

## Observing the Publicity about Zero Budget Natural Farming

Chandanpreet Kaur<sup>1</sup>, Karanbir Singh<sup>2</sup> and Himani Gautam<sup>3</sup>

<sup>1</sup>Assiseant Professor, Department of Agriculture, Chandigarh Group of Colleges, Jhanjeri, Mohali, Punjab, <sup>2</sup>M.Sc. Agriculture (Agronomy), Mata Gujri College Fatehgarh Sahib,

<sup>3</sup>Department of Entomology, Dr YS Parmar UHF, Nauni, Solan (HP)

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### Introduction

Zero budget natural farming is a method of chemical-free agriculture drawing from traditional Indian practices. This has led to a steady rise in awareness about organic agriculture and various other forms of natural farming. Zero Budget Natural Farming (ZBNF) is one among these various types of natural farming that are being practiced across India. This concept was popularized by Padmashri award winner **Subhash Palekar** from Maharashtra. This idea came across when Palekar studied tribal lifestyles and forest ecosystems in detail and he realized that forests do not require any human assistance for their existence and growth. Zero budget natural farming or holistic agriculture is a method of agriculture that counters the commercial expenditure. Alternative low-input farming practices have emerged in India and across the world likely to reduce input costs and higher yields for farmers, chemical-free food for consumers and improved soil fertility. The current trend in term of Indian agriculture is to get higher yields of farm produce without disturbing the nature of the soil since the area under cultivation is drastically reduced.

This comprehensive approach is emerging due to socio-environmental issues such as climate change, migration of the younger generation away from agriculture and lack of food security. ZBNF is one such low-input, climate-resilient farming that inspires farmers to use low-cost and locally-sourced and available inputs, eliminating the use of artificial/chemical fertilisers and industrial pesticides. The zero budgets farming model eliminates the cost of fertilizers, pesticides and seeds. This is the method of cultivation which makes the already existing nutrients in the soil such as phosphate, potash, zinc and calcium available in



absorbable form by the plants. Hence it is named as **ZERO BUDGET NATURAL FARMING**. The term 'zero budget' in ZBNF indicates that no budget is incurred as there are no external inputs in the form of fertilizers (farmyard or green manure), tractor cultivation (costing labor or fuel), micro-nutrients, pesticides or seeds from the market. This further adds to 25% reduction in labor. There is also an added advantage of 10% lesser water and power requirements.

#### **Why should ZBNP to be adopted?**

- Rising cost of Inputs
- High labor wages
- Volatile market price
- Fragile ecosystem – Unpredicted monsoon extremes
- Large suicide of farmers
- Change in Consumers preference towards safety food
- Cost of farming inputs is rapidly increasing.

#### **How ZBNP is unique?**

- An approach towards sustainability
- In zero budget natural farming nothing has to be purchased from the outside.
- It is expense-free farming. All things required for the growth of plants are available around the root zone of the plant.
- Farming with minimum electricity and water consumption
- Producing quality, poison-free food
- Agriculture without external input
- Techniques of multi-crop cultivation for higher net income
- Reducing external labour requirement
- Farming in tune with nature
- Saving the farmers from suicide themselves

## FOUR PILLARS OF ZERO BUDGET NATURAL FARMING



### 1. Jeevamrutha: Adding soil inoculants

Jeevamrutha is the first and important pillar of zero budget farming. Soil nutrition is the most important factor for plant growth. The required soil health can be achieved by either using fertilizers (chemicals that affects the soil in the longer run), or organic manure (a natural ingredient requiring manure preparation which is time-consuming and labor-intensive). But Zero Budget Natural Farming states the best method is to increase the microbial activity in the soil in such a way that nutrients are easily available, which is achieved by adding an inoculant made from fermented cow dung, cow urine and jaggery.



### 2. Beejamrutha: The seed treatment

Beejamrutha is the second pillar of zero budget natural farming. Seed treatment is normally done to enhance the nutritional accessibility for seeds and to protect them from any stress so as to enhance their viability. The conventional way of doing that is to coat it with a chemical. But in ZBNF, the seed treatment is done using cow dung, cow urine and soil. It is used to treat seeds, and it provides natural protection to seeds. This adds to the advantage of protecting the soil from seed-borne diseases.

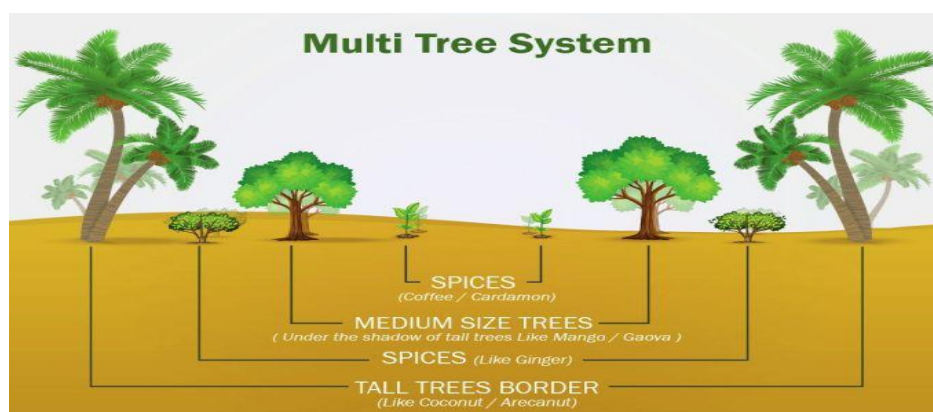
### 3. Acchadana (Mulching): An outer cover for the soil:

It is the third pillar of zero budget farming. Crop residue is used to cover the soil from direct sunlight hence reducing the evaporation loss and soil erosion. This, in turn, conserves soil moisture. Both earthworm activity and microbial activity increases drastically in such dark and moist conditions. There are following types of mulches that can be used effectively. Mulches help to conserve water in the soil as well as increase the organic matter content in the soil.

- **Soil Mulch:** This protects topsoil during cultivation and does not destroy it by tilling.
- **Straw Mulch:** Straw material usually refers to the dried biomass waste of previous crops, but it can be composed of the dead material of any living being
- **Live Mulch** (symbiotic intercrops and mixed crops): It is essential to develop multiple cropping patterns of monocotyledons and dicotyledons. Dicotyledons seedlings have two seed leaves grown in the same field, to supply all essential elements to the soil and crops.

### 4. Waaphasa: Maintenance of soil water balance or moisture

Waaphasa is carried out by spraying water on biodegradable materials. For more yield, stem width should be higher which means root coverage should be higher. When water is given outside the canopy of the crop, the root will automatically spread. This would increase the vegetation. If a trench is done, it must be so at least a foot away from the canopy so as the root can grow until there. Once it does so, the second trench is to be dug during the next season outside the first one as now, the canopy is more.



Typically, the atmosphere would contain about 35% humidity in summer, 65% humidity during the winter and 95% during the rainy season. It is this natural moisture absorbed from [www.justagriculture.in](http://www.justagriculture.in)



the atmosphere that is used in ZBNF. Further, a multi-tier cropping system is used instead of monocropping. This provides two advantages: one preventing hot air blows during summer to withstand minimum irrigation and also withstand against pest and insect attacks.

Particularly, this kind of multi-tree system is most suitable for plantation of more than three varieties of horticultural crops. The first layer will have drought-resistant, tall trees such as coconut, silver oak, teak etc. Under the shade of these trees, smaller fruit bearing trees like mango and guava can be planted. The space between these two trees can be used for spice crops like pepper or ginger (shadow crops). Shadow crops like coffee and cardamom (spices) can be planted in between the trees. This way the utility of the land can be increased by about five times. Space for furrows can be given in between to ensure percolation of rainwater into the aquifers. Trenches can also be made in between two shadow region crops. The trenching boarder can be cropped by dribble system with crops like cow pea, cucumber or watermelon. The trench lines must though be covered by mulching. Mulching helps in conserving water in the soil thus reduce the requirement of irrigation water.

#### **Advantages of zero budget Farming**

- This farming decreases the initial costs of cultivation which will automatically increases the income of farmers.
- It also improves the soil ecosystem.
- The ZBNF method promotes soil aeration, minimal watering, intercropping, bunds and topsoil mulching and discourages intensive irrigation and deep ploughing.
- ZBNF improves the productivity of the soil.
- The quality of produce also increases because of lesser use of chemical fertilizers.
- It decreases the disease attack risk on the crop.
- It reduces farming cost by reducing dependency on external inputs like seeds, fertilizer, pesticides, etc., which is a leading cause of indebtedness and suicide among farmers.

#### **Disadvantages of ZBNF**

The main disadvantage of this ZBNF method is due to the misunderstanding among farmers who go by the word. While the method is natural (more like the Ayurvedic treatment for humans), but it does incur a minimum input cost. Cost of labor for field work and cattle rearing is indirectly involved, and slowly, over years reduce the proportion of land under



chemical farming. States like Andhra Pradesh and Himachal Pradesh feed and its health requirements like vaccinations. Zero budget implies that no direct cost is incurred but there are indirect costs in terms of feed to the cattle, labor and so on which are kept at very minimal. Further, we should not forget, ecological changes cannot be done instantaneously. Zero Budget Natural Farming might be profitable in the long run, but as of now, completely depending on it for profit is not feasible (particularly for those owning more than 5 acres). The best option is to combine chemical-based farming, organic farming and ZBNF have started to take steps towards ZBNF, and we need to watch out for the outcome.

**Conclusion:** So at last it can be concluded that Zero budget natural farming save the input costs i.e. seed, fertilizer etc. It also increases the soil fertility as well as productivity by adding organic manures and residues. It is that system of farming has freed the farmers from debt trap and it has instilled in them a renewed sense of confidence to make farming an economically viable.

