Natural Farming: Approaches, Market Linkages and Extension Strategies

Prelude

While the use of chemical fertilisers, pesticides, and herbicides has contributed significantly to increased food production since the Green Revolution in India. However, their long term adverse impacts on soil fertility, water resources, biodiversity and human health have become increasingly evident. Pesticide exposure has been associated with rising incidences of cancer, respiratory disorders, and skin diseases among farming communities. Chemical residues entering the food chain further pose chronic risks to consumers, including neurological disorders and cancer.

Soil degradation is another critical concern. Fertiliser use in India has increased nearly ten-fold since the 1970s, while soil organic carbon has declined from about 1.0% to 0.3%, threatening long-term productivity. Scientists warn that nearly 50% of India's agricultural land could become infertile if current trends persist. Excessive water extraction for high-input cropping systems has led to a sharp decline in groundwater levels, with about 64% of groundwater resources classified as over-exploited. Loss of crop diversity estimated at nearly 75% since the 1950s has further reduced resilience to pests, diseases, and climate variability.

Natural Farming (NF) offers a viable and science based response to these challenges by aligning agricultural production with ecological processes. It promotes diversified cropping systems, use of local seeds, preparation and application of on-farm bio-inputs, mulching, and integration of livestock, agroforestry, and beekeeping. Research evidence indicates that Natural Farming can increase soil organic carbon by 30-40% within a few years, enhance beneficial microbial activity, and improve biodiversity by up to 20%, thereby strengthening resilience to climate extremes. Further, naturally grown produce contains higher levels of certain vitamins, minerals, and antioxidants, offering potential solutions to widespread micronutrient deficiencies.

Globally, demand for chemical free and organic food is rising rapidly, with markets growing at 14-15% annually worldwide and 20-25% in India, reflecting heightened consumer concern for health and environmental sustainability. Recognising these trends, the Government of India has initiated Natural Farming through Bharatiya Prakrutik Krishi Paddhati (BPKP) under PKVY and, based on this experience, has launched National Mission on Natural Farming in the year 2024-25, to cover 10 million farmers and establish 10,000 bio-input resource centres supported by certification and branding mechanisms.

Accordingly, the NMNF will be implemented in partnership with MANAGE, ICAR, State Agricultural Universities, Krishi Vigyan Kendras, ATMA, SRLMs, and farmer master trainers to strengthen research, documentation, training, and extension systems. As part of the Mission, MANAGE has involved in the capacity building of various stakeholders on natural farming such as Scientists from KVKs, extension functionaries from agriculture and allied departments, Krishi sakhis, master trainers, grampradhas etc besides developing study materials and compiling the success stories and best practices.

In this context, India's emerging experience with Natural Farming offers valuable lessons for other countries facing similar challenges of soil degradation, water stress, health risks, and climate vulnerability. Organising an International Training Programme on Natural Farming will enable extension professionals from partner countries to learn from India's policy framework, institutional mechanisms, field-level innovations, and farmer-led practices. Such capacity

building will contribute to the global transition towards farming systems that are productive, climate-resilient, ecologically sound, and socially inclusive.

By promoting Natural Farming, India has the opportunity to demonstrate a globally relevant model of sustainable agriculture that safeguards natural resources while ensuring food security and farmer livelihoods.

Aims and Learning Objectives

- To provide an overview of India's policies and programs related to natural farming
- To build technical competence among participants of ITEC countries on concept, principles and practices on natural farming
- To expose the delegates to research, extension support and institutional mechanism available in India for promotion and upscaling natural farming
- **Course duration**
- The duration of the course will be for two weeks duration from 10 June-2026 to 23-June-2026.

Tentative Programme Schedule

Time	**Particulars**
Day 1	
09.30 AM- 10:00 AM	Registration
10.00 AM- 10:30 AM	Introduction and briefing about the program
10.30 AM- 10:45 AM	Online Pre-training Test and Discussion
10.45 AM- 11:00 AM	Tea Break
11:00 AM- 01:00 PM	Training Need Assessment- Group activities
01:00 PM- 02:00 PM	Lunch
02:00 PM- 03:30 PM	Icebreaking – Interactive Session
03:30 PM- 03:45 PM	Tea Break
03:45 PM -05:15 PM	Conceptual Understanding - Natural Farming & Agroecological Principles and components
05:30 PM	Close
Day 2	
09:00 AM- 09:30 AM	Recap Session
09:30 AM- 11:15 AM	Institute visit – MANAGE Campus
11.15 AM- 11.30 AM	Tea Break
11.30 AM- 01.00 PM	Formal Inauguration of the programme
01:00 PM- 02:00 PM	Lunch
02:00 PM- 03:30 PM	Use of Local Landraces in Natural Farming
03:30 PM- 03:45 PM	Tea break
03:45 PM- 05:15 PM	Regenerative Soil Management
05:30 PM	Close
Day 3	
8.30 PM – 5.30 PM	Visit to CRIDA for natural farming demonstration units and NTR Garden
Day 4	
09:00 AM- 09:30 AM	Recap Session
09:30 AM- 11:15 AM	Natural Farming: Practices, Protocols and Research Evidences
11.15 AM- 11.30 AM	Tea break

11.30 AM- 01.00 PM	Bio stimulants - their role, types, methods of preparation (bijamrit, jiwamrit, Amritjal, panchagavya, etc.)
01.00 PM- 02.00 PM	Lunch
02.00 PM- 03.30 PM	Bio-input Resource Centre
03.30 PM- 03.45 PM	Tea Break
03.45 PM- 05:00 PM	Nutrient management under Natural Farming
05:00 PM- 05:30 PM	Close
Day 5	
08:30 AM- 05:30 PM	Study Tour – Historical places of Hyderabad (Museum, Char Minar)
Day 6	
09:00 AM- 09:30 AM	Recap Session
09:30 AM- 11:15 AM	Integrated Pest Management
11.15 AM- 11.30 AM	Tea Break
11.30 AM- 01.00 PM	Multi-Layer Farming in Natural Farming
01:00 PM- 02:00 PM	Lunch
02:00 PM- 03:30 PM	Crop Diversification: Traditional Cropping Systems of India
03:30 PM- 03:45 PM	Tea Break
03:45 PM- 05:15 PM	Perspective of Water Use efficiency in natural farming
05:30 PM	Close
Day 7	
09:00 AM- 09:30 AM	Recap session
09:30 AM- 11:15 AM	Good Agricultural practices with special reference to Natural Farming
11.15 AM- 11.30 AM	Tea Break
11.30 AM- 01.00 PM	WAAPSA (Conserving Soil Moisture) : Beyond Rainfall harnessing Water vapour, Water consumption relation etc.
01.00 PM- 02.00 PM	Lunch
02.00 PM- 05:30 PM	Visit to NIPHM on Bio Input Resource Center
Day 8	
09:00 AM- 09:30 AM	Recap Session
09:30 AM- 11:15 AM	Preparation and use of Bio-inputs in Natural Farming
11.15 AM- 11.30 AM	Tea Break
11.30 AM- 01.00 PM	Weed Management
01.00 PM- 02.00 PM	Lunch
2:30 PM – 05:30PM	Statue of Equality, Golconda Fort
Day 9	
09:00 AM- 09:30 AM	Recap session
09:30 AM- 11:15 AM	Role of FPOs in promoting Natural Farming
11.15 AM- 11.30 AM	Tea Break
11.30 AM- 01.00 PM	Livestock Integration in Natural Farming
01.00 PM- 02.00 PM	Lunch
02.00 PM- 05:30 PM	Agroforestry for ecosystem service and income enhancement
05:30 PM	Close
Day 10	
08:30 AM- 5:30 PM	Visit to Natural farming practicing farmers field
Day 11	
09:00 AM- 09:30 AM	Recap Session
09:30 AM- 11:15 AM	Bee Keeping in Natural Farming for better Pollination and yield
11.15 AM- 11.30 AM	Tea Break
11.30 AM- 01.00 PM	Market linkages for Natural Farming produce
01.00 PM- 02.00 PM	Lunch

2:00 PM – 03:30 PM	Extension approaches for promotion of natural farming
03.30 PM- 03.45 PM	Tea break
03.45 PM- 05:15 PM	Gamification Tools for Promoting Natural Farming
05:30 PM	Close
	Cultural evening
Day 12	
08:00 AM- 05:00 PM	Visit to Ramoji Film city
Day 13	
08:00 AM - 05:00 PM	Visit to ICRISAT –Opportunity of Natural Farming in Arid & Semi-Arid Regions
Day 14	
09:30 AM- 11:15 AM	Post-Training Test
11.15 AM- 11.30 AM	Tea Break
11.30 AM- 01.00 PM	Review and Feedback of the Training Program
01.00 PM- 02.00 PM	Lunch
02.00 PM- 03.45 PM	Valedictory Program and Certificate Awards
03.45 PM- 05:30 PM	Tea Break & Close

Expected outcome/Deliverables

- At the end of the training course, the participants are expected to
- Understand the concept and scope of natural farming for transforming sustainable production system
- Gain an insight into research and field activities related to Natural farming in India
- Understand the research, extension support services and institutional mechanism required to upscale the natural farming.

Eligibility criteria

- Officials from Public, Private, Civil Societies in Agriculture and allied sectors associated with or interested to promote natural farming from ITEC countries.

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