



## Natural Farming

**For Prelims:** Natural Farming, Zero-Budget Natural Farming (ZBNF), Bhartiya Prakritik Krishi Paddhati Programme (BPKP), Paramparagat Krishi Vikas Yojana (PKVY), Carbon Sequestration, National Mission on Sustainable Agriculture

**For Mains:** Natural Farming - Significance and Associated Issues, Methods to Promote Natural Farming

### Why in News?

Recently, Prime Minister Addressed a Natural Farming Conclave, where he urged farmers to take up [Natural Farming](#).

### What is Natural Farming?

- It is 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*.
- Internationally, Natural Farming is considered a form of regenerative agriculture—a prominent strategy to save the planet.
- 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.



# 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.

## What is the Significance of Natural Farming?

- **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.
- **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.

### What are the Issues Related to Natural Farming?

#### ▪ Decline in Yields:

- **Sikkim (India's first organic state)**, has seen some **decline in yields** following conversion to organic farming.
- Many farmers have reverted to conventional farming after seeing their [ZBNF \( Zero-Budget Natural Farming\)](#) returns drop after a few years.

#### ▪ Unable to Boost Productivity and Income:

- While ZBNF has definitely helped preserve soil fertility, **its role in boosting productivity and farmers' income isn't conclusive yet.**

#### ▪ Lack of Availability of Natural Inputs:

- An often-cited barrier by farmers in transitioning to chemical-free agriculture is the lack of readily available natural inputs. Not every farmer has the time, patience, or labour to develop their own inputs.

#### ▪ Nutrient Deficiencies:

- A study in Nature Sustainability states that while the nutrient value of the natural inputs is similar to the chemical ones used in low-input farms (farms using lower quantities of fertilisers and pesticides), **it is less in high-input farms.**
- When **such nutrient deficiencies are aggregated at a large scale, it might hamper the yield over the years**, potentially leading to **food security concerns.**

### What are the Related Initiatives?

- [Rainfed Area Development](#)
- [Sub-mission on Agro Forestry](#)
- [National Mission on Sustainable Agriculture](#)
- [Pradhan Mantri Krishi Sinchayee Yojana \(PMKSY\)](#)
- [Green India Mission](#)

### Way Forward

- There is a need to Focus on promoting **natural farming in rainfed areas beyond the Gangetic basin.**
  - Rainfed regions use **only a third of the fertilisers per hectare compared** to the areas where irrigation is prevalent.
- Microenterprises **that produce inputs for chemical-free agriculture shall be provided support** from the government **to address the challenge of unavailability of readily available natural inputs**, the promotion of natural farming needs to be combined with the setting up of village-level input preparation and sales shops.
- The **government should facilitate an ecosystem in which farmers learn from and support each other** while making the transition.
- Beyond evolving the curriculum in agricultural universities, there is a **need to upskill the agriculture extension workers on sustainable agriculture practices.**

[Source: TH](#)

