

# ZERO BUDGET NATURAL FARMING

Y. B. Vala

Department of Agronomy, C. P. College of Agriculture,  
Sardarkrushinagar Dantiwada Agricultural  
University, Sardarkrushinagar, Gujarat

In India, the agriculture sector has been dominated for the past over 40 years by Green Revolution. Green Revolution has influenced the economy by increasing agricultural production and productivity. Now a days using conventional techniques in agriculture is like cancer to our soil and health as well. It does not only make the soil barren but eventually, the farmer goes under debt. A revolutionary impact of green revolution or modern agricultural techniques that broke away the old and outdated traditional practices. Zero Budget Natural Farming (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 fertilizers and industrial pesticides.



## ZERO BUDGET NATURAL FARMING (ZBNF)

Zero Budget Natural Farming, as the name implies, is a method of farming where the cost of growing and harvesting plants is zero. This means that farmers need not purchase fertilizers and pesticides in order to ensure the healthy growth of crops. All inputs are to be locally resourced from the farm or around the village.

Indian agriculturist Subhash Palekar practiced Zero Budget Natural Farming model in India. For this he was awarded the 'Padma Shri' in 2016. He considered it as 'Krishika Rishi'.

## NEED OF THE DAY?

- Substantial losses from pests, diseases and weeds persist, despite billions of lbs. of pesticides are used annually.
- Sustainability in agriculture is one of the major concerns of humanity as on today.
- To find farming systems which works in harmony with nature rather against it.

## ZBNF – A BIG CONCEPT !!

- An approach towards sustainability
- Expense-free farming
- Producing quality and poison-free food
- Agriculture without external input
- Reducing external Labour requirement
- Farming in tune with nature
- Techniques of multi-crop cultivation for higher net income
- Farming with minimum electricity and water consumption
- Saving the farmers from suicide and leaving behind their families as beggars

## ZBNF IN INDIA

Zero Budget Natural Farming (ZBNF) is a set of farming methods, and also a grassroots peasant movement, which has spread to various states in India. It has attained wide success in southern India especially.

## WHY ZBNF ?

- Rising cost of Inputs
- High labour wages
- Volatile market price
- Fragile ecosystem – Unpredicted monsoon extremes
- Large suicide of farmers
- Rising Environmental concerns
- Change in Consumers preference towards safety food
- Combat climate change



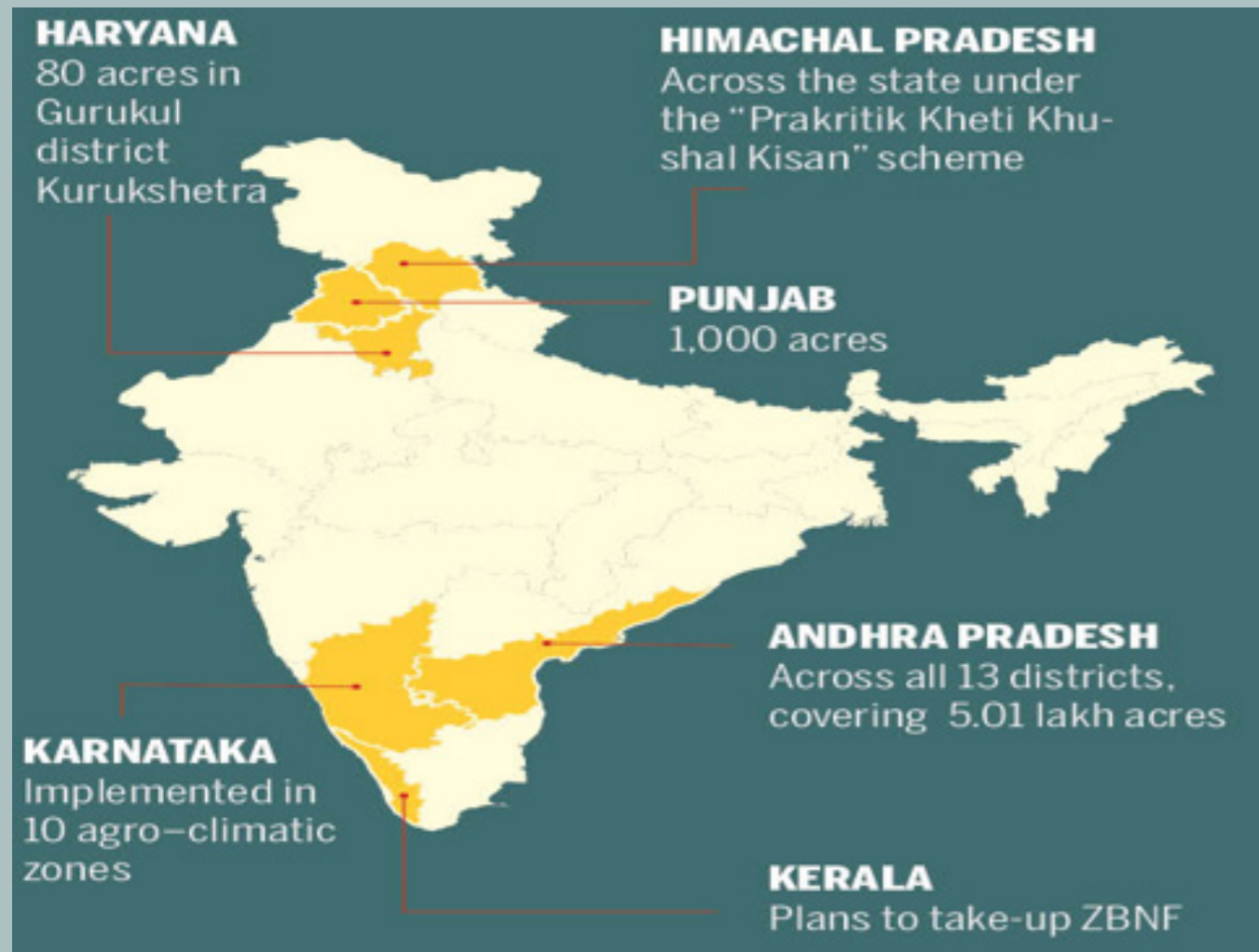
## WHY WE DON'T NEED ANY FERTILIZERS, PESTICIDES AND HERBICIDES IN ZBNF ?

- Bhumi Annapurna: Means soil is rich with all nutrients for plants to grow.
- Plants do not compete for the food with weeds. They coexist and live in symbiosis.
- Natural pest controls in the form of complementary crops and *Asthras* will help.

## FOUR PILLARS OF ZBNF:

### 1) Jeevamrut:

*Jeevamrut* is a organic manure. This is fermented microbial culture which is prepared by natural resources. *Jeevamrut* helps to increase the microbial activity in the soil. The 48 hrs. fermentation process multiplies aerobic and anerobic bacteria present in the cow dung and urine, as they eat organic ingredients and a handful of undistributed soil acts as inoculate of native species of microbes and organisms. It can be applied through irrigation water or foliar spray. While transiting from conventional input-intensive agriculture, the application of *Jeevamrut* to the soils and plants is required only for the first three years because after that the system becomes self-sustaining.



## 2) *Beejamrut*:

This is an organic manure which is prepared from locally available natural resources for the purpose of treatment for seeds, seedlings or any planting material. It reduces the possibility of seed infestation by pests and protects young roots from fungus, soil-borne diseases, and seed-borne diseases that generally affect the plants after monsoon. In the ingredients, the dung and urine from the indigenous breed cow act as a powerful fungicide, and antibacterial agent, respectively.

## 3) *Acchadana/Mulching*:

There are three types of mulching.

- Soil mulching: It protects topsoil by avoiding tilling. It facilitates aeration, and promotes water retention.
- Straw/Biomass mulching: Application of dry organic matter (dead material of any living being) along with Jeevamrut will lead to decomposition and humus formation that will improve soil fertility.
- Live mulching: This suggests inter-cropping or mixed-cropping by combining monocots (those seedlings with one seed leaf like rice and wheat) with dicots (those seedlings with two seed leaves like

legumes) in the same plot of land. This will create a symbiotic relationship because monocots will supply elements like potash, phosphate, and sulphur while dicots will work towards nitrogen-fixation.

## 4) *Whapasa/Moisture*:

It is the condition where there are both air molecules and water molecules present in the soil. Thereby helping in reducing irrigation requirement. Mixture of 50% air and 50% water vapours in the cavities between two soil particles.

## DIFFERENT *Asthras* FOR PEST MANAGEMENT IN ZBNF:

1) *Agniastra*- This is the mixture of chilli, garlic, neem and cow urine (all available in house or locally) and used to control the insects (leaf roller, stem borer, fruit borer, pod borer).

2) *Brahmastra*- Mixture of several locally available plants like neem, guava, custard apple, pomegranate etc. with cow urine and it is used to

spray over the leaves of the plants. It is used to control all of the sucking pests, pod borer, fruit borer etc.

3) *Neemastra*- Mixture of cow dung, urine, neem etc. and used against leaf sucking insects and mealy bugs.

## GOVERNMENT SCHEMES AND INITIATIVES TO SUPPORT ZBNF

• In the context of the government's commitment to double farmers' income by 2022, GOI is promoting natural farming in country through dedicated schemes of Paramparagat Krishi Vikas Yojana (PKVY) and through Rashtriya Krishi Vikas Yojana (RKVY).

• NITI AAYOG in a survey found out that the Zero Budget technique has resulted in an increase in the yields of crops like cotton by 11 per cent, paddy by 12 per cent, groundnut 23 per cent, and chilli 34 per cent at less than half the cost of cultivation in the year 2016-17.

• Addressing the United Nations conference on desertification (COP-14), our honorable Prime minister told the global community that India is focusing on Zero Budget Natural Farming (ZBNF).

• Finance Minister Nirmala Sitharaman has often mentioned how ZBNF will double farmers' income by going "back to basics" in her budget speech.

• AP Government has decided to approach 60 lakh (6 million) farming households to adopt "Climate Resilient Zero Budget Natural Farming (CRBZBNF)" as a farming practice that believes in natural growth of crops without supplying any other external inputs.

## DRAWBACKS OF ZERO BUDGET NATURAL FARMING:

- There is no special market to sell
- Takes long conversion period
- It is practiced in fewer parts of India
- Slow to achieve results
- Difficult to convince customer that their produce is nutritious and pesticide free in order to command premium price and finding consumer to sell at premium price is difficult
- The farming type is still under debate and not much scientific research is done still under evaluation

## CONCLUSION:

Zero Budget Natural Farming has its own benefits and drawbacks, although if properly executed it will become a secure part of Indian agriculture. Government should take the initiative to build the bridge of knowledge between the farmers and his system of farming. First of all government should address the crisis like rising labour cost in this, and by providing better produce price to the farmers. This all if looked into a better way will help overcome the various drawbacks of ZBNF. It should be tested on a wider scale and on all soil types. Hence, implementing this at larger scale and in a better way will help the nation to progress towards achieving the Sustainable Development Goals.