

3. Natural Farming

Farmers in Himachal Pradesh are increasingly adopting natural farming, supported by the State's flagship Prakritik Kheti Khushhal Kisan Yojana (PK3Y), which promotes chemical-free agriculture.

Introduction to Natural Farming

Definition – Natural farming is a chemical-free, sustainable farming system that integrates crops, trees, and livestock while maintaining functional biodiversity.

Core Principles –

1. Avoidance of synthetic fertilizers, pesticides, and chemical inputs.
2. Emphasis on on-farm resource recycling using biomass, cow dung, cow urine, and compost.
3. Maintenance of soil aeration, water retention, and microbial activity.
4. Integration of livestock (preferably local breeds of cows) for nutrient cycling.

Philosophical Roots –

1. Deeply rooted in Indian traditional agricultural knowledge, enriched with modern understanding of ecology, agroecology, and resource optimization.
2. Viewed as an agroecology-based diversified farming system, balancing productivity with ecological sustainability.

Key Features of Natural Farming

Agroecological Integration – Combines crops, trees, and livestock in a mutually beneficial ecosystem. Promotes functional biodiversity, which naturally manages pests and enhances resilience.

On-Farm Biomass Recycling – Use of crop residues, leaf litter, and animal manure as mulch and compost. Reduces dependency on external inputs and improves soil health.

Cow-Based Inputs – Preparation and application of cow dung-urine formulations for fertilization and pest control. Preference for local cow breeds due to adaptability and higher microbial activity in dung/urine.

Soil and Water Management – Practices such as mulching, intercropping, and crop rotations improve soil aeration, organic matter, and water retention.

Present Status of Natural Farming in India

Leading States – Andhra Pradesh, Karnataka, Himachal Pradesh, Gujarat, Uttar Pradesh, and Kerala have successfully implemented natural farming programs.

Government Initiatives – National Mission on Natural Farming (NMNF) launched in November 2024 as a centrally sponsored scheme to promote chemical-free, ecosystem-based agriculture.

Adoption Models – State governments are developing model farms and training centres for scaling up adoption. Integration with existing agricultural schemes is ongoing but uneven across regions.

Benefits of Natural Farming

Improved Soil Health – Enhances soil organic matter, microbial diversity, and nutrient cycling. Increases water retention and reduces soil erosion.

Reduced Input Costs – Eliminates the need for chemical fertilizers and pesticides, lowering farmer expenditure. Can enhance net incomes for small and marginal farmers.

Climate Resilience – Diverse cropping systems help farms withstand erratic rainfall and extreme weather. Reduces greenhouse gas emissions associated with synthetic inputs.

Healthier Food Production – Produces chemical-free, nutrient-rich food, meeting growing consumer demand for organic produce.

Environmental Sustainability – Supports biodiversity, soil conservation, and ecosystem services.

Socio-Economic Benefits – Potential to boost rural employment through labor-intensive, knowledge-driven practices.

Challenges in Scaling Natural Farming

Yield Uncertainty – Transition from conventional to natural farming may initially reduce yields, especially in high-input intensive zones.

Knowledge Gaps – Farmers need training in soil biology, organic nutrient management, pest control without chemicals, and ecosystem-based practices.

Market and Value Chain Constraints – Lack of dedicated supply chains, branding, and certification reduces profitability and discourages adoption.

Coordination Issues – Uneven central-state coordination in policy implementation and integration with existing agricultural programs.

Research and Innovation Deficit – Limited long-term research on productivity, soil health, and region-specific best practices for natural farming.

Steps Taken by Government

National Mission on Natural Farming (NMNF) – Standalone centrally sponsored scheme promoting chemical-free, ecosystem-based natural farming. Focus on training, model farms, awareness campaigns, and adoption incentives.

State-Level Initiatives –

Andhra Pradesh – Rythu Sadhikara Samstha supports large-scale adoption.

Himachal Pradesh – Farmer-centric training programs promoting climate-resilient practices. Other states have pilot programs for organic/natural farming clusters.

Integration with Traditional Knowledge – Promotes use of Indigenous cow breeds and locally available organic inputs.

Suggestions and Way Forward

Capacity Building and Extension Services – Train farmers, extension officers, and local trainers in ecosystem-based management. Set up demonstration and model farms for practical learning.

Research and Development – Invest in long-term research on soil health, crop productivity, pest management, and climate resilience. Develop region-specific natural farming protocols.

Market Ecosystem Development – Establish certification, branding, and price-support mechanisms for natural produce. Develop direct-to-consumer marketing channels and agro-processing clusters.

Policy Integration – Align NMNF with existing central and state schemes such as PM-Kisan, MGNREGA (for labour support), and Rashtriya Krishi Vikas Yojana.

Public Awareness – Promote consumer awareness campaigns to increase demand for chemical-free produce.

Digital and Data Support – Use digital platforms and geotagged farms to track adoption and progress.

Conclusion

Natural farming represents a transformative shift in Indian agriculture, balancing productivity, profitability, and environmental sustainability. By reducing reliance on external chemical inputs, it is cost-effective, promotes rural livelihoods, and supports climate-resilient agriculture. Widespread adoption requires multi-pronged strategies involving training, research, market development, policy integration, and public awareness.

Source – <https://www.thehindu.com/news/national/himachal-pradesh/natural-farming-gains-traction-in-himachal-pradesh-amid-policy-push/article70154748.ece#~:text=Amid%20a%20national%20push%20for,farmer%20welfare%20with%20environmental%20conservation.>