

Andhra Pradesh Zero Budget Natural Farming (APZBNF)

Is it delivering the promise of reducing chemical fertilizer's use?

There is a popular saying that *the proof of the pudding is in the eating*. It means that something can be judged as good or bad only after it has been tried.

Of late, many state governments claim to adopt/promote ZBNF with huge budgets. The most prominent among them is Andhra Pradesh.

Zero budget means without spending any money on purchased inputs and without any credit.

Under ZBNF, the cost of growing crops would be zero as this method involves zero use of external inputs including chemical fertilizers.

According to ZBNF philosophy, the plants get **98%** of their supply of nutrients from the air, water, and sunlight. While the remaining **2%** can be met by good quality soil with plenty of friendly micro-organisms, just like in forests and natural systems.

Andhra Pradesh (AP) launched ZBNF in the FY 2016-17 with lots of fanfare. When launched in AP, it was claimed that it would save **Rs 2154 cr** annually by avoiding the use of chemical fertilizers and related subsidies.

It has been over three years since the AP government launched large scale promotion of ZBNF. It is high time for an evidence based review.

Has the promotion of ZBNF led to reduction in the use of chemical fertilizers in the state of AP?



What do the official data show?



Fertilizers Sale in Andhra Pradesh (lakh tons)

Year	Urea	DAP	MOP	NPKS	SSP	Total
2018-19	14.18	3.14	2.41	11.38	1.63	32.74
2019-20	14.26	3.52	2.42	13.52	1.58	35.3
2020-21	15.92	4.21	2.94	17.27	1.80	42.14
Growth	12%	34%	22%	52%	10%	29%

Source: Integrated Fertilizers Management System – mFMS Reports
(Accessed on 26th November 2021)

Link: <https://reports.dbtfert.nic.in/mfmsReports/getProductAndPgWiseRetailerSaleDetail.action>

DAP – Diammonium Phosphate; MOP – Muriate of Potash; NPKS – Complex fertilizer+Ammonium Sulphate; SSP – Single Super Phosphate

Strangely enough, after the introduction of ZBNF, the sale of chemical fertilizers in AP has sharply increased by **29%** over the last three financial years. The intensity of use of chemical fertilizers is now very high in AP.

Data from the Ministry of Chemicals & Fertilizers, New Delhi show that the consumption of chemical fertilizers has grown in AP at a faster pace than in most other states. For example, the fertilizers consumption growth in Punjab is only **3%**.

In fact, the AP's chemical fertilizers consumption growth registered over the last three years is **70%** higher than the growth at all India level.

Remember, a colossal amount of **Rs 381.75 cr** was spent on promoting ZBNF in AP till 2019-20 with the promise of reducing/eliminating chemical fertilizers.

Suddenly in the year 2020, perhaps after realizing the folly of the so called zero budget natural farming the APZBNF was silently rechristened as APCNF. Not many would be in the know of this drastic change.

What is APCNF?

APCNF stands for **Andhra Pradesh Community Managed Natural Farming**.

Quite importantly, the prefix “zero” before the Natural Farming has been dropped.

It is now no more 'zero budget' natural farming in the AP, but is simply “natural farming”.

Why was APZBNF rechristened as APCNF after four years of high profile publicity promoting ZBNF as the ultimate panacea?

According to those in the know, it is an admission of failure of ZBNF.

The APCNF, unlike the APZBNF, allows use of external inputs- such as tractors, farm machineries, hired labourers, hybrid seeds, biological inputs etc., purchased from the market.

Under the APCNF, the average cost of cultivation of main crops per hectare is shown below:



Paddy	Rs. 41,069
Cotton	Rs. 46,445
Sugarcane	Rs. 96,324
Groundnut	Rs. 51,349
Black gram	Rs. 21,507

Source: Impact Assessment of APCNF
Consolidated 2019-20 Report

What an upward transition from the zero budget!

The cost of cultivation under the APCNF style of natural farming cannot qualify to be termed “low”.

Besides the scaled up cost, the other allied claims made under the APCNF raise a few eye brows. Sample this. An official presentation claims that **8 million hectare** of agricultural land is “naturally farmed” in the state of AP under the aegis of APCNF.

The net cropped area in AP is only **5.9 million hectare**. How can the adoption of APCNF be in excess of the net cropped area in the state?

This also implies that there is **100% adoption of APCNF** in AP all over the cropped area, all the seasons.

If true, what, then, explains the huge jump in the sale of chemical fertilizers in the state over the last three years?

COMMUNITY MANAGED NATURAL FARMING

A non-profit government initiative implemented to **build and scale** a farmer-led agroecological model with **700,000 farmers** enrolled across Andhra Pradesh, India.

Is
8 mn ha.
naturally
farmed
in AP?



ENVIRONMENT

8,000,000 ha FARMED NATURALLY



AVOIDED LAND DEGRADATION COSTS
\$164,442,399 USD/
YEAR

CROPS NEED
55% LESS WATER
& **ELECTRICITY**
SAVES **\$100-740** USD/
ha



55-99% FEWER EMISSIONS

Source : Twitter link of Andhra Pradesh Community Managed Natural Farming <https://twitter.com/apzbnf>
(Accessed on 25th November 2021).

The other staggering claims made by APCNF are all “green coated”, perhaps to appeal to external fund providers. Such claims include land degradation avoided to the extent of **\$164 million**, reduction in carbon emissions up to **99%**, water and electricity savings up to **\$740/ha** in the state of AP.

There is nothing that is state-of-the-art in the APCNF that would support these claims in a manner that could be scientifically replicated.

The “natural farming” originally developed by Masanobu Fukuoka (1913-2008), a Japanese farmer in his 1975 book “The One Straw Revolution” is “do nothing farming”. Pertinently, it does not allow ploughing, use of powered machines, compost, etc.

The natural farming originally developed in Japan failed to gain any ground over there. Japan uses more fertilizers per unit area than most countries in the world. Japan uses 254 kgs/ha of fertilizers as against India's 175 kgs/ha. Japan uses 11 kg of pesticides/ha as against India's 0.3 kg.

It is worth mentioning that India's premier academic body, the National Academy of Agricultural Sciences (NAAS), Delhi hit out at ZBNF terming it as **“unproven technology and there are no validated outcomes to consider it as a viable technology.”**

Conclusion:

Farm policies need an evidence-based approach. The evidence in this case is clear, cogent and glaring. It does not demonstrate that APZBNF or APCNF is delivering the initial promise of eliminating/reducing chemical fertilizers.

On the contrary, the consumption of chemical fertilizers has shot up 29% since the introduction of the ZBNF in the state of Andhra Pradesh.

APZBNF (now APCNF) has failed to deliver.

What fails to deliver, will never scale.

The costly failure of ZBNF in AP should serve as an early warning to other states planning to experiment with ZBNF.

