Voices from the Field

Farmer Case Studies from YSR Kadapa & Sathya Sai Districts, Andhra Pradesh

Natural/Organic Farmers: Journeys of Transformation

&

Chemical Farmers: Struggles and Challenges

Documented by CSA | 2025

Villages: Thallamapuram | Kuppalapalli | Omtimitta | Regulapalli | Sidduguripalli | Somalavandla Palli | Bolagondla Cheruvu

About the SCALAGRO Project

SCALAGRO (Scaling Agroecology) is a collaborative international research project operating across India, Bolivia, and Burkina Faso. In India, the project is implemented in partnership with the Centre for Sustainable Agriculture (CSA). Phase 1 focused on baseline qualitative research to understand existing agroecological knowledge systems and the structural conditions shaping transitions. These case studies have been collected and documented as part of the SCALAGRO project.

*If you would like more information*https://www.graduateinstitute.ch/scalagro

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About This Work

These case studies were compiled as part of the **SCALAGRO (Scaling Agroecology in India, Bolivia, and Burkina Faso) Project**, led by the **Centre for Sustainable Agriculture (CSA) in India**. The project seeks to understand the lived realities of farming communities transitioning toward sustainable, agroecological practices and to document them in ways useful to both farmers and policymakers.

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The stories in this document were gathered through patient, careful fieldwork. **Suneetha** travelled across the villages of YSR Kadapa and Sathya Sai districts, sat with farmers in their homes and on their farms, listened without rushing, and brought back honest, human accounts. Her work in the field is the foundation on which everything else in this document rests.

Case Study Compilation

Mamatha provided invaluable support in compiling the case study data, bringing order and clarity to a rich but complex body of material. Her contribution made this document possible.

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The farmers of YSR Kadapa and Sathya Sai districts are the true authors of this work. We have only written down what they lived.

Glossary of Natural Farming Terms

A plain-language guide to the Telugu and field-science terms used in this document

Natural farming in India, and particularly in Andhra Pradesh, has developed a rich vocabulary of its own. Many of the inputs and practices described in this document have names drawn from Sanskrit and Telugu that may be unfamiliar to readers outside the region. This glossary explains each term simply and honestly, so that anyone reading these case studies can follow along without missing what matters.

Term	Category	What it means & how it is used
Soil Inputs &Biofertilizers- feeding the land, not just the crop		
Jeevamrutam *jee-va-mroo-tam*	Liquid Biofertiliser	Literally “elixir of life.” A liquid biofertiliser made by fermenting cow dung, cow urine, jaggery, pulse flour, and a handful of soil from the farm in water. Left to ferment for 48 hours, then diluted and applied to the field or drip-irrigated to plant roots. It introduces billions of beneficial soil microbes, dramatically improving soil biology. One of the most widely used inputs in natural farming across India.
Ghanajeevamrutam *gha-na-jee-va-mroo-tam*	Solid Biofertiliser	The solid (ghana = solid/dense) version of Jeevamrutam. Made from the same ingredients but prepared as a dry, crumbly,compost-like material. Applied directly into the soil at sowing/ploughing time. Releases nutrients and microbes slowly over weeks.
Beejamrutam *bee-ja-mroo-tam*	Seed Treatment	A seed treatment liquid, made from cow dung, cow urine, lime, and water. Seeds are soaked in or coated with Beejamrutam before sowing. It protects seeds from soil-borne fungal and bacterial infections, improves germination rates, and provides seedlings with a healthy microbial start. Beeja = seed; amrutam = elixir.
Navadhanyas *na-va-dha-nya*	Cover Crop / Green Manure	Literally “nine grains” (nava = nine, dhanya = grain). A mix of nine different seeds, typically including legumes, cereals, and oilseeds, sown together as a green manure or cover crop between main crop seasons. The roots fix nitrogen, the biomass improves organic matter when turned into the soil, and the diversity of plant roots feeds different microbial communities. Acts as a natural soil rejuvenator. Very commonly used across all villages in this study.
Dhibba Eruvulu *dib-ba e-ru-vu-lu*	Organic Compost	Farm Yard Manure (FYM) is composted animal dung, often from cattle. Referred to throughout the case studies simply as “dung compost” or “dhibbaeruvulu.” The most traditional soil amendment used by Indian farmers. Improves soil structure, water retention, and provides a slow-release source of nutrients. In natural farming, it forms the backbone of soil nutrition.

Term	Category	What it means & how it is used
Waste Decomposer *(English term)*	Microbial Inoculant	A government-distributed microbial culture developed by NCOF (National Centre for Organic Farming, India). A small bottle of the culture is dissolved in water with jaggery, and the mixture is multiplied into large volumes of liquid over several days. Applied to the soil or used to accelerate composting. Inoculates the soil with beneficial fungi and bacteria. Several farmers in this study use it generously as a low-cost soil health tool.
Vep Chekka / Neem Cake *vepchek-ka*	Soil Amendment	The solid residue left after extracting oil from neem seeds. Mixed into the soil before sowing. Acts as a slow-release nitrogen fertiliser and also repels soil-dwelling pests and nematodes. Widely used alongside castor cake (amudamchekka) to build soil fertility naturally.
AmudamChekka / Castor Cake *a-mu-dam chek-ka*	Soil Amendment	The residue left after extracting oil from castor seeds. Mixed into the soil to improve nitrogen availability and suppress certain soil pests. Used together with neem cake across many farms in this study.
Trichoderma *try-ko-der-ma*	Biofungicide	A naturally occurring beneficial soil fungus, available as a powder or liquid inoculant. Applied to seeds (seed treatment) or mixed into the soil. Protects plant roots from fungal diseases like wilt and root rot. Also helps decompose organic matter faster, releasing nutrients. Commonly used at the seed treatment stage alongside Beejamrutam.
Pseudomonas *soo-do-mo-nas*	Bio-inoculant	A beneficial soil bacterium is available as a bio-inoculant. Promotes plant growth, suppresses soil-borne pathogens, and solubilises phosphorus, making it more available to plant roots. Applied as a seed treatment or soil drench. Often used alongside Trichoderma for combined disease suppression.
PSB (Phosphate Solubilising Bacteria) *P-S-B*	Bio-inoculant	A microbial inoculant containing bacteria that unlock phosphate already present in the soil, but in forms plants cannot absorb. Reduces the need for phosphatic chemical fertilisers like DAP. Applied as a seed treatment or soil drench.
Fish Amino Acid / Egg Amino Acid *(English terms)*	**Nutritional Spray**	Fermented preparations made from fish scraps or eggs are rich in amino acids, proteins, and trace minerals. Applied as a foliar spray or soil drench to boost plant nutrition at critical growth stages, particularly during flowering and fruit development. A natural substitute for synthetic micronutrient sprays.

Term	Category	What it means & how it is used
Pest & Disease Management - protecting crops without chemicals		
Neemasthram *neem-as-tram*	Botanical Pesticide	A concentrated botanical pest spray made from neem leaves, cow dung, and cow urine, fermented together and diluted before spraying. The word combines “neem” with “astram” (weapon/arrow in Sanskrit). Highly effective against soft-bodied insects like aphids, whiteflies, and leaf-eating caterpillars. One of the most mentioned sprays across all villages in this study.
Brahmasthram *brah-mas-tram*	Botanical Pesticide	A more potent botanical pesticide formulation than Neemasthram. Made from neem leaves plus leaves of other locally available pest-repelling trees (sometimes including custard apple leaves, white datura, papaya, and others), fermented with cow dung and urine. Used for heavier pest infestations. The name draws on Hindu mythology, with Brahmastra as the most powerful weapon.
Agnyasthram *ag-nya-as-tram*	Botanical Pesticide	Another fermented botanical spray, typically made using cow dung, cow urine, and green chilli or ginger, sometimes with tobacco. The pungency and alkaloids in the mix repel and kill many crop pests. Used when pest pressure is moderate. The name means “fire weapon” in Sanskrit.
DashaparniKashayam *da-sha-par-ni ka-sha-yam*	Botanical Pesticide	A multi-leaf extract pesticide. Dashaparni = ten leaves; kashayam = decoction/extract. Made by fermenting leaves of ten different pest-repelling plants (neem, custard apple, papaya, white datura, pomegranate, and others) with cow dung and urine. One of the broadest-spectrum botanical pesticides used in natural farming. Also used as a plant tonic.
VavilaKashayam *va-vi-la ka-sha-yam*	Botanical Pesticide	An extract made from Vavila leaves (Indian Vitex or Malabar chaste tree, Vitex negundo). The leaves have been shown to have antibacterial and antifungal properties. Made by boiling or fermenting the leaves in water and diluting for spraying. Commonly used against leaf curl viruses, fungal diseases, and certain insect pests.
BVM (Beauveria bassiana) *B-V-M*	Biological Pesticide	A naturally occurring entomopathogenic (insect-killing) fungus, available commercially as a bio-pesticide. When sprayed on crops, its spores attach to pest insects, germinate, and eventually kill them. Effective against thrips, whiteflies, stem borers, and other pests. Completely safe for humans, pollinators, and the environment. One of the most frequently mentioned pest control inputs in this document.
BT (Bacillus thuringiensis) *B-T*	Biological Pesticide	A naturally occurring soil bacterium that produces proteins toxic specifically to caterpillars and certain other larvae when ingested. Available as a spray. Highly targeted, harmless to humans, birds, bees, and most beneficial insects. Often used alongside BVM. Referred to simply as “BT” in the field.

Term	Category	What it means & how it is used
Neem Oil *(Vep Nune in Telugu)*	Botanical Pesticide	Cold-pressed oil from neem seeds. One of the oldest and most proven botanical pesticides in Indian farming. Applied as a foliar spray (usually 15 days after transplanting as a preventive measure), it disrupts the life cycle of many insects, repels pests, and has mild antifungal properties. Widely used across all villages and crops in this study.
Panchakavya *pan-cha-kav-ya*	Plant Growth Tonic	Literally “five products of the cow.” A fermented tonic made from five cow-derived materials: dung, urine, milk, curd, and ghee, sometimes with additions like banana, tender coconut, and jaggery. Used as a foliar spray or soil drench. Acts as both a plant growth promoter and a mild disease suppressant. Rich in micronutrients and beneficial microbes.
Dung-Asafoetida Solution (Peda-Inguvaa Draavanam) *in-gu-vadra-va-nam*	Repellent Spray	A spray made from cow dung water infused with asafoetida (hing/inguvaa, a strongly pungent resin). The sharp smell repels sucking pests and certain insects. Applied as a preventive spray. Simple, cheap, and easy to make at home.
Sitaphal Oil / Custard Apple Oil *(Seetaphalnune)*	Botanical Pesticide	Oil or extract from custard apple (Annona squamosa) leaves or seeds. Contains alkaloids that are highly toxic to insects. Used as a spray against leaf-eating pests. Several farmers in Thallamapuram and Regulapalli specifically mention this as part of their mixed oil sprays.
LingakarsanaButtalu (Pheromone Traps) *lin-ga-kar-sha-na but-ta-lu*	Physical Pest Control	Telugu for “sex attractant traps.” Plastic traps containing synthetic pheromone lures that attract male insects of specific pest species (fruit flies, pod borers, etc.), trapping and killing them before they can mate. Disrupts the pest breeding cycle. Used widely alongside sticky traps for monitoring and mass trapping.
Manjal / TelupaAttalu (Yellow / White Sticky Traps) *man-jal / te-lu-pa at-ta-lu*	Physical Pest Control	Coloured sticky cards hung in the field. Yellow traps attract aphids, whiteflies, and fungus gnats. White traps attract thrips and certain other insects. Pests land on the sticky surface and cannot escape. Used for both monitoring pest populations and as a direct control measure.
Farming Methods & Practices		
Mulching *(English term)*	Soil Management	The practice of covering the soil surface around plants with organic material, such as dry leaves, straw, crop residue, or plastic sheeting. Reduces water evaporation, suppresses weeds, moderates soil temperature, and gradually adds organic matter as it decomposes. Several farmers in this study use straw mulching in their vegetable plots.

Term	Category	What it means & how it is used
AWD (Alternate Wetting and Drying) *(Also: Wet and Dry Method)*	Water Management	A water management technique for paddy (rice) fields. Instead of keeping the field permanently flooded, farmers allow the field to partially dry between irrigations. Reduces water use by 25-30%, reduces methane emissions from waterlogged soil, and can improve root health. Several Thallamapuram and Omtimitta farmers mention learning this method through natural farming training.
Line Sowing / Lines Showing Method (LSM / SRI-type planting) *(Also referred to as Line Transplanting)*	Crop Management	Transplanting paddy seedlings in neat, straight rows with wider spacing (typically 25 x 25 cm or more), rather than random bunching. Allows more sunlight to reach each plant, improves air circulation (reducing disease), makes weeding easier, and usually results in more tillers (side shoots) per plant. Associated with the System of Rice Intensification (SRI).
Five-Layer Model (Panchastara / Failayer Model) *(Also: Multi-layer farming)*	Farm Design	A farming design that grows crops at five different height layers on the same land simultaneously, tall trees (like coconut or timber), medium fruit trees (mango, guava), shrubs and small trees (banana, moringa), ground-level crops (vegetables, pulses), and soil-surface crops (leafy greens, herbs). Maximises land use, creates ecological diversity, and provides year-round income from multiple harvests. Several farmers in Thallamapuram, Kuppalapalli, and Siddguripalli have adopted this model.
Intercropping (Antara Pantalu) *an-ta-ra pan-ta-lu*	Crop Management	Growing two or more crops simultaneously on the same piece of land. For example, growing pigeon pea between rows of groundnut, or sowing black gram after the main paddy harvest while residual moisture remains. Reduces risk, improves land-use efficiency, and increases plant diversity, thereby confusing and reducing pest pressure. Mentioned by almost every natural farmer in this study.
Border Cropping (Sarihaddhu Pantalu) *sa-ri-had-dhu pan-ta-lu*	Crop Management	Planting a different crop along the edges (borders) of the main crop field. Border crops can act as trap crops (attracting pests away from the main crop), windbreaks, or simply as a productive use of the field margin. Common border crops include marigold, jowar, and castor.
Drip Irrigation (Drip / Tapak Sinchayi) *(English/Hindi term used directly)*	Irrigation	A system that delivers water directly to plant roots through a network of pipes and emitters, drop by drop. Highly water-efficient compared to flood or furrow irrigation. Also used by natural farmers to deliver liquid inputs, such as Jeevamrutam, directly to the root zone. Widely used across all sandy-soil areas (Regulapalli, Siddguripalli, Somalavandla Palli) in this study.
Azolla *a-zol-la*	Green Manure / Weed Control	A small floating water fern that grows on the surface of flooded paddy fields. It lives in symbiosis with cyanobacteria (blue-green algae) that fix atmospheric nitrogen. Azolla is ploughed into the paddy field just before transplanting, acting as a free green manure. It also suppresses weeds by blocking light on the water surface. Several Thallamapuram paddy farmers use Azolla specifically for weed management.

Term	Category	What it means & how it is used
Abbreviations& Shorthand Used in the Field		
NF	Abbreviation	Natural Farming -used throughout as shorthand.
DAP *D-A-P*	Chemical Input	Di-Ammonium Phosphate-a widely used chemical fertiliser providing nitrogen and phosphorus. One of the two main chemical fertilisers (alongside Urea) that natural farmers are trying to move away from.
Urea *(English term)*	Chemical Input	A synthetic nitrogen fertiliser. The most used chemical fertiliser in Indian agriculture. Over-application leads to soil acidification, groundwater pollution, and disruption of soil microbial life. In this document, it appears most often in the “Before NF” cost descriptions.
RBK *R-B-K*	Government Institution	Rythu Bharosa Kendram, government-run farmer service centres in Andhra Pradesh that provide seeds, soil testing, and agricultural advisory services. Some farmers in this study received free seeds from RBK.
CSA *C-S-A*	Organisation	Centre for Sustainable Agriculture, the non-profit organisation that supported, trained, and documented the natural farming transitions in this study. CSA provides training, input support, peer learning, and market linkages for natural farming communities.
Q / q (in yield figures)	Unit of Measurement	Quintal, a unit of weight equal to 100 kg. “6q” means 600 kg. Commonly used in India when measuring crop yields.
Basta / Bags (in yield figures) *bas-ta*	Unit of Measurement	A bag of grain, typically 40–75 kg depending on the crop and region. Used loosely in the field to describe paddy yield. “35 bastas” of paddy usually refers to approximately 35 gunny bags, each weighing approximately 65-70 kg.
Kharif / Rabi*kha-reef / ra-bee*	Seasonal Terms	The two main agricultural seasons in India. Kharif is the monsoon season (June-October), when rain-fed crops like paddy, groundnut, and cotton are grown. Rabi is the winter/post-monsoon season (November-March), when crops like wheat, chickpea, and some paddy varieties are grown under residual moisture or irrigation.

A Note on Spelling

Telugu and Sanskrit terms pass through multiple transliteration conventions when written in English. Across these case studies, you will see spelling variations such as Jeevamrutam / Jeevamrtha / Jivamruta, Ghanajeevamrutam / Ghana Jeevamrutha, and so on. These all refer to the same preparations. We have standardised spellings in the main text, but readers may encounter variations in quoted material and field notes.

A Note Before We Begin

The farmers in these pages did not set out to change the world. They were simply trying to feed their families, pay off their debts, and hold on to the land their parents left them.

What you are about to read are real stories from real people, small and marginal farmers from the villages of YSR Kadapa and Sathya Sai districts in Andhra Pradesh. These accounts were collected in 2025 by field teams from CSA (Centre for Sustainable Agriculture) through face-to-face conversations.

The farmers are of two kinds. Some have walked away from chemical farming, either slowly or suddenly, and have found a different path in natural farming. Their stories speak of renewed soil, lower costs, and children eating food grown without poison. Others are still caught in the grip of rising input costs, unpredictable markets, and failing soil health. Their stories speak of struggle and uncertainty.

Both kinds of stories matter. Together, they offer a true picture of what farming looks like on the ground today.

We have written these stories in simple, direct language. We have tried to let each farmer speak in their own words whenever possible and have respected their wisdom. Names, ages, land sizes, and income figures are as reported during the surveys.

We hope these stories move you, and if you work in agriculture, policy, or community development, we hope they guide you as well.

-From Authors

PART ONE

Natural & Organic Farmers

Journeys of Courage and Hope

The farmers in this section made a choice. Some made it because they were in debt and could not afford chemical inputs. Some made it because they saw their soil dying. Some made it because a neighbour showed them the way. But all of them made it, and most of them have not looked back.

01

B. Shiva Prasad - The Young Farmer Who Chose Nature

Age: 28 | **Land:** 3 acres | **Crop:** Paddy | **Practicing NF for:** 2 years

Enumerator Suneetha interacting with the farmer Shiva Prasad

"I started because of my health and my soil's health.
Both needed attention. Natural farming gave me both."

Village: Thallamapuram

Thallamapuram is a village in Proddatur Mandal, YSR Kadapa district. The land here is mostly black cotton soil (nalla regadi) with good canal water access through the KC Canal. Most farmers here grow paddytwo seasons a year. In recent years, a quiet shift has been happening, with a growing number of farmers moving toward natural farming.

Shiva Prasad is one of the youngest farmers in these case studies. At 28, he completed his ITI and returned to his family land in Thallamapuram. He could have gone to the city. He chose to farm, and when he did, he chose to do it the natural way. "I have always believed that if you take care of the soil, the soil will take care of you," he says simply.

He farms 3 acres of canal-irrigated black cotton soil, growing paddy. In the two years since he began natural farming, the shift in his numbers has been visible. Earlier, when he used chemical methods, he spent around ₹ 27,000 per acre per season on paddy. He earned back about ₹ 53,200, with a net of ₹ 26,200. Not bad, but most of that income came at the cost of soil depletion and rising chemical costs each year. After switching to natural farming, he uses Jeevamrutam, Ghana jeevamrutam, and Beejamrutam for soil health and seed treatment. He replaced chemical fertilizers with navadhanyas and organic compost. His input costs dropped by about 20%, and his yield stayed consistent at around 38 bags per acre.His method: He treats seeds with Beejamrutam before sowing. He incorporates Ghanajeevamrutam at the time of ploughing. He prepares Jeevamrutam and applies it to the standing crop. He sows navadhanyas in the field to build soil fertility and uses neem oil spray for pest management.

02

B. Loknath Reddy - The Man Who Came Home

Age: 40 | **Land:** 4 acres (2.3 under NF) | **Crop:** Paddy | **Practicing NF for:** 2 years

Farmer-Loknath Reddy is weighing the paddy that was grown in his field

"I went to another country looking for a better life.
I came back and found it in my own field."

Loknath Reddy spent fifteen years farming. When fertiliser costs rose, and paddy market prices didn't follow suit, he found himself working harder and earning less. At one point, he left altogether, packing his bags and travelling to another country in search of work.

He came back. And this time, he came back differently.

"When I was away, I kept thinking about the land. I knew something had to change. The old way was eating us alive, more input costs every season, and the soil was getting worse and worse."

He started natural farming two years ago on 2.3 acres of his 4-acre paddy field. The rest is still under chemical farming, which helps him compare and decide. He uses the Wet and Dry (AWD) method for water management, a big shift from the waterlogged paddy fields most local farmers maintain. He uses neem oil sprays within 15 days of transplanting, followed by BVM and BT formulations for pest control. Azolla is used in the field for weed suppression. At ploughing time, he applies Ghanajeevamrutam and navadhanyas to build soil health.

His main message: "The first year, I understood I could reduce my costs. In the second year, I realised I could improve my food and my soil. Both together, that is natural farming's real gift."

03

C. Srinivasulu - Thirty Years of Rice, Five Years of Change

Age: 60 | **Land:** 6 acres | **Crop:** Paddy | **Practicing NF for:** 5 years

Nava Dhanya sown in Srinivasulu's Field

"Farmers' costs are going up, and yields are going down.
That is why I chose natural farming.
Healthy food, healthy soil, this is what I want to leave for the next generation."

C. Srinivasulu has been growing paddy for thirty years. Like every farmer around him, he grew it with urea, DAP, and whatever the local dealer recommended. It workeduntil it didn't.

"Year after year, I was putting more fertiliser and getting the same or less yield. I was watching my soil get harder. I knew something was wrong."

Five years ago, he began watching the Annadata programme on television, reading newspaper articles about natural farming, and eventually connected with CSA. He switched all 6 acres of his paddy land to natural farming.

He now uses the Line Sowing Method (LSM) to optimise plant spacing and reduce water use. He applies Jeevamrutam and Ghanajeevamrutam. Navadhanyas are sown before the crop to build soil biology. He replaced chemical sprays with neem oil, Neemasthram, Biojel, and Custard apple oil (Sitaphal), applied as needed based on pest pressure.

Before natural farming, he spent about ₹ 22,050 per acre on paddy and earned ₹ 49,000, a net of ₹ 26,950. After switching, his costs are down, and his soil is visibly better. He uses the Wet and Dry method to save water, thereby reducing methane emissions from waterlogged fields.

04

P. Shravanya - A Woman Who Chose to Grow Differently

Age: 39 | **Land:** 0.5 acres | **Crop:** Paddy (Desi varieties) | **Practicing NF for:** 7 years

Farmer Shravanya is preparing Jeevamrutam

“When I first said I would do natural farming, people laughed. Today they come to my field to learn.”

Shravanya holds a degree. She did not have to farm. But she wanted to, and she wanted to do it her way.

Seven years ago, when she started natural farming on her half-acre plot, she was one of the very few women in Thallamapuram doing so. Today, she is one of its most consistent practitioners. She grows traditional (desi) paddy varieties using the Line Sowing Method, which improves air circulation and makes manual weed management easier.

“I started because I wanted my family to be healthy. But then, natural farming became something I love. The soil feels alive. The food tastes different.”

She prepares Beejamrutam for seed treatment, uses Ghanajeevamrutam at ploughing time, and makes Jeevamrutam to apply to the standing crop. She composes a mix of neem cake and castor cake for soil nutrition. For pests, she uses neem oil sprays, Neemasthram, Panchakavya, Sapta Dhanya Jivamrutam, and Biojel.

Before switching to natural farming, she was spending ₹ 13,800 on a half-acre, earning ₹ 30,800, and netting ₹ 17,000. Her natural farming costs are lower, and her yield from traditional varieties is consistent. The micro-nutrients she feeds the soil have given her land the kind of health that shows in the grain.

05

V. Jayamma - A Widow Who Made Her Land Speak

Age: 60 | **Land:** 4 acres | **Crops:** Jowar, Paddy, Vegetables (Five-Layer Model) | **Practicing NF for:** 5 years

Farmer Jayamma is preparing Ghana Jeevamrutham

"I used to stitch chappals to survive.
Now I grow food to live well. Natural farming gave me that."

V. Jayamma lives alone. Her husband is gone. Her land is chalky (chowdu) soil, the kind that most farmers consider difficult. Until a few years ago, she grew jowar and paddy on it, but yields were poor, costs were high, and there was no one to help manage a large chemical farm.

Then CSA came.

"They helped me plant fruit trees on two acres. They showed me I could grow vegetables in between, save seeds from my own crops, and sell what I grew. I also make chappals to earn money. Now I have all of that, and my trees are growing."

She now runs a Five-Layer Model on two of her four acresa system that grows fruit trees, vegetables, leafy greens, and herbs at different heights on the same land. The remaining two acres grow jowar (on rainfall) and paddy (in the kharif season using borewell water).

In jowar, she has seen a before-and-after shift. Earlier, she spent ₹ 15,000 per season and earned ₹ 46,800, a net of just ₹ 3,800. After shifting to natural farming, her costs fell, her soil improved, and she was able to expand into vegetables she sells fresh in the local market.

She collects seeds from her own vegetables. She makes her own pest control preparations, neem oil, Agnyasthram, BVM, and BT. She uses the Line Sowing and Wet-Dry methods in paddy to save water.

06

M. Nagaraju - Bringing a Barren Field Back to Life

Age: 45 | **Land:** 5 acres (2 under Five-Layer Model) | **Crops:** Fruit trees, Vegetables | **Practicing NF for:** 1 year

Framer Nagaraju is preparing the dung before making Ghanajeevamrutham

“A field with fruit trees will take care of my children even when I cannot. That is why I planted them.”

M. Nagaraju’s story is one of reclaiming something lost. His family’s land in Thallamapuram sat idle for years, first rented out, then just forgotten. After his mother passed away, there was no one to tend it. Thorn bushes took over.

“My mother used to farm this land. After she left, we gave it on lease. After the lease ended, nobody came. Thorns grew. For three or four years, nothing grew on it. I felt bad seeing it like that.”

With CSA’s support, he brought 2 of those 5 acres back. He planted guava, mango, custard apple, sapota, fig, coconut, and red sandalwood. Between the trees, he grows vegetables and leafy greens. He used Trichoderma to treat the soil, neem cake as a base amendment, and drip irrigation to deliver Jeevamrutam directly to the roots.

He has been doing this for just one year. The trees are still young. The income is not yet flowing. But the soil is alive again, and that is something.

“I wanted to save this land. I did not want it to just be thorns. Now it is something again.”

07

J. Kamal - The Forty-Year Farmer Who Still Learns

Age: 66 | **Land:** 5 acres (2 under NF) | **Crop:** Paddy | **Practicing NF for:** 2 years

CSA Staff Nagavenamma visiting the farmer Kamal's farm

"Forty years of farming and I am still learning something new. That is the beauty of it."

J. Kamal has 40 years of farming experience. For most of those years, he farmed the chemical way because that is what everyone around him did. "When your neighbour farms paddy with chemicals and you try something different, your crop suffers from their pesticide drift. It is difficult to go alone."

Two years ago, he began natural farming on 2 of his 5 acres, a careful, considered start. He is 66 and still open to learning. He took a KNM seed production training and now produces his own paddy seed.

He uses Beejamrutam for seed treatment, Ghanajeevamrutam at ploughing, navadhanyas for soil building, and Azolla for weed suppression in paddy. For pest management, he uses neem oil, BVM, BT, and onion extract. He wants to try the Wet-Dry method but says the canal water schedule in his area makes it difficult to manage.

"I want to do it for health. My age is telling me to eat well, grow well. Natural farming is the answer."

08

M. Shiva Parvathi - The Woman Who Built a Resource Centre

Age: 42 | **Land:** 10 acres | **Crops:** Banana, Lemon | **Practicing NF for:** 5 years

Farmer Shiva Parvathi is standing in her field

"If you take care of the soil, the soil takes care of everything else. I have seen it happen on my own land."

Village: Kuppalapalli

Kuppalapalli is in Vempalli Mandal, YSR Kadapa district. The land here is mostly red soil with some black patches, and water availability varies. Some plots are irrigated; others depend on rainfall. Farmers here grow black gram (minumu), lemon, cotton, and vegetables.

M. Shiva Parvathi is not just a farmer. She has turned her land and her knowledge into a resource for other farmers in Kuppalapalli. She maintains a mini-Bio Resource Centre (BRC) where she prepares and makes available plant-based pest control preparations, kashayams, and other organic formulations for farmers in the area who cannot make them at home.

"I started natural farming because I wanted to protect my health. My soil was getting tired, and so were we. Now I grow 10 acres of banana and lemon without chemicals, and I share what I know with others."

She farms with Beejamrutam for seeds, Jeevamrutam and Ghanajeevamrutam for soil feeding, Waste Decomposer, and a range of bio-pesticides including neem oil, Vavila leaf extract (Vavilakashayam), Neemasthram, Brahmasthram, Fish Amino Acid, and Egg Amino Acid. Drip irrigation and mini sprinklers save water.

On a banana crop, she plants one that lasts three years and yields multiple harvests. She calculates costs per cutting cycle. Before natural farming, her chemical banana plot cost ₹ 1,10,500 per cycle and earned ₹ 4,00,000, a net of ₹ 2,89,500. After switching, her costs dropped with natural inputs, and soil health improved,allowing the plant to stay productive longer.

She also manages intercropping and border crops, growing multiple varieties together to reduce risk and use land fully.

09

G. Kanakambaram - She Turned Three Acres into a Forest of Profit

Age: 55 | **Land:** 4 acres (3 under NF) | **Crop:** Black Gram | **Practicing NF for:** 6 years

CSA Staff is investigating the farm of the farmer Kanakambaram

“Six years ago, I did not believe these preparations could work. Now I make them myself and teach others.”

Kanakambaram has been farming for decades, but it is the last six years of natural farming that she points to when she talks about satisfaction. She is a woman with no formal education, but she farms with more precision than many trained agronomists.

“We used to grow one crop. Now we grow intercropping, border crops, and multiple varieties. The land is busy and productive all year.”

Her shift to natural farming on 3 acres of her red soil land has been measured and visible. While growing black gram, she carefully compared her numbers. Before natural farming, she spent ₹ 16,900 per crop cycle and earned ₹ 26,000, for a net of ₹ 9,100. After six years of natural farming, with lower input costs and improved soil, she now yields 6 quintals (up from 4 quintals), and her total income has risen to ₹ 39,000 with a net of ₹ 24,700, nearly three times the earlier profit.

She uses BVM, Agnyasthram, Vavilakashayam, and neem oil for pest management. She never uses synthetic pesticides. Navadhanyas, compost, neem cake, castor cake, and Waste Decomposer build her soil.

10

M. Brahmanand Reddy - Degree in Hand, Soil in Heart

Age: 42 | **Land:** 3.5 acres | **Crops:** Lemon, Black Gram | **Practicing NF for:** 5 years

Farmer Brahmanand Reddy

“When you take care of the earth honestly, it gives back honestly. This is what I have learned.”

M. Brahmanand Reddy is an educated young man who chose farmingand chose to do it the right way. He and his sister, Shiva Parvathi, both farm and both maintain the mini BRC for their community. Together, they represent a new generation of natural farmers in Kuppalapalli.

“We do this for our health and the soil’s health. Our BRC makes preparations available for all farmers who want to try natural methods but do not know how to start.”

He uses Beejamrutam, Jeevamrutam, Ghana jeevamrutam, Pseudomonas, and Trichoderma in his farm. His pest management includes neem oil, Vavilakashayam, Neemasthram, Brahmasthram, Fish Amino Acid, and BVM. Drip and mini-sprinkler systems manage water.

His black gram numbers: Before NF, he spent ₹ 17,500 and earned ₹ 32,000 (net ₹ 14,500). After NF, with slightly lower input costs and similar yield, he nets ₹ 12,500, a marginal drop in net due to transition costs, but soil health continues to improve, and future seasons will show the benefit. His lemon grove, where he began organic farming from the ground up, tells a better story.

11

G. Srinivasa Reddy - The Four - Acre Farmer with Multiple Harvests

Age: 40 | **Land:** 4 acres | **Crops:** Black Gram, Horse Gram, Lemon | **Practicing NF for:** 7 years

Farmer Srinivasa Reddy in his lemon orchard

“Natural farming taught me that the land works better when I do not fight it. I work with it now.”

G. Srinivasa Reddy started natural farming because he wanted to protect his land and produce healthy food. Seven years in, he grows lemon, black gram, and horse gram using only organic inputs.

His lemon grove on Kuppalapalli’s red-black mixed soil has been entirely organic from the start. “I never used chemicals on these trees. I planted them with natural inputs, and they have stayed that way.”

His income from sweet lemon (cheeni) trees is ₹ 75,000 from 5 tonnes per year, with a net of ₹ 53,500, a very healthy margin from just one crop on a part of his land. He uses Jeevamrutam via drip, Beejamrutam, Ghanajeevamrutam, Pseudomonas, and Trichoderma. His intercropping of black gram and horse gram adds another layer of income from the same land.

He also uses mustard oil (avalanune), kanugan oil, and Agnyasthram for pest management.

12

L. Chennakesava Reddy - The Young Graduate Farmer

Age: 27 | **Land:** 4.74 acres (2 under NF) | **Crops:** Cotton, Black Gram, Groundnut, Vegetables | **Practicing NF for:** 3 years

Farmer Chennakesava Reddy Daincha in his field

"The older generation farmed with nature.
We forgot that for a while. I am coming back to it."

At 27, Chennakesava Reddy is one of the youngest natural farmers in this study. He has a degree, and he chose to come back to the farm. "My soil's health and good food for my family, that is why I started."

He practises intercropping and border cropping on his two natural farming acres, growing cotton, black gram, moong, groundnut, and kitchen vegetables together. He uses Beejamrutam for seeds, Jeevamrutam, Ghanajeevamrutam, Pseudomonas, and Trichoderma for soil building. Sheep manure mixed with soil and sand is applied to the root zone. He uses Vavila leaf kashayam, mustard oil, and Agnyasthram for pest management. On his natural farming plots, Reddy relies almost entirely on farm-based and locally prepared inputs, which are as follows:

- Only local seeds are sown.
- Organic manure, including composted organic matter and oilseed cakes, to improve soil fertility.
- Sheep dung with soil and sand to increase soil structure and nutrient availability.
- To improve soil fertility, seeds are treated with Beejamrutham, a microbial seed treatment solution.
- Jeevamrutham, a liquid bio-fertiliser, is used to boost microbial activity.
- Oraninge inputs such as Pseudomonas and Trichoderma are often used.
- Plant-based and homemade botanical formu lations are used for pest control.

Water usage is also monitored using drip irrigation and sprinklers. Together, these approaches reflect a system that prioritises soil health and on-farm resource usage. For water, he uses drip and sprinkler systems. His black cotton soil (nalla nela) and a well on the farm give him enough irrigation.

13

G. Mallikarjun Reddy - From Army to Agriculture

Age: 56 | **Land:** 4 acres (3 under NF) | **Crops:** Guava (Five-Layer Model), Cotton | **Practicing NF for:** 7 years

CSA Staff visit to the farmer Mallikarjun Reddy's farm

"I served the country for thirty years. Now I serve my land.
Both feel the same to me, a commitment to something larger than yourself."

G. Mallikarjun Reddy spent his career in the Indian Army. When he retired and came home to Kuppalapalli, he did not want to farm the old chemical way. "I had seen how chemicals changed everything in twenty years. I did not want that for my land."

He set up a Five-Layer farming model on 3 acres, with guava trees at the top layer and vegetables, herbs, and crops planted at different heights below. He kept cotton on the remaining land under natural methods.

His cotton, grown without chemicals, yields 7 quintals per acre. The income is ₹ 21,600, but his total input costs have dropped to about ₹ 42,000, including labour for picking, giving him a net of around ₹ 20,400 on that plot. His guava trees are the longer-term investment.

He uses Beejamrutam, Jeevamrutam, Ghana jeevamrutam, Pseudomonas, Trichoderma, and Waste Decomposer. Pest control is handled with Vavilakashayam, Neemasthram, BVM, Agnyasthram, Fish Amino Acid, and ginger-asafoetida solution (iinguvaadraavanam).

14

M. Subbarayudu - The Retired Bank Manager Who Chose the Field

Age: 72 | **Land:** 3.81 acres | **Crops:** Paddy, Five-Layer Model | **Practicing NF for:** 9 years

Farmer Subbarayudu is preparing Jeevamrutham

“Natural farming is good for everything:
The earth, the food, the farmer, the future. I am proof.”

Village: Omtimitta (Ganga Perooru)

Omtimitta Mandal in YSR Kadapa district includes the villages of Ganga Perooru and Chinna Kothapalli. The land here ranges from red soil to chalky-limestone soil (sunnamnela). Soma Sheela Dam water serves the area, making paddy the dominant crop, with turmeric, banana, and cucumber also grown.

M. Subbarayudu is a retired bank manager. He holds an MSc degree. When he retired, most people in his position would have settled into a comfortable life. Subbarayudu chose to farm.

“I never farmed with chemicals. When I started, I started with natural farming. I knew from the beginning this was the right path.”

Nine years later, his 3.81-acre farm in Chinna Kothapalli is a demonstration of what natural farming can look like when done thoughtfully. He grows paddy under the Five-Layer model, uses the AWD (Alternate Wetting and Drying) method to conserve water, and produces his own KNM paddy seed.

His paddy costs are ₹ 40,750, and he earns ₹ 75,000, a net income of ₹ 34,250, which is very respectable for a small farm. He uses Beejamrutam, Jeeva mrutam, Ghanajeevamrutam, dung-asafoetida solution (dashaparni), neem extract, and Neemastram for pest management.

He believes that agriculture needs mechanisation and better weed management tools. “The physical effort of weeding by hand is the biggest challenge. If that can be solved, natural farming will be even more appealing to young farmers.”

15

P. Venkatasubbayya - Rice Farmer, Environmental Thinker

Age: 60 | **Land:** 2 acres | **Crop:** Paddy | **Practicing NF for:** 3 years

Land preparation by Farmer Venkatasubbayya

"We protect the environment by protecting our soil.
Every farmer who goes natural is doing something good for all of us."

P. Venkatasubbayya worked with ICRP (Integrated Crop Resource Project) for years before returning to farming. He brought that technical knowledge with him. He started natural farming three years ago and has not looked back.

"Natural farming protects the environment, protects the soil, reduces costs, and gives us healthy food. It is good in every direction."

Before NF, he spent ₹ 39,300 per season and earned ₹ 44,800, a bare net of ₹ 5,500. With natural farming, his costs have fallen, and his soil is building value for future seasons.

Yet the path of a natural farmer is not without its challenges. Subbaiah shares the following ongoing concerns:

- **Market Inequity:** A significant challenge is the lack of a remunerative market price for his naturally grown produce, which denies him a fair return on his labor.
- **Labour Constraints:** He grapples with acute labour shortages and soaring wage rates, which complicate farm work.
- **Logistical Gaps:** He notes the lack of readily available, ready-made natural farming inputs in local markets. This forces farmers to dedicate considerable time to preparation, which is a time-consuming and labour-intensive task for many.

He prepares Jeevamrutam from cow dung, applies Ghanajeevamrutam at ploughing, and uses navadhanyas to build soil fertility. For pest management, he uses Agnyasthram, dung-asafoetida solution, Dashaparnikashayam, Neemasthram, and acidic buttermilk. He also uses Azolla in the paddy field to suppress weeds.

16

K. Venkata Ramana - The Seed Keeper

Age: 55 | **Land:** 3 acres | **Crops:** Paddy, Sesame | **Practicing NF for:** 5 years

Enumerator Suneetha's interaction with the farmer Venkata Ramana

"Growing seed in the natural way and giving it back to the soilis the oldest way. I am just remembering it."

K. Venkata Ramana does something most farmers in the region do not bother with: he produces his own paddy seed under natural farming conditions. "I grow seed that is pure and natural. That seed goes back into the soil the way it should."

He farms 3 acres of red-clayey (bankanela) soil with good water access. He grows paddy as the main crop and Noogu (sesame) in rotation. He introduced crop rotation five years ago, moving away from mono-cropping paddy.

Before natural farming, he spent ₹ 26,950 on paddy and earned ₹ 39,000, a net of ₹ 12,050. After switching, his costs fell slightly due to homemade inputs, and his yield stayed consistent at 28 bags per acre. He makes his own Jeevamrutam, uses Ghanajeevamrutam for ploughing, performs navadhanyas for soil building, and uses his own seeds for planting. For pests, he uses neem oil, buttermilk spray, and Vavilakashayam.

17

P. Srinivasulu - A Kashayam Changed His Mind

Age: 35 | **Land:** 2 acres (own) + 8 acres leased | **Crop:** Paddy, Sesame | **Practicing NF for:** 5 years

Paddy plantation preparation in the nursery by the farmer Srinivasulu

"One spray of kashayam on brinjal convinced me. Sometimes that is all it takes, one honest proof."

P. Srinivasulu tells a specific moment that changed him. "I was growing brinjal (eggplant), and I sprayed Dashaparnikashayam, a natural preparation, and the results were very good. I realised natural methods work. That was the start."

From that one experiment, he advanced his entire natural farming practice over the next five years. He does not just grow his own 0.3-acre plot naturally; he has also brought 2 acres of the 8 leased acres under natural farming.

Before NF, paddy cost him ₹ 31,500 per acre and earned ₹ 39,200, a thin net of ₹ 7,700. After switching, costs fell (with homemade inputs), and he now uses navadhanyas to build soil health instead of chemical fertilisers. He has also introduced crop rotation with Sesame after paddy.

He uses Jeevamrutam, Ghanajeevamrutam, Trichoderma, dung-asafoetida solution, Neemasthram, and Dashaparni for pest management.

18

K. Mahalaxmi - 365 Days, Never Empty Fields

Age: 35 | **Land:** 1 acre | **Crop:** Paddy, Sesame | **Practicing NF for:** 2 years

Enumerator Suneetha's interaction with the farmer Mahalaxmi

"My field is never empty.
The soil rests, but it never sleeps.
That is how I keep it healthy."

K. Mahalaxmi has a simple philosophy: "I try to make sure there is always something growing on my land. 365 days, some crop is present." This kind of continuous living cover is one of the foundations of healthy, natural farming soil.

She has been farming her 1-acre plot for 2 years under natural methods. She grows paddy in the main season and rotates with Sesame, keeping the soil active and her family supplied with food and a small income year-round.

Before NF, her paddy cost ₹ 31,800 per acre and earned ₹ 44,800, a net of ₹ 13,000. After NF, with lower input costs and a revised water management strategy (Wet and Dry method), her net has improved. She also uses Azolla in the paddy field and navadhanyas for soil building.

She uses Jeevamrutam, Ghanajeevamrutam, Beejamrutam, BVM, BT, and bio-fertilisers for pest management and soil health.

19

S. Pedda Bayapu Reddy - The Crop Rotation Pioneer

Age: 62 | **Land:** 5 acres | **Crops:** Groundnut, Black Gram, Moong | **Practicing NF for:** 4 years

The farmer Pedda Bayapu Reddy is standing in the 36-model kitchen garden at his home

"The soil feeds us. If we do not feed the soil back, one day there will be nothing left to take."

Village: Regulapalli

Regulapalli falls under Seetampalli Panchayat in Proddatur Mandal, YSR Kadapa district. The land here is mostly sandy (isukanela), with water from the Penna River available for irrigation. Farmers primarily grow groundnut, black gram, moong, and cucumber.

S. Pedda Bayapu Reddy learned the hard way what happens when you grow the same crop every year. "We used to plant groundnuts three seasons in a row. The yield kept falling. The soil got tired. Finally, I understoodthe land needs change too." He introduced crop rotation four years ago along with natural farming. He now grows groundnut, black gram, and moong alternately, with intercropping and border crops woven in throughout the season.

Nevertheless, Reddy highlights some issues that remain unresolved. These are as follows:

- Reddy points out, "In natural farming, there are no medicines for all types of pests. If root grubs occur in the soil, the entire crop can be lost."
- He discusses the need to invest in herbicides when adopting natural farming methods.
- He also mentions that there are no accessible marketing facilities for small farmers.
- Lastly, talking about the decrease in yield, he notes, "In the first two years of natural farming, our yield decreases a bit. Then, if it is sold at a reasonable price, our income will increase."

On a more positive note, Reddy's shift to natural farming has been significantly supported by CSA. He receives training, inputs, regular guidance, and peer support. His farm is certified under a PGS group, which has given him the confidence to continue using natural practices. He also maintains a 36-model kitchen garden at his home, growing seasonal vegetables and fruits all year. "My family eats from the land. Everything seasonal, everything natural."

Before NF, his groundnut cost ₹ 47,000 per crop and yielded ₹ 84,000, netting ₹ 37,000. After four years of NF, his costs dropped to ₹ 41,500 with organic inputs, and income stayed at ₹ 72,800, a net of ₹ 31,300. Though the net is slightly lower due to the transition to organic inputs (which have higher initial labour costs), his soil is building year on year.

20

M. Malleswar Reddy - Three Crops Where One Used to Grow

Age: 42 | **Land:** 8 acres (4 under NF) | **Crops:** Groundnut, Black Gram, Cucumber | **Practicing NF for:** 3 years

CSA Organised an exposure visit to Malleswar Reddy's farm

"I do not need to convince anyone anymore.
My field is the proof."

M. Malleswar Reddy farms 8 acres of sandy soil along the Penna River. Three years ago, he was growing only groundnuts. Today, he grows three crops on 4 of those 8 acres under natural methods. "Before, it was only groundnuts. Now it is groundnut, black gram, and cucumber. The land works harder, but so do I, and we both do better."

Malleswar Reddy's farm is irrigated with a drip system and has mostly sandy soil. For many years, he depended on traditional chemical farming, cultivating groundnuts as a single crop. Over time, rising input costs and concerns about soil fertility prompted him to reevaluate his method.He uses local seed varieties, notably TG-24, and practices seed treatment with Beejamrutham, a microbial seed treatment solution prepared from cow dung, cow urine, lime, and water. For soil fertility, he uses Jeevamrutham, a liquid bio-fertiliser made by fermenting cow dung, cow urine, jaggery, pulse flour and soil in water during crop growth, as well as grains to boost microbial activity. He also uses castor oil, wood and Shoptech organic fertilisers.

Crop scraps, including cucumber vines, are incorporated back into the soil, allowing organic matter to naturally degrade and replenish the land. For pest management, decoctions such as neem oil, turmeric, white cardamom, mixed oils, custard apple oil and BVM (Beauveria, Verticillium, Metarhizium fungi mixture) BioJal are used. Irrigation is efficiently managed using drip and sprinkler systems, which conserve water while meeting crop requirements.Reddy also mentions another important personal change. He notes, "Earlier, because investments were high, there were debts, but now, by doing natural farming, I have reduced costs, cleared debts, and have money. I am providing my share of help and support to farmers in practising natural farming."

Despite these accomplishments, some problems remain. When neighbouring farmers use chemical sprays, pest pressure increases on his natural farming lands. He also points out the lack of remunerative prices for naturally grown produce and the lack of accessible weed management solutions in natural farming systems as ongoing concerns. Even though he shares his experience and actively guides other farmers in his village, Reddy stands out as a leader who contributes to a growing sense of confidence and collective learning.

He started natural farming to reduce costs, improve yield, and eat healthier. "All three things are happening. The soil is better than it was."

21

S. Chinna Bayapu Reddy - From Crisis to Confidence

Age: 55 | **Land:** 7 acres (2 under NF) | **Crops:** Groundnut, Black Gram | **Practicing NF for:** 2 years

The farmer Chinna Bayapu Reddy's interaction with Enumerator Suneetha

"Costs were eating us. We had to change.
Natural farming at least gives us a chance."

"I have been farming for fifteen years. Year by year, the cost of pesticides kept rising, while income never caught up. At one point, even recovering the investment became difficult." -S. Chinna Bayapu Reddy knows exactly what pushed him toward natural farming.

He started two years ago on 2 of his 7 sandy acres. He introduced intercropping and border cropping, growing groundnut with black gram and other crops in the same season. He now uses Ghana jeevamrutam, navadhanyas, neem cake, and castor cake at sowing time. BVM, BT, and Agnyasthram handle pest control.

He says soil health is improving, and his family feels better about the food they eat. Fair market prices remain a challenge, but the lower input costs have already made a difference.

22

D. Suvarna - A Young Woman Farming Sustainably

Age: 30 | **Land:** 2 acres | **Crops:** Groundnut, Black Gram, Cucumber | **Practicing NF for:** 3 years

Enumerator Suneetha's interaction with farmer Suvarna

"My land is small. But it is clean and healthy.
That matters more to me than anything."

D. Suvarna is 30 years old and has been farming naturally for three years. She completed her Intermediate (Class 12) and chose to stay in the village and farm. She grows groundnut, black gram, and cucumber on sandy soil alongside Penna River, using sprinkler irrigation. "I started because pesticide costs were getting impossible, and I wanted to protect my health and my land. That is it. Very simple reason."

Suvarna has been farming for about ten years. Over time, she noticed that pesticide and fertiliser costs continued to rise while crop prices remained stagnant. The use of chemicals began to negatively affect soil quality, raising long-term health concerns. These issues led her to adopt natural farming three years ago, with the goal of decreasing expenses, recovering soil fertility, and providing healthier food.Her farm has sandy soil and is irrigated primarily with sprinklers to manage water use effectively. Previously, she cultivated a single crop, but as she moved to natural farming, she introduced intercropping, border cropping, and multi-cropping systems. Today, her fields grow groundnut, black gram, and cucumber, reducing financial risk and improving land and resource use.

Suvarna uses local seed kinds, such as TG-24. New grains, neem, castor oil, and crop rotation are used to maintain soil structure and nutrient availability. Fruit fly baskets, solar traps, seed nectar and Jeevamrutham, a liquid bio-fertiliser made by fermenting cow dung, cow urine, jaggery, pulse flour and soil in water, are some of the organic materials used in her farm. To avoid pests, she sprays neem oil 15 days after planting the seeds.Despite a recent net loss, Suvarna believes she has benefited overall from natural farming by reducing cultivation costs, improving soil fertility, and providing her family with chemical-free food. She asserts that raising awareness is essential to encouraging more farmers to adopt natural agricultural practices.However, a major concern remains to be addressed. The lack of remunerative prices in the market for naturally grown produce negatively impacts small farmers. To provide more support, CSA has provided Suvarna with training, guidance, and regular technical support, enabling her to sustain natural agricultural practices effectively.

Referring to her journey, Suvarna says, "By practicing natural farming, costs are reduced, and we are eating healthy food. Because chemicals are not used in the soil, its nutrient levels increase. Mini BRCs (Bio-input Resource Centres) should be established in more villages."Suvarna's story embodies the dilemmas faced by many young farmers today, from balancing cost pressures, soil health, and food quality in an uncertain farming climate. Even on small farms, natural farming can help reduce dependence on chemicals and gradually rebuild their faith in farming. With continued support and expanded market access, these changes could lead to a more secure and sustainable future for agricultural households.

Now she uses BioJal, BVM, BT, Jeevamrutam, pheromone traps, sticky traps, solar light traps, Trichoderma, and Beejamrutam. Her intercropping and border cropping approach mirrors the larger natural farming philosophy of growing many crops together to reduce pest pressure and soil stress.

23

K. Shankar Reddy - Ten Years of Patience, Ten Years of Results

Age: 47 | **Land:** 4.4 acres | **Crops:** Groundnut, Pigeon Pea, Paddy | **Practicing NF for:** 10 years

Farmer Shankar Reddy groundnut in his field

“Ten years. My soil is softer than it used to be.
My family is healthier than it was.
The numbers may go up and down, but the soil never lies.”

Village: Sidduguripalli

Sidduguripalli is under Kurli Panchayat in Talupula Mandal, Sathya Sai district. The soil here is a mixred, black, and white soils exist side by side on the same farm. Most farmers grow groundnut, horse gram, paddy, and tomato.

K. Shankar Reddy is the most experienced natural farmer in Sidduguripalli, with ten years of consistent practice. He did not start because someone told him to. He started because he saw what chemicals were doing to his body and his land, and he decided to protect both.

“Health first. Then soil. Then the cost. Then yield. In that order, natural farming gives you all four.”

He farms 4.4 acres with local varieties of red pigeon pea, paddy (BPT 5204), and maize (Namdar). He applies Beejamrutam to seeds, Jeevamrutam to the crop, Ghanajeevamrutam to the soil, and uses Waste Decomposer generously”I pour it everywhere and always.”

For pests, he uses BVM, BT, pheromone traps, yellow and white sticky cards, and neem oil. He uses drip and sprinkler irrigation. His intercropping and border cropping mean multiple crops on every acre of his land.

24

T. Eshwar Reddy - Healthy Food, Lower Costs, Better Soil

Age: 51 | **Land:** 4.58 acres (3 under NF) | **Crops:** Groundnut, Tomato, Paddy, Jowar | **Practicing NF for:** 4 years

Farmer Eshwar Reddy groundnut in his field

"Four years ago, I thought natural inputs could not be as strong as chemicals. Four years later, I know they are, and the soil proves it."

T. Eshwar Reddy says it simply: "Healthy food, soil health, lower costs, those are the reasons." He started four years ago on 3 of his 4.58 acres and grows three different crops across the seasons.

On paddy, his Before NF numbers werecost ₹ 48,000, income ₹ 84,000, net ₹ 36,000. After switching, he significantly reduced chemical costs by replacing DAP and Urea with composted dung, neem cake, castor cake, and dried neem-thorn-jelloid leaves mixed into the soil.

He uses Beejamrutam for seeds, Jeevamrutam, Ghanajeevamrutam, and navadhanyas.

For pests: BVM, BT, pheromone traps, yellow and white sticky traps, and neem oil. Drip and rented tube irrigation manage water.

25

P. Kadirappa - Small Land, Big Change

Age: 62 | **Land:** 1.5 acres | **Crops:** Groundnut, Pigeon Pea, Horse Gram | **Practicing NF for:** 1 year

Farmer Kadirappa harvesting groundnuts

P. Kadirappa is from the SC community, 62 years old, with no formal education. His 1.5-acre plot is small by any measure. But one year into natural farming, he has already seen the change.

“Earlier, I grew only one type of crop. Now I grow three types in one year: groundnut, pigeon pea, and horse gram. My kitchen has more variety, and I spend less to produce it.”

Before NF, his pigeon pea cost ₹ 18,750 and earned ₹ 16,500, a loss of ₹ 2,250. After one year of NF, with Beejamrutam for seeds, Ghana jeevamrutam in the soil, Jeevamrutam for the crop, neem cake and castor cake for nutrition, and BVM, BT, pheromone traps for pests, his costs have fallen, and yield has stayed the same.

“I did not think one man with 1.5 acres could make much difference.
But every field that grows clean food makes a difference to someone.”

26

R. Raghu - Young Farmer with a Long View

Age: 30 | **Land:** 3.79 acres | **Crops:** Bottle Gourd, Tomato, Pigeon Pea, Horse Gram | **Practicing NF for:** 3 years

Farmer Raghu Tomato crop in his field

“I farm so my family eats clean.
That is the most basic thing a farmer can do.”

At 30, R. Raghu has a clear reason for choosing natural farming. “I was watching people around me getting sick. Young people with diabetes, heart problems, and kidney issues. I kept wondering what we were eating. And I am a farmer. If I grow clean, at least my family eats clean.”

He manages 3.79 acres of mixed red-sandy-clayey soil with a well for irrigation. He grows vegetables and pulses across seasons. His pigeon pea numbers show the shift: Before NF, cost ₹ 15,000, income ₹ 18,000, net ₹ 3,000. After NF, costs fell to ₹ 11,500, and while yield figures are still stabilising, his soil is visibly improving.

He uses Ghanajeevamrutam, Jeevamrutam, Beejamrutam, Trichoderma, navadhanyas, neem powder, and castor powder. For pest management: neem oil, BVM, Vavilakashayam, and crop-specific preparations as needed.

27

Chandamamolla Bhagya Lakshmi - A Small Plot, a Big Turnaround

Age: 40 | **Land:** 3 acres (1.5 under NF) | **Crops:** Horse Gram, Pigeon Pea | **Practicing NF for:** 2 years

CSA Staff visit to Bhagyalaxmi's farm

Chandamamolla Bhagya Lakshmi is from the SC community. She farms 1.5 of her 3 acres under natural methods. Horse gram does not even need pest management; it simply grows clean with navadhanyas, neem cake, castor cake, and Ghanajeevamrutam in the soil.

Before NF, her horse gram on 1 acre cost ₹ 19,000 and earned ₹ 11,400 a loss of ₹ 7,600. After two years of natural farming, her cost fell to ₹ 11,500, and her yield increased by 1 quintal (from 3 quintals to 4), earning ₹ 15,200, a net gain of ₹ 3,700. "We mainly changed because of our family's health. The benefit to the land is a bonus."

"We earn a little more and spend a little less. That is not a miracle. That is just what happens when you take care of the soil."

28

R. Venkat Ramana - From One Crop to Three

Age: 60 | **Land:** 3 acres | **Crops:** Groundnut, Tomato, Watermelon | **Practicing NF for:** 2 years

Farmer Venkat Ramana applying neem cake on his farm

"Two years of natural farming gave my soil back to me.
Three more years and I will not recognise it ina good way."

R. Venkat Ramana has a practical observation about why natural farming makes sense: "A chemical spray works for one season. Organic compost and navadhanya sremain in the soil for 2 or 3 years. The effect lasts."

He farms 3 acres of mixed red-black soil and now grows three crops in a year: Groundnut, Tomato, and watermelon. Before NF, he grew only one crop.

His groundnut numbers: Before NF, ₹ 47,300 cost, ₹ 60,000 income, net ₹ 12,700. After NF, with organic inputs, his yield rose from 20 bags to 25 bags per acre, and income to ₹ 75,000+, with costs of ₹ 50,300.

He uses Beejamrutam, Jeevamrutam, Ghana jeevamrutam, neem cake, castor cake, and BVM, BT, pheromone traps, sticky traps, and neem oil for pest management. Sprinkler irrigation helps manage water on his red soil plot.

29

M. Venkatapati Nayudu - Drought - Proof Farming

Age: 50 | **Land:** 10 acres (4.5 under NF) | **Crops:** Tomato, Paddy, Pigeon Pea, Groundnut | **Practicing NF for:** 2 years

Framer Venkatapati Nayudu is tying the sticky traps in his tomato farm

"We farm with the rain.
Natural farming means our soil stays ready whether the rain comes or not."

Village: Somalavandla Palli

Somalavandla Palli is in Udamalakurti Panchayat, Talupula Mandal, Sathya Sai district. The land here is red soil with well irrigation. Farmers grow paddy, pigeon pea, groundnut, horse gram, tomato, and vegetables.

M. Venkatapati Nayudu farms in one of the driest areas in Andhra Pradesh, the Anantapur region, where crops are grown only when the rains come. "In our area, we cannot afford expensive chemicals. When it rains, we plant. If the rain fails, we lose everything. With natural farming and organic compost, at least the soil holds its fertility for two or three years."

He has moved 4.5 of 10 acres to natural farming. He grows tomatoes when the market is good, paddy in irrigated areas, and pulses on rain-fed land.

His tomato numbers are striking: a cost of ₹ 1,48,500, an income of ₹ 10,00,000, and a net of ₹ 8,51,500 in a good season.

But he is careful: "When the market price is good, the income is high. When the price falls, the income falls. That is the nature of vegetables."

He uses dung compost, Ghanajeevamrutam, Beejamrutam, neem oil, BVM, Vavilakashayam, and sprinkler irrigation. He keeps intercropping and crop rotation to stay resilient.

30

K. Venkateswarlu - Six Years Steady

Age: 58 | **Land:** 3 acres (1 under NF) | **Crops:** Pigeon Pea, Horse Gram, Moong, Bottle Gourd | **Practicing NF for:** 6 years

Farmer Venkateswarluis inspecting his field

"When I started, people said it would not work. Six years later, I am still farming the same way. That is my answer to them."

K. Venkateswarlu has been practising natural farming for 6 years, longer than most in his village. "Soil health, healthy food, reduce costs. Those were my reasons. They still are."

He farms 1 acre under natural methods on his 3-acre rain-fed plot. His pigeon pea numbers: Before NF, ₹ 19,100 cost, ₹ 8,000 income, a loss of ₹ 11,100. After NF, his costs dropped sharply to ₹ 8,400 (using free seeds from RBK and home-prepared inputs), and his yield went from 2 quintals to 3 quintals, earning ₹ 12,000. A real turnaround.

He uses Jeevamrutam, Ghanajeevamrutam, Beejamrutam, pond mud, navadhanyas, BVM, kashayams, and neem oil. Speaking on the necessity for natural farming, Venkateswarlu says, "Now that health problems are increasing, farmers should think and grow crops for their health." Stressing the need for wider institutional involvement, he suggests the following improvements to encourage more farmers to take up natural farming:

- Venkateswarlu mentions, "NGOs should make some inputs available free of charge in every village."
- Solar panels, seeds, and inputs should be made available on behalf of the SPO (Small Producer Organisation).
- There should be more accessibility for agricultural tools and equipment in the market.
- The price of organic farming inputs should improve in the market.
- Lastly, he notes, "The government should also aid farmers who do organic farming. For example, PM Kisan Rythu Bharosa should also be given to farmers who do organic farming."

31

N. Ramanjaneyulu — Seven Years, Five Acres, One Commitment

Age: 40 | **Land:** 8 acres (5 under NF) | **Crops:** Paddy, Pigeon Pea, Groundnut, Horse Gram | **Practicing NF for:** 7 years

Farmer Ramanjaneyulu is preparing Jeevamrutham at his farm

"Seven years of natural farming and I have not once wanted to go back. My soil knows the difference."

N. Ramanjaneyulu manages 5 of his 8 acres under natural farming. He has been at it for seven years. "I do it mainly for one reason: health. The income part follows if you are patient."

His paddy numbers: Before NF, cost ₹ 38,100, income ₹ 42,000, net ₹ 3,900. After NF, with lower input costs and the same yield (30 bags), his net improved. He uses Ghanajeevamrutam, navadhanyas, neem powder, castor powder, Trichoderma for seeds, and BVM, neem oil, Vavilakashayam, and crop-specific preparations for pest management. For Raghu, this improvement confirmed that decreasing expenses can greatly improve farm stability even without higher yields. He identifies three key advantages of natural farming: greater soil health, healthier food, and reduced costs. He also points out that natural inputs, such as Jeevamrutam, help crops withstand water stress better. This resilience has become increasingly valuable since water availability in his village has heavily declined.

Despite these advantages, some difficulties remain. Raghu emphasises the need for solar fencing to protect crops from wild pigs, along with better access to tools like pruning cutters for fruit trees. He also emphasises the need for the timely availability of inputs and increased government support to make natural farming more accessible to small farmers.

32

R. Raghu (Somalavandla Palli) - Courage at 30

Age: 30 | **Land:** 3.79 acres | **Crops:** Bottle Gourd, Tomato, Pigeon Pea, Horse Gram | **Practicing NF for:** 3 years

Farmer Raghu Samalavandla palli Horse Gram crop

“It takes courage to change.
But once you change, the land gives you more courage to continue.”

“I see young people getting sick with early diabetes, kidney problems, and heart issues. Chemical-grown food is part of the reason. I am a farmer. At least my family eats clean. That is what I can control.”

R. Raghu of Somalavandla Palli began natural farming three years ago with a specific purpose: providing his family with healthy food, reducing costs, and securing a better future for his land.

He uses Ghanajeevamrutam, Jeevamrutam, Beejamrutam, Trichoderma, navadhanyas, neem powder, and castor powder. For pests: neem oil, BVM, Vavilakashayam. His pigeon pea improved in three years from ₹ 3,000 net to a better margin with lower input costs.

33

N. Bhagyamma - Keeping the Field Alive All Year

Age: 38 | **Land:** 3 acres (1 under NF) | **Crops:** Paddy, Fodder, Vegetables | **Practicing NF for:** 5 years

Farmer Bhagyamma Paddy crop

“Five years of natural farming, and my soil is doing what it should. That is more than I could say before.”

N. Bhagyamma farms 1 acre under natural methods, and she has a clear strategy: “I grow paddy in one season, fodder for cattle in another, and vegetables whenever I can. The land is never wasted.”

Her paddy numbers: Before NF, cost ₹ 29,400; income ₹ 39,200; net ₹ 9,800. After five years of NF, with lower input costs and improved soil, her net has improved steadily. She uses navadhanyas, Ghanajeevamrutam, Beejamrutam, Trichoderma, neem oil, BVM, Vavilakashayam, and Pancha patrkashayam.

34

K. Sarojamma - Health and Harvest Together

Age: 56 | **Land:** 5 acres (3 under NF) | **Crops:** Paddy, Pigeon Pea, Groundnut, Horse Gram | **Practicing NF for:** 2 years

Farmer Sarojamma in his farm

“Two years into natural farming,
and I am convinced. I do not need more proof.”

K. Sarojamma is 56, and she farms 3 of her 5 acres naturally. She says she does it for her health and income, “Both together.” Her paddy (half acre): Before NF, ₹ 14,600 cost, ₹ 23,800 income, net ₹ 9,200. After NF, with lower inputs (dung compost, navadhanyas), costs reduced while yield stayed at 17 bags.

She uses Ghanajeevamrutam, Beejamrutam, Trichoderma, navadhanyas, neem oil, BVM, Vavilakashayam, egg solution, and Agnyasthram.

35

T. Ramachandra - Ten Years, Mixed Oils, and Better Bananas

Age: 61 | **Land:** 4 acres | **Crops:** Groundnut, Banana | **Practicing NF for:** 10+ years

Farmer Ramachandra in his farm

“I was never a big chemical farmer.
So, the shift to natural was not hard.
The results have been the reward.”

Village: Bolagondla Cheruvu

Bolagondla Cheruvu is in Velamavarippalli Panchayat, Vempalli Mandal, YSR Kadapa district. The soil is “garugu” (gravelly-rocky) with borewell irrigation. Farmers grow bananas, cotton, lemons, and groundnuts.

T. Ramachandra has been practicing natural farming for over ten years. He was guided by Vijay Kumar Sir’s work for fifteen years before that. He says he was never a heavy chemical user, even in the past, always preferring dung compost. Natural farming formalised and deepened what he already knew.

He grows bananas on rocky, gravelly soil in Bolagondla Cheruvu using a unique mixture of plant oils for soil health: Kanuga oil (Pongamia), neem oil, groundnut oil, and coconut oil, at 5 litres per acre, applied through drip irrigation to the root zone.

His banana (25 tonnes per harvest): Before NF ₹ 1,59,200 cost, ₹ 1,80,000 income, net ₹ 20,800. After NF: ₹ 70,500 cost, ₹ 2,00,000 income, net ₹ 1,29,500. A dramatic improvement in net profit through cost reduction. He uses kanuga oil, castor oil, Vavila preparation, and dung-urine mixture for pest management.

“CSA has helped with inputs and guidance. Getting fair market prices remains a challenge. Labour is also a problem. But the soil is better, and our income is better.”

PART TWO

Chemical Farmers

Struggles, Losses, and the Search for a Way Forward

The farmers in this section are not villains. They are people who farmed the way they were taught, using urea, DAP, and chemical pesticides, and who are now facing the consequences of that system. Falling yields, rising costs, deteriorating soil, health problems, unpredictable markets.

Their stories matter because they show the real cost of chemical agriculturenot in theory, but in rupees, in soil samples, and in a farmer's own words. They also show that change is possible, and that many of these farmers are already thinking about it.

36

L. Subba Reddy - Twenty-Five Years of Giving, Now the Land Tires

Age: 60 | **Land:** 6.5 acres | **Crops:** Paddy, Jowar, Moong | **Chemical farming since:** 40+ years

Farmer Subba Reddy is preparing the land for the paddy crop

“Farming with chemicals is like borrowing from the soil. Someday it asks for it back.”

Village: Thallamapuram - Chemical Farmer Stories

L. Subba Reddy (BA degree) has been farming for over forty years. He grows paddy on 4 acres with canal irrigation and jowar and moong on 2 rainfed acres. He has used urea, DAP, super phosphate, and chemical pesticides, such as Nano Urea and Nano DAP, in recent years.

His paddy costs: ₹ 36,500 per acre, including ploughing, hired bulls, transplanting, super phosphate, urea, and post-harvest expenses. His income from a yield of 35 bags is about ₹ 49,000. Net income: roughly ₹ 12,500. The margin is thin and getting thinner.

“I have not increased the amount of fertiliser I use, but the cost has gone up every year. The yield stays the same or sometimes drops. We are running in place while the expenses run ahead of us.”

He is aware of natural farming. He uses green manure (navadhanyas) occasionally and dung compost. But a full switch feels uncertain for someone who has farmed the same way for four decades.

37

M. Shiva Reddy - Eighteen Acres of Worry

Age: 53 | **Land:** 5 acres own + 13 acres leased | **Crops:** Paddy, Jowar, Black Gram | **Chemical farming since:** 20+ years

Farmer Shiva Reddy is applying Urea in his paddy field

“Eighteen acres means eighteen times the cost, eighteen times the risk. I need to be very sure before I change anything.”

M. Shiva Reddy is a larger farmer who owns 5 acres and leases 13 acres. Total land under paddy, jowar, and black gram. He uses urea, DAP, green manure, dung compost, and chemical pesticides. He has been doing this for over twenty years.

The scale of his farming means the scale of his risk. Eighteen acres of leased and owned land, each season demanding capital investment of lakhs. His paddy alone costs ₹ 30,150 per acre and yields 35 bags, earning ₹ 49,000, a net of just ₹ 18,850 per acre. Multiply that by 18 acres, and the absolute numbers work, but the margins remain fragile.

“On leased land, the first thing I have to do is pay the landlord. After that, I cover the input costs. What is left is mine. The numbers have not been growing.”

He is aware of natural farming but has not yet made the shift. The scale of his operations and the risk involved in transition make him cautious.

38

Chandrashekhar Reddy - Twenty Acres, Forty-Five Years, No Change

Age: 65 | **Land:** 20 acres | **Crops:** Paddy, Chickpea, Black Gram | **Chemical farming since:** 45 years

Farmer Chandrasekhar Reddy is watering the paddy field

“Forty-five years of farming the same way.
I will not say it is perfect. But I know what I know.”

Chandrashekhar Reddy is 65. He farms 20 acres of black cotton soil with paddy, chickpea, and black gram. He has been doing this for 45 years. He uses super phosphate, urea, hybrid seeds, and chemical pesticides. He has not changed his approach in 4.5 decades.

“This is how I have always farmed. My father farmed the same way. The yield is enough. I manage.”

His paddy costs about ₹ 32,100 per acre and yields about ₹ 49,000, for a net of nearly ₹ 17,000 per acre. On 20 acres, that adds up, and for a farmer of his generation and land-holding, the system still appears to work in absolute terms. But his costs are rising every year.

The challenge of chemical farming at this scale is what happens when the soil eventually shows signs of exhaustion, harder soil, reduced earthworm activity, compaction, and increasing fertiliser requirements for the same yield. None of these isan immediate crisis, but they accumulate.

39

M. Shiva Shankar Reddy - Thirty Years and Declining Returns

Age: 54 | **Land:** 7.5 acres | **Crops:** Paddy, Black Gram, Moong | **Chemical farming since:** 30+ years

Farmer Shiva Shankar Reddy is inspecting his paddy field

"The soil gives us everything.
But we are not giving anything back.
I know it. But I do not know what else to do."

M. Shiva Shankar Reddy holds a degree. His 7.5-acre farm has black cotton soil with a mix of rainfed and irrigated plots. He grows paddy in the irrigated areas and black gram and moong on the rest.

Paddy costs per acre: ₹ 52,700 (including ploughing, transplanting, super phosphate, urea, weeding, pesticides, dung compost, and harvest). Income from about 30 **bags:** ₹ 42,000. **Net:** a loss of ₹ 10,700. He is not making money from paddy with chemical farming.

"I have been doing this for thirty years. The cost goes up every year. The yield does not. The soil is getting harder. I can see it."

He uses chemical pesticides, including Chlorpyrifos and Corogen. He knows this is damaging but has not been shown an alternative that works at his scale. He mentioned interest in natural farming but expressed concerns about managing the transition given high fixed costs.

40

V. Jayamma & A. Venkata Subba Reddy & S. Nagabhushan Reddy - More Faces of the Same Struggle

Farmer Venkata Subba Reddy is preparing his field for cultivation using bullocks

Farmer Nagabhushan Reddy tending the soil and watering the crops in his farm

"If someone shows me it works and stands beside me for one season,
I will try natural farming. But I cannot afford to fail. -S. Nagabhushan Reddy"

Several other farmers from Thallamapuram tell variations of the same story. V. Jayamma (before she switched to NF), K. Ramesh Babu (58, chemical farmer), A. Venkata Subba Reddy (chemical farmer), and S. Nagabhushan Reddy (chemical farmer) all report the same pattern:

Rising costs of chemical pesticides and fertilisers every season. Yields that plateau or fall. Soil is getting harder and less responsive. Dependence on the local input dealer. No safety net when the crop fails. No fair price when the market is flooded.

The common thread across all these stories is not laziness or ignorance. It is a risk. Many of these farmers know that chemical farming is not sustainable. But changing a whole farming system in one season is frightening, especially when there is debt to repay and a family to feed.

41

A. Gangi Reddy - Twenty Years, Still Looking for Profit

Age: 54 | **Land:** 3.5 acres | **Crops:** Black Gram, Lemon | **Chemical farming since:** 20 years

Farmer Gangi Reddy in his lemon orchard

“What is left for a farmer when even the lemons cost more to grow than they sell for?”

Village: Kuppalapalli — Chemical Farmer Stories

A. Gangi Reddy has 3.5 acres of red soil in Kuppalapalli. He has grown black gram and lemon for twenty years using urea, DAP, and potash. His lemon 7-year-old trees cost ₹ 24,500 to grow per season, yet yield only ₹ 10,000. **Net income:** minus ₹ 14,500. He is losing money on every lemon season.

“Farming gives no profit. My children are in jobs. We farm, so we are not idle. We keep cattle, and that keeps us going. When it rains too much, the crop is lost. When it rains less, the crop is lost.”

He also grows horse gram as an intercrop with lemon, which earns ₹ 6,000 after costs of ₹ 6,000, breaking even at best. His situation is common among farmers with ageing orchards and rising input costs.

He has not explored natural farming. The losses he is already experiencing from chemical farming have made him uncertain about investing in any change.

42

A. Subba Reddy - Cotton and Loss

Age: 43 | **Land:** 3.2 acres | **Crop:** Black Gram, Cotton | **Chemical farming since:** 10 years

Farmer Subba Reddy in his Sesame field

A. Subba Reddy farms cotton on 3.2 acres of red rainfed soil. He uses urea, DAP, and chemical pesticides. His cotton this year: ₹ 17,400 in costs, ₹ 12,000 in income, a net loss of ₹ 5,400.

"When water is good, and prices are good, we make something. Otherwise, we lose. This year we lost. Next year, maybe different."

Farmers like Subba Reddy are caught in a cycle of hope, hoping the next season will be better, hoping for a good monsoon, hoping the market price holds. For cotton, especially, prices swing wildly, and the investment required is significant.

He has heard of natural farming but has not tried it. "I am afraid to try something new when I am already losing."

"A farmer who is afraid to change and afraid to stay the same.
That is the situation we are in."

43

L. Raja Reddy, A. Eshwaramma, K. Shyamala, K. Gangi Reddy - Cotton Struggles on Red Soil

Farmer Raja Reddy's spouse is doing the weeding in their farm

Farmer Eshwaramma's interaction with CSA staff-Nagavenamma

Farmer Shyamala is inspecting her Bengal gram crop

Farmer Gangi Reddy's spouse working in their Sesame field

"After forty-five years, the soil still grows something.
But for how much longer?
- K. Gangi Reddy"

Several farmers in Kuppalapalli grow cotton and black gram on small red soil plots of 3-7 acres, relying on chemical inputs. Their situations share common patterns:

L. Raja Reddy (53, 6.5 acres): Cotton costs ₹ 27,000, earns ₹ 30,000 - net ₹ 3,000. Twenty years of farming for ₹ 3,000 net on 6 quintals of cotton. "We kept changing the amounts of fertilizer but the yield didn't change much."

A. Eshwaramma (43, 3.2 acres, Female): Cotton costs ₹ 50,250, earns ₹ 70,000 - net ₹ 19,750. Her yields are better, but pesticide costs (₹ 10,500 per acre) are a major burden. Picking costs alone are ₹ 12,500.

K. Shyamala (53, 4.4 acres): Cotton and black gram. 40 years of chemical farming. Uses dung compost, castor cake, urea, DAP, hybrid seeds. Still dependent on chemical pesticides. "Costs go up every year. What can we do?"

K. Gangi Reddy (65, 4.6 acres): Black gram and chickpea. 45 years of chemical farming. Black gram costs ₹ 33,300, earns ₹ 35,000 - net ₹ 1,700. Forty-five years of farming for ₹ 1,700 net per acre is not what farming should be.

44

M. Abbi Reddy - Forty Years of Turmeric and Questions

Age: 68 | **Land:** 7 acres | **Crops:** Paddy, Turmeric, Banana | **Chemical farming since:** 40+ years

Farmer Abbi Reddy is showing his turmeric crop

“We grow something precious.
But we are never sure what it is worth until market day.”

Village: Omtimitta - Chemical Farmer Stories

M. Abbi Reddy is 68. He has been growing paddy, turmeric, and banana in Ganga Perooru for over forty years. He uses DAP, urea, 319 (a compound fertiliser), super phosphate, castor cake, dung compost, and chemical pesticides.

His turmeric on 1 acre costs ₹ 1,10,000 and earns... the income figures were not fully captured in the data, but the input list tells a story: ploughing ₹ 10,000, dung compost ₹ 10,000, seeds ₹ 27,000, planting labour ₹ 4,000, weeding ₹ 8,000, herbicide ₹ 2,500, pesticides ₹ 10,000, castor cake and neem cake ₹ 10,500, harvesting labour ₹ 8,000, digging labour ₹ 8,000, sorting ₹ 20,000, tractor ₹ 2,000. The investment in turmeric is enormous.

“Turmeric gives good money when the price is good. But price is never in our control. We grow it, we wait, and whatever the market says, that is what we get.”

He seasons his plants and is open to trying natural farming, but has not found the right guidance or support for turmeric specifically.

45

P. Yellareddy, K. Sidda Reddy, V. Gangireddy, P. Erikalaiah - Rice Farmers Running Thin Margins

CSA Staff Anusha showing the sticky traps usage to Gangi Reddy and other farmers

Farmer Sidda Reddy in his turmeric farm, along with CSA staff-Anusha

Farmer Yella Reddy in his paddy nursery

"We grow the rice that feeds the country.
But at the end of the year, what do we have? - P. Yellareddy"

Paddy farmers in Ganga Perooru and surrounding areas face a common problem: The cost of growing rice has crept up over the decades, while the price they receive has not kept pace.

P. Yellareddy (62 years, 2 acres): Paddy costs ₹ 33,800 (including DAP, urea, pesticides, planting, and weeding). He does not have complete income data captured, but estimates thin margins. Uses Soma Sheela Dam water for irrigation. Chemical pesticides only.

K. Sidda Reddy (66 years, 4 acres): 50 years of farming turmeric, paddy, and cucumber. Turmeric alone costs ₹ 1,50,000+. He uses Bavistin M45, zinc, potash (319), and multiple chemical pesticides. "I have been doing this for fifty years. This is the only way I know."

V. Gangi Reddy (40 years, 1 acre): Paddy costs ₹ 37,850 on 1 irrigated acre. Chemical inputs, including Ampligoo, Ramon Pitora, and others. He works primarily as a daily labourer and farms one acre on the side. The margin after all costs is very thin.

P. Erikalaiah (48 years, 1 leased acre): Paddy costs ₹ 38,100, including castor powder, urea, and chemical pesticides. He leases the land, meaning he carries all the risk and pays a portion of any income to the landowner.

46

C. Shankar Reddy - Twenty Years and Still Going, Barely

Age: 37 | **Land:** 1.18 acres | **Crops:** Groundnut, Black Gram, Moong | **Chemical farming since:** 20+ years

Farmer Shankar Redy's field

"When a degree-holder struggles to survive on 1 acre, the system has a problem."

Village: Regulapalli - Chemical Farmer Stories

C. Shankar Reddy has a degree and farms only 1.18 acres of sandy soil near Penna River. His plot is small, but the challenges are not. He uses castor cake, DAP, urea, dung compost, and chemical pesticides, including Ampligoo, Ramon, and Pitura.

His moong numbers: Cost ₹ 28,600, income ₹ 37,200, net ₹ 8,600 on just over 1 acre. That is the best of it. Not all seasons look this good.

"We change crops with the season. Groundnut, moong, black gram. We try to manage the chemicals neither too much nor too little. But prices for the chemicals never go down."

A degree, a tiny farm, and twenty years of chemical farming that barely sustains. He is thinking about natural farming but has not made the move.

47

G. Srinivasulu, Y. Venkataramana Reddy, Y. Janardhan Reddy, M. Babu, P. Satyam - The Pattern Repeats

Farmer Srinivasulu is checking the sprinkler in his Groundnut field

Farmer Babu is setting up the pheromone trap in his groundnut field

Farmer Venkataramana Reddy in his Groundnut field

Farmer Satyam with his harvest of Groundnuts

"Every year, I put more in. Every year, I get the same or less. That is not farming. That is losing slowly - Y. Venkataramana Reddy"

The chemical farmers of Regulapalli grow groundnut, moong, and black gram on sandy soil near the Penna River. Many are managing, some are struggling, all are watching their input costs rise.

G. Srinivasulu (53 Years, 2 leased acres): Groundnut costs ₹ 51,000, earns ₹ 78,000, net ₹ 27,000. This is one of the better outcomes. But he leases his land, so the apparent profit covers rent and family expenses, leaving little for savings or investment.

Y. Venkataramana Reddy (52 Years, 5 acres): Black gram costs ₹ 35,500, earns ₹ 35,000, a net loss of ₹ 500. A full season of farming that breaks even at best. "I put everything in and get everything out. Nothing is left." Uses Ampligoo, Ramon, and Pitura for pest control.

Y. Janardhan Reddy (40 Years, 5 acres): Groundnut costs₹ 46,000, earns ₹ 78,400, net ₹ 32,400. Uses castor powder, DAP, urea, and dung compost. One of the better-performing chemical farmers in the group. But he says the costs are rising every year.

M. Babu (45 Years, 6 acres): Groundnut costs ₹ 58,500, earns ₹ 72,500, net ₹ 14,000. 30 years of chemical farming. High pesticide use. Crotolephos, Berajed, Crooklin.

P. Satyam (chemical farmer): Groundnut and related crops. Consistent user of chemical pesticides over many years. Gradually seeing yield stagnation.

48

D. Nagaraju - Groundnut, Debt, and Diminishing Returns

Age: 40 | **Land:** 3.5 acres | **Crops:** Groundnut, Tomato, Ridgegourd, Bottlegourd | **Chemical farming since:** 16 years

Farmer Nagaraju's interaction with CSA staff

"I am working every day. And at the end of the season,
I am behind. I do not understand why this keeps happening."

Village: Siddguripalli - Chemical Farmer Stories

D. Nagaraju farms red, white, and black mixed soil in Siddguripalli. He has been using hybrid seeds, dung compost, urea, DAP, and chemical pesticides for 16 years. His main crop is groundnuts.

Groundnut costs per acre: ₹ 80,500 (high because of dung compost at ₹ 22,000, seed cost at ₹ 11,000, and weeding labour at ₹ 14,000). **Yield:** 25 bags. **Income:** ₹ 75,000. **Net:** minus ₹ 5,500.

"I am spending more than I earn on groundnuts. I have tried to cut costs, but it is not easy. Dung compost is expensive. Seeds are expensive. Labour is expensive. Everything is expensive."

He also grows vegetables like tomatoes and ridge gourd, which sometimes yield better returns, but they are riskier and more labour-intensive. He has not tried natural farming because the transition seems uncertain.

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B. Ravanamma, K. Surendra Reddy, K. Ravindranath Reddy, S. Sudhakar Reddy, C. Vishwanad Reddy - The Weight of Chemical Farming

CSA staff demonstrating in Farmer Revanamma's paddy field

Surender Reddy, along with his spouse, is working in their groundnut field

Farmer Sudhakar Reddy is applying the pesticides in his farm

Farmer Vishwanad Reddy is inspecting his groundnut crop for insects

"When the market goes down, the farmer loses.
When input prices rise, the farmer loses. When does the farmer win?
- B. Ravanamma"

The chemical farmers of Sidduguripalli carry the weight of high costs and uncertain markets.

B. Ravanamma (39 Years, 7 leased acres, female, SC): Grows paddy on leased land. Costs ₹ 37,200. Earns ₹ 70,000 but pays ₹ 20,000 in lease. **Net: ₹** 12,800. Uses hybrid seeds, dung compost, DAP, and chemical pesticides. Managing, but just. "If I do not pay the lease, I lose the land. So the lease comes first."

K. Surendra Reddy (45 Years, 9 acres): Grows pigeon pea among other crops. Pigeon pea costs ₹14,300, earns ₹ 30,000, and has a net of ₹ 15,700. Uses hybrid seeds, dung compost, and chemical pesticides. 20 years of chemical farming. One of the better-margin chemical farmers in the group.

K. Ravindranath Reddy (chemical farmer): Groundnut and related crops. Long-term chemical farmer. Observing stagnant or declining yields with rising input costs over recent years.

S. Sudhakar Reddy (chemical farmer): Similar situation. Paddy and vegetables on mixed soil. Chemical inputs across all crops. Aware of the problem but uncertain how to change.

C. Vishwanad Reddy (chemical farmer): Mixed soil, multiple crops. High pesticide use, particularly on vegetables. Watching input prices climb year after year without corresponding market price improvement.

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A. Youngamuni - Rainfed Farming Without a Safety Net

Village: Somalavandla Palli | **Crops:** Rainfed crops -pigeon pea, horse gram | **Situation:** Chemical-dependent, limited water, thin margins

Farmer Youngamuni's farm

Village: Somalavandla Palli - Chemical Farmer Stories

A. Youngamuni is a chemical farmer in Somalavandla Palli, growing rainfed crops on land that only produces when the rains are good. He uses chemical inputs because that is what he knows, but the combination of unpredictable rainfall and rising input costs makes his situation precarious.

"If it rains, we farm. If it does not rain, we do not. And if we do farm, we use chemicals because that is the only thing that seems to guarantee any result."

Farmers like Youngamuni represent a particular kind of vulnerability in a rainfed, chemical-dependent region prone to drought. The transition to natural farming is appealing in theory (lower costs, more resilient soil), but in practice, they worry about yield in the first few transition years.

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M. Venkatayya, R. Gangayya, C. Gangaiyya - The Older Generation Holds On

CSA staff demonstrating in Farmer Venkatayya's field

Farmer Gangaiyya working in his Mango orchard

Farmer Gangayya with his tomatoes harvest

"We have farmed this way for thirty, forty, fifty years.
The land is still here. But it is not what it used to be. -R. Gangayya"

M. Venkatayya, R. Gangayya, and C. Gangaiyya are older farmers in Somalavandla Palli who have been using chemical inputs for 20-45 years. They grow tomato, rice, pigeon pea, and horse gram on mixed soil with well irrigation.

Their stories share a theme: they have been farming this way for so long that change feels impossible, even as they recognise the problems. Soil is getting harder. Yields are not improving. Pesticide-resistant pests require ever-stronger chemicals.

M. Venkatayya (chemical farmer): Tomato and paddy with heavy DAP and drip-applied fertiliser use. Pesticide costs are a major expenditure each season. Market price volatility means some seasons yield good income, while others yield losses.

R. Gangayya (chemical farmer): Rainfed and irrigated crops. 45+ years of chemical farming. Aware that the land is changing, but does not know how to change with it.

C. Gangaiyya (chemical farmer): Long-term chemical farmer. Growing tomatoes and paddy with high input investment each season.

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R. Ramachandra - Mango and Hope

Age: 62 | **Land:** 5 acres | **Crops:** Mango, Bottle Gourd | **Chemical farming since:** 20 years

Farmer Ramachandra in his Red gram field

“The chemicals that worked ten years ago do not work as well now.
I am watching the pests get stronger.
That tells me something.”

R. Ramachandra grows mango as his main orchard crop and bottle gourd as an intercrop on rain-fed red soil in Somalavandla Palli. He uses DAP, dry super, neem cake, and chemical pesticides, particularly to help flowers set and fruit size up properly.

His bottle gourd results: cost ₹ 31,700, income ₹ 72,000, net ₹ 40,300. That is a good return, but he notes that heavy pesticide use on flowering crops is risky: “For the flowers to set and the fruits to grow big, we spray. We spray a lot. It is part of the work.”

“I have done this for twenty years. My concern is: what happens when the chemicals stop working as well? I see that already on some pests.”

He is one of the chemical farmers who have seriously considered natural farming. He has not yet made the switch, but the growing pest resistance to chemicals has made him curious about alternatives.

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T. Gangayya - Forty Years of Cotton, Rising Costs

Age: 64 | **Land:** 4.5 acres | **Crops:** Cotton, Lemon | **Chemical farming since:** 40+ years

Farmer Gangayya's Cotton field

"Forty years of work and the profit is still small.
If I had known natural farming earlier, I would have tried it."

Village: Bolagondla Cheruvu - Chemical Farmer Stories

T. Gangayya has farmed cotton in Bolagondla Cheruvu for over forty years. His 4.5 acres of gravelly, rocky soil, with borewell irrigation, grow cotton using hybrid seeds, sheep manure, DAP, urea, and chemical pesticides.

Cotton costs: ₹ 49,000 per year. **Income:** ₹ 64,000. **Net:** ₹ 15,000. That sounds reasonable until you consider that it is 40 years of farming to earn ₹ 15,000 net on 4.5 acres, with rising costs every year eating into that margin.

"The cost of chemicals is too much. We are putting in too much, and the profit is not worth the effort. But what can we do? This is what we know."

He mentions that in some seasons, the cotton market drops after harvest, and farmers who planted expecting a certain price receive much less. "When we plant, the price is there. When we harvest, the price is gone. This is the farmer's life."

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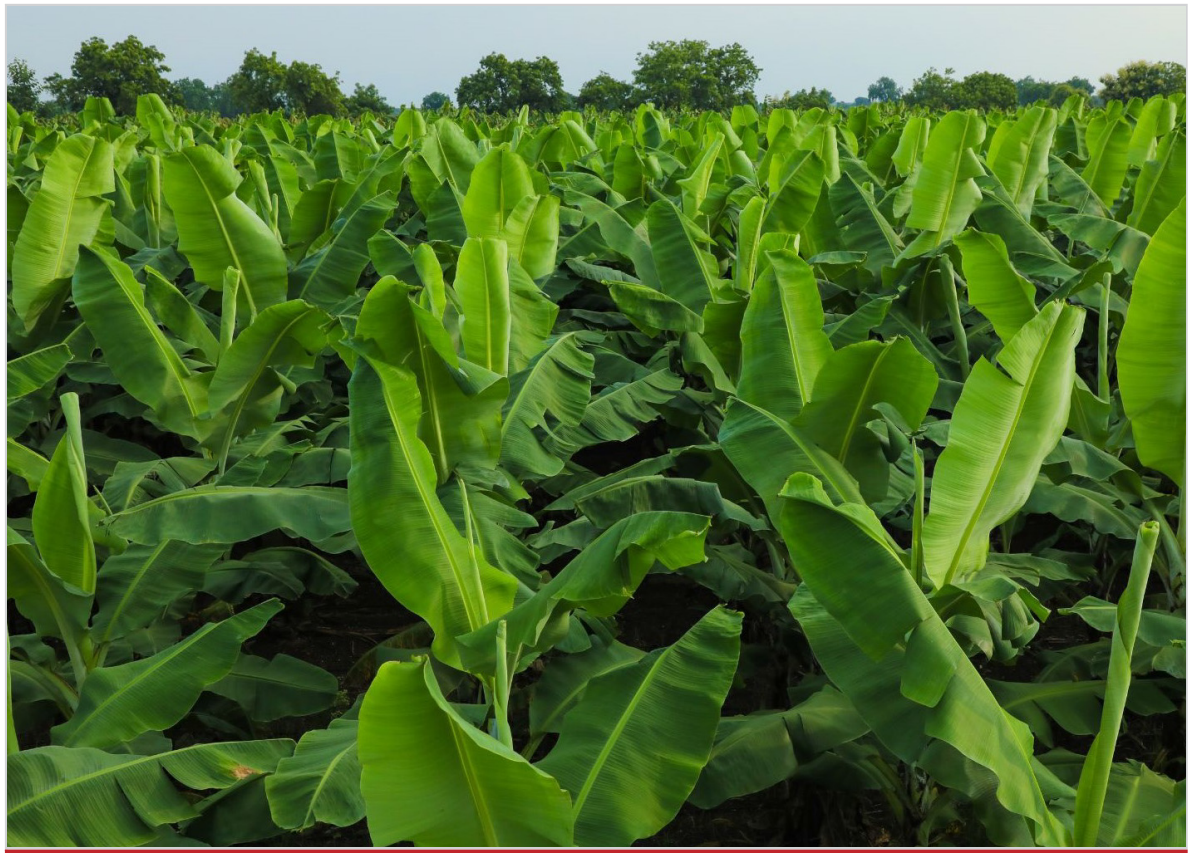
T. Muttaiah - A Farmer Considering Another Way

Age: 42 | **Land:** 8.5 acres | **Crop:** Banana | **Chemical farming since:** 30+ years



Farmer Mutaiah bananna in his field

“My neighbour does it naturally, and his bananas earn more. I am watching. Maybe next season.”

T. Muttaiah grows bananas on 8.5 acres of gravelly soil. He uses sheep manure, DAP, urea, red and white potash, drip fertilisers, and chemical pesticides, including NEWTO. His banana yields 20 tonnes per harvest at a cost of ₹ 1,59,200, earning ₹ 1,80,000 and netting ₹ 20,800.

“When the banana market falls at harvest time, all those losses happen at once. We plant in the off-season when prices are good. By the time we harvest, the price has fallen. It has happened to all banana farmers.”

He says the biggest frustration is market timing. “We cannot delay the harvest. Banana ripens when it ripens. If the price has fallen, we still have to sell. We have no choice.”

He has heard of natural farming and knows T. Ramachandra (another banana farmer in the same village) has been doing it naturally for years with better results. He is thinking about it.

What These Stories Tell Us

Reading through these pages, a few things become clear.

First, the farmers who have shifted to natural farming are not farming idealists. They are practical people who made calculations about costs, soil, and health, and decided to change. Their decision was often slow, sometimes forced by crisis, and almost always supported by some external guidance or community. Once the shift happened, most found their costs went down, their soil improved, and their families ate better food.

Second, the farmers still using chemical inputs are not unaware of the problems. Most of them can articulate exactly what is wrong: rising input costs, resistant pests, declining soil health, unpredictable markets, and shrinking margins. What they are missing is not knowledge of the problem, but confidence in the solution. They need to see natural farming work on farms like theirs, with crops like theirs, in seasons like theirs.

Third, fair market prices are a problem for everyone. Even natural farmers who reduce their input costs and increase yields face a market that does not always reward their effort. This is a structural problem that goes beyond individual farming choices.

Fourth, women farmers are doing remarkable work managing farms, making preparations, running resource centres, raising children, and leading by example. Their stories deserve to be heard and celebrated.
Fifth, there is a clear generational divide. Older farmers (55+) tend to be more cautious about change. Younger farmers (25-40) are more open to natural farming, and several have become strong advocates. This is hopeful.

A Word on What We Do Not Know

These case studies are honest portraits, not finished success stories. The income figures are self-reported and may vary. Long-term soil health outcomes cannot be fully measured in 1 or 2 years. And the broader market, water, and climate conditions that affect every farmer are outside any individual's control.

What we can say with confidence is this: where natural farming has been tried with care and consistency, costs have come down, soil health has improved, and farmers report feeling better about what they grow and eat.

To Every Farmer in These Pages

You trusted a field team with your story. You spoke openly about your struggles and your hopes. You showed us your land and explained your work.

This document exists because of you. We hope it does justice to what you shared.

— Authors