Government of Andhra Pradesh (GoAP), through Rythu Sadhikara Samstha (RySS) is scaling up a pioneering climate-resilient, Zero-Budget Natural Farming (ZBNF) to cover 6 million farmers by 2024. ZBNF addresses the acute farmers’ distress caused by high-input, resource-intensive chemical farming that over time has resulted in losses, high debts, soil degradation, pollution of waterways, encroachment of forest-land, biodiversity loss and water scarcity.

In the first phase, covering 500,000 farmers, GoAP is implementing the programme with its own funds and funds from Government of India under two national schemes - the Rashtriya Krishi Vikas Yojana (RKVY) and the Paramparagat Krishi Vikas Yojana (PKVY). USD 108 million have been committed for the same. Appreciating the potential, Azim Premji Philanthropic Initiatives (APPI) has established Technical Support Unit and has been providing technical support grant to the tune of USD 14 million.

### APZBNF Current Snapshot

- **3,067** Villages
- **970** Clusters
- **662** Mandalas
- **5,500** Community Resource Person
- **250** Natural Farming Fellows
- **580,453** Farmers
- **203,962** Hectares
- **110,409** Women SHGs
- **4389** Village Organizations

**Rythu Sadhikara Samstha, Andhra Pradesh Zero Budget Natural Farming**
ZBNF principles and methodology have been pioneered in India by Padma Shri Dr. Subhash Palekar. He is our inspiration and mentor. The four wheels of ZBNF has been conceptualized by him. He has conducted four mega training programmes for 28,000 farmers during 2016-2018 and indirectly inspired hundreds of thousands of farmers through live stream and training videos to take up ZBNF.

**ZBNF Principles**

ZBNF practices are built on four core principles, which are called the four wheels of ZBNF.

Along with adhering to zero-chemical usage, ZBNF follows certain other important principles:

- **Use of ‘indigenous’ cow – for cow-dung and urine. One cow is adequate for more than 10 acres of land. (According to Sh. Palekar it is enough for cultivation of 30 acres).**
- **Botanical extracts prepared locally, using on farm inputs such as neem leaves for pest management.**
- **Minimal tillage is an important practice in ZBNF so as to avoid changing the soil structure.**
- **All inputs are to be made within the village – so that to the extent possible nothing is purchased from outside.**

In international classification, ZBNF comes under climate change resilient **Agroecology**, more specifically under “Regenerative agriculture”.

**Regenerative Agriculture** is a holistic land management practice that leverages the power of photosynthesis in plants to close the carbon cycle, and build soil health, crop resilience and nutrient density.

ZBNF reduces farmer’s costs through eliminating external synthetic inputs and utilising in-situ biological resources to rejuvenate the soil, whilst simultaneously increasing yields, restoring ecosystem health and climate resilience through diverse cropping systems.

**Farmer-owned, Farmer-led APZBNF Extension Model**

We follow a whole village approach. Women Self Help Groups along with the Best-practising champion farmers as Community Resource Persons, and Young Agri-Graduate farmers as Natural Farming Fellows are the important pillars of APZBNF extension model. They follow saturation as an approach and use collective action and ICT as tools for change management.
The women self-help groups, seasoned through decades of community-based actions have emerged as a strong social capital and a platform for ZBNF activities. The SHGs are involved in preparing their own farming plan. 83,971 SHGs are involved in collective input preparations for ZBNF. 12,897 SHGs have purchased desi cows as well through their institutions.

Multiple Benefits of ZBNF

- Reduced cost of cultivation
- Interest savings
- Higher yield
- Increased income through Intercrops
- Fairer returns

$13 worth direct benefits
- Cost Reduction
- Risk reduction
- Higher Yields
- Better Prices

Ecosystem & Health Benefits to citizens
ZBNF vs Non-ZBNF Yield and Cost Comparisons in Crop Cutting Experiments conducted by Centre for Economics and Social Studies (CESS)

<table>
<thead>
<tr>
<th>Crop</th>
<th>Condition</th>
<th>Net Income ZBNF ($/Ha.)</th>
<th>Net Income Non ZBNF ($/Ha.)</th>
<th>Percentage increase (%)</th>
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</thead>
<tbody>
<tr>
<td>Paddy</td>
<td>Irrigated</td>
<td>667</td>
<td>603</td>
<td>10%</td>
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<tr>
<td>Groundnut</td>
<td>Rainfed</td>
<td>129</td>
<td>116</td>
<td>11%</td>
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<tr>
<td>Maize</td>
<td>Irrigated</td>
<td>639</td>
<td>302</td>
<td>111%</td>
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<tr>
<td>Cotton</td>
<td>Irrigated</td>
<td>1003</td>
<td>573</td>
<td>75%</td>
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<tr>
<td>Bengal gram</td>
<td>Rainfed</td>
<td>769</td>
<td>655</td>
<td>17%</td>
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</table>

<table>
<thead>
<tr>
<th>Crop</th>
<th>Condition</th>
<th>Cost of Cultivation ZBNF ($/Ha.)</th>
<th>Cost of cultivation Non ZBNF ($/Ha.)</th>
<th>Percentage Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddy</td>
<td>Irrigated</td>
<td>526</td>
<td>604</td>
<td>13%</td>
</tr>
<tr>
<td>Groundnut</td>
<td>Rainfed</td>
<td>313</td>
<td>376</td>
<td>17%</td>
</tr>
<tr>
<td>Maize</td>
<td>Irrigated</td>
<td>454</td>
<td>457</td>
<td>1%</td>
</tr>
<tr>
<td>Cotton</td>
<td>Irrigated</td>
<td>538</td>
<td>567</td>
<td>9%</td>
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<tr>
<td>Bengal gram</td>
<td>Rainfed</td>
<td>398</td>
<td>464</td>
<td>14%</td>
</tr>
</tbody>
</table>

Innovations in the programme
Developing Science behind ZBNF
Collaboration for experiments with ICRAF, University of Reading, Indian Institute of Science, Bangalore & Indian Institute of Science Education & Research (IISER), Trivandrum for establishing protocols, developing scientific reasoning, spreading knowledge among the farmers and promoting community scientists.

365 Days Green Cover
Maintaining land under green vegetation by crop diversity and applying different crop combinations throughout the year to address drought proofing, convincing small and marginal farmers to grow for the entire year. The 365 days vegetation enhances the soil heath, changes soil structure, increases microbial activity and increase water holding capacity of the soil.

The 365 Day Green Cover experiment is being carried out to establish the fact that crops can be grown irrespective of seasonality and rainfall.

“...After the cropping season is over the land is left vacant for 9 months of the year and soil gets directly exposed to sun leading to desertification. To reverse this it is extremely important to keep the land covered with crops and trees for 12 months of the year...”

Y S Jagan Mohan Reddy
Hon’ble Chief Minister, Andhra Pradesh
Health and Nutrition

The Health and Nutrition component integrates safe agriculture practices, chemical free food along with the health of the farmers, their families and consumers at large. Currently health and nutrition intervention is being undertaken in 40 villages in 8 districts through institutional linkages and thematic campaigns.

Poorest of the Poor – Farm livelihoods

The programme prioritizes to bring qualitative change in the life of poorest of the poor and landless farmers both economically and socially. 1.4 million Poorest of the Poor families to be covered in next 5 years

Community Marketing

Community marketing strategy focuses on ensuring consumption at household and village level. The surplus post this is sold at the local markets at competent rates ensuring health food for farmers and their families. There is a special emphasis on strengthening market linkages, value addition, ZBNF shops, ZBNF canteens and hotels through farmers’

Seed systems

The programme is working intensively on developing indigenous seed. Diversified cropping systems are essential which is ensured by the seed system that supply different varieties of seeds. A Community Managed Seed System has been developed, in association with NGOs, Community Based Organizations and Government.

Food for Farmers and Consumers

- Farmer Produce
- Farmer Family Consumption
- Community Consumption
- Selling through CBOs
- Linkages through Farmer Entrepreneur/CBOs
- Income to Farmers
World Future Council selected AP ZBNF as one of the top 30 most promising policies in agroecology.

Global Alliance for the Future of Food has selected AP ZBNF as one of the 21 ‘Beacons of Hope’.

UN Agencies (WFP, UNEP, CBD, WHO, IFAD, FAO, UNDEP) has approved the Scaling up Agroecology Initiative work plan for 2019-2020. Mexico, Senegal and APZBNF selected for the first phase of implementation.

The Hon’ble Prime Minister has mentioned ZBNF as a way forward for farming in India during Parliament session and in COP 14 speech in Sept’19.

NITI Aayog, Govt of India has commended the Government of Andhra Pradesh’s ZBNF strategy. The Ministry of Agriculture is setting up a National Mission for scaling up of ZBNF in all the States.

Himachal Pradesh, Karnataka, Rajasthan States have visited AP and are interested to adopt APZBNF model.

Partnerships and Collaborations

Women Self-Help Groups

Visit us @ apzbnf.in