

Padi Pantalu Project

Case Study on Zero Budget Natural Farming (ZBNF)

With an aim to reduce the chemical based agriculture, APMAS in collaboration with its funding partner AEIN Luxembourg has introduced **Zero Budget Natural Farming (ZBNF)** practices to the farmer community through implementing “**Padi Pantalu project**” since 2020 in Kurabalakota and Valmikipuram mandals of Annamaiah district. The main objective of the ZBNF is to reduce the risks of climate uncertainties by promoting the adoption of agro ecological sustainable farming practices such as to avoid use of harmful chemicals on farmlands/ crops and reduce cost of cultivation by making farming economically viable & profitable in combination with increased soil fertility resulting in better yields, quality of the crops.



Ms. Ravanamma and her husband **Mr. Raghavanna**, the young farmer beneficiaries belong to Brahmanavaddupalli village (Angallu gram panchayat) of Kurabalakota mandal shares her success story in adopting the sustainable farming practices under the idea ZBNF. She and her husband being small holder farmers, own 5 acres of farm land growing tomato crop in 1.5 acre, paddy in 2.5 acres, Fingermillet in 0.5 acres and Fodder to feed her 4 cows (2 milching condition) in remaining 0.5 acres of land under both rainfed and irrigated conditions. The couple used to follow natural farming practices 5 years ago using cow wastes (urine and dung) for the application on crops but later due to drought conditions they stopped natural farming and started depending on the conventional farming practices.

During practicing conventional farming practices, the farmers faced lot of difficulties such as high cost of investment on chemical fertilizers coupled with labor cost for spraying pesticides, reduced quality & quantity in the crop yield, reduced shelflife (storability) of the produce and depletion of soil beneficial microorganisms & earthworms.

During this period the couple attended a village level awareness program and training programs organized by the project team on the topic ZBNF practices. The couple says, “we were into losses for 3 years, when we shifted to conventional farming practices. We attended a training program on “importance of ZBNF and sustainable good agricultural practices” headed by a Horticulture Research Station (HRS) senior scientist **Dr.Bala Hussain** and relaising the need and importance of the natural farming practices we decided to go back and follow the previous techniques of natural farming.”

Initially the farmers used to use only cow wastes (urine and dung) for the production of crops, but after attending the training sessions and the frequent visits by the Bio Resource Centre entrepreneur to their fields, they started using naturally made decoctions, such as “Beejamrutham, Jeevamritham, Ghanajeevamrutam, Neemastrham, Brahmastram, Agniasttram, Tootikada kashayam, Egg amino acid and Chilli garlic decoction” and the project supported the farmer with installation of sticky traps, pheromone traps, insect light traps, border crops (maize) along with decoctions.



The woman farmer **Ms. Ravanamma**, maintained an informal record on the the difference in cultivation practices (conventional and natural farming) and the following are her observations in Fingermillet and Tomato crops.

S.No	Purticulars	Conventional farming practice	ZBNF farming practices
Crop: Finger millet for 0.5 acre land			
1	Cost of cultivation	Rs. 25,000/-	Rs. 20,000/-
2	Pest infestation	Attack of sucking pests Thrips, Aphids	No attack of sucking pests
3	No. of cuttings	2	4
4	Total yield	125 kgs	400 kgs
5	Profits	Rs. 5,000/-	Rs. 20,000/-
6	Storage time	6 months	12 months
7	Quality	Small sized grains, lighter in color, less seed per panicle and less no of panicles (5) per plant	Big sized grains, brighter in color, more seed per panicle and more no of panicles (8) per plant
Crop: Tomato in 1 acre land			
1	Cost of cultivation	Rs, 2,00,000/-	Rs. 1,60,000/-
2	Pest infestation	White fly, Thrips, Aphids, Oozy fly, Fruit borer	Less infestation of pests (5%)
3	No. of cuttings	6	10
4	Yield per plant	1.5 kgs	2 to 2.5 kgs

5	Total yield (each box 30 kgs)	60 to 65 boxes (1,800 kgs to 1,950 kgs)	100 to 105 boxes (3,000 kgs to 3,150 kgs)
6	Profits	Rs. 52,000/-	Rs. 98,000/-
7	Quality	Loose fruits, hard seeds, lesser shelf life, uneven ripening	Tight fruits, normal seeds, longer shelf life, even ripening and bright color fruits

The farmer says, “I have encouraged 15 neighbor farmers in adopting the ZBNF practices and made 3 farmers in practicing the use of decoctions.

I also send my naturally produced finger millets to my sons’ friends in USA, as natural produced millets are not available in their place. Every year I send 5 kgs of millets to them and I feel very happy and proud in sending them my products”.

Details of farmers adopted ZBNF practices:

Purticulars	Kubaralakota	Valmikipuram	Total
No. of Farmers	180 (all women)	120 (including 45 women)	300 (225 women)
Area	90 Acre	75 acres	165 acres
Major crops	Tomato, Paddy, Mango and Millets		