



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](#)

