

Pathways for Expanding Natural Farming in India



What's the issue?

Natural farming is emerging as an alternative approach to conventional agriculture in India because it addresses the intertwined challenges of food security, nutrition, and rural livelihoods. Despite decades of industrial agriculture, smallholder farmers—who produce most of India's food—have seen little improvement in their lives. High input costs for chemical fertilizers and pesticides, along with market volatility, have left many trapped in debt and poverty. Industrial farming has boosted yields in some regions, but it has not delivered equitable prosperity or sustainable food systems.

Meanwhile, India faces a changing climate marked by erratic rainfall, rising temperatures, and extreme weather events. These stresses expose the vulnerability of farmers, both socially and ecologically. Reliance on chemical fertilisers and pesticides instead of organic fertilisers and biocontrol measures degrades soil health and biodiversity, reducing the long-term productivity and resilience of farmlands.

Natural farming offers a pathway to build socio-ecological resilience. By relying on locally produced inputs, intercropping, non-pesticide management, and soil-improvement techniques, it can lower costs, enhance

Key Recommendations:

- **Promote the benefits of natural farming nationally.**
- **Train extension workers in natural farming to increase drought resilience and environmental benefits.**
- **Build partnerships with farmers to synthesise existing practices to inform and monitor the expansion of natural farming.**

nutrition, and improve food security without degrading ecosystems. Strengthening natural farming is therefore not just an environmental imperative but an economic and social one, enabling farmers to adapt to climate change and chart a pathway out of precarity, all while providing safe, nutritious food for India's consumers.

Why is it important?

Farmers seek to be protagonists in their own lives. Expanding natural farming through national policy can build resilience in the livelihoods of smallholder farmers while fostering greater agency in their decision making. The adoption of natural farming can turn agriculture into a year-round, income-generating activity, which will reduce some of the push factors that drive rural migration. Our research reveals that it also empowers women within smallholder households, increasing their independence and role in farm management. Our scientific studies show no yield penalty and significantly lower input costs during the first year after the adoption of natural farming, demonstrating that it can deliver sustainable productivity, economic stability, and social transformation.

What should policymakers do?

Promote the benefits of natural farming nationally.

Increase support to existing initiatives like the National Mission on Natural Farming (NMNF). A coordinated national campaign can highlight the economic advantages of reduced input costs and higher net returns for farmers, while educating consumers about the nutritional and dietary diversity offered by naturally grown foods. Media outreach—television, radio, and digital platforms—can raise awareness and demand for synthetic chemical-free produce. To strengthen trust and marketability, the government should expand participatory guarantee schemes that certify natural products in a low-cost, community-driven way. Integrating natural-farming produce into public procurement programs such as school meals and hospitals will create stable markets and expand climate-resilient farming across India's diverse regions.

Train extension workers in natural farming to increase drought resilience and environmental benefits.

Integrating natural farming principles into agricultural extension curricula will equip field officers with practical skills to promote soil health, conserve water, and enhance drought resilience. Extension workers should use data from the Soil Health Card program to identify regions where natural farming practices can deliver the greatest ecological and economic gains. Our research indicates that these gains are best achieved in drier regions. Training must go beyond top-down knowledge transfer by fostering

two-way dialogue and participatory learning, engaging farmers as equal partners in experimentation and problem-solving. This will raise adoption rates.

Build partnerships with farmers to synthesise existing practices to inform and monitor the expansion of natural farming. Establishing collaborative platforms where farmers, researchers, and local institutions share and document on-the-ground experiences will help identify effective practices and refine strategies for wider adoption. These partnerships should strengthen farmers' ability to choose or adapt techniques to suit their local soils, climates, and market conditions, including the partial adoption of specific innovations when full conversion is not yet feasible. Joint monitoring will ensure that policies remain responsive, evidence-based, and supportive of regionally appropriate solutions, creating a dynamic framework for scaling natural farming across diverse agro-ecological zones.

Authors

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