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Stories That Matter:
Tales from the JIVA Programme

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Stories That Matter: Tales from the JIVA Programme

Under the SuATI project, seven journalists document farmers' stories in JIVA programme areas

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- Watershed Organisation Trust (WOTR), Ahmednagar, Maharashtra
- Watershed Support Services and Activities Network (WASSAN), Bhadradi Kothagudem, Telangana

Message

Shaji K V
Chairman, NABARD

India's agriculture has always been deeply intertwined with its natural resources- land, water, soil, and energy, supporting millions of livelihoods. However, rapid demographic changes, unsustainable practices and climatic variability have severely strained these resources, especially for smallholder farmers. Excessive use of chemical inputs and over-extraction of groundwater have degraded soil health, reduced productivity and heightened vulnerabilities in Indian agriculture.

In this challenging context, sustainable agriculture is no longer a choice but a necessity- a cornerstone for ensuring a resilient future. Recognising the necessity of this change, the United Nations declared 2021-2023 as the "Decade on Ecosystem Restoration," emphasising the importance of preventing, halting and reversing ecosystem degradation. In response to this global need, National Bank for Agriculture and Rural Development (NABARD) launched the JIVA programme, a transformational initiative designed to balance agricultural productivity with ecological sustainability.

The initial phase of JIVA, which was executed across 24 projects in 11 states, has already yielded significant results. Encouraged by its achievements, the programme has entered an ambitious second phase, which includes 19 additional projects across 12 states, including underserved areas in North East, East and Central India.

Through its multifaceted efforts, JIVA represents a harmonious blend of ecological stewardship, community participation and innovative outreach. As it broadens scope and depth of impact, it reinforces the potential of sustainable farming to address global challenges. As JIVA evolved, its success was reflected not just in its results but also in the stories it generated, stories of resilience, innovation and transformation.

I express my heartfelt gratitude to the farmers, field facilitators, regional teams and partners who made this JIVA Compendium a reality.

Foreword

Dr. Ajay K. Sood
Deputy Managing Director,
NABARD

Agriculture has always been at the heart of India's economic and cultural identity, nurturing millions of livelihoods while contributing to the nation's growth. In recent years, NABARD has championed initiatives that integrate ecological sustainability with agricultural development, and the JIVA programme stands as a shining example of this commitment.

JIVA embodies the transformative potential of agroecology and natural farming. The programme's first phase, successfully implemented across 24 projects in 11 states, has demonstrated how sustainable farming practices can rejuvenate ecosystems, enhance productivity, and improve the economic well-being of smallholder farmers. Through the adoption of practices such as crop diversification through A-grade model, Any Time Money (ATM) model, Suryamandalam model etc., and efficient water management, IVA has empowered communities to rebuild their relationship with nature. These efforts have led to improved soil health, better water retention, and enhanced biodiversity. Farmers have also seen increased incomes, greater food security, and healthier, more resilient agricultural systems. By promoting ecological sustainability, JIVA continues to drive a holistic transformation in farming communities, fostering long-term environmental stewardship alongside economic prosperity.

Recognising the importance of documenting and amplifying the programme's impact, NABARD and GIZ India engaged seven professional journalists. These journalists visited seven JIVA project sites across six Indian states, namely, Andhra Pradesh, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra and Telangana. They interacted with farmers, field facilitators, and regional teams, capturing compelling narratives of transformation. Their work has resulted in insightful articles and case studies that showcase the positive changes brought about by natural farming and climate-resilient agriculture under the JIVA programme.

The stories captured by the journalists bring to life the resilience, innovation, and determination of farmers who have embraced the principles of natural farming. These narratives highlight how smallholder farmers have transitioned to sustainable practices, improved their livelihoods, and secured better futures for their families. From increased incomes to diversified livelihoods, the stories showcase how agroecology has enabled communities to achieve financial stability while preserving ecological integrity.

I extend my deepest gratitude to the farmers, Project Facilitating Agencies (PFAs), Resource Support Agency (RSA) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH for their tireless dedication to this initiative.

Together, we continue to demonstrate that sustainable agriculture is not only achievable but transformative, bringing hope and prosperity to countless rural communities.

Foreword

Rajeev Ahal
Director, Natural Resource Management and Agroecology,
GIZ India

India's agricultural journey is at a turning point, with a growing movement of farmers and communities taking the lead with practical, ecological solutions and the urgency to create resilient, climate-smart food systems. Our work in agroecology and natural resource management at GIZ India is motivated by the belief that meaningful change in agriculture needs to be inclusive, locally based, and sustainable in every way.

That belief is powerfully reflected in the stories in this collection. They bring forth lived experiences from seven Indian states where farming communities, supported through NABARD's JIVA programme under the German Federal Ministry for Economic Cooperation and Development (BMZ) funded Indo-German development project SuATI, are actively co-creating alternatives to chemical-intensive, extractive agriculture. These are not abstract case studies; they are real stories of transition, struggle, innovation, and hope.

Agroecology is appealing because of both its technical and human aspects. It is a systems approach that respects the cycles of nature and enhances the agency and knowledge of those who grow our food. The stories presented here provide insight into the practical application of agroecological concepts like crop diversity, knowledge co-creation, and responsible governance. They demonstrate how, at the core of this shift, farmers—particularly women and marginalised groups—are agents of change.

Through our partnership with NABARD, GIZ is honoured to accompany this journey. We believe that scaling agroecology requires more than technical inputs – it demands storytelling, trust-building, and the nurturing of communities of practice that learn from and with one another.

This compilation serves as a call to action as well as a record. It is a call to action for development professionals, researchers, policymakers, and members of civil society. The resilience these communities have developed offers lessons that are applicable well beyond their immediate geographic boundaries as we confront increasing climate volatility and intensifying ecological crises.

The farmers, project facilitating agencies, and journalist fellows from Village Square, who helped make this publication possible have our sincere gratitude. Their voices shed light on a way forward that is just, regenerative, and firmly grounded in place.

Let these stories serve as seeds of inspiration as we collectively work toward a future where agriculture nourishes both people and the planet.

Foreword

Ute Rieckmann
Project Director,
SuATI, GIZ India

The transformation of agricultural landscapes and livelihoods toward sustainability is no longer a choice but an urgent necessity. With the planet facing the dual crises of climate change and biodiversity loss, the need for resilient farming systems that honour ecological principles and empower communities has never been more critical. Agroecology offers a path forward with its holistic approach to farming that integrates traditional knowledge, environmental science, and social equity.

It is with great pride and optimism that we present this compendium of stories from the ground, a collection that brings to life the spirit of agroecology as practiced in diverse landscapes across India. Drawn from the ecosystems of seven Indian states, these stories emerge from NABARD's JIVA programme, implemented under the Indo-German development cooperation project "Support to Agroecological Transformation Processes in India (SuATI)", commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). This compendium owes much to Village Square's journalist fellows, who captured these inspiring ground-level narratives with dedication and insight. NABARD, as one of SuATI's key implementing partners, has been instrumental in advancing the adoption of agroecological principles and practices across the country.

Each story in this compendium serves as a testament to the transformative potential of the 13 principles of agroecology articulated by the High-Level Panel of Experts (HLPE). From enhancing biodiversity and fostering resilience to championing equity and empowering local communities, these narratives underscore the deep interconnectedness of ecological health and human well-being. They remind us that agroecology is not merely a framework but a movement-one rooted in collaboration, innovation, and the unwavering spirit of farmers.

The farmers and communities featured in this collection have demonstrated extraordinary courage and creativity in reimagining their agricultural practices. Their stories highlight not only the challenges they face but also their resilience and determination to create systems that are environmentally sound, economically viable, and socially just. Their voices provide invaluable insights and inspiration for policymakers, practitioners, and anyone committed to building a sustainable future.

As we celebrate these ground-level achievements, let us also recognise the critical role of partnerships in making this vision a reality. The collaboration between NABARD, GIZ India, and Village Square exemplifies how shared goals and coordinated efforts can drive meaningful change at scale.

I invite you to delve into this compendium, to listen to the voices of those who are shaping the future of sustainable agriculture, and to draw inspiration from their journeys. May these stories ignite a deeper commitment to agroecology and a collective resolve to nurture our planet and its people.

About Village Square

Village Square has been working diligently to bridge the urban-rural divide by harnessing the power of storytelling, advocacy, and dialogue. Its mission is to present a holistic and authentic view of rural India, showcasing its diversity, resilience, and untold stories. Through various rural immersive programmes, it empowers journalists, storytellers, and change-makers to experience the rich realities of life in rural communities and share these stories with a global audience!

One of its flagship cultural immersive initiatives is the *"Village Square Fellowship"* Programme, designed specifically for journalists and media enthusiasts. Over two successful cohorts in 2022 and 2023, the programme has brought together 20 fellows from 18 states across India. These fellows have collectively produced over 350 impactful stories, exploring themes such as gender, climate change, entrepreneurial success, livelihoods, and rural innovations. Their work has amplified local voices and celebrated the resilience, creativity, and transformative potential of rural communities.

Village Square values the importance of hands-on immersive experiences. Staying true to this ethos, the fellowship programme is led by industry experts with over three decades of experience in storytelling and journalism, ensuring the highest quality of training and mentorship.

Since its inception in 2016, Village Square has remained steadfast in its commitment to bridging the urban-rural divide. Building on this foundation, it is now re-crafting its mission to expand its horizons and create a sustainable for-profit model. The vision is to establish a vibrant platform that authentically showcases rural India's stories, traditions, and cultural richness. The plan is to launch immersive programmes, host cultural events, and forge partnerships with government bodies, Non-governmental Organization (NGOs), and Civil Society Organizations (CSOs).

By leveraging its robust social media and digital presence, Village Square aims to amplify the voices of rural India further, engage broader audiences, and connect urban and rural communities on a deeper level. This holistic approach will not only sustain Village Square's impact but also position it as a leading force in bridging the urban-rural divide while celebrating the richness and resilience of rural India.

CATEGORY: LIVELIHOOD

Returning to roots - natural farming bears fruit in Telangana

Mallaigudem Village, Bhadradri Kothagudem District, Telangana

Written by Amir Malik
Project Facilitating Agency: WASSAN, Bhadradi Kothagudem, Telangana

After three decades of using chemicals to cultivate food, a Naikpod tribe farmer returns to natural farming which her mother used to practise. Now Kanthamma embraces year-round intensive cropping, which is bearing fruit for her in ways she never imagined.

"For years and years I was growing only one crop – cotton."

Saren Kanthamma smiles as she talks. The evening sun lights up her face and the shade of the trees casts shadows on her forehead.

"For that one crop I needed chemical fertilisers to ensure it grew," Kanthamma, 42, admits. "It's different now. I grow over 50 crops through natural farming practices. That means I need nothing external to farm well and be happy," she added.

Wearing a yellow saree with a petal-shaped *tilaka* on her forehead, the farmer, who belongs to the Naikpod tribe in Bhadradri Kothagudem district of Telangana, is preparing to go to the Bathukamma festival that celebrates femininity. For Kanthamma the festival is also about preserving nature.

"The flowers we find in the forests and fields are used to create a layered floral offering, around which we dance during Bathukamma to celebrate nature," she explains.

As the sun sets, women of the village arrive to dance and soon form a circle. Kanthamma has collected marigolds and other flowers from her 1.5-acre field in Mallaigudem village in the Aswaraopeta block. She has sold flowers worth Rs 2,000 today from her fields. During the festival season, she will be able to earn over Rs 40,000 just by selling flowers.

"These hands which hold flowers now used to sprinkle chemical fertilisers on crops in the past," said Kanthamma, showing her palm. "But, today, not an ounce of fertiliser is used on my land," she said proudly.

Since childhood, Kanthamma farmed a small plot of land, like many women in India, believing success depended on pesticides and chemical fertilisers.

For decades, her tribe practiced natural farming which was gradually replaced with chemical-intensive unsustainable farming methods.

In 2022, Kanthamma re-discovered the benefits of natural farming as traditionally practiced by her mother.

Discovering the power of alternate cropping

The National Bank for Agriculture and Rural Development (NABARD), under its agroecology-based programme JIVA, supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by WASSAN, was able to instil in Kanthamma a vision to practise agriculture differently from her fellow farmers. She started replacing biochemical with natural manure like *Ghana Jeevamrut-II,* a type of dry manure prepared using jaggery and cow urine.

"The JIVA team members provided hands-on training on natural farming," said Kanthamma.

She has also prepared her soil through the pre-monsoon dry sowing method (PMDS) – a system of sowing, tilling and tending the land wherein the farmer grows crops before the monsoon. She used paddy straw, dried leaves, groundnut shells, paddy husk and other crop residue to mulch them in the soil at the later stages.

This method helps enrich the soil by increasing healthy microbes and trapping dew in the soil, reducing dependency on groundwater consumption and thereby helping Kanthamma in cost-cutting. "When my soil is healthy, my body will also be healthy," contends Kanthamma.

"PMDS acts as an umbrella for the soil, covering it from the heat, incessant and untimely rain and also tornadoes, which are unpredictable due to climate change," said Satheesh Kumar, a natural farming enthusiast leading the JIVA project, who has worked in the region for over two decades.

"PMDS helps my soil in the face of climate change," agrees Kanthamma. "By helping my soil, I am helping my country," said the farmer.

Nature's bounty

She grows over a dozen varieties of crops, including *sunhemp* (Crotalaria juncea) and coconut. She has planted many varieties of fruit trees such as *sapota* (chiku), pomegranate, amla, papaya and banana adding beauty to her farmland and income to her pocket.

"This year I have also planted ridge gourd and beans, and prepared wooden ladders for them to climb. Now, I grow bottle gourd, chilly, beetroot, *palak* (spinach), *methi* (fenugreek), coriander, *gongura* (local leafy plant), radish, maize, tomato and brinjal. That is mostly for consumption, but I also sell the leftovers," explains Kanthamma. "Even doctors in the village buy milk and vegetables from me and tell me that they are delicious compared to what they get from the market," Kanthamma said, beaming.

She has three cows that produce 20 litres of milk a day, which is less than what it used to when it gave birth to a calf. Nonetheless, villagers come to her asking for milk. "What you have is different from what is available elsewhere," the villagers tell her as they gather for the milk. Sometimes the demand is so great, Kanthamma sells what she had kept for herself.

"I also have 30 desi birds, chickens primarily. I can sell them when I want, or also sell their eggs," she says, sprinkling *bajra* and rice for them to eat. She also has a small pond where she has fisheries. "The cow shed was provided by JIVA and they also gave me some birds to begin with," she revealed.

> PMDS helps my soil in the face of climate change," agrees Kanthamma. "By helping my soil, I am helping my country," said the farmer.

Going back to her roots

The Naikpod is an agriculture-practising tribe and Kanthamma's mother was also a farmer. "I do not remember my mother using any fertiliser in our field or anyone else's fields she worked on," she says. It was after marriage that Kanthamma, pressed by the need to feed many mouths, and encouraged by the example of others using fertiliser on their farm, turned away from natural farming. "That trend was increasing and in a few decades, it (chemical farming) has damaged our earth. I think about undoing the harm chemicals caused," she explained.

Now that she practises natural farming, Kanthamma says that she earns far more than what she did as a chemical farmer. "Last year from bitter gourd alone I earned Rs 5,000 and from beans Rs 6,000," she revealed.

"The work can be tedious," admitted Kanthamma. "But I'm happy. I feel healthy and satisfied that I'm helping protect nature," she said, signing off.

Kanthamma has 20 desi birds and cows on her farm.

CATEGORY: ENVIRONMENT

Diversification yields better food, income, health

Village Dibbagudem, District Bhadradri Kothagudem, Telangana

Written by Amir Malik
Project Facilitating Agency: WASSAN, Bhadradi Kothagudem, Telangana

From pomegranates to pineapple, fish to "power-packed" rice – how a Telangana Koya tribal woman embraces agricultural diversification and organic farming. Doing so has not just helped her fields yield a better income, but improved her land, her health and taste buds too.

Tribal farmer Modium Ramulamma standing by her fish pond around which grows 60 types of plants.

On a sunny afternoon in Telangana's Bhadradri Kothagudem district, Modium Ramulamma is redefining drip irrigation. The 30-year-old belongs to the Koya tribe in a village called Dibbagudem within Telegana's Aswaraopeta block.

As she talks to Village Square about her journey into natural farming, she tenderly ensures her young plants receive the perfect amount of water – just enough to thrive but not so much that the roots clog and the plants die.

For this she uses old saline bottles to carefully drip the right amount directly into the roots of the plant – similar to a doctor administering fluids into a patient's bloodstream. She has fixed wooden stakes adjacent to the saplings and adjusts the valve flow after putting water in the bottle, which has an opening from the rear side. This design allows for a steady, controlled delivery of moisture to her growing plants, which have become – thanks to her care – nurtured.

Trusting the tongue

Ramulamma grows around 60 types of plants around a small pond in one of her fields. On another two acres, she grows maize. She also grows indigenous varieties of paddy supporting her commitment to traditional agriculture.

That's not all.

She also cultivates fish in her pond. Her efforts yielded significant returns – she received Rs 15,000 for her fish alone. This year, she has once again stocked her pond with fish, believing in diversifying her agricultural output and enhancing her income potential.

"I stopped getting dependent on the market. What I want, I grow and it is definitely better than the chemically grown food and vegetables," Ramulamma said. "Earlier, I found it hard to tell the difference between natural food and food with chemicals. After I started growing food naturally, my tongue tells me that I'm eating nutritious food," she explained.

Profiting from diversification

This journey into farming diversification has been possible because of her hard work and the support of National Bank for Agriculture and Rural Development (NABARD).

Through its agroecology-based programme JIVA, supported the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by WASSAN, Ramulamma received the resources and training necessary to establish an eco-friendly farm pond. She received hands-on training on bio-inputs from NABARD and WASSAN.

"They're encouraging me and that's why I'm getting an additional income," Ramulamma revealed. "Last year, I produced 13 quintals of Navara rice and sold the lot out in the rural market for Rs 2,60,000," she added.

Pretty "power-packed" rice

Also growing in her field is Burma Black rice that creates a purplish-black patch at the centre of the red soil, making the field appear more aesthetically appealing than those of the neighbours. The rice has anthocyanin and antioxidant content. "These prevent cancer," Ramulamma said to Village Square.

Another nutritious, "power-packed" rice is Siddhi Sannalu, which is not only rich in protein but also boasts dietary fibre and cancer-resistant properties. This quality of rice is an immunity booster and helps increase haemoglobin, according to a research paper by Care Hospitals.

"My paddy has over 50 tillers whereas chemical ones only have around 20. That is because my rice stays in the field for a longer period," she specified.

She grows crops such as radish, tomato, beans, sapodilla (chiku), pomegranate, pineapple, banana, jamun, dragon fruit, guava, pumpkin, drumstick and other leafy vegetables.

"Earlier I had to buy pesticides at each stage of crop growth. Now, with the use of natural fertilisers, I don't use chemical-based pest control methods. Back then, I was always anxious about what to provide to the crop and at what time," she recalled.

"All this (the need for pest control) has been taken care of by the Ghana *jeevamruth*, and other manure, which I prepare myself," she said. Ghana *jeevamruth* is made by collecting cow urine. Ramulamma sells cow urine to the organic farmer for Rs. 5 per litre and to those not practising natural farming, she gives it for Rs 10 per litre. "That discount is to support the farmers who are organically growing the crops," she stated.

Farmer as eco-warrior

Ramulamma also insists that working to save the environment is a farmer's responsibility, pointing at the soil on her land which she has prepared using the pre-monsoon dry sowing method (PMDS). It is a system of sowing, tilling and tending the land wherein the farmer grows crops before the monsoon. Ramulamma will use paddy straw, dried leaves, groundnut shells, paddy husk and other crop residue to mulch them in the soil at a later stage.

"In fact through the JIVA project, I got to know that food grown chemically was causing health issues and malnutrition.

"You sow what you reap," she asserted while quipping, "If you use chemicals to grow your food, you will also get chemicals to eat."

Ramulamma works hard to ensure she has a variety of crops that helps the land be more sustainable but also increases her profits.

After consuming natural food, my health also has improved," Ramulamma admitted.

"I'm doing what my grandparents used to do. After reversing the process of chemical farming, what's left is natural. We were organic farmers. We were people of the forest. We were people of nature. We will continue to be so," she said emphatically.

Ramulamma believes that plants are not stupid. Soil and plants have intelligence. "You sow what you reap," she asserted while quipping, "If you use chemicals to grow your food, you will also get chemicals to eat."

Her baby plants have got enough water now. She is closing the valve. The sunny afternoon has turned into a reddish evening with clouds floating in the sky. It will rain tomorrow and Ramulamma won't need to water her plants.

"When you take care of nature, nature takes care of you."

CATEGORY: LIVELIHOOD AND ENVIRONMENT

Faith in the long game of natural farming

Mallaigudem Village, District Bhadradri Kothagudem, Telangana

Written by Amir Malik
Project Facilitating Agency: WASSAN, Bhadradi Kothagudem, Telangana

Battling climate change and financial woes, a tribal farmer puts his faith in organic, natural farming methods – betting that enriching his soil will reap rewards in the long run.

Like parents around the world, Dara Jyothi and Dara Prasad worry if their income is enough to ensure their children get a good education. And like many couples, they do not always agree on how this is achieved.

"Chemical farming methods yield more and so we should go back to doing it," Dara Jyothi says as she prepares mutton pickles at home in Telangana's Mallaigudem village in the Bhadradri Kothagudem district.

"That's true. It has given me more yield and money in the past." her husband, Dara Prasad, steadfastly says, "if my soil is enriched it would help the earth and us in the long run. That's why I started growing crops organically."

Faith in natural farming

The Koya-tribe farmer began organic farming in 2022. "I had been thinking about natural farming since 2008. High-intensity chemical use has depleted our soil of its natural richness," he contended.

Prasad used to grow cotton and groundnuts. He left cotton farming because it was a water-intensive crop that did not give him the income he desired. Though farming with chemicals bears more yield, input costs are much higher with lesser profit margins.

He was firm in his belief that once the earth's top layer is nutritious and fertile, more bountiful crops will come. "For this, I had started growing crops naturally," he explained.

Getting the dirt on soil

Through the support of NABARD's JIVA programme, supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by WASSAN, he was able to conduct soil testing. "After testing the soil, I found out that it was deprived of micronutrients," said Prasad. "JIVA's goal is to revive the soil—and it certainly brought mine back to life."

This motivated him to cultivate groundnuts on his 3.5-acre patch of land via organic farming. He prepared the soil in the pre-monsoon dry sowing method (PMDS), sowing over a dozen types of seeds, millets, sunflowers and sunhemp. After 45 days, he mixed cow urine in the soil. Mulching helped the top layer of the earth regain its strength. PMDS has also increased the soil's water retention capacity. As a result, more water has percolated into the soil.

Prasad used natural fertilisers like Ghana Jeevamrutham-II and Panchagavya to grow his plants and Brahmastra for pest control. He was delighted to find reduced input costs as a result of using these methods.

A-maizing benefits of natural farming

By 2023 Prasad grew radish, sesame, *jawar*, *bajra,* coriander, little millets, maize and leafy vegetables, including *gongura*. Prasad also cultivated crops on the edges of his field to prevent insects from entering it. "Maize is a natural insect trapper much like marigold and the castor oil plant," he said to Village Square.

Maize is more than a natural insecticide, it is also part of the Koya tribe's welcoming rituals.

"In our Koya tribe, we follow the tradition of offering our guests healthy maize seeds, grown in our own fields, mixed with hot water, like a soup. Our guests like the flavour very much," Prasad said. "I have kept a bunch of these seeds to use during the next season," he added.

The shift to organic farming was challenging. Beyond transitional challenges, climate change is also taking its toll.

Climate change stress to tribal farmers

"Yes it's been difficult, due to the impacts of climate change on my crops" concedes Prasad. Cyclones seem to be

Dara Prasad received help learning sustainable farming practices and best irrigation methods from the JIVA project.

increasingly powerful, with winds so strong that Prasad saw a eucalyptus tree bending so much that its topmost branches scraped the ground.

Erratic weather literally knocked him down last year when one of the cyclonic winds flung a dish TV antenna from the rooftop and hit him on his leg while he was getting home.

"It hit me and I fell on the roadside, got dragged to the earth, and was hurt," he says. "During the next storm, an asbestos sheet from my village was seen flying at a location two kilometres away," he explained.

While this season there was less rain, it poured down heavily on Prasad's farm. Then the temperature rose suddenly, almost burning the crop. "What should the farmer do then? We can't exactly cover our crops, can we?"

Cashing in on the crop

Prasad remains patient, believing that with natural farming the yield comes with time. "For the first season, I got 800 kilograms of groundnuts per acre and in the second season, it increased to 1200 kilograms," he said.

He sold one quintal for Rs 8,000, securing Rs 64,000 in the bargain. In the next season, he received Rs 72,000 selling at Rs 6,000 per quintal. Even though the yield tends to be four to six quintals less than what is achieved through chemical farming, the produce is healthy for both soil and people.

He also likes the smell of the natural crop growth enhancer, which he prepares himself. The stench of chemical fertilisers on the crops never agreed with him. Never mind he had to wear gloves and cover his nose for protection against poisonous fumes, back then. "How can something from which my body needs protection be sought to protect my crop? This realisation left me bewildered," he admitted.

Now, two years into growing his crops using organic means, farmers from distant parts of the state come to observe his farming practices. This allows Prasad to continue using these techniques for agriculture.

Dara Jyothi has finished preparing mutton pickles in her home. But what of her worries?

She continues to worry about being able to pay for her children's higher education even though her husband is convinced that natural farming will enable them to do that in the long run.

"Well, that can continue for the time being," he shrugged, firm in his belief that natural farming is the way forward.

CATEGORY: ENVIRONMENT

Reviving traditional red gram in drought-prone Dewas, MP

District Dewas, Madhya Pradesh

Written by Aishwarya Mohanty
Project Facilitating Agency: Samaj Pragati Sahayog, Dewas, Madhya Pradesh

When everyone around him was growing genetically modified Bt cotton, one Madhya Pradesh farmer saw red. Finding the negatives of GM crops outweighed the positives, the farmer from Dewas switched to red gram.

A 20-minute walk through narrow, rocky lanes and fields from Balram Rathore's two-room *kutcha* house leads to a distinctive half-acre plot among the surrounding cotton fields. Rows of red gram plants now stretch across the land.

Five years ago, Rathore's farm blended in with his neighbours – they all grew the same cotton crop. But today, his plot stands out.

Rathore, a 48-year-old farmer from Borkhedi village in the Bagli *tehsil* of Dewas, has experienced the highs and lows of modern agriculture. Like many farmers across India, he once cultivated cotton after the advent of the genetically modified *Bacillus thuringiensis* (Bt) Cotton, designed to resist pests. But five years ago, he began rethinking his approach, seeking a more sustainable and profitable path.

Today, he is part of a growing trend in the district to revive red gram, a split pulse dal also called pigeon pea. It is also a crop with deep traditional roots and exceptional resilience.

What is the Bt Cotton dilemma?

Long ago, these villages in Dewas, home to the Bhil and Bhilala tribes, had traditionally grown red gram and maize. After the Green Revolution, traditional crops were replaced by wheat, with little land devoted to maize and red gram. However, in 2007, genetically modified cotton took over.

The villagers say that initially Bt Cotton was like a lifeline for its farmers. Designed to resist bollworms, Bt Cotton promised higher yields with fewer pest issues, allowing India to become one of the world's top cotton producers.

However, this genetically modified crop came with hidden consequences. For one, the input costs for Bt Cotton steadily rose.

"The hybrid seeds can't be reused, so I had to buy expensive seeds annually, adding to the financial burden. I spent about Rs 10,000 on seeds alone, only to receive diminishing returns of Rs 25 per kg. Over time, the demand for pesticides and fertilisers skyrocketed, affecting soil health and raising environmental concerns," Rathore said.

But that was not all. Bt cotton had been embraced for its genetically engineered resistance to the bollworm pest, which was expected to reduce pesticide dependency and boost yields. However, outcomes for farmers have been mixed, particularly as pest-resistance to Bt cotton has evolved.

"As Bt Cotton took over as a cash crop, its intensive requirements eroded soil fertility, leading to compaction and reduced water retention in the fields," said Sukhran Baghel, 52, an agricultural activist from the region who has worked with Samaj Pragati Sahyog (SPS) in spreading awareness about traditional crops. SPS has partnered with NABARD under its agroecology-based programme JIVA, supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, to promote natural farming practices in Dewas.

The richness of red

Faced with these challenges, Rathore transitioned back to a traditional crop: red gram. The benefits of red gram, both agronomic and economic, became clear.

Known for its climate resilience, red gram is well-suited to Madhya Pradesh's semi-arid regions, requiring significantly less water and external inputs compared to cotton. So Rathore planted 1 kg of red gram seeds, costing Rs 370, across a quarter of his land.

The result?

A harvest of 3.5 quintals, which he sold at Rs 10,000 per quintal – marking a drastic improvement in profitability and sustainability.

"Cotton can be tricky, as it requires skilled labour to harvest properly," Rathore explained. "Red gram, on the other hand, can be harvested by anyone, saving both time and money, " he added.

Rathore's success extends beyond economics.

The transition to red gram has rejuvenated his soil without the need for chemical fertilisers or pesticides. Instead, he applies *panchatatva kadha*, a homemade bio-pesticide derived from local plants, including *neem* (Azadirachta indica). This mixture, containing boiled-down leaves, acts as an effective natural pesticide, reducing the risk of pest outbreaks without harming the environment.

"Red gram is a drought-tolerant, leguminous crop that contributes to soil enrichment through nitrogen fixation, which improves soil health and reduces the need for synthetic fertilisers. This natural resilience makes red gram a viable crop even in low-rainfall areas, providing a dependable yield that aligns well with the risks of climate variability," Baghel said.

Pigeon pea takes flight

The community has taken notice of these benefits. Farmers around Dewas have seen firsthand how the revival of the pigeon pea dal fosters biodiversity in their fields, attracting pollinators and beneficial insects. Additionally, with red gram's capacity to naturally replenish nitrogen, the need for chemical fertilisers has decreased.

Farmers in the region have now started cultivating red gram in small patches of their land and at times mixed with other crops as it takes eight months to cultivate.

In Mahigaon village, Pratap Alawa, a farmer in his late 50s, started cultivating red gram on his one-acre farmland two years ago. At present, he cultivates red gram with maize. He also keeps a small patch of his land for cultivating cotton, which he plans to phase out soon.

"Cotton can be tricky, as it requires skilled labour to harvest properly," Rathore explained. "Red gram, on the other hand, can be harvested by anyone, saving both time and money, " he added.

"Over the years, cotton production has declined, while input costs have risen. Maize yields have also suffered due to unseasonal rains, damaging the crop and leaving very little for sale-mostly, it's used for self-consumption. But with red gram, I don't face these challenges," Alawa explained. "Although it takes longer to harvest—around eight months—it requires minimal tending and withstands erratic weather well," he said.

Back in the diet

Beyond its agricultural advantages, red gram has a deep-rooted cultural significance. Before the Green Revolution shifted local focus to wheat and later to Bt Cotton, red gram was a dietary staple, providing essential protein to rural communities.

Today, its revival not only supports soil health but also brings this nutritious legume back to local diets, promoting food security and nutritional well-being. The perennial legume is an excellent source of vegetable protein.

"If we grow something that we can consume, we do not depend on the market for buying it. In small patches, we grow vegetables which we consume. We save maize and wheat for our consumption. Now we can add red gram to the diet again. After harvest, we save some for our family's annual consumption and then we sell the rest," Alawa revealed.

Most fields in Borkhedi village grow mostly cotton with a few farmers now reviving red gram.

CATEGORY: LIVELIHOOD

Drought to abundance: water harvesting turns the tide for this Dewas village

Magradeh village, Dewas district, Madhya Pradesh

Written by Aishwarya Mohanty
Project Facilitating Agency: Samaj Pragati Sahayog, Dewas, Madhya Pradesh

Several measures adopted by the residents of the Magradeh village, in rural Madhya Pradesh, including building a check dam and switching to natural farming, are helping change the fortunes of its villagers.

> "Before the dam, we could hardly imagine farming during the dry months".

The check dam in Magradeh village which was built by the villagers to end the locality's water woes.

Dressed in a printed pink saree, with a small hoe in one hand and tomato seeds in the other, Ganga Baghel, in her late 30s, heads out to her farm just 300 metres from her two-room *kutcha* house in Magradeh village. From five in the morning, Ganga devotes at least seven hours a day to the farm, working in shifts to carry out various tasks — tilling the soil, weeding, sowing seeds, harvesting, irrigating, and gathering ripe vegetables.

This daily routine, however, is new for her. Until a few years ago, Ganga could cultivate only a single crop on less than one-eighth of her nearly two-acre farmland, yielding a harvest that was meagre, unpredictable, and entirely dependent on scarce rainfall. The soil was usually hardened and devoid of any moisture.

But over the years, in Magradeh village, a small, arid settlement in the Bagli block of the Dewas district of Madhya Pradesh, many villagers have transformed their lives and land by adopting natural farming techniques and the strategic use of water resources.

From rain-dependent to year-round farming

Known for its unforgiving droughts and parched soil, Magradeh had long struggled to sustain agriculture, with many villagers forced to leave for city jobs to survive. "The landscape here is undulating. The rainwater would usually run off, leaving little for us to use. We couldn't irrigate our lands in the non-monsoon periods," said Ganga.

However, since 2017, the community has built resilience and prosperity through an initiative that revived the region's potential: a modest check dam.

The dam was built with the support of Samaj Pragati Sahyog (SPS), a not-for-profit organisation working in the region on multiple aspects of rural development.

Ganga and other villagers contributed labour to build the structure, which is now essential for the village's water needs. The dam captures rainwater during the monsoon season, storing it for use throughout the year and also recharging wells downstream.

"Before the dam, we could hardly imagine farming during the dry months, " said Phoola Baghel, 40, another resident of the village. Now, with an assured water source, she has expanded her cultivation to the entire farmland. She cultivates maize, wheat and multiple vegetables.

"Look at our village, agriculture is all we have. The men from our village migrate for work and we look after our small land holdings. Without sufficient water for irrigation, the produce was hardly enough to meet our needs. But things are changing now," Phoola added.

Cultivating crops the natural way

After the water woes ended last year, Magradeh has also adopted crop diversification and natural farming techniques under the JIVA programme by NABARD, supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and implemented by SPS.

From the conventional maize and cotton cultivation, the village farms are now a vegetable basket with multiple vegetables like ladyfinger, tomatoes, torai and gilki. This diversification has made their farm productive year-round, an unthinkable achievement in the village's drought-prone past.

Ganga's husband, who once laboured on construction sites in Indore, nearly 70 kilometres from the village, now works beside her in the fields, cultivating vegetables for the local market. "There was a time when my husband worked for others for daily wages. He toiled at construction sites. But today he sells the vegetables we grow. He owns his own small cart and commutes daily to Indore to sell the fresh vegetables," Ganga said proudly.

He now sells his surplus produce in the vegetable market in Indore earning Rs 2,000 every day. This additional revenue stream has given them the means to reinvest in their farms, further boosting productivity.

From farmer to employer

With the extra income, they have even been able to employ workers on their farm during peak seasons, a sign of the family's rising prosperity and the village's economic growth. "It feels good to provide work to others," Ganga reflected.

What also stands out for them is their commitment to natural farming techniques. They've eliminated chemical fertilisers and pesticides from their farming, instead relying on organic ferments and bio-pesticides to nourish the soil and protect crops.

"There was a time when my husband worked for others for daily wages. He toiled at construction sites. But today he sells the vegetables we grow.

"It wasn't easy to switch to these natural techniques. But today we make our own ferments to spray on the crop in case of any pest infestation. Due to multi-cropping on the farm, the pest infestation has reduced drastically," revealed Nirmala Baghel, another villager.

In place of commercial fertilisers, they use compost made from cow dung and farm residues, a practice that has led to better soil health and crop quality. "Using chemicals on the land was not only costly but also harmed the soil," she explained. "Now, with natural methods, our soil is getting richer and the crops are healthier," said Nirmala.

This approach, known as natural farming, requires low investment and promotes soil regeneration, which is crucial in regions where land is often overworked and depleted.

Vivek Kumar, program officer, SPS, who has been involved in the process of switching the farmers here to natural farming explained, "Natural farming is showing remarkable potential here. Not only does it make farming affordable for the farmers, but it also makes their land more resilient to climate variations. Without the burden of costly inputs, farmers like Ganga can thrive even in tough conditions."

The efforts of residents of Magradeh village demonstrate the power of collective action and the results are a testament to the resilience of this community who, with help from the right quarters, have turned adversity into opportunity.

Ganga Baghel's daughter sows vegetable seeds and prepares the field for the next season.

CATEGORY: LIVELIHOOD

Chhattisgarh farmer's transformative "ATM model" of crop-growing

Village Rampur, District Korba, Chhattisgarh

Written by Devashish Biswal
Project Facilitating Agency: GBVSS, Korba, Chattisgarh

Like an ATM that dispenses money anytime, a Chhattisgarh farmer creates a process of cultivation where a field produces crops that can be consumed and sold anytime. He calls it his "ATM model" and it's catching on.

Farmer Jaimant Kumar Rathiya at work on his farm in Chhattisgarh's district of Korba

Jaimant Kumar Rathiya has always been a visionary. Any technological advancement that comes along, the 38-year-old farmer from Rampur village in the district Korba of Chhattisgarh, wonders how it could be used to improve his land and cultivation.

He has always been driven by a passion for restoring the health of his soil and reducing his dependency on chemical fertilisers. What started as a quest for alternative farming methods soon led him to a ground-breaking model—one that promises year-round crops, better soil health and increased profitability for farmers.

"Chemical usage in our fields has caused crucial damage not just to our crops but our health too," Rathiya told Village Square.

For over a decade, like many of his peers, Rathiya had relied on growing paddy, often under the pressure of securing a minimum support price (MSP) from the government-run public distribution system (PDS). However, the excessive use of chemical fertilisers like DAP left the soil depleted, diminishing its ability to support diverse crops and raising long-term concerns about health and sustainability.

A new dawn

The turning point came when Rathiya was introduced to the JIVA programme with facilitation support from the Gram Bartori Vikas Shikshan Samiti (GBVSS). Through the programme, Rathiya, along with 33 other farmers, was given a week-long orientation and training on the principles of natural farming. He was taught how adopting eco-friendly agricultural practices could not only restore the vitality of his land but also significantly reduce his input costs, ensuring financial stability for his family.

Inspired by the teachings from the programme, Rathiya developed what he calls the "ATM model" (any time money) with money being synonymous with crops. The idea is to cultivate multiple crops on the same piece of land throughout the year without degrading soil health.

Farmers are taught to produce a variety of crops like pulses, millets, and vegetables that can be harvested year-round, providing both nutritional security and a steady income from weekly markets. The approach eliminates the dependency on external markets for daily food needs, creating a sustainable farming ecosystem.

The 1-2-3 of natural farming

Rathiya's farming practices are rooted in traditional natural farming techniques, with an emphasis on organic inputs and indigenous knowledge.

He begins by preparing his land with a mixture of cow dung, cow urine, and various natural elements. The first step involves creating Beejamruta, a natural seed treatment solution. Rathiya dissolves 40 kilos of cow dung in 200 litres of water, adding jaggery, gram flour, and cow urine, followed by the soil from a banyan tree's roots. After allowing the mixture to ferment for several days, the seeds are coated in the solution, which boosts their germination and promotes healthier growth.

The next critical stage involves Jeevamruta, a fermented liquid fertiliser made by mixing cow dung, cow urine, jaggery and gram flour. This mixture, when applied to plants, enhances soil fertility and boosts plant health. Rathiya also uses Ghanjeevamruta, a concentrated version of Jeevamruta, which strengthens the soil and helps reduce the need for chemical pesticides.

To protect his crops from pests, Rathiya prepares Neemastra, a natural pest repellent made from *neem* (Azadirachta indica) and fig leaves, along with cow dung and cow urine. This solution is effective against nymph-sucking insects and larvae. If pest issues persist, he applies Brahmastra, a potent mixture of neem and several other indigenous leaves, which offers protection against larger pests like caterpillars.

Because of the support, under JIVA, he was able to grow variants of mixed crops like spinach, radish, carrot, turmeric, sesame and pulses like *moong* and *urad*. As a result of this, he currently cultivates in both the Kharif and Rabi seasons, when he grows paddy, groundnut, sesame, *toor* lentils and vegetables like ladyfinger, cauliflower, tomato and chillies.

> "My daughter feels proud her teacher talks of me as an example. They look up to me for protecting not just the crops but the environment too."

Rathiya coats seeds with a natural solution made from cow dung, urine, and indigenous ingredients to promote the healthy growth of his crops.

"This ATM model has helped me secure nutrition for my family and earn considerable monetary benefits by selling the produce in the markets," said Rathiya proudly.

The ATM everyone wants to use

Within a year, Rathiya's ATM model has become a shining example of how traditional knowledge, combined with modern training, can transform agricultural practices. By diversifying his crops and minimising external inputs, Rathiya has not only reduced his dependence on the chemical market but has also restored the health of his soil.

"People look upon Jaimant Rathiya as an example of change. They've seen him reap profits from crops despite a reduction of chemical fertilisers. Now they're learning methods from him and wanting to know about the JIVA programme so that they can join the next batch to be trained," said Suryakant Soulakhe, president of GBVSS.

His ATM model is now being shared with other farmers in the region, providing them with a roadmap for achieving food security, financial stability, and ecological balance.

"My daughter feels proud that her teacher talks of me as an example in class," Rathiya said, smiling. They look up to me for protecting not just the crops but the environment too with the adoption of natural farming ."

CATEGORY: LIVELIHOOD

From day-care to soil care - Chhattisgarh woman teaches natural farming

Village Rampur, District Korba, Chhattisgarh

Written by Devashish Biswal
Project Facilitating Agency: GBVSS, Korba, Chattisgarh

After excessive fertilising stripped nutrients from her village's soil, an anganwadi teacher takes it upon herself to educate her community about the perils of chemical farming and how to cultivate agri-nutrition gardens.

Farmer Jaimant Kumar Rathiya at work on his farm in Chhattisgarh's district of Korba.

From Classroom to Farmland: A Mission for Community Health:

With a warm, ready smile and a big heart, Vimala Rathiya has been teaching young children in the local community anganwadi centre since 2011. But now she is educating her entire community on a different set of fundamentals.

For years Rathiya, and most families of her village – Rampur – in the Kartala block of the Korba district of Chhattisgarh, relied on farming standard crops like paddy, driven by the government's minimum support price (MSP).

However, using chemical fertilisers for a long period not only became more expensive, but it began to impact the quality of the crops, never mind the soil. Overuse of chemical fertilisers, like urea and DAP, degraded soil health so much that the produce became unsafe to eat, especially for pregnant and lactating mothers.

"It was something I always wanted to do – make an impact on my community's future health," said Rathiya, the 47-year-old anganwadi worker. It wasn't until she encountered the JIVA programme, repetitive with facilitation support from the by Gram Bartori Vikas Shikshan Samiti (GBVSS), that she felt empowered to take action.

Turning over a new leaf

Through the JIVA programme, Rathiya learned about "agri-nutrition gardens," small, sustainable gardens designed to grow nutrient-dense crops that improve household nutrition and food security. These gardens integrate agriculture with nutrition by promoting the cultivation of vegetables, fruits, and herbs rich in essential nutrients.

"I received the necessary training from the GBVSS team, and officers from the NABARD regularly visited us for feedback," she recalled.

In rural settings, it is challenging for women to be voices of change, but with a clear goal of prioritising health and nutrition, Rathiya committed herself to eliminate harmful fertilisers from her village.

As the head of her self-help group (SHG), which includes 8-10 women from nearby villages, she led weekly discussions on women's health issues like anaemia and shared solutions. "In a family, a mother's responsibility is to provide nutritious food, but we only realised the enhanced quality of our diets after we started eating from our own agri-nutrition garden" she said.

Creating an agri-nutrition garden wasn't difficult. All it required was proper hand-holding and guidance which was provided through the JIVA programme. The focus shifted from chemical fertilisers to cow-based, natural farming practices.

"We wanted to reduce farmers' expenses. Under this programme, we've trained about 200 women who are now promoting this model, improving their health and helping them financially," explained Suryakant Soulakhe, president of GBVSS.

Today, Rathiya grows over 20 types of vegetables in her backyard, including red spinach, moringa, okra, chili, tomato, radish, ivy gourd, and pumpkin, and she also sells her produce in the local market twice a week. Although her sales bring in a modest weekly income of Rs 1,000 to Rs 1,500, her true satisfaction lies in knowing her family and the Anganwadi children are consuming safe, nutritious food.

"I believe that if my family eats healthily, it's the right of every child at the anganwadi to eat the same quality of food," she said. The SHG women now provide fresh, homegrown produce for mid-day meals and encourage the children to promote this practice to their families. Inspired by Rathiya's success, all 50 families in her village have adopted agri-nutrition gardens, leading to improved health, reduced medical expenses, and substantial savings.

Stages of natural solutions for organic farming

The process of establishing a successful agri-nutrition garden includes several stages, beginning with Beejamrutha, a seed treatment to protect young roots. Rathiya prepares it by dissolving 5 Kgs of cow dung in 20 litres of water, adding 5 litres of cow urine, and a handful of soil from under a *neem* tree (Azadirachta indica), and stirring in 50 grams of lime. After letting the mixture sit for 12 hours, she coats seeds in it, air-dries them, and plants them to boost germination and seedling growth.

The next stage, Jeevamrutha, is applied to soil to increase fertility. She mixes 10 Kgs of cow dung with 10 litres of cow urine, 2 Kgs of jaggery, 2 Kgs of gram flour, and 200 litres of water, stirring in soil from a neem tree to promote microbial growth. After fermenting this mixture for three to four days, it is applied around the plants.

As a further step, Ghanjeevamrutha is a concentrated soil enhancer. Vimala combines 10 Kgs of cow dung, 2 litres of cow urine, 500 grams of jaggery, 500 grams of flour, and soil from under a neem tree, fermenting it for three to five days, then drying and storing it. This mixture, when applied around plants, improves soil health and reduces dependency on chemical pesticides.

> "I believe that if my family eats healthily, it's the right of every child at the anganwadi to eat the same quality of food,"

Vimala Rathiya smiles knowing her organic farming practices have led to improved soil health and reduced fertiliser costs for farmers in her village.

Organic farming evangelist

These organic methods, rooted in India's agricultural heritage, remind farmers of traditional practices before the widespread use of chemical fertilisers. Rathiya also shares this knowledge with her anganwadi students, encouraging them to eat balanced meals and promoting agri-nutrition gardens during community events. Her efforts gained local attention, and the gram panchayat invited her to speak on natural farming and the importance of food, nutrition, and health for women.

Through the JIVA programme, women from neighbouring villages now approach Rathiya and GBVSS for training and guidance in establishing their own agri-nutrition gardens. A year after JIVA's launch, villagers saw significant improvements in soil and crop quality while halving their fertiliser expenses.

This is how Rathiya's dream of a self-sustaining, healthy community has come to life. With each seed she plants, she cultivates a legacy of resilience, health and empowerment, showing that one woman's determination can transform her world, one garden at a time.

CATEGORY: LIVELIHOOD

How an Andhra woman inspired her village to adopt natural farming

Rankini village, Srikakulam district, Andhra Pradesh

Written by Shreya Pareek
Project Facilitating Agency: BREDS, Srikakulam, Andhra Pradesh

When Janni Jyoti adopted natural farming techniques, she had no idea that her entire village would soon follow in her footsteps. Read about the trailblazer from Andhra Pradesh's Rankini village.

© GIZ/Shreya Pareek

Janni Jyoti and another woman from her village sharing their harvest.

Rankini, a small, tranquil village in Andhra Pradesh, may seem unremarkable at first glance. However, bubbling under the surface is the stirring of an agricultural revolution led by Janni Jyoti, a 47-year-old woman transforming her community with the power of natural farming.

From homemaker to changemaker

Married at the tender age of 13, Jyoti spent most of her life as a devoted wife and mother, with no knowledge of farming. Yet, she has risen to become a powerful and inspiring voice in her village.

Her journey began in early 2023 when her husband, Jani Chandra Rao, attended a meeting organised by NABARD and JIVA, an agroecology programme supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by BREDS. Among the first to attend these village-level meetings, he felt enthused but bewildered by the technicalities of natural farming. He turned to Jyoti, who embraced the challenge and began attending the training sessions.

Armed with the knowledge and confidence to transform their three-acre ancestral land from chemical-intensive farming to sustainable natural farming, Jyoti, along with her husband, pioneered natural farming in their village.

Humble beginnings

The couple began their experiment by dedicating an acre of their land to natural farming. Years of chemical use had depleted the soil of nutrients, but Jyoti decided to revive it using jeevamrit—a nutrient-rich mixture of cow urine, cow

dung, jaggery, and other natural ingredients.

The results were astonishing. By the first harvest, their paddy crop showed significant improvement in quality and yield. Motivated by this success, they expanded their efforts to the rest of their land.

Scaling knowledge, spreading change

JIVA's training sessions introduced farmers to a variety of natural farming techniques, including preparing compost, pest repellents, and nutrient-rich soil enhancers using easily available materials. Jyoti didn't stop at applying this knowledge to her farm alone; she became a mentor to her fellow villagers, addressing their questions and challenges.

"I would visit other households and encourage them to adopt natural farming," Jyoti recalls. "One by one, small-scale farmers in the village joined the movement," she adds.

Her innovative use of the line-sowing method for paddy cultivation reduced costs and improved yields. Meanwhile, the couple diversified by planting vegetables such as ridge gourd, brinjal, tomatoes, and beans on the edges of their farmland, creating an additional source of income.

Transformative results

The transformation was not just ecological but also financial. The couple observed that naturally grown paddy fetched Rs 1,000 per bag, compared to Rs 800 for its chemically grown counterpart. Additionally, eliminating expensive pesticides saved Rs 9,000 per acre annually. "The natural paddy had larger grainsand the percent of crop damage due to high winds and pest attacks was also less," Chandra recalls.

Jyoti started selling pesticide-free vegetables near her village and soon the word spread about her higher-quality vegetables. Government employees began buying from her directly. "The ridge gourd would typically sell in the market for Rs 30 whereas I was selling mine for Rs 50 and people were happy to buy them since they're pesticide-free," she says.

> "My dream is to see organic farming becoming a norm and farmers practicing natural farming in the country."
>
> —Janni Jyoti

The couple says the new agricultural practices augmented their annual income by Rs 30,000. The use of jeevamrit revitalised the soil, and the line-sowing method reduced weed management costs while enhancing crop resilience. The couple even began generously distributing jeevamrit for free to help their neighbours adopt sustainable practices.

A model of empowerment

Jyoti is a beacon of hope and progress for Rankini. Her story isn't just about farming but also about empowerment and the courage to lead. She has helped transform her community into a hub of natural farming, where healthier crops and higher incomes have improved the quality of life for many.

"Everything new seems challenging and scary in the beginning, but once you start, you realise the positive impact. My dream is to see naturalfarming becoming a norm for farmers across our country," says Jyoti.

With a confident smile and unwavering determination, Jyoti represents the power of knowledge, resilience, and community spirit. Rankini's silent revolution is now a story of inspiration, driven by a woman who dared to take risks and aim higher.

Jyoti has become an expert at making natural fertiliser like jeevamrit.

CATEGORY: LIVELIHOOD

A better future takes seed in Andhra farmer's hands

Illayipuram village, Srikakulam district, Andhra Pradesh

Written by Shreya Pareek
Project Facilitating Agency: BREDS, Srikakulam, Andhra Pradesh

She employs time-tested methods of preserving organic seeds, enabling better crop yield in the bargain. Meet Sidhipalem Chinnammi of Andhra Pradesh's Illayipuram village, who uses everything from bottle gourd to clay pots to keep her seeds fresh.

© GIZ/Shreya Pareek

Chinnammi's precious seeds that have been preserved using various techniques.

Sidhipalem Chinnammi, in her late 70s, radiates a sense of purpose as she sits on the porch of her modest home in the Illayipuram village of district Srikakulam in Andhra Pradesh. The village folks gaze upon her with reverence, and even as some approach her, she continues to meticulously arrange seeds into small, neat piles, only pausing to hand over a selection to their outstretched palms. "These are some of the finest organic seeds you'll find," she declares proudly, pointing to the carefully sorted piles, "Bottle gourd, horse gram, millet—each one prepared for the upcoming sowing season."

A guardian of traditional knowledge

Chinnammi is a living repository of traditional farming wisdom, particularly in seed preservation. She employs age-old techniques, from using local herbs to creating optimal storage conditions, to ensure seeds remain viable.

Her son works as a daily wage labourer in a nearby city, while she and her husbandmanagetheir two acres of farmland—one wetland and one dry plot. Though they once relied on chemical farming to cultivate paddy, everything changed when they attended natural farming workshops organised by the National Bank for Agriculture and Rural Development (NABARD), supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by BREDS, through its JIVA programme.

"We resorted to chemical farming because it seemed easier and more productive. However, the JIVA training showed us the value of returning to natural methods, just as our ancestors practiced," Chinnammi explains.

Over the years, the widespread use of hybrid seeds and chemical fertilisers has destroyed the soil, leading to declining

yields and increased costs. But, with a renewed interest in organic farming, Chinnammi stepped forward as a leader, preserving pesticide-free seeds using the techniques she learned from her grandparents.

Traditional seed varieties, she says, often outperform hybrids in terms of resilience and yield, provided they are stored correctly. However, hybrid seeds are susceptible to pests, making conservation a delicate and crucial task.

Time-tested methods for seed preservation

Chinnammi employs several ingenious methods to preserve seeds naturally. Using sun-dried bottle gourd, for instance, she hollows it out and fills it with seeds, sealing the opening with a mixture of cow dung and mud. This airtight seal protects the seeds from pests, keeping them viable for up to four years. Pulses, green gram, and other crops are commonly stored using this technique.

For seed-balls, the seeds are mixed with husk powder and other medicinal plants like holy basil and neem leaves (Azadirachta indica), to create a strong pest repellent. Clay, compost, and water are combined to cover these seeds, protecting and nourishing them until planting. Some organic elements like compost or coconut coir are also added to provide nutrition during storage. "This eventually results in better germination and good initial growth after planting," explains Chinnammi.

She also uses clay pots, cleaned with cow urine and dung for added protection, which provide proper ventilation to the seeds. For enhanced security against pests, some pots are sealed with mud and grass, only to be opened during planting season.

Each method reflects her deep understanding of nature and, making conservation processes simpler, sustainable, and easy to replicate.

A legacy of sharing

Chinnammi doesn't just preserve seeds for her own farm. She generously distributes them to fellow villagers, ensuring they have access to high-quality organic seeds at no cost. "We are planning to buy these seeds from farmers like Chinnammi," says Jagannath Behra, a representative of BREDS, an organisation that has partnered with GIZ India to promote natural farming. "This will provide them with an additional source of income," he adds.

> "I believe that returning to natural farming can revive the soil and improve harvests. Preserving seeds is the missing link."

Chinnammi also shares her expertise with younger generations, attending village meetings and encouraging the community to embrace traditional agricultural practices. "Returning to natural farming can revive the soil and improve harvests. Preserving seeds is the missing link. If we all take responsibility, we can solve this problem within a few growing seasons," she said.

In a world increasingly dominated by industrial farming, Sidhipalem Chinnammi stands as a beacon of hope. Her efforts not only protect biodiversity but also empower her community to reclaim its agricultural heritage. With her knowledge and determination, she's sowing the seeds for a sustainable future, one seed at a time.

Shreya Pareek is a solution journalist based in Uttarakhand. She has extensively covered positive social change stories from South Asia. She is the founder of The Stories of Change, a publication that focuses on documenting lesser-reported solution stories from across the globe.

Chinnammi regularly attends meetings and training sessions to enhance her knowledge.

CATEGORY: LIVELIHOOD

This Andhra man's rhapsody revives natural farming

Illayipuram village, district Srikakulam, Andhra Pradesh

Written by Shreya Pareek
Project Facilitating Agency: BREDS, Srikakulam, Andhra Pradesh

Music and manure don't usually mix, except in the case of Janni Narshingh Naidu from Illayipuram village in Andhra Pradesh, who finds a novel way to inspire his fellow farmers to adopt natural crop-growing techniques.

© GIZ/Shreya Pareek

Janni Narshingh Naidu and his family on their farm. The couple has inspired other farmers to adopt natural farming techniques.

In the heart of Illayipuram village, Andhra Pradesh, 45-year-old farmer Janni Narshingh Naidu stands before a gathering of 50 villagers. At first glance, his quiet demeanour belies what is to come.

As he begins to speak, his eyes sparkle with enthusiasm, his posture becomes animated, and his voice carries passion. Singing verses from religious texts, he pauses frequently to explain their relevance, weaving together tradition and wisdom in a way that holds his audience spellbound.

This is no ordinary performance. It is an agricultural meet. But it is no normal meeting either. This is one of Naidu's more unusual efforts to promote natural farming. Using songs, ancient literature, and mythology, Naidu shares insights into farming practices that have sustained communities for centuries. His unique approach, blending storytelling with practical knowledge, has won him the respect of his fellow villagers.

But Naidu hasn't always been an advocate for natural farming. Like many others, he relied on chemical fertilisers and pesticides to cultivate his 2.5-acre wetland. Everything changed in 2022 when he met officials from NABARD during their JIVA programme, which is supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by BREDS. Their lessons on natural farming ignited a curiosity in him.

"I was so intrigued that I began natural farming even before the programme was officially introduced in our village," Naidu recalls.

Small changes fashion a big transformation

He started small, growing paddy on his land while experimenting with planting vegetables along the edges. The transition wasn't without its challenges. Initially, productivity was low, and scepticism from his family and neighbours added to his burden. "They said I was wasting money and my effort," Naidu shared. But he was undeterred.

With support from BREDS, the Project Facilitating Agency of JIVA, Naidu attended training sessions and undertook exposure visits to deepen his understanding of natural farming. His dedication began to bear fruit.

He adopted the line-sowing method for paddy on one acre of land, which reduced his expenditure on seeds. To his surprise, the quality of his harvest was exceptional. While earlier he earned Rs 1,650 for a bag of paddy, buyers were now willing to pay Rs 2,000. This success boosted his confidence, and he gradually converted his entire land to natural farming, yielding 22 bags of paddy per acre.

Naidu also embraced border plantations, growing vegetables and flowers like marigolds. These acted as natural pest repellents and provided an additional income of Rs 3,000 per harvest season.

Recognising the importance of water conservation, he constructed a small pond on his land, with financial help from BREDS, which contributed Rs 8,000. Naidu invested Rs 12,000 of his own to ensure a steady water supply even during dry seasons.

Inspiring other farmers

Scaling up further, Naidu began producing his own pest repellents and compost. He prepared organic solutions like *jeevamrit* (a mix of cow urine, cow dung, jaggery, and other natural ingredients) and *neemastra* to enhance soil fertility and combat pests. Generously, he distributed *jeevamrit* to 27 families in his village and taught others how to make it.

Naidu's passion for natural farming extended beyond his village. Travelling to neighbouring areas, he inspired over 50 farmers to adopt natural farming practices. "The same people who once doubted me now seek my guidance. They love how I explain natural farming through poems and music," he said with pride.

His journey didn't just transform his farm but also his health. Consuming produce grown naturally, Naidu noticed improved flavour and nutritional value. Word spread, and he began receiving pre-orders for his harvest at premium prices.

Moreover, his story inspired landless farmers to lease small plots and start natural farming, proving that sustainability is within everyone's reach. "I'm happy that people are beginning to understand the importance of natural farming," Naidu says. "It's our responsibility to care for the environment and our family's health," he adds.

> "The same people who once doubted me now seek my guidance. They love how I explain natural farming through poems and music."

Today, Naidu's storytelling, fuelled by his passion, has united farmers and revived age-old practices. His story is a testament to the fact that tradition and innovation can coexist to nurture a land and its people.

Naidu adopts the line-sowing method of paddy cultivation for enhanced yield and better crop quality.

CATEGORY: LIVELIHOOD

Drought-hit Maratha village turns to natural farming

Kumbharwadi, Maharashtra

Written by Pranay Tripathi
Project Facilitating Agency: WOTR, Ahmednagar, Maharashtra

Kumbharwadi, a drought-prone village in Maharashtra, is set to rewrite its future as it undergoes a natural farming revolution. The lands are now laboratories for organic farming and natural practices as farmers apply what they learn at "school".

© GIZ/Pranay Tripathi

Village Kumbharwadi has come a long way, after decades of suffering from drought

Village Kumbharwadi may seem ordinary, but this once drought-hit Maharashtra village has rewritten its story and now stands as an example of what determination and innovation can do for a region. While 66% of the state suffered drought in recent times, natural farming has come as a solution for farmers at this village.

Seventy percent of rural households are dependent on agriculture for their livelihood across India – nearly 82% of those falling in the category of small and marginalised. Their struggle is made worse by harsh climatic changes, land degradation, desertification and drought.

But Kumbharwadi village shows how community-driven solutions can offer a way out of agricultural hardships.

Tough Times Call for Tough Measures

Let's go back to 1948, when 24-year-old Swiss Jesuit priest Father Hermann Bacher, popularly known as the 'Baba Bacher', arrived in the Ahmednagar district of Maharashtra. During the drought of 1972, which pushed marginalised farmers to migrate to cities in search of livelihood, he focussed his efforts on water harvesting and conservation. The late priest, who is remembered as the father of community-led watershed development in India, engaged the village in planting trees, growing forests, building check dams, digging contour trenches and raising earthen bunds, gradually transforming the area.

The collective action culminated in the Indo-German Watershed Development Program (IGWDP) and Watershed Organization Trust (WOTR), which went on to become a non-governmental organisation working for national-level watershed development. Meanwhile, the IGWDP, a collaboration between Germany, India, Maharashtra state government and the National Bank for Agriculture and Rural Development (NABARD), marked a new chapter in the drought-prone region of Marathwada.

The Village Prepares for Transformation

Watershed development at Kumbharwadi from 1998-2002 transformed the labour intensive agricultural practices of the village, but it wasn't enough for the new generation to stop the youth from migrating for better prospects to industrial areas.

On the threshold of the new century, farmers decided to switch to vegetable and dairy farming along with animal husbandry. In 2022, with the aim of promoting natural farming, NABARD launched the agroecology-based JIVA programme, supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by WOTR, targeting ecologically fragile and rain-fed areas.

"The JIVA programme for natural farming in Kumbharwadi was introduced in 2023 as a pilot. Around 900 hectares were divided in 10 clusters. We introduced new farming patterns such as intercropping, mixed cropping, climate resistance agriculture practice, broadcast seeding, zero budget farming, A-grade model, ATM model and integrated farming systems," says Tushar Gaikwad, a Senior Agriculture Assistant and JIVA programme manager at Kumbharwadi.

The JIVA production model aims at produce that caters to the family's needs, followed by crops for livestock and ultimately for the market. Farmers undergo training at Farmer Feed School, while the Seed Bank and Bio-Resource Centre are set up as small business models to sustain women's self-help groups (SHGs) to provide seeds and bio-inoculums such as natural fertilizers, insecticides, pesticides and fungicides.

In the pilot year, 40 families were selected to turn half an acre of their land into soyabean demo plots, where they could experiment from a pool of natural farming practices, under the guidance of two NABARD-appointed external farmer resource persons (EFRPs). "As a farmer too, I can say that farming is synonymous with uncertainty. The new generation is barely interested in it and the future seems doomed. Therefore, the JIVA programme helps farmers in putting their land to maximum and optimal use," adds Tushar.

The success of natural farming in this tiny village of Kumbharwadi is more than evident, especially in the shift towards a scientific approach among farmers, thanks to the manuals provided at the Farmer Feed School. JIVA has also developed the Custom Hiring Centre where devices such as jumbo seeders, pro seeders, cleaning grading machines and token devices can be rented.

Farming is synonymous with uncertainty. The new generation is barely interested in it – the future seems doomed.

The Hundare family has expanded into goat-farming under JIVA's Natural Farming initiative. (Photo by Pranay Tripathi)

"At present, 80 families are associated with the JIVA programme. We have established a Village Development Committee and assigned seven farmer resource persons from the village to guide these families," shares Bhagwat Gagre, Secretary at Village Development Committee.

Each household in Kumbharwadi is akin to a laboratory. "Under JIVA, people have started adapting to dairy, goat farming and poultry. Most of us have our own kitchen gardens. Advanced farmers are putting their hearts and minds into preparation of azolla, vermicompost, *jeevamrit* and *dashparni* (natural fertiliser), natural spray medicine and micro-nutrients, plant promoters, sea-bead extracts, *sanjeevak* (immunity booster) and biogas," says Ramesh Hundare, 39, a conventional farmer with a newfound passion for the science of agriculture.

JIVA also aims to cater to the needs of the village's tribal population. Another challenge is access to the market. Tushar says, "There's no scope for an organic market nearby and farmers are often forced to sell their crops at lower prices. JIVA is working on creating a Farmer Producer Organisation," shares Tushar.

The village may be small, but what's happening at Kumbharwadi is nothing short of a miracle. And with the farmers upbeat on adopting natural practices, the road ahead can only bring more success.

CATEGORY: LIVELIHOOD

This Maha farmer banks on rare seeds for a sustainable future

Kumbharwadi village, district Ahmednagar, Maharashtra

Written by Pranay Tripathi
Project Facilitating Agency: WOTR, Ahmednagar, Maharashtra

Despite challenges like illiteracy, Swati Dhamle pulls out all the stops to ensure the seed bank she heads in her Maharashtra village thrives. The seeds act as repositories of the region's agricultural heritage.

Farmers Sunil Dhamle and his wife Swati in their seed bank.

As dawn breaks over the lush hillocks of the Kumbharwadi village in Maharashtra's Ahmednagar district, its residents awaken to the possibilities of a new day.

Women like farmer Swati Dhamle, 38, get started on their domestic chores, to make way for their duties as budding entrepreneurs under NARBARD's natural farming programme JIVA, supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by WOTR.

As a part of this, Swati operates a newly-formed seed bank from one room of her living quarters.

A taste of things to come

This seed bank ushered in a new phase of life for the women of the village. After all, it means much more than a mere bank for agriculturalists. It is a repository of the cultural richness of the region.

The next generation isn't aware of the unique crops that grow in the area, let alone trying to preserve them, rues Swati. The senior agriculture assistant and project manager with JIVA, Tushar Gaikwad, agrees with her, "The motive is to bring back the traditional crops."

In Swati's small room are kept multiple earthen pots and many boxes. Each of them carries the fruit of the community's labour, the essence of their culture and the traces of history, the seeds.

The seed bank is a depository of various kinds of organic and traditional seeds that can be bought by farmers. Along with the common seeds used for cash crops, vegetables and fruits, it also gives buyers the option of crops that are rare to find.

This is how one can find crops like *aabai* (sword bean), *kueri* (velvet bean), *laal math* (red amaranth leaves) growing in Swati's compound. "They're not merely plants. They're traditional Maharashtrian *gavran bhajis* (rural delicacies). They're an essential part of our culture. People nowadays hardly know about them, let alone how to prepare them. These dishes were part of our childhood," says Sunil, Swati's husband.

"My husband and I farm on three acres of land. Operating a seed bank for more than a year has turned out to be like multiple lessons in farming and agriculture. It's managed by our self-help group (SHG) where all the members struggle with various challenges to make this bank grow," shares Swati.

With no formal education, Swati finds it hard to maintain the accounts but is helped by Sunil, who has now discovered a love for natural farming over chemical farming.

A programme that nurtures nature

Selecting 40 families a couple of years ago, JIVA carried out its pilot programme for natural farming in the region. They took care of the expenses and asked farmers to deposit 40 percent of their yield in the form of seeds to the seed bank.

Operating a seed bank for more than a year has turned out to be like multiple lessons in farming and agriculture.

Women, who belong to the SHG operating the seed bank, either contribute seeds or participate in seed bank activities, getting their share as a commission. In 2023, the seed bank managed to sell seeds worth Rs 20,000. The earnings doubled the following year.

"It's not only Kumbharwadi, but also farmers from nearby villages who are developing an interest in traditional seeds as compared to the hybrid variety. They seek us out for a traditional variety of *gehu* (wheat), which is rare to find and procured from tribal communities," says Gaikwad.

JIVA's initiative is not limited to providing seeds alone, but to ensure that in the future farmers can sell their output to the seed bank as well. The organic market is out of reach and market rates are unfriendly for the farmers.

"Seed banks will soon be provided with *dal* (pulses) mills to begin with packaging and grading. This will enable all the women belonging to various SHGs to work independently," adds Gaikwad.

Sunil Dhamle with the aabai (sword bean) plant, a popular traditional Maharashtrian delicacy.

CATEGORY: LIVELIHOOD

Why natural farming stops Maha villagers migrating

Kumbharwadi, Maharashtra

Written by Pranay Tripathi
Project Facilitating Agency: WOTR, Ahmednagar, Maharashtra

Thanks to natural farming, the people of Kumbharwadi are embracing agriculture as a vocation, eschewing the tendency to migrate to cities for income.

A community resource person tells a farmer about the broad bed and furrow system, a farming technique used to control soil erosion and conserve soil moisture

Kumbharwadi might be a nondescript village in the Ahmednagar district of Maharashtra, but look more closely and you'll see it is a unique petri dish for experiments in natural farming (NF). Farmers with no institutional degrees or even formal education to their credit are testing, designing and implementing new techniques of natural farming in their battle for survival.

Ravindra Subhash Ugale worked as a wireman at a sugar factory until last year when he was laid off. The uncertainty compelled him to think of alternative ways to earn his livelihood and secure his future. That's when he learnt about the concept of natural farming and enrolled in the 2023 NF batch in his village and attended the weekly Farmers Feed School. Then interactions with agricultural community resource persons (CRP) further led him to deliberate about the importance of health and the agricultural practices one must follow to lead healthy lives.

Currently, Ugale practices natural farming on his 4.5 acre land and aspires to become a full-fledged farmer. "I'm practicing multiple NF methods like mix-cropping and inter-cropping. I'm also developing my skills in animal husbandry," says Ugale.

Healthy crops, healthy tummy

Life has drastically changed for him and his family since they became wary of the health risks from exposure to fertilisers and pesticides, never mind the importance of health and eating well. "Our kitchen garden is thriving. We no longer need to buy vegetables from the market. In fact, we sell the excess and make a profit. The bio-gas set-up installed on my farmland has also made my family completely self-sufficient in terms of cooking gas."

Other farmers in the village have also come to see not just the long-term consequences of chemical-based farming, but the disadvantages of hybrid seeds and the scarcity of water.

"Our health is closely connected to the health of the land. Prolonged use of chemical fertilisers, insecticides, and pesticides had worsened the health of our land. We had been following the rotational cropping pattern for the last couple of decades, but NF has changed our approach and attitude for the better," says Bhagwat Ghagre, a farmer and also the secretary of Kumbharwadi's Village Development Committee (VDC).

Tilling the land becomes attractive again

"I've 12.5 acres of land. I used NF on one acre by intercropping *bajra* (pearl millet) during *kharif* season and jowar (sorghum) and kardayi (safflower) during the *rabi* season. NF helped me save 80 percent of the expenses," shares Ramesh Hundare, a farmer.

The 39-year-old dropped out of school early on, only to continue his formal education with the NF manual and practices. He now wants to shift to NF completely. "The VDC and CRP have taught me how to make bio-resources like *jivamrut* and *dashparrni* at home. I have hens, goats, cows and bulls. Now I am learning the ropes of animal husbandry and livestock farming," shares Hundare.

Encouraged by the results of NF, even the teenagers in the village – who used to be disillusioned by the idea of farming – now want to become farmers in the future.

Hundare's son, Samarth, is a grade 11 student who now wants to pursue agricultural studies in college. "I want to learn about the modern agricultural technological methods that are practised across the world."

The word spreads

The slow and secure methods of NF became a hot topic of discussion in nearby villages too.

"Farmers have a sharp eye when it comes to crops. The results are evident in the appearance of the products. NF products are better than the conventional ones. People from nearby villages often stop by and enquire about the NF method. It's really fulfilling," shares Asha Choudhary, a CRP.

"Our health is closely connected to the health of the land. Prolonged use of chemical fertilisers, insecticides, and pesticides had worsened the health of our land.

By participating in various NF activities, several dozen farmers are now aspiring to become advanced farmers by adopting the complete integrated farming system.

"It keeps you engaged and always turns out to be a great learning experience. The best part is that all the activities can be carried out on the farm land simultaneously," says Bhagwat Ghaghre who has adopted most methods of the integrated farming system. He started with livestock management and later began producing natural fertilisers, spray medicines, sea-bead extracts, micro-nutrients, *sanjeevak* (immunity booster), and plant promoters.

Not just that. Ghagre is even involved in reviving extinct plants, preparing vermicompost and establishing biogas units.

NF reduces input cost of cultivation and is more financially rewarding than chemical-based farming methods. Gokul Pawde, a farmer, used to grow *makka* (maize) on half a *bigha* of land and earn Rs 8,000. Now, embracing one of the NF tenants of multicropping he grows 22 vegetables. "The model generates money consistently and has helped me earn Rs 20,000," he says.

The seed of change

It was only in 2023 when these seeds of change were planted by the JIVA programme, an initiative by National Bank of Agriculture and Rural Development (NABARD) that is supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by WOTR. As a part of this 40 families in the village were chosen to participate in a pilot project. The next year twice as many participants joined the project.

It is only a matter of time the natural farming revolution sweeps across the country. The government recently launched the National Mission on Natural Farming (NMNF) promoting natural farming across India. Over the next two years, the mission will be implemented in 15,000 gram panchayat clusters – but it's hoped one crore farmers will start NF across 7.5 lakh hectares.

CATEGORY: LIVELIHOOD

This Jharkhand changemaker turned adversity into an opportunity

Konkoa village, district Chakradharpur, Jharkhand

Written by Monika Marandi
Project Facilitating Agency: PRADAN, West Singbhum, Jharkhand

Rani Chaki, a farmer from Jharkhand's Konkoa village, rose from tragedy to resurrect her family's fortunes, becoming an inspiration for other women. She is now recognised as a changemaker in her community.

Rani Chaki demonstrating a natural farming technique to other women in the village.

Rani Chaki's story is nothing short of extraordinary. The 45-year-old widow, who lives in village Konkoa, nestled in the Sonwa block of Chakradharpur district, Jharkhand, transformed her life from the depths of despair to become a beacon of hope and empowerment for her community.

A life of loss and despair

In 2012, she lost her husband, the sole breadwinner of their family, which included their two young children and her elderly in-laws. Already grappling with poverty, the family's situation deteriorated further. Due to personal conflicts, she was compelled to separate from her in-laws, leaving her entirely on her own with two children to support. During these trying times, life seemed unforgiving, but Chaki's determination never wavered.

Farming, the only skill she possessed, became her lifeline. Despite the poor condition of her small plot of land, Chaki toiled day and night, cultivating enough to sustain her family. Her perseverance ensured that her children never went hungry, but she knew that mere survival alone was not enough - she needed a way to thrive.

The turning point: Joining PRADAN

The year 2015 marked a turning point in Chaki's life when she became associated with PRADAN, a prominent NGO working to empower rural communities. Through PRADAN, Chaki was introduced to advanced farming techniques that promised to improve productivity and income.

She attended workshops on crop diversification, soil health management, and sustainable farming practices. She learned

how to grow high-value crops, such as vegetables, alongside staple grains, significantly increasing her income. For the first time in years, she saw a glimmer of hope.

With her newfound knowledge and resources, Chaki began to see results. Her small farm started yielding better produce, and her confidence grew with each passing season. What truly set her apart was her desire to share her success with others. As Chaki says, "Empowering others is the greatest success of all."

Empowering women through JIVA

In 2023, Chaki took another significant step by joining NABARD's JIVA programme, supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and implemented by PRADAN. Designed to promote sustainable agriculture and natural resource management, the initiative aligned perfectly with Chaki's vision of eco-friendly farming. Under the programme, she was trained as a Community Resource Person (CRP) and provided with resources to start her own initiatives.

Chaki transformed her home into a training and production centre, using JIVA's support to empower other women in her village. She taught them how to prepare organic fertilisers and pesticides from natural materials, package and market these products in local markets, and adopt sustainable farming practices to reduce their dependence on expensive chemical inputs.

In addition to training, JIVA provided her with essential tools, including a grain-grinding machine, which allowed her to process ragi, wheat, and other crops. This created a new source of income for her and benefited local farmers, who no longer had to travel far for milling services.

Chaki's efforts quickly gained momentum. Women from neighbouring villages began attending her training sessions, eager to learn and implement her techniques. By the end of 2023, Chaki had trained over 150 women, enabling them to earn livelihoods through organic farming and related activities.

Chaki's vision for the future

Farmers in her region report increased yields, reduced input costs, and healthier soil. Her locally produced organic inputs and grain-grinding services have become essential for small farmers, boosting local incomes.

Despite her achievements, Chaki remains focused on the road ahead. She said, "I want to expand organic farming practices to every corner of the block and establish a permanent resource centre where farmers can access training, tools, and market information. I also dream of building a network of empowered women leaders to replicate the model in other regions."

Chaki also advocates for sustainable practices that preserve soil fertility, conserve water, and protect biodiversity.

Impact and community voices

The women Chaki has trained have become financially independent, contributing to their families and breaking free from the cycle of poverty. Many of them credit Chaki for giving them the knowledge and confidence to succeed.

> "Empowering others is the greatest success of all."
>
> —Rani Chaki

The women Chaki has trained have become financially independent, contributing to their families and breaking free from the cycle of poverty.

Sumitra Didi, one of Chaki's trainees, shared, "Chaki helped me learn organic farming and make fertilisers at home. I now sell these in local markets, earning more than I ever imagined. She doesn't just teach; she gives us hope."

Nishu Nishant, team leader at PRADAN, highlighted Chaki's impact, saying, "Her dedication is unmatched. Her transformation from a struggling widow to a community leader is extraordinary. She has shown how grassroots efforts can create lasting change."

A role model and a leader

Chaki's leadership didn't go unnoticed. In 2024, she was appointed as a Block Resource Person (BRP), and she now oversees development initiatives across the entire Sonwa block. Her duties include conducting capacity-building workshops for farmers and women's self-help groups (SHGs), advocating sustainable farming practices and water conservation, facilitating market access for organic products, and ensuring fair prices for farmers.

Chaki's efforts have brought tangible benefits to her community. Local markets have also seen a transformation. Organic products from Konkoa and nearby villages are in high demand, thanks to the quality and affordability of the items produced under Chaki's guidance.

Rani Chaki's story is a powerful reminder of the resilience of the human spirit. Her journey inspires countless others, proving that one person's courage and commitment can transform an entire community.

CATEGORY: LIVELIHOOD

Cock a doodle do – how women are changing the pecking order in Banjhi Kusum

Banjhi Kusum, Chakradharpur block, Jharkhand

Written by Monika Marandi
Project Facilitating Agency: PRADAN, West Singbhum, Jharkhand

Livestock farming was once a daunting livelihood prospect in the small village of Banjhi Kusum. However, when a group of determined women were equipped with the necessary skills and resources, they did not falter. Instead, they turned livestock farming into a sustainable enterprise.

Sona Mai managed to earn about Rs 40,000 in the last six months with the help of livestock farming, giving her economic independence that makes her optimistic about the future.

The quaint village of Banjhi Kusum, nestled in Chakradharpur block of Jharkhand, is at the forefront of a quiet revolution. A group of extraordinary women have turned livestock farming into a prosperous livelihood, redefining the development narrative of their small, agrarian community.

Sona Mai, a 35-year-old resident of Banjhi Kusum, had always struggled to keep alive the few chickens and ducks she raised for her family's consumption. The high mortality rate of the livestock was her biggest challenge.She never imagined that livestock farming could generate a consistent source of income for her, until it did.

Things changed when she reluctantly participated in an intensive training program where she learned to make herbal medicines and prepare organic feed for the chickens. She

also learned various techniques to maintain the health of the chickens. Within a few months, her small flock experienced significant growth, and she began selling eggs and poultry in the local market. In the last six months, she has earned Rs 40,000, far more than what she previously managed from subsistence farming.

Her newfound economic independence brought not only material gains but also a deep sense of pride and self-worth. "I've proven to myself and to my children that we can indeed build a better future for ourselves," Mai, a mother of three, told Village Square.

Overcoming challenges

Several other women in Banjhi Kusum faced similar struggles as Mai. Livestock mortality rates were alarmingly high due to lack of veterinary care, poor feed quality, and unscientific rearing methods. Relying on livestock farming for one's livelihood was considered imprudent.

Thus, the journey of these women to become self-reliant entrepreneurs is remarkable. It highlights the transformative power of collective action and targeted interventions at the grassroots level by organisations like PRADAN and National Bank of Agriculture and Rural Development (NABARD) through JIVA programme supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. While PRADAN provided on-ground training, NABARD supported the programme financially and offered a vision for sustainable development.

Unity in action

The two organisations collaborated to launch a pilot programme involving 20 families from Banjhi Kusum in the middle of 2024. Each family, primarily led by women, was provided with a batch of indigenous chickens, ducks, or goats. The women were trained to prepare organic feed and herbal veterinary medicines using locally available resources. This not only reduced dependence on expensive veterinary drugs but also ensured the livestock received nutritious feed without straining the household finances.

"Initially we focused on building the confidence of the women. We wanted them to see the economic potential of livestock farming while ensuring they had the skills to succeed," says Nishu Nishant, team lead at PRADAN. The pilot has been highly successful in honing the entrepreneurial abilities of the women participants.

Scaling new heights

35-year-old Geeta Diggi had always harbored the dream of running a poultry farm, but she lacked the knowledge and resources to realise her vision. Moreover, diseases often decimated her flock, leaving her demotivated. As part of the pilot, Diggi received training in disease management, indigenous breed rearing, and organic farming techniques. The local FPOs played a pivotal role in ensuring she could access the markets for her poultry and essential supplies.

> "Seeing these women succeed has changed how we think about farming. They've shown us that with the right support, even small-scale efforts can grow into something big,"

Today, Diggi manages a flock of over 80 indigenous chickens, known for their hardiness and high market value. The programme has helped her earn Rs 50,000 in the last six months, and now she dreams of expanding her business further. "I never thought I'd be able to do something like this. Today, I'm not just a farmer. I'm a businesswoman," she says nonchalantly.

Similarly, 33-year-old Sunita Champia identified a market demand for affordable, high-quality organic feed for the livestock. She began producing the feed using inexpensive, locally-sourced ingredients. The local FPO supported her with a packing machine and packaging materials to market her brand effectively. "Who would've thought that making poultry feed could become a viable business," Champia remarks with a smile. "By selling my poultry feed in nearby villages through the FPOs, I have been able to earn Rs 20,000 in the last six months. I am also training other women for the same," she adds.

Her initiative has not only improved the quality of livestock feed available locally but also reduced the cost burden on other farmers.

"Our focus has always been on empowering communities to sustain their own growth. By equipping these women with skills and resources, we've not only improved their incomes but also set a foundation for long-term change," says Nishant.

Revolution in the making

Inspired by the achievements of women like Diggi and Champia, more villagers are embracing livestock farming as a viable livelihood option. "Seeing these women succeed has changed how we think about farming. They've shown us that with the right support, even small-scale efforts can grow into something big ," says Ram Singh, a farmer from the village.

Banjhi Kusum indeed serves as a shining example of how women-led initiatives can drive sustainable development in rural India.

CATEGORY: LIVELIHOOD

How integrated farming saved the day for Andhra farmer

Parvathipuram Manyam district, Andhra Pradesh

Written by Amulya B
Project Facilitating Agency: ARTS, Srikakulam, Andhra Pradesh

Madhusudan Rao and his wife Karamma, from the Soura community in Andhra Pradesh, overcame challenges like illiteracy to adopt progressive farming techniques. Their success has inspired others in the region.

Farmer Madhusudan Rao and his wife Karamma may be illiterate, but that didn't stop them from embracing progressive farming techniques.

If you visit the home of farmer Madhusudan Rao, 60, and his wife Karamma, 55, in Seethempeta village of Andhra Pradesh's Parvathipuram Manyam district, you will be greeted by a blanket of yellow and orange marigolds in full bloom. The couple earns between Rs. 100 to Rs. 5,000 per kilo from these flowers during festivals like Dussehra and Deepavali.

Beyond the marigolds, you can see fully grown gourds ready for harvest, and on the opposite end, a field of ripe papayas.

"I was the first one to grow papaya in Seethampeta mandala," says Rao proudly.

The papayas, marigolds and gourds are some of the produce from his 1.2 acre patch of land, which also nurtures vegetables like carrots and beetroot.

Rao rears chicken for poultry and has recently begun apiculture. Two blue boxes containing honey bees stand on the elevated land behind his home. He also has a small nursery providing vegetables and other horticultural plants, next to which stands a huge drum containing biostimulants.

A setup like this, where a farmer can earn income from multiple sources is called the Integrated Farming System (IFS). Under IFS, different agricultural activities are practiced on a single land withoutuse of any chemicals.

Natural farming, a boon

Since adopting this system, Madhusudan's income has risen significantly. If one crop fails, other sources can sustain

him and his family. There are also ecological benefits like improvement in soil quality when the land is covered by crops throughout the year.

Rao is one of the success stories of the Jiva programme by NABARD, supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH under the SuATI project. The programme is implemented locally in Seethampeta by Action in Rural Technology and Service (ARTS).

"Madhusudan is an enterprisingfarmer," gushes Swetha Koduru, the coordinator for the Jiva programme at ARTS, "He is self-motivated and always shows great interest in our interventions."

His faith in governmental and non-governmental agencies is due to the high success rate of their interventions. When the Integrated Tribal Development Agency (ITDA) recommended him to grow papayas, he accepted the advice positively. Rao belongs to the Soura community, a Particularly Vulnerable Tribal Group (PVTG), and both he and his wife are illiterate.

Now, with multiple sources of income, Rao is recognised as an exemplary farmer not only in his village but also in his district and beyond.

Openness to the new

Married at 15, Rao began farming the same year. Twenty years ago, pesticides were commonly used until his father saw the benefits of organic farming. However, the push towards natural farming came after the intervention of ARTS and the JIVA programme.

The pilot programme began in January 2024, with 45 farmers from six villages within the Seethampet mandal. Rao was already familiar with ARTS, which had previously implemented NABARD'S renowned 'Maa Thota' programme locally. Under the JIVA programme ARTS has been encouraging the farmers to adopt the A3 model that is "*aaharam*, *aarogyam* and *adayam*" (food, health and income).

"Each selected farmer has to try natural farming on at least one acre of his land. If they like the benefits, they can expand it to the rest of their land," explains Swetha.

ARTS belives that having even one farmer adopt their recommended interventions can encourage others to do the same.

However, finding that one farmer open to new ways can be difficult. A farmer like Rao is a rarity. "Now, if we send him 20 farmers, he can train all of them," quips Swetha.

Waste to manure

As we chat with Rao, a customer arrives to buy his famed papayas. As they scrutinise each papaya, a few deemed not good enough thrown on the ground, attracting chickens to peck at the fruit.

> "Madhusudan is a wonderful farmer. He is self-motivated and shows interest in our interventions."
>
> —Swetha Koduru

Rao guides a customer through his papaya grove.

"Plant waste is used for poultry, poultry waste is used for the plant," explains Swetha. "That's the beauty of the IFS, where there is a chain linking one farming activity to another."

As the chickens continue pecking and the customer happily loads the fruits into a gunny, the sole cow of the family moos. Rao was given the cow as part of the Jiva programme but, rearing a cow has its own challenges.

"I don't know how to recognise when the cow goes into heat," reveals Rao, aknowledge which is essential for artificial insemination.

Traditionally, Souras have been closer to goats, integral to their culture and traditions. Most farmers do not know that cow dung and cow urine can protect their crops and stimulate growth. Preparing biostimulants and biofertilisers like ghanajeevamrutham, drava jeevamrutham, and neemastram is new for them.

The next steps

Currently, Rao looks forward to building structures to support creepers like pumpkin and other gourd varieties, while the ground remains free to grow marigold flowers.
Due to the varied timelines of harvest, the couple does not feel the need to hire extra labour.

"We want to work in our own land. If it's ours, no one can dictate terms to us," Karamma concludes wryly.

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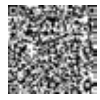
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