

NATURAL FARMING TRANSITION LED BY A SMALLHOLDER FARMER

“Arika Narsamma is a smallholder farmer from the hilly, rainfed region of Parvathipuram Manyam district in Andhra Pradesh. She cultivates one acre of land and comes from a traditional farming household that practised monocropping, primarily paddy on flat land, along with cashew, turmeric, ginger, and vegetables on hill slopes.”

Transition from Chemical Farming

Like many small farmers seeking stable yields and income, Narsamma’s family adopted chemical fertilisers. Over time, the impacts became evident. Soil health declined, pest and disease incidence increased, costs rose, and food quality reduced. Monocropping further amplified risk, as one failed season often resulted in total crop loss.



ADOPTING NATURAL FARMING

In 2019, Narsamma was introduced to Natural Farming through a Community Resource Person from Rythu Sadhikara Samstha. The possibility of regenerating soil without dependence on external inputs prompted her transition. She began practicing line sowing, preparing her own bio-stimulants, and introducing multi-cropping.

The initial transition was challenging. Yields were lower, and neighbouring farmers questioned her decisions. Despite doubts, she continued applying what she had learned. Over successive seasons, soil structure improved, moisture retention increased, pest pressure declined, and yields stabilised and rose.

Maintaining Year-Round Soil Cover (365 days)

With paddy cultivation limited to the Kharif season due to rainfed conditions, Narsamma adopted Pre- Monsoon Dry Sowing and Rabi Dry Sowing to maintain continuous green cover. Sowing diverse crops in dry soil before and after the monsoon ensured year-round root presence, enhanced soil biological activity, improved moisture retention, and strengthened crop resilience to climatic and pest-related stress.



FROM PRACTITIONER TO FARMER SCIENTIST

In 2021, Narsamma was recognised as an Internal Community Resource Person, supporting women's Self Help Groups through peer learning.



Seeking deeper understanding, she enrolled in the four-year, field-based Farmer Scientist Course in 2023, offered by the Indo German Global Academy for Agroecology Research and Learning. Through the course, Narsamma began treating her farm as a learning laboratory.

She experimented, observed seasonal changes, recorded inputs and outputs, and adapted practices to local conditions rather than following fixed prescriptions. This marked her transition from practitioner to farmer scientist.



REGENERATION ON THE GROUND

Diversified Farming Models:

1 A Grade Model: Narsamma implemented multilayer cropping by integrating vegetables and biodiversity crops alongside paddy. Brinjal, chillies, broad beans, ridge gourd, bottle gourd, and other crops were cultivated on bunds. This diversified production increased income and reduced the risk of total crop failure during adverse seasons.

ATM Model: Through the Any Time Money model, she cultivated 15–18 varieties of vegetables, greens, tubers, pulses, and tree crops in relay mode, ensuring regular income and household nutrition.

Outcomes and Impact: With increased biodiversity, Narsamma's soil became self-sustaining, reducing inputs, improving moisture, increasing earthworms, and strengthening crop health.

Her income rose from ₹11,200 per acre (cost ₹4,380) to a net ₹47,824 per season after applying course learnings, nearly a tenfold increase.

Beyond increased income, her family now enjoys diverse, chemical-free produce from their own land. Reduced expenditures on food and healthcare have enabled consistent savings, which she has leveraged to launch an event rental business and acquire land for building their family home.

3 **Small Farms, Strong Futures:** Narsamma's journey demonstrates that small landholdings can deliver strong economic, ecological, and nutritional outcomes when supported by farmer-led learning and agroecological science. Her experience challenges the notion that productivity and sustainability are trade-offs and shows that regenerative farming can restore soil, livelihoods, and dignity simultaneously.

"These methods did not just change my farm. They changed my farm soils and our family's health"

- Arika Narasamma
