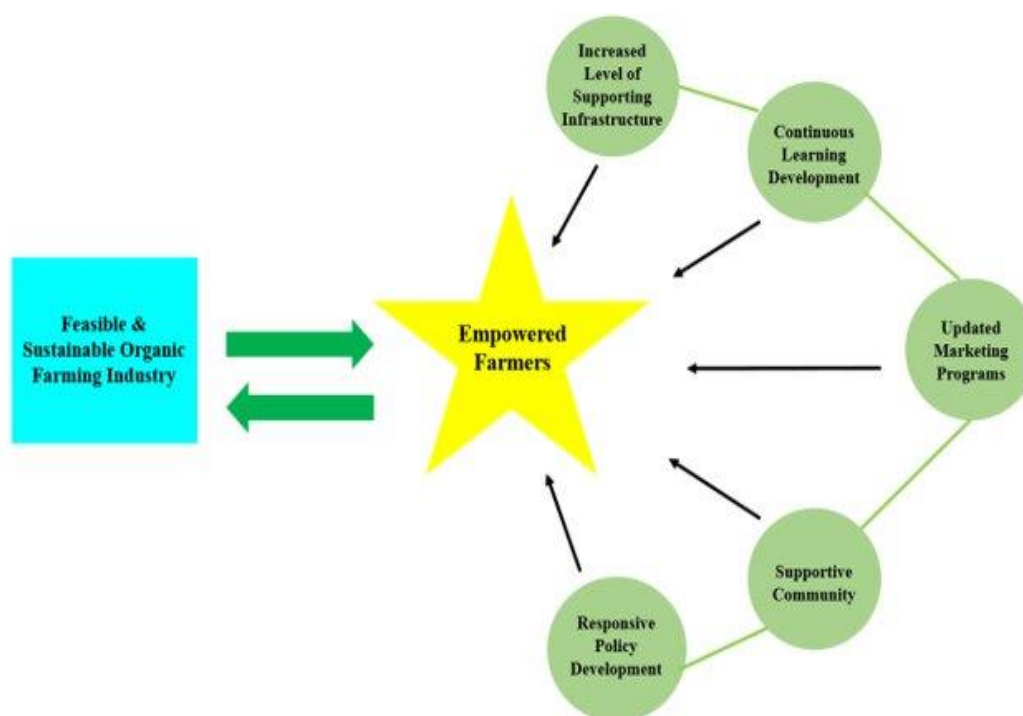
Extension strategies must align with these principles while translating scientific knowledge into farmer-friendly practices.

4. Role of Agricultural Extension in Organic Farming

Agricultural extension serves multiple functions in the promotion of organic farming:

- Dissemination of organic production technologies
- Capacity building and skill development
- Behavioral change communication
- Risk mitigation during transition period
- Market linkage and certification support

5. Extension Strategies for Promoting Organic Farming



Source: <https://www.researchgate.net>

5.1 Participatory Extension Approaches

Participatory Extension Approaches emphasize active farmer involvement in planning, implementation, and evaluation of extension programs, making them highly effective for promoting organic farming.

Farmer Field Schools (FFS) provide season-long, hands-on learning where farmers gain practical experience in composting, biofertilizers, botanical pesticides, crop rotation, and ecological pest management. This experiential approach improves decision-making skills and confidence in organic practices.

Participatory Technology Development (PTD)

involves farmers, scientists, and extension workers in jointly testing and adapting organic technologies to local soil, climate, and cropping conditions, ensuring relevance and sustainability.

Self-Help Groups (SHGs) and **Farmer Producer Organizations (FPOs)** strengthen collective learning and action by facilitating peer-to-peer knowledge exchange, joint input production, certification, and marketing of organic produce. Together, these participatory approaches enhance adoption, reduce costs and risks, and promote community-based, sustainable organic farming systems.

5.2 Capacity Building and Training Programs

Capacity Building and Training Programs play a crucial role in the successful adoption of organic farming, as organic agriculture requires specialized knowledge and skills. Skill-oriented on-campus and off-campus training programs help farmers understand organic principles, input preparation, and crop management practices. Practical demonstrations on vermicomposting, green manuring, biofertilizers, and biological pest control enhance hands-on learning and confidence. Exposure visits to successful organic farms motivate farmers by showcasing real-life benefits and best practices. Additionally, training extension personnel on organic standards, certification procedures, and quality control ensures effective guidance to farmers. Continuous capacity building enables farmers to efficiently manage complex organic farming systems and improve productivity and sustainability.

5.3 Demonstration and Model Organic Farms

Demonstration and Model Organic Farms are effective extension tools for promoting organic farming. Frontline demonstrations, model organic villages, and cluster-based demonstrations provide farmers with real-field evidence of organic practices. On-farm trials comparing organic and conventional systems highlight improvements in soil health, crop performance, and economic returns. Such visual and practical evidence builds farmer confidence and accelerates adoption of organic farming.

5.4 ICT-Based Extension Strategies

ICT-Based Extension Strategies significantly enhance the reach and effectiveness of organic farming extension services. Tools such as mobile advisory services, including SMS alerts and WhatsApp groups, deliver timely field-specific guidance to farmers. Mobile applications provide information on organic inputs, nutrient management, and pest control practices. Online training modules, webinars, community radio, and digital video platforms support continuous learning and knowledge sharing. Overall, ICTs offer real-time, cost-effective, and location-specific information, strengthening decision-making and accelerating the adoption of organic farming practices.

5.5 Market-Led Extension and Value Chain Development

Market uncertainty is a major barrier to organic farming adoption.

- Extension support for organic certification (PGS, third-party certification)
- Market intelligence on organic prices and demand
- Linking farmers with retailers, exporters, and e-commerce platforms
- Branding and promotion of organic produce

5.6 Policy and Institutional Support-Based Extension

Institutional convergence strengthens organic farming promotion.

- Integration of extension programs with government schemes
- Collaboration with NGOs and private sector
- Promotion of organic farming under mission-mode programs
- Incentives for transition period and organic inputs

6. Challenges in Extension for Organic Farming

Challenges in Extension for Organic Farming remain significant despite growing awareness and policy support. A major constraint is the limited technical expertise of extension personnel in organic production systems and standards. Weak research–extension–farmer linkages often result in poor dissemination of location-specific technologies. The long transition period, accompanied by yield uncertainty, discourages farmers from conversion. Additionally, complex and costly certification procedures create barriers, especially for smallholders. Fragmented markets and price volatility further reduce profitability. Addressing these challenges requires systemic reforms, capacity strengthening, market-oriented extension, and innovative, farmer-centric extension models to ensure sustainable adoption of organic farming.

7. Future Strategies and Innovations

Future Strategies and Innovations are essential for strengthening extension systems in organic farming. Adoption of pluralistic extension models involving public, private, and NGO

stakeholders can improve outreach and effectiveness. Farmer-to-farmer extension should be promoted to enhance trust-based knowledge exchange. Integrating climate-smart organic practices will improve resilience to climate variability. The use of artificial intelligence, digital platforms, and decision-support tools can provide precise, real-time advisories. Greater emphasis on youth and women-led organic enterprises will encourage innovation, entrepreneurship, and inclusiveness. Future extension efforts must prioritize sustainability, equity, and resilience for long-term organic farming development.

CONCLUSION

Organic farming holds immense potential for ensuring environmental sustainability, food safety, and rural livelihoods. However, its widespread adoption depends largely on effective extension strategies that combine technical guidance, participatory learning, market support, and policy facilitation. Strengthening extension systems through innovative, inclusive, and market-oriented approaches will be crucial for transforming organic farming from a niche practice into a mainstream agricultural system.

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