

Zero Budget Natural Farming: Need of the Hour

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What Is Zero Budget Natural Farming

- ZBNF is a farming system is popularised by Padma Shree Mr. Subash Palekar from Maharashtra in mid-1990's as an alternative to the green revolution
- There is no standardised definition for zero budget natural farming but, one can define it as a farming system which can neutralise/ sustain the Agro – ecology and help doubling the farmer's income by different means such as cutting the input cost; profiting supplementary crops.
- The term “zero budget” specifies that there would be zero cost of production.
- The term “natural farming” specifies that the farming process is done in a natural way where we would not use any kind of chemicals and intensive practices on the field.
- This process not only helps in increasing soil health and ecological balance but, also helps the farmers escape from the vicious cycle of indebtedness and can decrease the cases of farmer suicides.

Process of ZBNF

ZBNF has 4 basic principles they are Jeevamrutha, Bijamrita, Acchadana, Whapasa

Jeevamrutha

- It is used as a nutrient supply for soil and plants and is also used for preventing fungal and bacterial diseases
- It is made up of 200 litres of water, 10 kg local cow dung, 5 – 10 litres local cow urine, 2 kg jaggery, 2 kg pulse flour, 2 kg of local soil. All these are mixed and are stored for 48 hours in shade. 200 litres of Jeevamrutha is sufficient for one acre land.
- It helps in boosting plant growth and results in high yield. It builds the plant immune system to be resistant to diseases. It also helps in increase of useful microorganism in soil Eg: *Rhizobium*

Bijamrita

- It is a treatment for seedling/ seeds/ planting material. It is helpful in preventing seed borne diseases and protecting the young roots from fungal diseases.
- It is made of 20 litres of water, 5 kg local cow dung, 5 litres local cow urine, 50-gram lime and local soil.
- The mixture should be added to the seeds as a seed treatment. Coat them and mix the seeds by hand to even spread. For leguminous seeds just dip and let the solution dry on the seed.

Acchadana

- It is used to improve the soil fertility and helps in reviving the top soil. It also helps in increase of water holding capacity of soil and can also indirectly prevent the growth of weeds.
- It is a mixture of soil, straw, dry leaves. The mixture is applied on the field at the time of land preparation and can also be used as sowing sites.

Whapasa

- It is used as a subsidiary for irrigation.
- It is a condition in which soil contains both air and water molecules.
- This condition encourages the reduction of irrigation and provides balance between moisture and air in the soil. And helps in soil aeration.

Pest management in ZBNF

- ✚ Agniastra
- ✚ Brahmastra
- ✚ Nimastra

How is it Different from Organic Farming?

Some of the major differences between organic and natural farming are

- Organic farming concentrates on not using chemicals but, natural farming concentrates on practising farming in natural ways according to natural laws.
- For instance, in organic farming usage of vermicompost, manure can be seen. In natural farming the soil is encouraged to have decomposition by increasing its organic matter through microbes and earthworms are introduced naturally on top soil which will help in nutrient addition in soil

- So, natural farming doesn't consist practices like ploughing, tillage, manuring, weeding, composting, supplemental fertiliser etc.,

Similarities between Organic Farming And Natural Farming

Both organic and natural farming has practices such as

- Chemical free farming
- Usage of local breeds of seeds, native varieties vegetables, pulses are grown.
- Usage of homemade pest control methods.

Uses of ZBNF

- Natural farming helps in maintaining soil micro-climate as the soil is always covered with organic mulch (Acchadana) which creates perfect humus and conditions for the growth of healthy micro bacteria.
- Local cow breeds are used for dung and urine. Usage of indigenous breeds like Gir, Shaiwal etc., this helps the farmer get the pure material from the cow and also the bi products of the cow can be used in value addition for farmers income and as being a local cow maintenance cost of the cow is comparatively low than an exotic cow.
- Usage of Jeevamrutha aids in a micro flora culture within the soil and improves soil aeration and fertility. This is due to presence of cow dung and cow urine in Jeevamrutha.
- Usage of mulch decreases weed growth on the farm and lets the farmer use the maximum area of the field for cultivation purpose.
- Multi- cropping is a practice which aids in doubling the farmers income and getting out of monoculture is getting him out of the vicious cycle of debt.
- One of the main objectives of the farming system is zero budget. This will make the farmer manage his macro- economic structure without any input as the input cost is getting to zero as the farmer starts planning his model with locally available resources and materials.

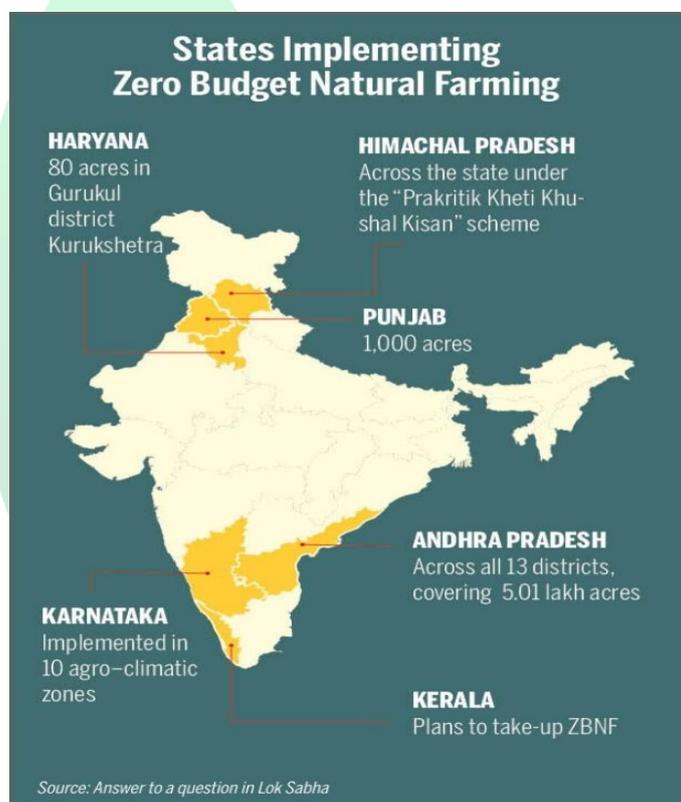
Government Initiatives for Promoting

- The government of India promotes organic farming through the schemes of Paramparagat Krishi Vikas Yojana (PKVY) since 2015-16 and Rashtriya Krishi Vikas Yojana (RKVY).
- Under the PKVY scheme, several organic farming methods like zero budget natural farming (ZBNF), natural farming, vedic farming, rishi farming, cow farming, homa

farming, etc. are included wherein states adopt any model of organic farming including ZBNF depending on the farmer's choice.

- According to the RKVY scheme, organic farming or natural farming model components are considered by the respective State Level Sanctioning Committee (SLSC).
- The Union Budget 2022-23 has proposed to promote chemical-free natural farming throughout the country, beginning with 5km wide land corridors along the Ganga. The Budget also proposed upgrading curricula in agricultural universities to include courses on ZBNF.

States Which Implemented ZBNF



Criticism on ZBNF

- The green revolution came to ensure food security in India however due to mismanagement and excess use of the fertiliser it created many environmental problems. Experts of farming still doubt zero budget farming practice, as in Sikkim state, it has been noticed that the yield of the farmers is declining due to organic farming

- Family labour cost, rent of land, cow maintenance, electricity cost, etc are ignored in the cost calculation

Answers for Criticism

- When we talk about the green revolution it consists of fertilizer usage and usage of exotic varieties. At the start of the green revolution, the farmers are made to come out of their comfort zone and are made to work with unknown technologies.
- But when it comes to natural farming farmers its more of a natural process and it doesn't need any new practice and just needs basic training about practices of making the Jeevamrutha, Bijamrita, Acchadana, Whapasa
- When it comes to yield disparity, it is scientifically proven that it takes 3-5 years' time according to the intensity of chemicals in the field.
- The cows used in this method are purely local cows so the maintenance is easy as the local cows are determined to resist the local crisis for example: drought, rain, heat etc. and its input can be the value addition of the cow products like milk, curd, paneer etc..

Conclusion

- Prime Minister said "The Centre has decided to double farmers' income by 2022 by improving technology, increasing milk production, use of solar light, honey production.
- Cutting down the toxicity in food chain can be made possible by practising ZBNF
- ZBNF in the drought prone regions of Andhra Pradesh is helping soils to produce more yield and offering small farmers decent lives Farmers' organisations together with the government provide the training. They encourage local communities, particularly women's self-help groups, to take up new farming practices that transform the land. The practices make farmers more resilient and able to fight climate change.
- According to UNCCD farmers are using less water and electricity and are now saving 2000 USD per season. Andhra Pradesh is planning to convert into 100% natural farming and making it world's largest Agro – ecological programme.
- ZBNF in Andhra alone covers 6 million farmers by 2025 – 26 and will be able to feed 9.6 billion by 2050 according to a united nation report.



- Across the world, agriculture is facing multiple setbacks, be it in the form of extreme weather events like floods and droughts or factors such as soil degradation, soil salinity and water shortage.
- As climate is changing, creating resilient food systems has become the need of the hour. And to restore agriculture ecology ZBNF is the need of millions of farmers in areas who are facing drought, desertification, soil infertility, excess fertilizer usage, trapped in debts and are being victims of suicides.

