

What is Natural Farming?

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Introduction

Natural farming is a system where the laws of nature are applied to agricultural practices. This method works along with the natural biodiversity of each farmed area, encouraging the complexity of living organisms, both plants, and animals that shape each particular ecosystem to thrive along with food plants. Natural farming is an ecological farming approach established by Masanobu Fukuoka (1913–2008), a Japanese farmer and philosopher, introduced in his 1975 book.



Natural farming mindset into five principles:

1. No tillage
2. No fertilizer
3. No pesticides
4. No weeding
5. No pruning

1. NO Till:

No-till farming also known as zero tillage or direct drilling is an agricultural technique for growing crops or pasture without disturbing the soil through tillage. No-



till farming decreases the amount of soil erosion tillage causes in certain soils, especially in sandy and dry soils on sloping terrain. Tilling may destroy crucial physical characteristics of a soil such as *water suction*, its ability to send moisture upwards, even during dry spells. The effect is due to pressure differences between soil areas. Furthermore, tilling most certainly destroys soil horizons and hence disrupts the established flow of nutrients. The increases in organic carbon and nitrogen increase aerobic, facultative anaerobic and anaerobic bacteria populations

- **Effect of Till on Soil and others**

Tilling over-pumps oxygen to local soil residents, such as bacteria and fungi. As a result, the chemistry of the soil changes. Biological decomposition accelerates and the microbiota mass increases at the expense of other organic matter, adversely affecting most plants, including trees and vegetables. For plants to thrive a certain quantity of organic matter (around 5%) must be present in the soil. Tilling uproots all the plants in the area, turning their roots into food for bacteria and fungi. This damages their ability to aerate the soil. Living roots drill millions of tiny holes in the soil and thus provide oxygen. They also create room for beneficial insects and annelids (the phylum of worms). Some types of roots contribute directly to soil fertility by funding a mutualistic relationship with certain kinds of bacteria (most famously the rhizobium) that can fix nitrogen.

2. No Fertilizers

Addition of chemical fertilizers help in development of plant but not of soil, which continues to deteriorate.

3. No pesticides

Without the presence of pesticides, fields would be greener in every sense of the word. The soil would be healthier, erode less easily and the surrounding environment would be safer for wildlife and plants trying to thrive.

- **Effect of pesticide use on soils and others:**



Pesticides use soil is another key farming element that's damaged by pesticides. After the pesticides are sprayed, they can alter the soil's pH levels and make it more difficult for crops to grow. When the soil's structure is weakened, it erodes more easily and gets washed away by heavy rains. Pesticides release chemicals into the environment where they're sprayed. Harmless bugs are killed when they're caught in the spray, and other animals are hurt when they drink chemical runoff after fields drain into local rivers.

Advantages of Natural Farming

- Natural farming reduces the initial cost of farmers.
- Farmer's income automatically increases.
- The soil ecosystem improves.
- Cow dung adds soil value. It is full of nutrients value and available locally.
- Bacteria of cow dung decompose the organic matter in soil and make soil for the plants.
- It required less electricity and water.
- NF improves the productivity of the soil.
- It decreases the disease attack risk on the crop.
- In Natural Farming we use utilizing less chemical fertilizer, farming production quality improves.

