



## Shifting Focus Towards Natural Farming

This article is based upon [“Cultivate natural farming”](#) which was published in Hindu Business Line on 24/11/2022. It talks about the issues related to Farming practices in India and the need of Natural Farming.

**For Prelims:** Natural Farming, Agro-ecology, Green Revolution, National Mission on Sustainable Agriculture, Paramparagat Krishi Vikas Yojana (PKVY), Sub-mission on AgroForestry (SMAF), Rashtriya Krishi Vikas Yojana, Gross Cropped Area (GCA), Minimum Support Prices, Rainwater Harvesting.

**For Mains:** Major Challenges Related to Farming in India, Recent Government Initiatives Related to Sustainable Agriculture.

To feed the growing population, it is estimated that **food production will need to increase by 60% by 2050**. This increasing food demand is promoting farmers worldwide to **increase crop production**, which builds **pressure on the environment** and exceeds its carrying capacity to repair or replace itself, leading to its **serious degradation**.

**‘Natural Farming’** is suggested as a **neoteric approach to improve both traditional and modern agricultural practices**, which aims to **safeguard the environment, public health, and communities**. It has the potential to enable food production **without compromising the needs of future generations**.

### What is the Significance of Natural Farming?

- **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**.
- **Increased Farmers’ Income:** Natural Farming aims to make farming viable and **aspirational by increasing net incomes of farmers** on account of cost reduction, reduced risks, similar yields, incomes from **intercropping**.
- **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. It improves soil health and in turn increase productivity.
- **Minimized Cost of Production:** Natural Farming aims to **drastically cut down production costs** by encouraging farmers to prepare essential biological inputs using **on-farm, natural and home-grown resources**.

### What is Zero Budget Natural Farming?

- It is a unique model that relies on [Agro-ecology](#), it calls for chemical-free farming based on

**sustainable agricultural practices.**

- In the mid-1990s, **Subhash Palekar** developed it as an **alternative to the [Green Revolution's](#) chemical fertilisers and pesticides** and intensive irrigation methods.
- This model aims to **lower production costs and return to pre-green revolution farming practices** which **do not require expensive inputs such as fertilisers, pesticides, and irrigation.**

## What are the Major Challenges Related to Farming in India?

- **Per Drop More Crop:** Only 52 % of India's [Gross Cropped Area \(GCA\)](#) is irrigated at the national level. Even though **India has made significant strides since independence, many farms still rely on the monsoon for irrigation**, limiting their ability to plant more crops.
- **Lack of Readily Availability of Natural Inputs:** Farmers often cite the lack of readily available natural inputs as a barrier to converting to chemical-free agriculture. **Not every farmer has the time, patience, or labour to develop their own natural inputs.**
- **Lack of Crop Diversification:** In spite of the rapid **commercialization of agriculture** in India, most farmers assume cereals will always be their main crop (due to skewed [Minimum Support Prices](#) in favour of cereals) and **ignore crop diversification.**
- **Decline in Yields: Sikkim**, the first **organic state in India** has seen some **yield declines following conversion to organic farming.** Many farmers have switched back to conventional farming after seeing their [ZBNF \( Zero-Budget Natural Farming\)](#) returns drop.

## What are the Recent Government Initiatives Related to Sustainable Agriculture?

- [National Mission on Sustainable Agriculture](#)
- [Paramparagat Krishi Vikas Yojana \(PKVY\)](#)
- [Sub-mission on AgroForestry \(SMAF\)](#)
- [Rashtriya Krishi Vikas Yojana](#)
- **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)**

## What Should be the Way Forward?

- **Women's Participation in Natural Farming:** Studies have indicated that there is a **direct correlation between women's control over agricultural resources as a primary producer and the socio-economic characteristics of their household.**
  - Since women mostly cook for their families, **they understand the importance of natural products to nurture and nourish their children.** As a result, **women are likely to adopt natural farming sooner than men.**
    - **Women's Participation in Natural Farming** will increase their involvement in decision-making. It would also **positively impact the health and nutritional status of the family.**
- **Integrating Traditional and Frontier Technologies:** [Rainwater harvesting](#) and recycling of [organic waste](#) for plant nutrient, pest management, etc., are examples of traditional technologies that can be used to complement frontier technologies like **tissue culture, [genetic engineering](#), to achieve higher productivity.**
- **Knowledge-Intensive Agriculture:** India is known for its **diversity of farming practices**, making it important to **involve diverse perspectives in a national agricultural dialogue to find suitable solutions.**
  - A **smart and precise move towards high-tech farming balanced with a naturalistic approach** will increase farmers' incomes and **many other issues of scale will be addressed.**
- **Enterprising Natural Inputs for Farming:** **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**.

▪ **Towards Mimic Natural Ecosystem:** Developing **mutually reinforcing relationships** between agricultural productivity and conservation of nature is necessary.

◦ There can be modifications made to farming systems in order to **make it a mimic natural ecosystem. Ecological and economically useful trees, shrubs and perennial grasses can be integrated into farms** in ways that mimic the **natural vegetative structure**.

### ***Drishti Mains Question***

“The road to agricultural sustainability in India begins with natural farming.” Discuss.

## **UPSC Civil Services Examination, Previous Year Question (PYQ)**

### ***Prelims***

**Q.1 How is permaculture farming different from conventional chemical farming? (2021)**

1. Permaculture farming discourages monocultural practices but in conventional chemical farming, monoculture practices are predominant.
2. Conventional chemical farming can cause an increase in soil salinity but the occurrence of such phenomenon is not observed in permaculture farming.
3. Conventional chemical farming is easily possible in semi-arid regions but permaculture farming is not so easily possible in such regions.
4. Practice of mulching is very important in permaculture farming but not necessarily so in conventional chemical farming.

**Select the correct answer using the code given below.**

- (a) 1 and 3  
(b) 1, 2 and 4  
(c) 4 only  
(d) 2 and 3

**Ans: (b)**

**Q.2 Which of the following is the chief characteristic of ‘mixed farming’? (2012)**

- (a) Cultivation of both cash crops and food crops  
(b) Cultivation of two or more crops in the same field  
(c) Rearing of animals and cultivation of crops together  
(d) None of the above

**Ans: (c)**

### ***Mains***

**Q.1** What are the present challenges before crop diversification? How do emerging technologies provide an opportunity for crop diversification? **(2021)**

**Q.2** How has India benefited from the contributions of Sir M. Visvesvaraya and Dr. M. S. Swaminathan in the fields of water engineering and agricultural science respectively? **(2019)**

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