

# Frequently asked questions (FAQs) on “Natural Farming”





## Understanding Natural Farming

**1) What is natural farming, and why is it gaining popularity among Indian farmers?**

Natural farming is an agricultural approach that relies on minimal external inputs and emphasizes sustainability. It's gaining popularity in India due to its reduced cost, improved soil health, and eco-friendly practices.

**2) How does natural farming contribute to sustainable agriculture in India?**

Natural farming promotes sustainable practices by minimizing chemical inputs, conserving water, and enhancing soil fertility, leading to long-term agricultural viability.

**3) Is natural farming the same as organic farming?**

Natural farming shares similarities with organic farming but may focus more on indigenous practices and microbial inputs, while organic farming adheres to specific certification standards.

**4) What are the core principles of natural farming?**

Core principles include minimal external inputs, reliance on indigenous microorganisms, maintaining soil health, and promoting biodiversity.

**5) Can you explain the concept of "zero budget natural farming" (ZBNF)?**

ZBNF emphasizes minimal external inputs and encourages farmers to rely on available resources, minimizing their dependence on external budgets.

**6) What is the role of indigenous microorganisms in natural farming?**

Indigenous microorganisms play a crucial role in decomposing organic matter, enhancing soil fertility, and suppressing harmful pathogens.

**7) How does natural farming promote biodiversity in agricultural ecosystems?**

Natural farming encourages crop diversity, intercropping, and the preservation of native flora and fauna, fostering a healthier ecosystem.

**8) Are there different regional variations of natural farming practices in India?**

Yes, natural farming practices can vary based on local climate, soil conditions, and crop preferences.

**9) What crops are commonly grown using natural farming techniques in India?**

Common crops include rice, wheat, millets, pulses, and various fruits and vegetables.

**10) How does natural farming help conserve water resources in India?**

Natural farming promotes efficient water use through practices like mulching, which reduces evaporation, and enhances soil's water-holding capacity.

## Transitioning to Natural Farming

**11) How can I transition from conventional farming to natural farming practices?**

Start by reducing chemical inputs gradually, learning about natural farming techniques, and seeking guidance from local experts or agricultural extension services.

**12) What are the first steps to take when converting my farm to natural farming?**

Begin by assessing your soil health, understanding local practices, and creating a transition plan that gradually reduces chemical inputs.

**13) Are there any financial incentives or subsidies available for transitioning to natural farming?**

Some Indian states offer financial incentives and subsidies to promote natural farming; check with your local agricultural department for specific programs.

**14) Can I practice natural farming on a small piece of land, or is it more suitable for larger farms?**

Natural farming can be practiced on any scale, making it accessible to small and large landholders alike.

**15) What should I do with my existing chemical fertilizers and pesticides when switching to natural farming?**

Use up existing stocks judiciously while gradually transitioning to natural alternatives, and consult with agricultural experts for proper disposal guidelines.

## Soil Health and Nutrient Management

**16) How can I improve soil fertility in natural farming without synthetic fertilizers?**

Use compost, vermicompost, green manure, and cow-based products like cow dung and cow urine to enrich soil fertility naturally.

**17) What is the role of compost in natural farming, and how do I make it?**

Compost provides essential nutrients and beneficial microorganisms to the soil. Make compost by composting organic matter like kitchen scraps, crop residues, and cow dung.

**18) Are there specific types of compost suitable for natural farming?**

Compost made from locally available organic materials is suitable for natural farming. Adapt compost recipes to your region's resources.

**19) Can I use animal-based manure like cow dung in natural farming, and how should I apply it?**

Yes, cow dung is a valuable natural fertilizer. Dilute it with water and apply it as a liquid fertilizer or use it in compost.

**20) What is green manure, and how can it benefit my soil in natural farming?**

Green manure involves planting cover crops like legumes and plowing them back into the soil to improve fertility, add organic matter, and fix nitrogen.

**21) How do I prevent soil erosion in natural farming practices?**

Techniques like contour farming, mulching, and using windbreaks can help prevent soil erosion in natural farming.

## **Pest and Disease Management**

**22) How do I manage pests and diseases in natural farming without chemical pesticides?**

Use natural predators, trap crops, neem-based products, and companion planting to manage pests and diseases.

**23) Are there natural alternatives to chemical pesticides that are effective in Indian conditions?**

Yes, substances like neem oil, garlic, and chili spray can help control pests effectively in Indian conditions.

**24) What role do neem-based products play in natural pest management?**

Neem-based products act as natural insecticides and fungicides, disrupting the life cycles of many pests.

**25) How can I prevent the spread of diseases in my crops using natural methods?**

Practicing crop rotation, maintaining plant health, and avoiding overcrowding can help prevent the spread of diseases naturally.

**26) Are there companion planting techniques that help control pests in natural farming?**

Yes, companion planting involves planting specific crops together to deter pests or attract beneficial insects, aiding in pest control.

## Crop Rotation and Intercropping

**27) What is crop rotation, and why is it important in natural farming?**

Crop rotation involves planting different crops in successive seasons to improve soil health, reduce pest pressure, and enhance nutrient cycling.

**28) How do I decide which crops to rotate on my farm in natural farming?**

Choose crops based on their nutrient needs, growth habits, and compatibility with the local climate and soil conditions.

**29) Can you explain the concept of intercropping, and how does it work in natural farming?**

Intercropping involves planting two or more crop species together in the same field. It optimizes space, reduces pests, and improves soil health.

**30) Are there specific combinations of crops that work well in intercropping for Indian farmers?**

Suitable combinations vary by region, but common examples include planting legumes with cereals or herbs with vegetables.

**31) How does intercropping help improve soil health and crop yields in natural farming?**

Intercropping diversifies root systems, improves nutrient cycling, reduces soil erosion, and enhances overall soil health.

## Weed Management

**32) What are effective methods for controlling weeds in natural farming?**

Effective weed management methods include mulching, hand weeding, and using natural herbicides like neem-based products.

**33) Can mulching help with weed management in natural farming, and how is it done?**

Yes, mulching involves covering the soil with organic materials like straw, leaves, or crop residues to suppress weed growth and conserve moisture.

**34) Are there natural herbicides or weed suppressors I can use in natural farming?**

Neem-based products and vinegar solutions can act as natural weed suppressors without harming the environment.

## Harvesting and Post-Harvest Practices

### 35) How do I know when my crops are ready for harvest in natural farming?

Monitor crop maturity indicators like color, size, and texture to determine the best time for harvest.

### 36) What are the best practices for harvesting crops in natural farming to maintain their quality?

Use sharp, clean tools, handle crops gently, and avoid harvesting during adverse weather conditions.

### 37) Are there natural methods for extending the shelf life of harvested produce?

Techniques like proper storage, cool temperatures, and using natural preservatives can extend the shelf life of harvested produce.

### 38) How should I store organic produce to prevent spoilage and pests?

Store produce in clean, well-ventilated containers or rooms, and consider using natural methods like neem leaves to deter pests.

## Market and Selling Organic Produce

### 39) Is there a demand for organic produce in the Indian market?

Yes, there is a growing demand for organic produce due to increasing health consciousness among consumers.

### 40) How can I market and sell my organic produce locally and regionally?

Explore local farmers' markets, organic food stores, online platforms, and direct sales to reach consumers interested in organic products.

### 41) Are there certification processes for organic produce, and should I consider getting certified?

Organic certification is optional, but it can enhance market opportunities. Certification agencies like NPOP and PGS-India offer organic certifications.

### 42) What are the potential price premiums for organic crops in the Indian market?

Organic crops often command higher prices, but premiums vary depending on factors like crop type, location, and market demand.

## Challenges and Concerns

### **43) What are some common challenges faced by Indian farmers practicing natural farming?**

Challenges may include pest and disease management, knowledge gaps, resistance to change, and marketing hurdles.

### **44) How do I deal with fluctuations in crop yields and income in natural farming?**

Diversify crops, create buffer savings, and participate in farmer networks to share experiences and strategies for managing fluctuations.

### **45) Are there any risks associated with natural farming practices?**

Risks include potential crop losses due to pest outbreaks or weather conditions, but these can often be mitigated with proper planning.

### **46) How can I deal with resistance from traditional farmers or family members regarding natural farming?**

Engage in dialogue, share success stories, and demonstrate the benefits of natural farming to gradually win support.

## Resources and Support

### **47) Where can I find training and educational resources on natural farming in India?**

Seek training from local agricultural extension services, government programs, NGOs, and online courses and forums focused on natural farming.

### **48) Are there government initiatives or programs that support natural farming?**

Yes, government initiatives like Paramparagat Krishi Vikas Yojana (PKVY) and Rashtriya Krishi Vikas Yojana (RKVY) offer support for natural farming practices.

### **49) Can I join a local natural farming cooperative or association for support and networking?**

Yes, joining local cooperatives or associations can provide valuable support, knowledge sharing, and access to resources.

### **50) What online forums or communities are available for Indian farmers practicing natural farming?**

Online platforms like social media groups, forums, and websites dedicated to natural farming can connect you with like-minded farmers and experts for guidance and support.



**51) What is biodiversity?**

Biodiversity is the number and variety of plants, animals and other organisms that are living in an ecosystem.

**52) Why the understanding of Biodiversity is important for farmers?**

Biodiversity helps farmers understand how different species interact with one another in an ecosystem. This knowledge can help us understand how we can better manage our land so that we can sustainably grow our food supply for future generations.

**53) How Natural Farming helps in maintaining biodiversity?**

Natural Farming excludes use of harmful chemical fertilizers, focuses on increasing organic matter in soil. Healthy soil supports more soil biodiversity such as beneficial microbes, earthworms etc. It helps in maintaining population of beneficial insects/birds/pollinators.

**54) What is crop diversification?**

**Crop diversification** is a practice of cultivating more than one species in a given agricultural area, in the form of crop rotation and/or association.

**55) What is the meaning of minimum soil disturbance?**

The activities adopted during soil preparation in natural farming which reduces the disturbance in soil.

**56) How minimum soil disturbance can be achieved?**

It can be achieved by following:

- Reduced tillage practices (such as ploughing, harrowing, and all the tillage operations ordinarily applied to prepare the soil for seed germination.
- Direct seeding.
- Direct application of natural fertilizer.

**57) What is Whapsa?**

It is the condition where there are both air molecules and water molecules present in the cavity between two soil particles. It is the soil's micro climate on which soil organisms and roots depend for most of their moisture and some of their nutrients.

**58) What is mulching?**

Mulching is defined as covering of soil surface using both live crops and straw (dead plant biomass).

**59) What are the types of mulching?**

There are two types of mulching-

**1) Crop Residue Mulch:**

Crop materials leftover after harvesting such as: dried leaves, straw, small twigs etc. are used to cover the soil.

**2) Live Mulch:**

Live mulching is practiced by developing multi-cropping/inter cropping patterns of short durational crops in the rows of a main crop.

Example: planting wheat/rice (supply nutrients such as potash, phosphate and Sulphur) with pulses (nitrogen-fixing plants)

**60) What is Multi-cropping?**

Multi-cropping is growing of two or more crops simultaneously on the same piece of land.

**61) What role does earthworm play in farming?**

Earthworms consume biodegradable materials and convert it into rich manure. Earthworms "plow" and mix up the soil. Their tunneling loosens the soil so water and nutrients can go downward. The nutrients in worm castings enrich the soil. The slime they secrete contains nitrogen, an important nutrient for plants.

**62) What is the role of micro-organisms in nutrient management?**

Microbes can make nutrients and minerals in the soil available to plants, produce hormones that spur growth, stimulate the plant immune system and trigger or dampen stress responses. In general, a more diverse soil microbiome results in fewer plant diseases and higher yield.

**63) What is Humus?**

Humus is dark, organic material formed by decay of plant and animal matter.

**64) How humus is formed in soil?**

Plants drop leaves, twigs, and other material to the ground. These materials pile up and form leaf litter. When animals die, their remains add to the litter. Over time, all this litter decomposes/breaks down, into its most basic chemical elements through the process known as humification. The thick brown or black substance that remains after most of the organic litter has decomposed is called humus. The humus produced by humification is thus a mixture of compounds and

complex biological chemicals of plant, animal, or microbial origin that has many functions and benefits in soil.

**65) How is humus beneficial to soil?**

It makes the soil fertile as it contains many useful nutrients for healthy soil. It helps in suppression of soil –borne diseases. It helps the soil retain moisture by increasing micro porosity. It encourages the formation of good soil structure and increases availability of plant nutrients.

**66) What are the nutrient components of cow urine and how is it beneficial to soil in natural farming?**

Nutrient-rich cow urine with nitrogen, potassium, and phosphorous is highly beneficial to soil for dilution and direct application or with formulations and indirect applications. Besides macronutrients, the presence of sulfur, sodium, manganese, iron, enzymes, and chlorine make cow urine an integral natural pest repellent that requires low external input for sustainable agriculture.

**67) What is a Soil Health Card?**

SHC is a printed report that a farmer will be handed over for each of his holdings. It will contain the status of his soil with respect to 12 parameters, namely N, P, K (Macro-nutrients) ; (Secondary- nutrient) ; Zn, Fe, Cu, Mn, Bo(Micro - nutrients) ; and pH, EC, OC (Physical parameters). Based on this, the SHC will also indicate fertilizer recommendations and soil amendment required for the farm.

**68) What is the importance of Soil Health Card:**

The card will contain an advisory based on the soil nutrient status of a farmer's holding. It will show recommendations on dosage of different nutrients needed. Further, it will advise the farmer on the fertilizers and their quantities he should apply, and also the soil amendments that he should undertake, so as to realize optimal yields. It will be made available once in a cycle of 3 years, which will indicate the status of soil health of a farmer's holding for that particular period. The SHC given in the next cycle of 3 years will be able to record the changes in the soil health for that subsequent period.

**69) What is the procedure of soil sampling:**

Soil samples will be drawn in a grid of 2.5 ha in irrigated area and 10 ha in rain-fed area with the help of GPS tools and revenue maps. Soil Samples will be collected

by a trained person from a depth of 15-20cm by cutting the soil in a “V” shape. It will be collected from four corners and the centre of the field and mixed thoroughly and a part of this picked up as a sample. Areas with shade will be avoided. The sample chosen will be bagged and coded. It will then be transferred to soil test laboratory for analysis. The State Government collect samples through the staff of their Department of Agriculture or through the staff of an outsourced agency. Soil Samples are taken generally two times in a year, after harvesting of Rabi and Kharif Crop respectively or when there is no standing crop in the field.



