

## Zero Budget Natural Farming

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- 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 fertilisers, pesticides and intensive irrigation.
- ZBNF is based on 4 pillars:



**Jeevamrutha:** It is a mixture of fresh cow dung and aged cow urine (both from India's indigenous cow breed), jaggery, pulse flour, water and soil; to be applied on farmland.

**Bijamrita:** It is a concoction of neem leaves & pulp, tobacco and green chilies prepared for insect and pest management, that can be used to treat seeds.

**Acchadana (Mulching):** It protects topsoil during cultivation and does not destroy it by tilling.

**Whapasa:** It is the condition where there are both air molecules and water molecules present in the soil. Thereby helping in reducing irrigation requirement.

**The story so far:**

Finance Minister Nirmala Sitharaman thrust zero budget farming into the spotlight in the first Budget speech of the 17th Lok Sabha earlier this month, calling for a “back to the basics” approach. She said, “We need to replicate this innovative model through which in a few States, farmers are already being trained in this practice. Steps such as this can help in doubling our farmers’ income in time for our 75th year of Independence.” Several States, including Andhra Pradesh and Himachal Pradesh, have been aggressively driving a shift towards this model.

**Benefits of ZBNF**

- With the rising cost of external inputs (fertilizers and pesticides), which is the leading cause of indebtedness and suicide among farmers. According to the National Sample Survey Office (NSSO) data, almost 70% of agricultural households spend more than they earn and more than half of all farmers are in debt.
  - Since in ZBNF there is the need to spend money or take loans for external inputs, the cost of production could be reduced and farming made into a “zero budget” exercise.
  - This would break the debt cycle for many small farmers and help to envisage the doubling of farmer's income by 2022.
- 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.
- The ZBNF method promotes soil aeration, minimal watering, intercropping, bunds and topsoil mulching and discourages intensive irrigation and deep ploughing.
- It suits all crops in all agro-climatic zones.
- Citing the benefits of ZBNF, in June 2018, Andhra Pradesh rolled out an ambitious plan to become India’s first State to practise 100% natural farming by 2024.

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### Why does it matter?

According to National Sample Survey Office (NSSO) data, almost 70% of agricultural households spend more than they earn and more than half of all farmers are in debt. In States such as Andhra Pradesh and Telangana, levels of indebtedness are around 90%, where each household bears an average debt of ₹ 1 lakh. In order to achieve the Central government's promise to double farmers income by 2022, one aspect being considered is natural farming methods such as the ZBNF which reduce farmers' dependence on loans to purchase inputs they cannot afford. Meanwhile, inter-cropping allows for increased returns. The Economic Survey has also highlighted the ecological advantages

### *Is the budgetary support enough?*

Despite the ZBNF buzz caused by the Budget speech, the Finance Minister did not actually announce any new funding to promote it. Last year, the Centre revised the norms for the RashtriyaKrishiVikasYojana- Remunerative Approaches for Agriculture and Allied sector Rejuvenation (RKVY-RAFTAAR), a flagship Green Revolution scheme with an allocation of ₹ 3,745 crore this year, and the ParamparagatKrishi Vikas Yojana, which has an allocation of ₹ 325 crore and is meant to promote organic farming and soil health. Under the revised guidelines, both Centrally-sponsored schemes now allow States to use their funds to promote the ZBNF, vedic farming, natural farming, cow farming and a host of other traditional methods.

However, this is only a fraction of the spending on Central government subsidies for fertilizers, pesticides and mass irrigation that has driven the Green Revolution model.

### Issues Related to ZBNF

- Sikkim (India's first organic state), has seen some decline in yields following conversion to organic farming.



- Many farmers have reverted to conventional farming after seeing their ZBNF returns drop after a few years.
- While ZBNF has definitely helped preserve soil fertility, its role in boosting productivity and farmers' income isn't conclusive yet.
- ZBNF advocates the need of an Indian breed cow, whose numbers are declining at a fast pace.
- According to Livestock Census, the country's total population of indigenous and nondescript cattle has dropped by 8.1%.
- Low expenditure by the government: Last year, the government launched RashtriyaKrishiVikasYojana, a flagship Green Revolution scheme with an allocation of Rs 3,745 crore for the financial year 2019-20.
  - Whereas the ParamparagatKrishiVikasYojana, which was meant to promote organic farming and soil health has been allocated Rs 325 crore only.

#### ***Which are the States with big plans?***

According to the Economic Survey, more than 1.6 lakh farmers are practising the ZBNF in almost 1,000 villages using some form of state support, although the method's advocates claim more than 30 lakh practitioners overall. The original pioneer was Karnataka, where the ZBNF was adopted as a movement by a State farmers' association, the Karnataka RajyaRaitha Sangha. Large-scale training camps were organised to educate farmers in the method. According to a survey carried out in those early years, ZBNF farmers all owned small plots of land, had some access to irrigation and owned at least one cow of their own.

In June 2018, Andhra Pradesh rolled out an ambitious plan to become India's first State to practise 100% natural farming by 2024. It aims to phase out chemical farming over 80 lakh hectares of land, converting the State's 60 lakh farmers to ZBNF methods.

Himachal Pradesh, Chhattisgarh, Kerala, Karnataka and Uttarakhand have also invited Mr. Palekar to train their farmers.

#### **Way Forward**

There is a host of structural marketing issues which needs to be addressed first before aiming to achieve the ambitious goal of ZBNF. For example:

- Strengthening of agricultural market infrastructure.

- Extending the procurement mechanism to all foodgrain and non-foodgrain crops to all States.
- Implementation of price deficiency payment system for selected crops.
- Fixing minimum support prices (MSP) in consonance with the cost of cultivation.
- Abolishing minimum export price for agricultural commodities.
- Enacting legislation on 'right to sell at MSP' needs immediate attention.
- MGNREGS must also be linked with farm work in order to reduce the cost of cultivation which has escalated at a faster pace over the past few years.

Unless these issues are resolved, the doubling of farmers' income will remain a distant reality. In this context, farmers' ease of doing business and ease of living should also be taken into consideration.

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