



Natural Farming

Why in News

Recently, [NITI Aayog](#) has conducted a national workshop on **Natural Farming**.

- There are many working models of natural farming all over the world, the [Zero Budget Natural Farming \(ZBNF\)](#) is the most popular model in India. This comprehensive, natural, and spiritual farming system was developed by [Padma Shri Subhash Palekar](#).

Key Points

▪ About:

- It can be defined as a **“chemical- free farming and livestock based ”**. Soundly grounded in agro-ecology, it is a diversified farming system that integrates crops, trees and livestock, allowing the optimum use of functional biodiversity.
- It holds the **promise of enhancing farmers’** income while delivering many other benefits, such as **restoration of soil fertility and environmental health, and mitigating and/or reducing greenhouse gas emissions.**
 - This farming approach was introduced by **Masanobu Fukuoka**, a Japanese farmer and philosopher, in his 1975 book *The One-Straw Revolution*.
- It builds on natural or ecological processes that exist in or around farms. Internationally, Natural Farming is **considered a form of regenerative agriculture—a prominent strategy to save the planet.**
- It has the **potential to manage land practices and sequester carbon from the atmosphere in soils and plants**, where it is actually useful instead of being detrimental.
- In India, Natural farming is promoted as Bhartiya **Prakritik Krishi Paddhati Programme** (BPKP) under [Paramparagat Krishi Vikas Yojana \(PKVY\)](#).
 - BPKP is aimed at promoting traditional indigenous practices which reduce externally purchased inputs.
- Natural Farming, as the name suggests, is the art, practice and, increasingly, the science of **working with nature to achieve much more with less.**



COMPONENTS OF NATURAL FARMING



Beejamrit

The process includes treatment of seed using cow dung, urine and lime based formulations.

Whapasa

The process involves activating earthworms in the soil in order to create water vapor condensation.



Jivamrit

The process enhances the fertility of soil using cow urine, dung, flour of pulses and jaggery concoction.

Mulching

The process involves creating micro climate using different mulches with trees, crop biomass to conserve soil moisture.

Plant Protection

The process involves spraying of biological concoctions which prevents pest, disease and weed problems and protects the plant and improves their soil fertility.

▪ Aim:

- To make farming **viable and aspirational by increasing net incomes of farmers** on account of cost reduction, reduced risks, similar yields, incomes from intercropping.
- To drastically **cut down production costs by encouraging farmers to prepare essential biological inputs** using on-farm, natural and home-grown resources.

▪ Significance:

◦ **Minimized Cost Of Production:**

- It is considered as a **cost- effective farming practice** with scope for raising employment and rural development.

◦ **Ensures Better Health:**

- As Natural Farming **does not use any synthetic chemicals, health risks and hazards are eliminated.** The food has higher nutrition density and therefore offers better health benefits.

◦ **Employment Generation:**

- It generates employment **on account of natural farming input enterprises, value addition, marketing in local areas,** etc. The surplus from natural farming is invested in the village itself.
- As it has the **potential to generate employment,** thereby stemming the migration of rural youth.

- **Environment Conservation:**
 - It ensures **better soil biology, improved agrobiodiversity** and a more judicious usage of water with much smaller carbon and nitrogen footprints.
- **Reduced Water Consumption:**
 - By working with diverse crops that help each other and cover the soil to prevent unnecessary water loss through evaporation, **Natural Farming optimizes the amount of ‘crop per drop’.**
- **Rejuvenates Soil Health:**
 - The most immediate impact of Natural Farming is on the biology of soil—on microbes and other living organisms such as earthworms. Soil health depends entirely on the living organisms in it.
- **Livestock Sustainability:**
 - The integration of livestock in the farming system plays an important role in Natural farming and helps in restoring the ecosystem. **Eco Friendly bio-inputs, such as Jivamrit and Beejamrit, are prepared from cow dung and urine, and other natural products.**
- **Resilience:**
 - The changes in soil structure with the help of organic carbon, no/low tillage and plant diversity are supporting **plant growth even under extreme situations like severe droughts and withstanding severe flood and wind damage during cyclones.**
 - NF impacts many farmers positively **by imparting resilience to the crops against weather extremities.**
- **Related Initiatives:**
 - **Rainfed Area Development (RAD):** It focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variabilities.
 - **Sub-mission on Agro Forestry (SMAF):** It aims to encourage farmers to plant multi-purpose trees together with the agriculture crops for climate resilience and an additional source of income to the farmers, as well as enhanced feedstock to inter alia wood-based and herbal industry.
 - **National Mission on Sustainable Agriculture (NMSA),** to develop, demonstrate and disseminate the techniques to make agriculture resilient to adverse impacts of climate change.
 - **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER):** It is a **Central Sector Scheme**, a sub-mission under NMSA, aims to develop certified organic production in a value chain mode.
 - **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** It was launched in 2015 to address the issues of water resources and provide a permanent solution that envisages Per Drop More Crop.
 - **Green India Mission:** It was launched in 2014 under the umbrella of **National Action Plan on Climate Change (NAPCC)** with the primary objective of protecting, restoring and enhancing India’s diminishing forest cover.

Differences between Natural Farming and Organic Farming

Organic Farming	Natural Farming
In organic farming, organic fertilizers and manures like compost, vermicompost, cow dung manure , etc. are used and added to farmlands from external sources.	In natural farming, neither chemical nor organic fertilizers are added to the soil. In fact, no external fertilizers are added to soil or given to plants whatsoever.
Organic farming still requires basic agro practices like plowing, tilling, mixing of manures, weeding, etc. to be performed.	In natural farming, decomposition of organic matter by microbes and earthworms is encouraged right on the soil surface itself, which

	gradually adds nutrition in the soil, over the period.
Organic farming is still expensive due to the requirement of bulk manures , and it has an ecological impact on surrounding environments; whereas, natural agriculture is an extremely low-cost farming method, completely molding with local biodiversity.	In natural farming there is no plowing, no tilling of soil and no fertilizers, and no weeding is done just the way it would be in natural ecosystems.

Way Forward

- The world's **population is predicted to expand to approximately 10 billion by 2050**. It is expected that agricultural demand will increase up to 50%, in comparison to 2013, in such a situation a transformational process towards 'holistic' approaches such as **agro-ecology, agroforestry, climate-smart agriculture, and conservation agriculture is a necessity**.
- There is a **need to Strengthen agricultural market infrastructure** and extend the procurement mechanism to all foodgrain and non-foodgrain crops to all States.
- Implementation of price deficiency payment system for selected crops. There is a **need to enact legislation on 'right to sell at MSP' needs immediate attention**.
- **MGNREGS ((Mahatma Gandhi National Rural Employment Guarantee Act)** must also be linked with farm work in order to reduce the cost of cultivation which has escalated at a faster pace over the past few years.

Source: PIB

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