

Zero Budget Natural Farming

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Introduction:

Zero Budget Natural Farming (ZBNF) is the practice of growing crops without the use of any external inputs, such as pesticides and fertilizers. The phrase “Zero Budget” refers to all crops with zero production costs. The farmers’ revenue is increased as a result of ZBNF’s guidance towards sustainable farming methods that help to maintain soil fertility, assure chemical-free agriculture and ensure a cheap cost of production (zero cost). Simply said, ZBNF is a farming technique that emphasizes cultivating crops in harmony with the environment. Under the specific program known as Paramparagat Krishi Vikas Yojana (PKVY), the government has been encouraging organic farming. This program supports all different types of chemical-free agricultural methods, including Zero Budget Natural Farming.

Zero Budget Natural Farming (ZBNF) is a type of farming that doesn’t use chemicals and costs nothing to grow and harvest plants (taking into consideration the costs incurred by the farmers are recovered through inter-cropping). Zero Budget Natural Farming became well-known when Finance Minister Nirmala Sitharaman talked about it in her 2019 budget speech as a way to double farmers’ incomes.

Zero Budget Natural Farming: -

- Zero budget natural farming is a method of chemical-free agriculture drawing from traditional Indian practices.
- It was originally promoted by agriculturist Subhash Palekar, who developed it in the mid-1990s as an alternative to the Green Revolution’s methods that are driven by chemical fertilizers and pesticides and intensive irrigation.
- It is a unique model that relies on Agro-ecology.
- It aims to bring down the cost of production to nearly zero and return to a pre-green revolution style of farming.
- It claims that there is no need for expensive inputs such as fertilizers, pesticides and intensive irrigation.



Subhash Palekar: The Founder of Zero Budget Natural Farming in India: -

Subhash Palekar, an Indian farmer from the village of Belora in the district of Amravati in the Vidarbha region of Maharashtra, came up with the “Zero Budget Natural Farming” model. Midway through the 1990s, Subhash Palekar came up with this method as an alternative to the Green Revolution, which used chemical fertilizers, pesticides, and a lot of watering. From 1972 to 1985, when he was using chemical farming, his crops kept getting better and better. But after 1985, it began to go down. He didn’t understand why his production was going down when he was using the Green Revolution method of chemical farming to its fullest. After three years of looking for answers, he decided that agriculture science is based on a false philosophy. Green revolution isn’t right in some way. Then he started looking for ways to farm without using chemicals. From 1986 to 1988, Shubhash Palekar looked for natural ways to farm, which led him to study the plants in forests. Here is where he learned about the natural system at work in forests that keeps ecosystems healthy. From 1989 to 1995, Subhash Palekar tried different things to see how he could use natural methods in farming. After doing a lot of research, he confirmed that different methods worked and combined them into the “Zero Budget Natural Farming” method.

The points put forward by Subhash Palekar in support of ZBNF are:

1. Lakhs of farmers are using the technique of Zero Budget Natural Farming in different agro-climatic zones and soil types.
2. To grow a plant, whatever is needed is present in nature. No chemicals are required to grow a plant. An example – Earthworm excreta has seven times more nitrogen than the soil.
3. A large number of small farmers are using this technique as they see Zero Budget Natural Farming as a tool that can free them from debts and defaults.
4. It makes farming both profitable and sustainable.

Principles of Zero Budget Natural Farming: -

- Zero external inputs
- Crops to cover the soil for 365 days (Living Root)
- Soil disturbance at a minimum
- Bio-stimulants as essential catalysts
- Utilize native seed for mixed farming

- Mixed cropping
- The incorporation of trees onto the farm
- Conservation of moisture and water
- Bring animals into farming
- More organic debris in the soil
- Using plant extracts to control pests
- No artificial pesticides, herbicides or fertilizers

Components of Zero Budget Natural Farming: -

There are four primary ZNBF components and models:

1) Bijamrita:

As native cow species are more adapted to our region's climatic circumstances and easier for small and marginal farmers to maintain, the seeds are treated with formulations made using their dung and urine. While neem leaves and pulp, tobacco, as well as green chilli extracts are used to manage insects and pests, bijamrita is utilised to treat seeds.

Benefits of Bijamrita:

Fungal and other seed- and soil-borne infections may impact the seeds sowed in the field. The seeds are shielded against illnesses by the "Bijamrita" seed treatment.

2) Jiwamrita/Jeevamrutha:

A natural resource utilised to restore the fertility and nutritional value of soil is cow dung. A gram of cow dung may contain 300–500 billion helpful micro-organisms. These bacteria help decompose the soil's biomass and transform it into readily usable nutrients for crops. Cow dung and cow urine are used to make Jiwamrita. It is a component of the plants' diet. It is a fermented microbial culture made from uncontaminated soil, jaggery, cow dung, urine, and pulse flour. When applied to soil, this fermented microbial culture enriches the soil with nutrients and acts as a catalyst to encourage the activity of earthworms and microorganisms. For each hectare of land, 500 litres of jeevamrutha should be applied twice a month; following three years, the system might become self-sustaining. A single native cow is adequate 30 acres of land.

Benefits of Jiwamrita:

By promoting soil microbial activity, this culture improves the availability of nutrients to plants, shields crop from soil diseases, and raises the carbon content of the soil.

3) Acchadana/Mulching:

The process of mulching involves adding cover crops, organic debris, or agricultural residue to the topsoil.

Benefits of Acchadana/Mulching:

Decomposing the materials used for mulching results in humus, which not only improves soil nutritional status but also conserves topsoil, boosts soil water retention, reduces evaporation loss, and promotes soil fauna. It also inhibits weed growth.

4) Waaphasa/Moisture (Soil Aeration):

For plants to grow and thrive, the soil must have adequate aeration.

Benefits of Waaphasa/Moisture:

Applying Jiwamrita and mulching promotes soil aeration, humus content, availability of water, water retention capacity, and soil structure, all of which are essential for crop growth, particularly during dry spells.

Benefits of Zero Budget Natural Farming: -

- The ZBNF method promotes soil aeration, minimal watering, intercropping, bunds and topsoil mulching and discourages intensive irrigation and deep ploughing.
- By using mulching, it is also possible to prevent the burning of residue.
- ZBNF greatly lowers methane emissions.
- At a time when chemical-intensive farming is resulting in soil and environmental degradation, a zero-cost environmentally-friendly farming method is definitely a timely initiative.
- It suits to all crops in all agro-climatic zones.
- For all crops, ZBNF method uses 50 to 60% less water and electricity compared to non-ZBNF methods.
- The primary reason for debt and suicide amongst farmers is the rising expense of external inputs (seeds, fertilizers, pesticides, and herbicides). Over half of all farmers are in indebtedness, and nearly 70% of households in the agricultural sector spend more than they make, according to data from the National Sample Survey Office (NSSO).
- The cost of production could be decreased and agriculture could be turned into a “zero budget” endeavor since under ZBNF there is no requirement of spending money or taking out loans for external inputs.



- This will enable many small farmers to escape the debt cycle and pave the way for the income of farmers to double.
- As ZBNF is a completely chemical-free technique, it is environmentally friendly and produces organic yields which fetch the farmer's higher profits than from normal agricultural yields.
- Organic foods thus avoid diseases which used to be caused by non-organic foods, in a long run will not only make people healthy but also reduce the burden on the healthcare infrastructure in general.

Conclusion: -

ZBNF help farmers to save money by encouraging them to use natural fertilizers and seeds from their own area. It uses biological pesticides. Farmers can use cow dung, urine, human poop, plants, natural fertilizers and earthworms to protect their crops. It keeps the soil from getting worse and costs less for the farmer.

