

# Anyone with half an acre of land can start natural farming

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[Subhash Palekar](#) is a much-celebrated name in the agriculture sector.

A proponent of [Zero Budget Natural Farming](#) (ZBNF), he was in Chennai recently, after conducting workshops for farmers on natural farming on the outskirts of the city. In a chat with us, he talks about natural farming and how it can address the agrarian crisis.

*What is ZBNF? And why do you term it Zero Budget 'Spiritual' Farming? Zero Budget Natural Farming is titled so because the input cost for such farming method is zero. You do not have to purchase anything from outside. All the things required for your crop is available around the roots of the plants. The plants take nutrients from the soil, air, water and sunlight. Since everything required for your crop comes from nature itself, I prefer to term it Zero Budget Spiritual Farming.*

*How does this differ from chemical and [organic farming](#)? Chemical farming became rampant due to Green Revolution. In an effort to become self-reliant in food grains and pulses, we allowed chemical companies to enter the country and supply fertilizers to us. Those who use chemicals believe that there is nothing in the soil and we have to add fertilizers from the outside to make it nutrient-rich. But this is not true. Our lands have been fertile before the [Green Revolution](#) and our ancestors were farmers. Take a look at the forests — trees grow in the forests without any cultivation, fertilizers, insecticides and irrigation. This means, for the plants to grow and produce yield, there's no need to add things from the outside. Nature provides all the nutrients needed for the plants. But these nutrients are not always available in the form which the roots can absorb. So, agricultural scientists are asking the farmers to add them artificially, which is wrong. Now, coming to the production using chemicals, has it increased our crop yield? No. In fact, due to use of fertilizers, large acres of land have gone barren. We have come to a stage where the yield is coming down year on year and no chemical addition is able to save the land and increase produce. When I discussed this with agricultural scientists, they, too, agreed with this. As for organic farming, it's not an Indian technology. The five inputs in organic farming are composting, vermi-composting, bio-dynamics, m-solution and garbage enzyme. While practising organic farming, you have to spend more for each input since you have to purchase it. It is extremely high-cost — as high as four to five times that of chemical farming. Also, it's being observed that the production has been on the decline in organic farming. In addition to this, the greenhouse gas emission is very high in both chemical farming and organic farming, thus adding to the global warming. However, in ZBNF, there's no greenhouse gas emission.*

## [What are the inputs in ZBNF?](#)

*This is a holistic approach and it eliminates the cost of fertilisers, pesticides and special seeds. Due to chemicals and fertilisers, the micro-organisms that convert the nutrients in the soil to a usable form for the crops are not available. The four wheels of ZBNF are Bijamrita, Jiwamrita, Mulching and Waaphasa. Bijamrita is a natural way of seed treatment. Instead of using hazardous chemicals, we treat the seeds using local cow urine, cow dung and a little soil from the bund of the farm. Jiwamrita is made using water, local cow dung, local cow urine, jaggery, dal flour and soil. When we apply Jiwamrita to the soil, we add nearly 500-crore micro-organisms to the soil. These micro-organisms convert the non-available form of nutrients — nitrogen, phosphate, potash, iron, sulphur, calcium, etc — into available forms. Two hundred litres per acre per month is enough as a culture to convert the soil. Once you apply Jiwamrita to the soil, the earthworms start their work and they can bring the nutrients from 15 feet deeper in the soil to the upper surface and make them available to the roots. But these earthworms, micro-organisms and other insects need a favourable micro-climate, i.e. 25 to 32 °C temperature. When we mulch the soil, this micro-climate or humus is created automatically. We use three types of mulching — soil mulching, straw mulching and live mulching for this. If there is no Waaphasa (soil aeration) in the soil, the plants will die. For this, water is sprayed on degradable materials that are allowed to remain on the farmland. This forms humus that helps retain the moisture and nutrients in the soil. Farmers need to draw only 10 per cent of the required water from the soil for cultivation using this method. Insects and pests are managed using specially prepared mixtures involving cow dung, cow urine, neem leaves, neem pulp and green chillies.*

## *How can ZBNF address the agrarian crisis?*

*Chemical farming has not only made food a poison but it also has reduced the yield by making lands barren. Organic farming, with its specified ingredients and processes, is very costly and poor farmers are unable to find it a sustainable model. So, farmers are dependent on loans and subsidies. When the expected yield is not there, they find it tough to repay the loans and hence, the suicides. But in ZBNF, the farming methods are cost effective and useful. They can use whatever is available locally and within their means to grow the crops. Above all, studies have shown that in this method the yield goes up over a period of time. We have observed that by using this method, both crop productivity and farmers' income have doubled. For example, basmati rice gave an increased yield of 16 tonnes per acre on an average when this method of farming was used. Additionally, using ZBNF techniques, one can convert even the most infertile land into a fertile one. From three months of employing this technique, you can observe the change. Our country has 35-crore acres of farmland and in 2015, our food grain production was 25 crore metric tonnes. The area of cultivation is not going to increase, but India's population is estimated to hit 162 crore by 2050, and we want 50 crore*

metric tonne grains to feed the people. So, if we want to increase the food grain production, we have to opt for ZBNF. [How much land is required to start ZBNF?](#)  
[What will be an approximate income from a one-acre farm?](#)

Anyone who is having half an acre of land can start ZBNF. I can assure that from a one-acre farm, a family can make rupees six lakh per annum. But what you have to ensure is to select your crop based on what your family or farmers in your area had been practicing. Local varieties of rice and other crops give better yield.

**Where are ZBNF practiced in Tamil Nadu?**

People in the south, especially Tamil Nadu, have been very curious and interested in newer methods of farming. There are quite a few places in Tamil Nadu where ZBNF is followed. There are farmers in Pollachi, Krishnagiri, Dindigul and Kancheepuram who follow this technique among others. Recently, a training centre has been started in Thirukazhukundram to teach farmers on this method.

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