

Agronari

*Celebrating Women Farmers
and Agroecology*



Agronari

*Celebrating Women Farmers
and Agroecology*





Agronari

*Celebrating Women Farmers and Agroecology
December 2024*

Editors

C Jayakumar, Anju Babu, Lekshmi Krishnan

Compilation of articles by

Athira S Krishnan, Sreelekshmi MS, Neha Madhavan, Sreelakshmi K J

Layout & Design

Jino V Babu

Photographs

Neha Madhavan, Jino V Babu, Athira S Krishnan

Published with the support of

Pesticide Action Network Asia Pacific

©thanal trust

The content in this publication, including the personal stories, experiences, and traditional knowledge shared by the farmers, is protected under copyright. Reproduction, distribution, or use of this material, in whole or in part, without written permission from the authors or their respective representatives, is prohibited. The rights to this material are held by the individual farmers who contributed to this publication.

For over 36 years, Thanal has been in the forefront of the promotion of organic farming, Zero waste activities, reclaiming sustainability, agroecology and biodiversity and also made a clear impact on state-level to global policies. Thanal primarily does research, advocacy, action, and education believing that a society can be made sustainable and healthy by addressing the basic concerns regarding 'Environmental Health and Environmental Justice'. Thanal works at the grassroots level to learn, build capacity and collective knowledge to address the issues. It also works as part of the solution from planning to implementation. We continue to strive to expand our programs and services to the people and make our impact as an organization.

TABLE OF CONTENTS

Foreword	6
Acknowledgement	8
Introduction	10
Women Pioneers in Herbal Cultivation and Value Addition	12
Together for Tomorrow Women conserving traditions	16
From City Lights to Farm Delights	20
From Farmers to Changemakers	24
Breaking the Cycle of Chemicals	28
Journey to a Climate-Conscious Farming	32
Story of organic innovations and community support	36

Revival story of an ancestral Land	40
From Politics to Petal; Kunjumol's Journey of Nurturing Nature	44
A Woman's Mission to Break Agricultural Stereotypes	48
Inspiring a New Generation of Women Agripreneurs	52
A Woman's Quest for Food Security	56
Story of transforming fallow lands to flourishing farms	60
Radha's childhood passion is now her Therapy	64
A Retired Officer Cultivating Biodiversity and Inspiration	68
Small Space, Big Impact: Beena Sanu's Terrace Farming	72
From Terrace to Table	76
Women Uplifting Women The Friendship that cultivated success	80

Foreword



Sarojeni V. Rengam

In the lush and vibrant landscapes of Kerala, India, a transformative movement is flourishing. Women farmers, once marginalized within the agricultural sector, are now at the forefront of a shift toward agroecology—an approach that seamlessly weaves traditional knowledge with modern science to create sustainable farming practices.

Agronari: Celebrating Women Farmers and Agroecology captures the inspiring stories of these trailblazing women, who, despite facing immense challenges, have triumphed through unwavering commitment, resilience, and a deep love for their land and traditions. Their journey is a testament to the power of innovation and community, as they have successfully established thriving agroecological farms. These efforts have resulted in the organic cultivation of diverse crops, including paddy, vegetables, bananas, fruits, and tubers, enhancing food security while safeguarding environmental health.

But their achievements don't stop at cultivation. These women have pioneered entrepreneurship through value-added organic products

and online distribution channels, motivating a new generation of young women to follow in their footsteps. Initiatives like Thanal Organic Bazaar have played a critical role in supporting the distribution and marketing of women's organic products, creating far-reaching impact and economic opportunity.

The success of these women-led initiatives extends well beyond agriculture. By conserving native seeds, they are preserving biodiversity and laying a sustainable foundation for future generations. Their work not only uplifts their communities but also asserts their identities and rights as farmers, showcasing the profound link between empowerment and ecological stewardship.

This collection of women's stories by Thanal, is a celebration of the resilience, determination, and innovation of Kerala's women farmers. Their stories illuminate the extraordinary potential of community-driven, sustainable agriculture to transform lives and landscapes.

As you explore these accounts, may you find, as I have, profound inspiration in their dedication and a renewed appreciation for the transformative power of agroecology. Their successes stand as a beacon of hope, demonstrating the vital role of women in shaping a sustainable and equitable agricultural future.

Acknowledgement

We extend our heartfelt gratitude to the incredible women whose stories have shaped this publication. Their unwavering commitment to sustainable farming, innovative practices, and community empowerment has inspired and guided us in compiling this book. We thank all the women farmers who generously shared their journeys and insights with us. Your dedication and vision are paving the way for a healthier and more sustainable world.

We acknowledge the support of the farming communities, trainers, and mentors who have nurtured these journeys and shared invaluable knowledge. Special thanks to organizations like Thanal Organic Bazaar, various agriculture departments, civil society organizations, and the Welfare Societies for their steadfast support and contributions to the success of women farmers.

Our sincere appreciation goes to our editorial and design teams, whose dedication brought these stories to life. Lastly, we express our deepest gratitude to our readers, who continue to champion the cause of agroecology, women's empowerment, and sustainable agriculture. Together, we are cultivating a brighter and greener future.

A special note of thanks to Thanal Executive Director C. Jayakumar for his invaluable guidance and unwavering support in shaping this project and bringing this book to life. His vision and leadership have played a crucial role in documenting and amplifying the voices of women farmers, ensuring their contributions to agroecology and food sovereignty are recognized and celebrated.

We also extend our sincere thanks to Sarojeni Rengam, Executive Director of PANAP, Manju M. Nair, CEO of Thanal, and Usha S., Founder of Thanal, for their invaluable support, encouragement, and insightful

comments that helped shape this publication.

Thank you, PANAP, for making this publication a reality and for your support in handholding these farmers to success. Acknowledgements also go to the writers of the articles and the Thanal Agroecology team for their consistent support in providing technical guidance and solutions. We thank the women farmers for their efforts, the accreditation of their traditional knowledge, and their personal experiences, which have enriched this publication.

Finally, to everyone who has contributed in ways big and small, whose names we may have inadvertently missed, we extend our heartfelt gratitude. Your efforts and commitment have been instrumental in making this book a reality.

INTRODUCTION

In the popular imagination, the image of an Indian farmer is often a solitary figure—an older man, wearing traditional clothing, standing in a barren landscape, reflecting hope and despair as he faces climate extremes and struggles with financial losses. This portrayal is widely influenced by mainstream media, movies, and popular narratives that predominantly feature male farmers, reinforcing the perception that farming is a male-dominated occupation, one with struggles and

Despite these challenges, women are making significant strides in transforming Indian agriculture.

losses. However, these depictions obscure the vital role played by women in Indian agriculture, leaving their contributions largely invisible and underappreciated. They perform approximately 80% of the agricultural work, yet women own only 12.8% of land in India, a stark contrast to their substantial contributions to food production and rural economies (WOTR, 2024).

This underrepresentation and lack of land ownership have resulted in women farmers being marginalized. Cultural norms and traditional gender roles confine women to less visible roles such as sowing, weeding, and harvesting—tasks often categorized as ‘unskilled labor’. This invisibility not only undermines their status as agricultural contributors but also limits their access to resources and recognition within the sector.

Despite these challenges, women are making significant strides in transforming Indian agriculture. They are at the forefront of the transition from chemical-intensive farming to organic and agroecology practices, becoming crucial agents in conserving and transferring traditional knowledge and indigenous methods to the next generation.

This publication is a celebration of resilience, innovation, and empowerment, bringing the stories of these women to the forefront. It highlights how women across Kerala are breaking barriers, turning challenges into opportunities, and transforming agriculture into a platform for growth, education, and sustainable change. We are glad to bring the stories of women who have become champions of sustainable agriculture, using their knowledge to promote practices that preserve the environment, enrich soil health, and protect biodiversity. These women are not just growers; they are custodians of ancient practices and knowledge, passing down methods of natural pest control, seed preservation, and soil management to ensure the resilience of future generations in farming communities while nurturing dreams, inspiring their communities, and advocating for a healthier planet.

From the lush green western ghats and terraces of Kerala to community-centric initiatives, these women embody the spirit of agroecology and sustainability. Through this collection, we aim to shine a light on their journeys, their innovations, and the indelible impact they have made.

the gender gap in agriculture by providing women farmers with the recognition, resources, and platforms they deserve. As we bring these stories to the forefront, we hope to inspire a broader understanding of the essential role women play in shaping the future of Indian agriculture, paving the way for a more inclusive and equitable food system.

Women Pioneers in Herbal Cultivation and Value Addition

by Athira S Krishnan



Souparnika Oushadha Sasya Unit members collecting harvest from their fields

“When women nurture the healing powers of nature through the wisdom of medicinal plants and indigenous knowledge, they not only cultivate health and resilience but also sow the seeds of community empowerment and sustainable futures.”

The Souparnika Oushadha Sasya Unit is an inspiring initiative by a group of ten women from three Self-Help Groups (SHGs)—Priyadarshini, Pallavi, and Aiswarya—belonging to the *Kurichya* community from Meenangadi Panchayat in Wayanad district. In 2022, these women participated in a five-day training program on medicinal plant cultivation and value addition, organized by the MS Swaminathan Research Foundation (MSSRF) as part of an awareness campaign. Empowered by the knowledge gained, they expressed a strong desire to cultivate these crops. With support from NABARD (National Bank for Agriculture and Rural Development) and MSSRF, the group was selected and provided with the necessary resources, including saplings and materials, to kickstart their cultivation efforts. Due to land fragmentation, each member began growing herbal crops in their own houseyards.

During the initial phase, they focused on cultivating medicinal plants such as *Kaempferia galanga* (Kacholam), *Adathoda* (Adalodakam), *Piper longum* (Thippali), *Curcuma aromatica* (Kasthuri Manjal), *Maranta arundinacea* (Arrowroot/White Koova), and Holy Basil. All these are common herbs used in the ancient Indian medical system. For example, *Kacholam* and *Thippali* are key ingredients in ayurvedic medicines used for cough and cold and Arrowroot powder, aids in digestion when mixed with milk. Their collective effort and strong determination resulted in a bumper yield motivating them to explore value addition.

Pooling their resources and skills, the group established a small processing unit in one member's home, using the plant extracts, they started preparing value-added products, such as *Thailam** for body pain relief, Balm for headaches, and *Thaleesapathradi choornam** for treating coughs and colds, all of which are traditional Ayurvedic formulations/natural remedies. Except for the grinder used, all the other work is done manually. The team initially sold their products among their friends and local residents. The high quality of their products quickly gained recognition, increased customer demand and the team started to earn modest income from sales. Profit from the sales were reinvested for purchasing necessary inputs like oil, glycerine etc for more production. Their success caught the attention of the local self-government, who

invited them to participate in district expos. These events provided them with much-needed exposure, helping them reach wider customers and expand their market. Over time, their earnings turned into profits, which they wisely deposited into a shared bank account to secure their future.

As their market expanded, the team faced challenges in meeting production demands due to the limitations of their processing facilities, which were not equipped for large-scale production. Additionally, the high cost of Ayurvedic inputs made it difficult for them to keep up with customer requirements. Recently the Meenangadi Panchayat authority has set up a small processing unit with basic facilities for the team. With this initial support, the team could overcome these hurdles, work with enthusiasm, and they plan to further grow their enterprise.

In 2024, six women from the Souparnika team actively participated in the pilot project 'Regenerative Agriculture' launched by Thanal in collaboration with Meenangadi Panchayath. Taking the lead alongside 10 men from the community, these women transformed uncultivated land into a diversity-rich vegetable farm. By using solar energy to address water scarcity issues, they not only addressed a critical local issue but also set a powerful example of women driving sustainable development and community development. Through these efforts, the team gained recognition and inclusion in

government schemes. For instance, recently they were selected for a state government initiative to cultivate medicinal plants on a larger scale, marking a significant milestone in their journey.

The Souparnika Oushadha Sasya Unit emerged as a model for the entire Panchayath, demonstrating the transformative potential of women. Starting from a small scale cultivation, the team had achieved more steps in their journey and reached out to the entire district. This journey also underscores the significance of training and awareness programs in empowering rural women and their community growth.



Souparnika Oushada Sasya Unit Members (from left) Sherla, Hitha and Sheela

Value added products such as Balm, Thailam and Thaleesapathradi choornam and their production unit

**Thailam - Common name used for medicinal oil made with herbal mixed used for body pain,*

**Choornam - An ayurvedic powder made of medicinal herbs*



Noorang Conservation Centre team members (from left) Lekshmi, Santha Manoharan and Sarasu Gopi

Together for Tomorrow

Women conserving traditions

by Athira S Krishnan

Indigenous tubers, including wild varieties, have been an integral part of the diet and food security of tribal communities in the state for centuries but had later fallen off the platter following a shift in food habits. The reality came to light during an interaction with tribal children, where members of the Kudumbasree Mission discovered that these youngsters were unaware of their traditional culinary delights. Determined to revive their legacy, a team of ten women from the Vella Kuruma* - an indigenous community took the initiative to cultivate the varieties for their children. In 2022 under the Thirunelly Comprehensive Tribal Development programme of the National Rural Livelihood Mission, 'The Noorang Conservation Centre' was implemented through the Kudumbasree District Mission. They had set up the conservation centre on 70 cents of land by taking a loan of Rs 30,000. "Noorang" the name derives from *Nooram kizhangu*, a wild tuber variety that has numerous medicinal and nutritious properties. 60% of the tuber varieties were contributed by P J Manual, a Wayanad based farmer and conservator of diverse tubers. They have also set up a farm school to spread awareness about various varieties of tubers.

"Tubers were a major part of our meal in my childhood. I savour and conserve every tuber variety since it has the potential to be a complete meal. And I consider it important for ensuring food security. I appreciate our Noorang team for making this attempt towards safeguarding our traditional tubers".

-P J Manual

Their collection includes tuber varieties such as yam, cassava, taro and dioscorea. Later they added varieties that have commercial value

and sold them to communities. The group also conducts seed exchange programmes with farmers based on demand. The women's collective also received opportunities to showcase their work at exhibitions across Kerala, providing them with exposure and new experiences. The state government has selected the hamlet as the best tribal hamlet in the state which conserves tuber varieties and propagates traditional farming.

Despite all these, the group struggles to continue their cultivation due to a lack of funding and profit. The only marketing opportunity is through various marketing fairs held across the state, which unfortunately is not a sustainable solution. Under these circumstances, seven members of the team left the group and joined MGNREGS* programme, where they can earn daily wages. Amidst various challenges today, just three women continue the farming and conservation activities, motivated by the desire to preserve these practices for future generations.

Noorang is the best example of a sisterhood working towards a common goal. Scientists, activists and students from various parts of India often visit their field, fostering knowledge exchange and learning opportunities. The team often participates in exhibitions all over Kerala, thus reaching out to the wider community, and serving as a motivation to conserve our traditions. As per the NFHS* reports, more than 40% of tribal children in India are stunted and underweight. Through this women initiative, the children in their community have started consuming the traditional tuber varieties rich in Vitamin C and beta carotene, which has helped a lot in tackling malnutrition and anaemia that is widely observed among children in tribal communities. With more external financial support and improved marketing avenues, Noorang can successfully preserve and pass on these practices, ensuring a healthier and more sustainable future for the next generation.



Conservation Centre and plots of Noorang

**Vella Kuruma- An indigenous tribal community in Kerala*

MGNREGS- Mahatma Gandhi National Rural Employment Guarantee Scheme- A government scheme that guarantees a minimum 100 days paid work in a financial year to rural households

NFHS- National Family Health Survey



“Farming needs passion and patience, and we must realize that nature belongs to all, not just us—just as *Basheer said, ‘They are the real inheritors of Earth (*Bhoomiyude avakashikal),

Shalini Ramesh
Wayanad

From City Lights to Farm Delights

by Neha Madhavan

Shalini Ramesh, a young IT professional who juggles her urban life in Bangalore with her deep love for agriculture in Wayanad. Born into an agricultural family, Shalini always dreamed of creating her own farm—a dream she realized with Bhoomi Orchard, a 2.5-acre biodiverse haven she built over seven years of unwavering effort.

Tired of the chemical-laden food she encountered in city life, Shalini envisioned offering natural, organic products to her family, friends, colleagues, and the public. Her farm, enriched by the breathtaking beauty of Wayanad, represents a sanctuary where nature thrives. “I harvest whatever is left on my field after the birds, insects, and wild animals have eaten. The land belongs to them too, yet nature gives back to us abundantly,” Shalini shares with a smile. Shalini’s journey, which was mostly supported by her mother Laila, demonstrates the strength of willpower, traditional knowledge, and creativity, demonstrating that young people are having a significant effect on agriculture.

Shalini used an agroforestry technique to create her ideal farm, combining exotic fruits like Rambutan, Dragon fruit, Coconila, Citron, papaya, jack tree and other 207 varieties of fruit crops with vegetables like ivy gourd, cowpea, radish, spinach, and beans intercropped. Her integrated farming practices incorporate goats, poultry, and livestock, whose waste enriches compost, creating a circular and self-sustaining model. Bee boxes placed among her crops ensure pollination, while the buzzing of bees and the songs of diverse bird species offer a refreshing

break from the white noise of urban life.

Shalini monitors soil health meticulously, conducting soil tests every three months. Based on the results, she applies natural growth boosters like *Jeevamrutha*, *Panchagavya*, and *Haritha Kashaya*, or enriches the soil with green manure. For pest management, she uses neem oil-garlic emulsions, pseudomonas and jaggery mixture to enhance flowering, cow dung slurry, ash and mulching to nourish the soil- ensuring organic and traditional methods nurturing nature and biodiversity.

Weekends at Bhoomi Orchard are more than a getaway—they're a chance for Shalini to immerse herself in nature and share its beauty with others. "Spending a morning on my farm, listening to the birds, watching diverse colorful butterflies fluttering across the field, is such a relief from the city's constant noise," Every corner of her farm is alive with life, an ecosystem where insects, animals, birds, butterflies and plants coexist harmoniously. Her integrated approach doesn't just grow food, it preserves the beauty and balance of nature, making her farm a small but vital part of conserving biodiversity.

Running a farm from a distance hasn't been easy. Shalini is constantly struggling with the human-animal conflicts, especially monkeys raiding her orchards destroying everything in sight and erratic climate changes in which fruit plants like lychee lost its yields completely, and persistent pests like the stem borer. Yet her resilience and innovation keep her moving forward.

Shalini's farm has also become a destination for eco-tourists and curious visitors who want to experience



Custard apple tree in Shalini's Bhoomi Orchard

organic farming up close. Given that she has a young mind, her marketing abilities draw in more young people through social media platforms like YouTube, Facebook, and Instagram.

Shalini's dedication to biodiversity conservation and sustainable farming earned her the prestigious Biodiversity Conservation Merit Certificate from the Kerala State Biodiversity Board. Shalini aims to inspire others, especially young people, to see farming as a meaningful pursuit. "Farming is not just for the older generation. With patience and creativity, youth can make a difference. Start small—grow vegetables at home or try hydroponics. The key is to have a positive mindset."

Through passion, resilience, and innovation, she has shown that youth can lead the way in sustainable farming, creating a positive impact on the environment, community, and agriculture as a whole.



Shalini Ramesh with her pets

**Instagram- A social media platform through which people share photos, videos, innovations etc*

**Bhoomiyude Avakashikal (transl. Inheritors of the Earth) is a Indian Malayalam-language Novel written by renowned writer *Vaikom Muhammad Basheer*

From Farmers to Changemakers

by Sreelakshmi M.S

Thanal Organic Bazaar, Kowdiar Trivandrum

“

“We procure only from Participatory Guarantee System (PGS) certified farmers,”



When Laila first heard about the Saturday market organized by Thanal, she never imagined the journey ahead. As a small-scale farmer juggling the demands of motherhood, selling her produce directly to customers seemed like a practical solution to support her family. Little did she know that this monthly bazaar would grow into Thanal Organic Bazaar, and she, along with fellow women farmers, would become its backbone.

“Back then, the bazaar happened once a month,” Laila recalls. “It was a chance for us to meet customers directly and share our story. Slowly, the demand grew, and so did we.” Today, as Thanal organic bazaar celebrates its 21st anniversary, Laila is celebrating her own 18-year anniversary with the store—a bond of almost two decades.

Laila’s passion for organic farming has grown with Thanal. Although she started farming purely for her own needs, her work with Organic Bazaar inspired her to expand her garden to grow six varieties of produce that she still brings to Organic bazaar. Thanks to Thanal’s training sessions, she learned how to make organic fertilizers at home—Jeevamrutham and five-leaf extracts among them. With great care, she prepares these and tends her plants like family, ensuring they thrive without synthetic chemicals.

Laila wasn’t alone. Farmers like Latha, Vineetha, and Saji Kumari also brought their produce to the market, sharing a common goal of providing healthy, pesticide-free food to their community. These women weren’t just selling vegetables; they were introducing people to a way of life that respected the Earth and its resources.

As more the demand for organic food increased, the Saturday market became a

bimonthly, then weekly event. By 2003, Thanal Organic Bazaar was established as a daily shop in Kerala's capital city, Thiruvananthapuram, providing a steady outlet for organic produce. The women who once sold their vegetables in the market became the heart of this new venture, transitioning into managerial roles.

"It wasn't just about selling anymore," says Saji Kumari, now the shop manager. "We had to build a network of farmers, ensure the quality of the produce, and connect with customers who trusted us for safe food."

The women of Organic Bazaar have taken on a dual role: they are farmers themselves and advocates for hundreds of other organic farmers in Kerala. Today, the Bazaar supports over 250 farmers and serves more than 1100+ customers regularly.

One of their key achievements is ensuring that every product meets the highest standards of organic certification. "We procure only from Participatory Guarantee System (PGS) certified farmers," explains Vineetha, who manages procurement. "We visit their fields, inspect their practices, and even conduct random checks to make sure the produce is pesticide-free and of the best quality."

By sourcing locally, the Bazaar reduces food miles, offering consumers fresh produce while minimizing environmental impact. The team takes pride in handpicking the best fruits, vegetables, rice, pulses, millets, and spices, reducing wastage and ensuring customers receive only the finest.

For the women, their journey with Organic Bazaar has been transformational. Latha and Laila, who started as a farmer, is now a senior staff member with nearly two decades of experience who continues to



***"It's a platform
where we've grown
as individuals and as
a community. We've
built something that
supports farmers, feeds
families, and protects the
environment"***

connect with farmers and their struggles. Saji Kumari, an MA graduate who turned to farming due to life's challenges, found a new purpose managing the Bazaar. And Vineetha, who joined as billing staff, now oversees procurement.

The women have also expanded their income through the Bazaar. In addition to managing the shop, they sell their own produce and value-added products, like homemade organic snacks, which have become popular among customers.

The success of Organic Bazaar has inspired other organic shops across Kerala, creating a ripple effect in promoting agroecology. Beyond selling food, the women actively participate in exhibitions and events, spreading awareness about the benefits of organic farming and chemical-free food.

"We've seen how pesticides harm both the soil and people," says Laila. "By sharing our experiences, we hope to encourage more farmers and consumers to embrace organic living."

The journey of these women farmers reflects the ethos of Thanal Organic Bazaar: Safe Farm, Safe Food, Safe home, empowering communities, fostering sustainable practices, and bridging the gap between producers and consumers. Their dedication has transformed the Bazaar into more than a shop—it's a movement.

"Organic Bazaar isn't just our workplace," says Latha. "It's a platform where we've grown as individuals and as a community. We've built something that supports farmers, feeds families, and protects the environment. That's a legacy we're proud of."

Thanal Organic Bazaar is driven by women who bring firsthand agricultural knowledge to their roles. Their work extends beyond managing the store to advocating for pesticide-free food, educating communities, and supporting sustainable farming. Their dual roles as farmers and advocates highlight the critical role women play in fostering agroecology and building resilient food systems, proving that grassroots efforts led by women can create meaningful change in the way we grow, buy, and eat food.

Breaking the Cycle of Chemicals

by Neha Madhavan

Kochuthresia's journey is a shining example of courage and hope. In her late 50s, when many think about slowing down, she started fresh. After working for 18 years at Cochin University of Science and Technology (CUSAT), she retired and decided to follow her passion for farming. She bought a small plot of land in Wayanad, dreaming of a peaceful life close to nature. But what she found shocked her.

"The soil was dead," she says. "Years of chemical abuse had left the land dry, cracked, and lifeless. Walking away wasn't an option, I had to do something." Chemicals had drained it of all its nutrients, and nothing seemed to grow. Kochuthresia was determined to bring it back to life, but the journey was not easy.

In the first year, she faced endless challenges. The crops were weak, the soil wouldn't hold water, and weeds took over. People around her doubted her efforts. "Why work so hard?" they asked. "Just use fertilizers and pesticides like everyone else." But Kochuthresia stood firm. "I couldn't do that," she says. "I had seen what chemicals did to the soil. I wanted to grow food that was healthy and safe."

She started using natural methods like compost and organic fertilizers, experimenting to see what worked best. She spent hours reading, learning, and working on her land. Progress was slow, and there were many days when it felt like nothing was changing. Initially, Kochuthresia experimented with various inputs and methods, but nothing seemed to work. Yet, she refused to give up. After months of research and experimentation, she discovered a potent organic formula combining cow dung, cow urine, microbiome-rich compost, and other natural

“

If you are filling nature with chemicals, expect the same from nature too,

Kochuthresia
Wayanad



ingredients. “When I started applying this organic input, I noticed subtle changes,” she says. “The soil began to change—it became softer, richer, and alive. The plants grew healthier,

The second year brought small victories. “I remember seeing earthworms return to the soil,” she says with a smile. “It was like a sign that the land was beginning to trust me back.” These tiny creatures symbolized life, marking the soil’s gradual recovery.

By the third year, the changes were undeniable. The soil had transformed from dry, cracked clay into a rich, crumbly texture, alive with microbes and organic matter. Her tea plants began to thrive, their leaves lush and green. When she finally transformed her farm and certified it organically, she expanded her vision by including farmstays with a view towards her beautiful organic black and green tea plantation.

As she rebuilt her farm, Kochuthresia learned more about the environmental and human costs of pesticide use in Kerala, especially in Idukki, one of Kerala’s highest pesticide - consuming regions. In the Cardamom Hills



Kochuthresia's tea plantation

Reserve of Idukki, farmers use an average of 27 kg of pesticides per hectare on cardamom plantations, significantly higher than India’s average pesticide use of 0.5 kg per hectare. This excessive usage has led to severe soil and environmental degradation, including toxic residue buildup and health issues like chronic poisoning and cancer among residents. (Harikumar Reshma et al., 2020)

“I realized how deep the problem was,” she says. “Change is hard, but someone has to start. If we don’t protect our land now, what will we leave for the next generation?” Driven by this mission, she began reaching out to farmers across the state, motivating them to transition to agroecology. Her efforts often face resistance, as many farmers are hesitant to give up chemical methods that guarantee quick and high yields. Her efforts gained initial support from the Agriculture Department, which invited her to expos and exhibitions to share her methods. She uses such platforms to educate farmers about the long-term benefits of organic practices, showing them the healthier soil and thriving crops on her own farm as proof. “Sometimes I felt dismissed,” she admits. “Some officials still promoted chemical-intensive agriculture, but I knew I had to keep going.”

Through her journey, Kochuthresia grew to deeply appreciate the importance of indigenous knowledge in sustainable farming. She recognized the invaluable role women play in agroecology, their connection to the soil, and their potential as stewards of the land. To bring this vision to life, she collaborated with local indigenous groups, especially women. Her vision is to uplift them by providing permanent jobs on her farm, ensuring they have a steady income and opportunities to grow. By giving them a chance to contribute meaningfully, she helps them build better lives for themselves and their families.

Kochuthresia’s story is more than a tale of farming; it’s about the transformation of chemical intensive farming to agroecology farming, about reviving dead soil to a living flourishing soil, changing skepticism into belief, and about communities into empowered changemakers. Her words echo a message for everyone: “The land will give back to you if you care for it. And when the land flourishes, so do we.”

Journey to a Climate-Conscious Farming

by Neha Madhavan

“

“Farmers were Frustrated and struggling, and I knew we needed a different approach—one that respected both the soil and the climate.”

**Bindu
Wayanad**



In a world where formal education often defines success, Bindu proves that determination and self-belief can break all boundaries. A 10th-pass woman with no formal education in agriculture or horticulture, she turned her life experience and passion into a thriving nursery and farm inspiring and motivating farmers to cope with changing climates and changing agricultural calendars. “I didn’t have a degree, but I had confidence,” she says. “I knew the seven years of experience I had working in the agricultural research station would never fail me.”

The early days were daunting. Marketing her plants was challenging, and building trust among farmers proved an uphill task. Yet, Bindu persevered, leveraging her experience at the agricultural research station and the support of her husband to establish connections and expand her reach.

Wayanad is known for its biodiversity and fertile land, yet the region’s farmers are struggling. Climate change has brought erratic rainfall, rising temperatures, and soil degradation. Heavy reliance on chemical fertilizers and hybrid seeds has further compounded the crisis, with farmers facing lower yields and unsustainable costs.

Bindu recognized these challenges early. She saw firsthand how hybrid seeds—marketed as high-yielding and disease-resistant—often failed in Wayanad’s unique climate. The district’s lateritic soils and high rainfall require crops that are resilient and adaptable, qualities that hybrid plants often lack.

“I wanted to offer a solution,” she says. “Farmers were frustrated and struggling, and I knew we needed a different approach—one that respected both the soil and the climate.”

Bindu’s answer to these challenges lay in

avocados, a crop that is no longer considered exotic in India, as it is now widely cultivated here and well-suited to the conditions of Wayanad. In

her nursery, Bindu began focusing on grafted avocado plants, along with high-quality coffee seedlings and local staples like mango, pepper, and tea which are often locally sourced and handpicked by herself. She took great care in sourcing seeds and mother plants, ensuring that her saplings were strong and adapted to Wayanad's environment. "My plants are not just for sale," she explains. "They're a promise that farmers can trust—plants that will thrive and provide for them." The decision to grow avocados has not only provided a sustainable option for local farmers but has also opened doors to lucrative markets. The fruit's rising popularity in urban centers like Bengaluru and Kochi offers a promising economic opportunity for Wayanad's farming community.

To ensure the survival of her saplings, Bindu employs sustainable practices. She uses organic inputs like *Jeevamrutham*, bio fertilizers, and neem-based pest repellents, preparing the soil to support the growth of strong, healthy plants. Her commitment to quality and adaptability has earned her the trust of local farmers,

who now look to her nursery for high quality, high yielding varieties in Wayanad's specific conditions.



Bindu inspecting and managing her grafted avocado saplings in the nursery

Bindu's nursery has become a hub for learning and collaboration. By aligning her operations with the changing agricultural calendar, she ensures that saplings are ready for the critical planting season, maximizing farmers' chances of success. Her avocado saplings, alongside local crops like mango, pepper, and coffee, offer farmers a diversified portfolio that enhances both their resilience and profitability.

Bindu manages her nursery and farm entirely on her own, with only her husband's help. She doesn't see it as a struggle. "My farm is my home," she says with a smile. Her positive mindset is what keeps her going. "If you think positively, nothing feels like a burden," she says. Bindu's work is not just about selling saplings; it's about offering hope. By introducing climate-resilient crops, reviving sustainable farming practices, garnering the power of local solutions in addressing global challenges,

and encouraging farmers to adapt to climate change, Bindu is showing how a small nursery in Wayanad can contribute to the broader goals of ecological sustainability and economic security.

Story of organic innovations and community support

by Athira S Krishnan

“While our community often points fingers at the lack of youth engagement in agriculture, the truth lies in the fact that our society fails to foster their interests or encourage them to pursue their passions.”

says Vani, an agripreneur from Haripad, Kerala, with a strong passion for Organic Agriculture. Growing up in the Onattukara region*, Kerala, known for its rich agricultural traditions and vibrant cuisine, Vani was inspired by the environment around her and her father, a skilled farmer. “The flavors of our traditional dishes, like *asthram* and *puzhukk**, are deeply rooted in my memories and continue to influence my journey,” she reflects. However, her path to becoming an agripreneur was anything but straightforward.

Initially steered by her parents toward a career in science and medicine, Vani’s perspective shifted when she encountered an impactful article in ‘*Keralakarshakan*’* discussing the environmental consequences of the Green Revolution. This article deeply touched her. Additionally, she came across an incident from Madhya Pradesh concerning a farmer who initiated a fertilizer company that eventually resulted in severe damage upon his

crops and livestock, resulting in the company’s dissolution. “Around that same time, I observed certain uncommon alterations in my father’s farmland, such as the disappearance of native seasonal flowers like *thumba** and *karuka** that are typically abundant in here, due to excessive chemical use”

After absorbing all this information, Vani ultimately opted to shift her career path towards agriculture. However, her parents strongly objected to her decision. She faced significant challenges in trying to find a middle ground with her parents, and eventually, she enrolled

in College of Agriculture, Vellayani, which is a part of Kerala Agriculture University, to pursue a Bachelor’s degree in agriculture. Inspired by literature on natural farming like “Silent Spring” authored by Rachel Carson, and “The One-Straw Revolution” written by Masanobu Fukuoka she committed herself to agroecology. Her decision initially alienated her from her family, but with the support of her uncle and husband, Vijith, she began integrated organic farming. “Learning by doing became my mantra,” she says, crediting her early mentors, Elizabeth, Assistant Director of Agriculture, who encouraged her to launch an eco shop.

In 2017, Vani founded *Prakruthi Jaiva Kalavara*, an eco shop in Haripad that connects over 300 organic farmers across Kerala to fair markets. “Ensuring authenticity is critical,” Vani explains. “We use PR tools and thorough screenings to maintain the organic integrity of every product.” Beyond crop cultivation, she held a strong interest in preserving traditional seed and crop varieties. She was on a mission to gather endangered tree species from sources like forestry colleges and various other locations she visited. About seven



Vani with her husband Vijith

ponds surrounded with bamboo forests in her land make the ecology rich with flora and fauna. This bamboo serves as a windbreak. More than 32 bamboo species are there around her home. Various endangered tree species are also conserved. From bamboo alone, she is making a profit of 3 Lakhs (\$3500) per annum.

Subsequently, she thought of the value addition of these surplus yields from her farm, with the assistance of individuals from across Kerala to facilitate this. Through this experience, she came to realize that there existed a significant market demand for value-added products, which could command premium prices. This realization motivated her to establish a value addition unit named “Ruchira” in the year 2023, complete with the necessary machinery and equipments for processing. As a result of these ventures, she has successfully created employment opportunities for numerous individuals from various regions across Kerala as well as outside Kerala.

Today Vani has created a holistic agricultural system that includes Organic Integrated farming, livestock and poultry rearing, *Vasu jaivanganam* (plant nursery), *Ruchira* (value addition unit), Ecoshop (*Prakriti jaiva kalavara*), Organic farm input production, training for farmer groups and farm schools on organic farming, Agroforestry, and pisciculture. Major crops include bitter gourd, cucurbits, *nei kumbalam* (Ash gourd), pumpkin, papaya, salad cucumber, brinjal varieties, chilly varieties, traditional *amorphophallus* (Elephant foot yam) varieties, traditional yam varieties, ivy gourd, cabbage, cauliflower, amaranth (green and red varieties), lady finger (red and green), curry leaves, pineapple, banana, fruit trees etc. Besides these crops she also cultivates vetiver and lemongrass for soil conservation and various other medicinal plants like aloe vera. She offers comprehensive guidance and necessary resources to farmer groups for the production of seedlings. These seedlings both cultivated on her own field and by the farmer groups, are made available for purchase through her plant nursery (*Vasujaivanganam*).

Her commitment to sustainability extends to her farming practices. In preparing the soil beds, she employs compost, cow dung, coconut

husk, fermented oil cakes (derived from sesame and coconut), and dried leaves. To manage the issue of sucking pests, she maintains a balanced temperature by nurturing the ecological environment. For promoting robust growth and pest management, diluted cow urine (diluted 20 times) is utilized. Exclusively indigenous seeds are chosen for cultivation. In cases where pest populations become challenging, she uses biofertilizers like *Beauveria* and *Lecanicillium* as additional measures. Organic manures for the field purpose are made in the field itself. Her integrated practices include seven ponds surrounded by bamboo forests for natural temperature regulation, vermicomposting, in-situ green leaf manuring, biogas slurry application, and solar-powered operations. She cultivates a wide range of crops—from traditional yams to medicinal plants like aloe vera—and raises indigenous livestock breeds like *Vechur*, *Kasargod Kullam* and *Kapila** cows and free-rearing approach for poultry. “Every part of my farm has a purpose,” she says. “Even the poultry droppings are a resource.”

In conclusion, Vani’s journey in agriculture is backed up with strong determination, passion, and commitment to sustainable and organic farming practices. Despite initial opposition and challenges, she courageously followed her heart and pursued a path that aligned with her values. Through her ecoshop “Prakruthi Jaivanganam,” she not only transformed her own life but also positively impacted the lives of numerous farmers, workers, and the environment at large.

**(Astham and puzhuk - traditional cuisine made up of yams. *Onattukara- A specific region in Alappuzha district in Kerala where a lot of traditions and myths exists and is known for sesame cultivation. *Keralakarshakan- An agriculture magazine published by Farm Information Bureau. *Thumba (Leucas aspera) and *karuka (Cynodon dactylon)- Medicinal plants that grows wildly *Kapila, vechur and kasargod kullam- Indigenous cow breeds)*

Revival story of an ancestral Land

by Athira S Krishnan

For over 15 years, Sushana Devi has been on a mission to conserve and revitalize her 32 acres of ancestral land in Wayanad, Kerala. Sushana transitioned fully into farming after completing her MA aiming to bring her fourth-generation ancestral land back to life. She began the journey on an unfertile, sandy land where coffee (Robusta and Arabica) was intercropped with rubber. Driven by a desire to improve soil health, Sushana dedicated herself to researching soil management and natural farming techniques. Attending a training session conducted by the Department of Agriculture and Farmers Welfare, Kerala, under the *BPKP (Bharathiya Prakrithi Krishi Padhathi) scheme was a turning point for Sushana. The training included exposure visits to various organic farms and introduced her to tribal farmers of Wayanad who shared traditional knowledge on soil, crop, and pest management. Inspired by their traditional practices, she began implementing the same on her farm, gradually cultivating medicinal herbs and spices—such as pepper, cardamom, cloves, cinnamon, allspice, turmeric and ginger—across 16 acres.



SUSHANA DEVI
Wayanad

“

Indigenous tribal communities are the real doctors, from whom I started learning and loving the fascinating nature.”

Sushana developed her own farm manure by combining extracts from 15 leaves—such as neem, Papaya, Hibiscus, Mango, Moringa, Gliricidia, Calotropis, Vitex, Datura, *Thulsi* (Basil), Clerodendrum, Castor, Turmeric, Cassia, and Singapore Daisy—mixed with cow urine, cow dung, and jaggery. After 25 days of fermentation, this mixture transforms into a nutrient-rich growth booster liquid. She then filters it through layers of fine sand, gravel, and wire mesh within a barrel and pumps to the crops through the drip irrigation system along with irrigation water (*Fertigation). This unique formula has significantly reduced her dependence on urea and potash applications, which she now applies only twice a year instead of monthly once as before. After filtration, the retentate (the solid fraction) forms a black powder, which she uses as an additional manure, further enhancing the soil quality.

She also created two natural ponds on her farm to collect rainwater runoff from the coffee drying yards showcasing the best example of a water harvesting system and effective resource utilization. She uses turmeric and mint leaf extract to control Ant's attack on crops.



Sushana's value added product
Jain filter coffee powder

In 2020, Sushana, with the support of her children and her cousins launched an online marketing platform 'JAIN Foods'(www.jainfoods.online) to sell her farm fresh products and processed products such as filter coffee powder, turmeric powder, fermented coffee, flavored coffee etc at a premium price. Thus, her brand received fame in National markets and majority of her customers are from North India. They are now adding new products like coffee face masks, body scrub, soap etc based on the customer demands. Along with this, she also sells raw produce at Perfetto Naturals Pvt. Ltd. and Wayanad Social Service Society.

In 2024, Sushana exhibited her Wayanad Robusta coffee at the "World of Coffee" event in Copenhagen, Denmark. This international opportunity brought her products global exposure and garnered export interest from her stall visitors. Sushana's recognition in a global platform also garnered interest from her children and relatives in her work and agroecology .



Sushana Devi receiving Best exhibitor
Small Owner award by Directorate of
Plantations, Department of Industries
and Commerce, Government of Kerala at
Kerala Plantation Expo 2024



Jain foods Filter Coffee Powder and
Turmeric Powder

Sushana's farm is a lively agricultural plot and a rich biodiversity site where numerous medicinal herbs flourish naturally.

Sushana's farm is a lively agricultural plot and a rich biodiversity site where numerous medicinal herbs flourish naturally. Local tribal communities frequently visit her farm to gather these herbs, sharing their knowledge of traditional medicine. Through these interactions, Sushana continues to gain insights into the land's natural potential and indigenous medicinal practices. What began as a passion has now grown into a successful, profitable venture. Sushana's sustainable approach not only revived the land but also created a natural haven for her children, ensuring they both inherit a diverse rich land and a stable income.

(*BPKP- Bharathiya Prakrithi Krishi Padhathi - A Central government scheme for promoting natural farming.

*Fertigation- A method of pumping manures along with irrigation water)

From Politics to Petal; Kunjumol's Journey of Nurturing Nature

by Athira S Krishnan

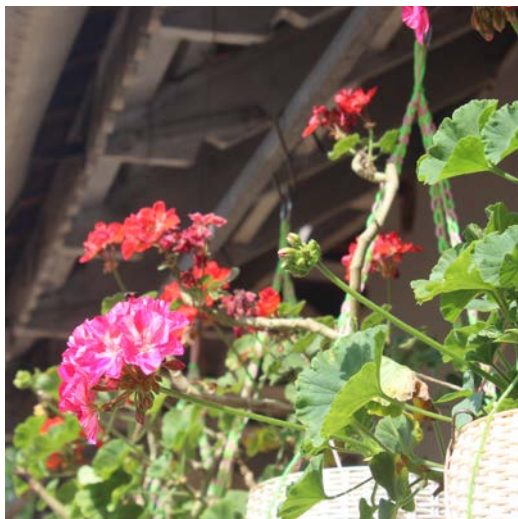
In a patriarchal society, imagine being a woman political worker in Kerala, balancing the political responsibilities, and still finding time to keep a beautiful garden full of colorful flowers and rare plants. That's Kunjumol. Growing up in a farming family, where black pepper was their major income source, something that kept her apart was her love for ornamental flowers and fruit plants. 50 varieties of Bougainvillea (Rubi red, California pink, Pune white, Jewel, Christina etc.), 45 varieties of Geranium, 100 + varieties of Rose, Bleeding heart, Chinese fever vine (*Manimulla*), Cats claw creeper, Frozer island, Yesterday- today- tomorrow, Lavender bush creeper, and Orchids are some of the ornamental flowers which add colors to her small beautiful home.

But her passion extends beyond the aesthetics of ornamental plants. For years, she has been on a quiet yet significant mission to collect and conserve indigenous vegetable seeds, safeguarding those varieties at brink of extinction.

"We curse the caterpillars that feed our plants only to admire them once they become beautiful butterflies. Nature is full of contradictions and when you find happiness in these, you truly start loving nature!"

Kunjumol with her husband Pallikunju

KUNJUMOL
Wayanad



Ornamental flowers in Kunjumol's farm

She has a collection of over 30 traditional vegetable varieties Vengeri Vazhuthana*, Clove beans, Ivy gourd varieties, Chilli varieties, Winged Bean and Sword Bean. These are heirlooms passed down through generations in Kerala, many of which are disappearing from our fields. Her discovery of the *Anakomban**, a wild variety of ladyfinger is quite interesting. One day, upon reading a newspaper article about a farmer cultivating traditional *Anakomban* lady finger in Kottayam district, she tracked the farmer through different ways and finally collected the seeds.

In addition to ornamental plants and vegetables, more than 20 varieties of fruit plants have also been planted around her home. This include sapota, rambuttan, durian, mosambi, butter fruit, water apple, lovi lovi, egg fruit, orange and lemon. Kunjumol's greatest support is her husband Pailikunju, who is also a political worker. While supporting Kunjumol's interest in ornamentals, fruit plants and vegetables, Pailikunju also



Kunjumol harvesting from her Vegetable garden

manages a 4.5 acre plantation of rubber, banana and coffee.

In her busy schedule as a political worker, she could not venture into marketing. So, after quitting from her political career, she and her husband are planning to develop farming into an enterprise. As a political worker, Kunjumol also utilizes the public platforms to raise awareness among the youth about the importance of farming. Kunjumol always reminds youth, "Healthy soil, healthy food, healthy people. Organic farming isn't a choice; it's the only way to ensure a future that thrives." As a Social worker, as a mother, as a homemaker and as a farmer, Kunjumol is a real star shining in all her fields of work.

**Vengeri vazhuthana (Brinjal), Anakomban venda (lady's finger) are indigenous vegetable varieties.*



Ripen Egg fruits in Kunjumol's farm

**Healthy soil, healthy food,
healthy people. Organic farming
isn't a choice; it's the only way to
ensure a future that thrives.**

A Woman's Mission to Break Agricultural Stereotypes

by Athira S Krishnan

"I am strong enough to face any challenge that comes my way. Through determination and hard work, I have built my strength, and now, no one can defeat me. I am a powerful woman"

Praveena is the youngest of nine daughters in her joint family. Praveena's father was a farmer, and she grew up with deep rooted farming traditions. Her grandmother was a landlord who owned 265 acres of land, which was divided among the daughters after their marriages. The land remained unused as all others pursued different careers. Among the nine daughters, she was the only one passionate about agriculture. Driven by the passion towards organic farming, Praveena quit her accountant job in 2016 to dedicate herself completely to farming, following in her father's footsteps. Her siblings supported her passion by sharing their lands for cultivation. Her father became her mentor, teaching the fundamentals of farming. Unfortunately, he passed away three years later, leaving Praveena to continue on her own. This posed a big question mark on continuing farming.

The road to success was not an easy one. In the early years, she struggled with heavy losses due to pests and diseases. Crop diversification solved the problem to an extent. In addition, learning from various expert training also helped her to sort out this issue. In 2018, Praveena attended a farmers' training programme at Shornur (Malappuram district) where she met with many paddy growers in Wayanad. With their guidance and advice on soil fertility enhancement, selection of varieties and pest management strategies, Praveena started cultivating traditional rice varieties- *Black Kavuni*, *Jeerakasala* and *Kullan thondi** in her 8-acre field. These varieties are in high demand in the market due

PRAVEENA
Wayanad

to their medicinal value and aromatic properties. She also diversified her cultivation with cowpea, crucifers and solanaceous crops on the field bunds. This cropping system not only helps protect her main crop rice from grazing animals but also helps in harboring more predators and pollinators in the field which will enhance the paddy yield ensuring proper pollination and pest management. After the rice harvest, the fallow land is cultivated with pulse crops like black gram and bush cowpea, oil seeds like sesame. This helps to enrich the soil for the next cropping season while also creating an additional income source.

Initially Praveena divided her field into small plots and assigned each plot to local agricultural laborers, hoping to streamline agricultural activities and create employment opportunities. "I initially thought hiring people would generate a daily income for some people and simplify my workload through division of labor. However, their lack of responsibility ultimately compelled me to take full charge of the fields myself," says Praveena. At times, she even considered giving up on agriculture, but her passion for farming kept her going.

Currently, her biggest challenge is the chemical contamination from nearby fields. Once, after transplanting the seedlings, she noticed yellowing in the seedlings, initially mistaking it for pest infestation or disease. The real culprit, however, was the chemical herbicide Roundup sprayed in neighbouring fields. Although she spoke with the neighboring farmers about this issue, they continued their practices. Determined to protect her crops, she constructed a channel to divert the contaminated water away from her field.

Praveena tending to traditional rice varieties



Water scarcity posed yet another challenge, as the irrigation channels were shared among multiple fields. Some farmers would secretly divert the water flow to their fields during the night, leaving her fields parched.

"They assumed I wouldn't react because I'm a woman," Praveena recalls. To address this, she began staying awake at night to redirect the water back to her field. Being a woman, she proved herself more determined and powerful, stopping others from judging her weak points. Praveena also tackled financial hurdles with ingenuity. Initially, her husband managed the farm's finances, while she focused on operations. Today, she independently oversees every aspect, from budgeting to decision-making.

Despite all these challenges, Praveena with her resilience and will power proved that organic farming is not only viable but also rewarding. She has broken all the stereotypes, proving that with strong determination, a woman can handle any situation patiently and wisely. Furthermore, the farmers nearby, motivated by her success, approached Praveena for mentorship for transition to organic farming in the upcoming cropping season. Praveena is now working towards getting her organic land certified to secure better market prices for her produce and has already started the certification process. She also plans to expand her farm by producing value-added products like Blue Butterfly Pea and Hibiscus flowers.

**Black Kavuni, Jeerakasala and Kullan thondi- Indigenous rice varieties*

Inspiring a New Generation of Women Agripreneurs

by Athira S Krishnan

I realized the joy of being independent and how it could open doors to new opportunities and recognition. The satisfaction of building something on my own kept me motivated, even through challenges."

NAYANA
Wayanad

"In my school days, I used to think that marrying into a financially stable family would mean I'd never need to earn anything, and my future would be secure. But as I stepped into family life, I realized the joy of being independent and how it could open doors to new opportunities and recognition. The satisfaction of building something on my own kept me motivated, even through challenges." Says Nayana, a BSc Computer Science graduate from Wayanad, Kerala.

Her father, Mr. John, was an established Plant nursery owner for 40 years in Wayanad. So Nayana and her two sisters had grown up amidst these beautiful plants which evoked an interest in plants from her childhood. Inspired by this environment, she even chose her postgraduate project to focus on creating an online platform for selling plants. Although her initial venture was unsuccessful, it laid the foundation for her entrepreneurial journey. Undeterred, Nayana joined her father in

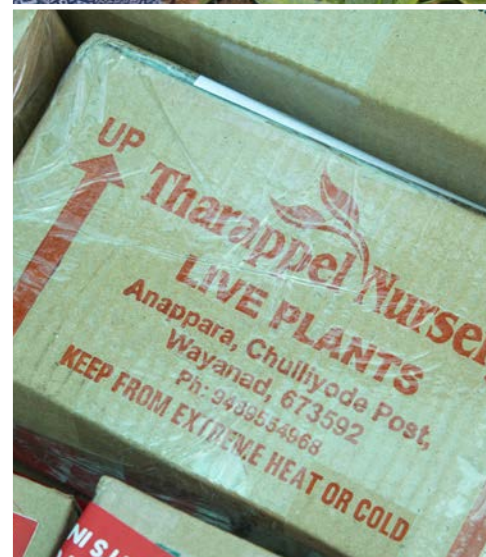
managing the nursery after post graduation.

In 2017, a customer from Pune called her father, John, to ask about a rare ornamental plant. Although the plant was available in the nursery, Wayanad's lack of rail and air connectivity made shipping the product costly and complicated. Initially, they ignored the customer's request, but the persistent customer continued to reach out, turning the situation into a challenge. Finally, Nayana took the responsibility of shipping the plant and when it safely reached the customer, he called back with a happy review. This sparked the idea of expanding their market to other states. Nayana launched an Instagram* page, 'Tharappelnursery', where she posted short videos showcasing the plants available at their nursery. Although the market was slow initially, she consistently maintained the page for two years. During the COVID-19 pandemic, as people spent more time at home, gardening became a fashion. This



became a peak sales period for her, and she started receiving more orders through Instagram. As demand grew, two of her father's nursery staff were assigned to assist her on Mondays and Thursdays—one for packaging and the other for managing social media. Thus Nayana's journey as an entrepreneur took shape.

The biggest challenge she faced during the initial days was the packaging methods. Since the plants face many shocks during transportation, the packaging must be secure and the plants should stay hydrated for 3-5 days of transportation. After extensive research, Nayana learned about jiffy bags, which are light weight as the medium used was coco peat, small in size, ensures proper drainage and high moisture retention capacity. This keeps plants fresh and safe until they reach the customers. Now, a monthly income of 80,000 to 2.5 lakhs (\$936 -\$2927) is assured from her online business alone.



As a father of three girls, John is so happy to see Nayana taking his business forward and growing as an entrepreneur.

Now Nayana has plans to launch an online website for the nursery. However, most of her customers are aged 50 and above, making a website potentially less user-friendly for them. Additionally, managing both an online website and social media platforms is a challenge due to limited staff, so the website launch is temporarily on hold.

Nayana was the first girl in Wayanad to start large-scale online plant sales through social media. Seeing her success, many other girls had started collecting plants from her nursery and selling through online platforms. "I'm thrilled to see these emerging entrepreneurs and their determination. My message to them and all the youth is

"Seeing her success, many other girls had started collecting plants from her nursery and selling through online platforms."

simple: work for independence. Even if your family is supportive, relying on others for your needs can gradually make you weaker. Take charge of your own life and discover the pride of standing on your own feet," says Nayana. She credits her father and husband as her biggest supporters. Today, she is proud to contribute financially to her family through her own earnings. "Now I am happy that I can hand over my business confidently to my daughter. She is truly a role model- even for me", says John.

**Instagram- A social media platform through which people share photos, videos, innovations etc*

A Woman's Quest for Food Security

by Athira S Krishnan

"When the COVID pandemic struck, I was in Kuwait, confined to a small area with no access to essential supplies. Once in a week, policemen would come to our area to collect purchase lists, but due to severe food shortages, there were strict limits on what we could buy". This challenging period deeply affected Veena, sparking a realization about the importance of self-reliance in food. Upon returning to Kerala, she resolved to cultivate fresh and safe food for her family and community, ensuring availability even in times of crisis.

In 2022, she began farming on 52 cents of her ancestral land, which had remained fallow for many years. Her first challenge was clearing the overgrown weeds, which was then incorporated back into the soil. This practice unexpectedly resulted in an excellent harvest in the first year. As a newcomer to farming, she thought that the initial years would not be profitable, but her results were unexpected. However, the yield began to decline in subsequent years. Also the soil texture started changing. She studied these changes in yield, soil color, and texture over following years. Eventually, she realized the importance of soil mulching. She discovered that her initial success was due to the integration of organic residues, which preserved soil texture, maintained soil temperature, improved water retention and carbon content, and thereby enhanced soil microbial activity and crop growth.

Veena adopted agroecological practices

Veena
Trivandrum

to rejuvenate her land. Meanwhile she bought indigenous cows and chickens for meeting the manure requirements in her field. The major manures used are compost made from the feed remains of the livestock and other crop residues in the field, ash obtained from fumigating the cattle shed at evenings to prevent diseases in cows and composted poultry manure. As pest control measures, she used leaf extracts of common weeds in the field which were immersed in cow urine for 1 week, which turned into thick

"There is no sincerer love than the love of food"-goes a popular saying. Safe and fresh food is the basic need of life, and the love for it motivated me to step into farming when I returned to Kerala from Kuwait."



green liquid that repelled most of the vegetable pests.

In addition to raw vegetables, she also started small scale value addition of farm produce. Milk, curd, ghee, paneer, and powdered spices are the major value added products sold. There are two permanent laborers in her farm, a husband and a wife, who support her in all the field activities. Thus Veena's farm is also a livelihood opportunity for another family.

Veena primarily relies on word-of-mouth marketing to promote her product. She has a loyal base of regular customers who visit her to purchase vegetables consistently. Additionally, she sells her surplus produce at the nearby Organic shops in Trivandrum. To ensure stable market pricing, Veena obtained PGS Organic Certification with support from Thanal Trust. However, as the demand for organic produce continues to rise, she has struggled to meet production targets. To address this, Veena adopted organic precision farming during the Rabi season with guidance from experts and consultants. She believes that precision farming is an efficient approach that helps save both time and space.

For Veena, farming is more than a livelihood; it is a source of emotional and physical well-being. "A cow's aura extends 15-20 meters, compared to just 1.5-2 meters for a human. During the mental and physical challenges of my menopause, they became my greatest comfort. They are like my children and hold a special place in my heart. Engaging in farming has been a healing escape from negative thoughts and life's struggles." Living in urban areas of Trivandrum, Veena's

integrated farm is a model that can be replicated. Veena's journey is a call to women everywhere to embrace their potential, overcome challenges, and redefine their roles in agriculture. By nurturing the soil, Veena has not only transformed her land but also empowered herself, proving that women can lead the way toward a more sustainable and inclusive future.

Pilot stage for precision farming at Veena's farm



Story of transforming fallow lands to flourishing farms

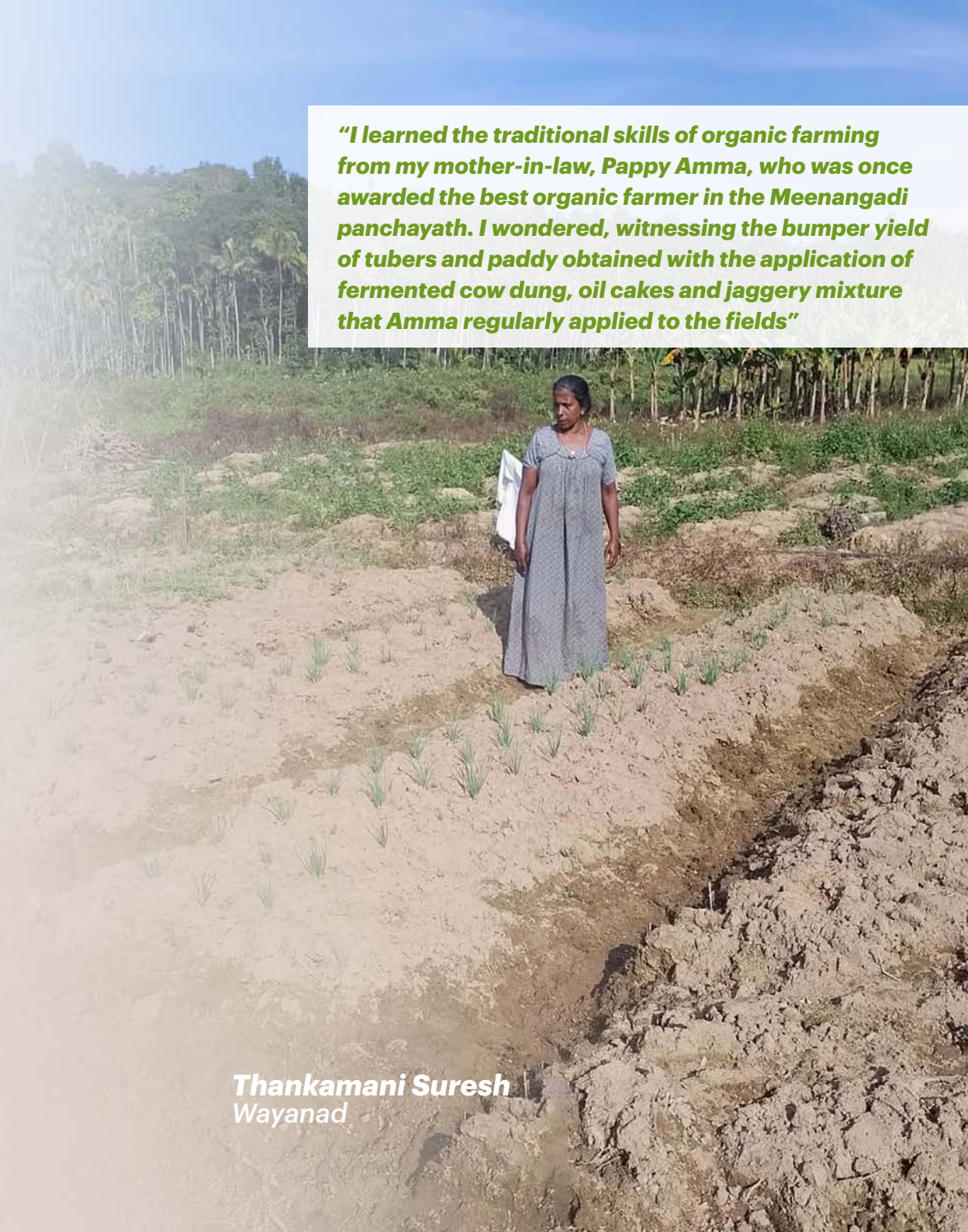
by Athira S Krishnan

Thankamani is a strong-willed woman living in a rural village, Kolagappara, in Wayanad district. She got into farming after getting married to Suresh, who was a traditional farmer. They own an area of 1 acre 50 cents. "I learned the traditional skills of organic farming from my mother-in-law, Pappy Amma, who was once awarded the best organic farmer in the Meenangadi Panchayath. I wondered, witnessing the bumper yield of tubers and paddy obtained with the application of fermented cow dung, oil cakes and jaggery mixture that Amma regularly applied to the fields", says Thankamani. Pappy amma was her inspiration in traditional farming and recalls that it was through her hardships our family fought hunger during those days.

Thankamani and her husband Suresh, are cultivating almost all the crops including tubers, bananas, coffee, pepper, rice and vegetables. Apart from own land, she also cultivates in the fallow lands of her neighbors, serving as a motivation for others to effectively use available resources without harming the environment. Thus, in the past 5 years, this woman has revived paddy lands which were lying fallow to a productive land. Thus she is not only producing safe and nutritious food, but also conserving wetlands and water too. Two crops of rice are usually taken- *Puncha* and *Nancha*. Traditional rice varieties are mainly cultivated in 1 acre lowland – *Ayiram kana*, *Govind bhog*, *Gandhasala* and *Jeerakasala*. Thankamani also experimented with tissue culture bananas on her field which was supplied through *Krishi bhavan. But it was a failure and Thanakamani suggested that indigenous varieties are profitable as they have special adaptations to the soil, climate, pests and diseases. Legume crops are cultivated in fallow fields for enhancing

"I learned the traditional skills of organic farming from my mother-in-law, Pappy Amma, who was once awarded the best organic farmer in the Meenangadi panchayath. I wondered, witnessing the bumper yield of tubers and paddy obtained with the application of fermented cow dung, oil cakes and jaggery mixture that Amma regularly applied to the fields"

Thankamani Suresh
Wayanad



N-Fixation. Proper mulching is also always ensured in entire fields. Apart from crops, livestock, poultry and honey bees are also well maintained for household purposes. During the last summer, 2024 she got a bumper yield from amaranth cultivation. A new variety of amaranth- **Sundari cheera* was done as an experiment. **Jeevamrutham* and **Panchagavyam* are the major plant and soil tonics used for upland and lowland. Pest management practices like **Anjila keedaviratti*, pheromone traps, *thulsi* jaggery traps, plant oils etc are also employed.

As an Agroecology farmer, Thankamani is always trying to stay updated on new technologies in agriculture. She relies mainly on social media (youtube, facebook etc), Agriculture Department trainings and SHG group trainings for gathering information regarding agroecology practices of manure preparations, new sustainable techniques of planting, pest management and marketing. Success stories of farmers seen through social media always stay as a motivation for her to stay back in this field. With the leadership of Thankamani, an Agroecology women farmer group has been formed in Kolagappara with the support of Thanal.

Thankamani's journey is more than a tale of farming; it is a story of empowerment, resilience, and leadership. By reviving traditional farming practices and integrating modern sustainable techniques, she has become a true woman farmer, ensuring nature's health and productivity



for generations to come. Her success has inspired a wave of change in her society, encouraging women and farmers alike to follow eco-friendly practices. With her dedication to preserving indigenous seeds and promoting community-based initiatives, Thankamani's journey continues to inspire.



**Kolagappara- A village in Meenangadi panchayath of wayanad district.*

**Ayiram kana, Govind bhog, Gandhasala, Jeerakasala- Indigenous rice varieties.*

**Puncha, - cropping seasons Dec-Jan to April-May,*

**Nancha- cropping seasons - May-June to Oct- Nov.*

**Krishi bhavan- Government body in India undertaken by Department of Agriculture, working at the panchayat level dealing with the formulation and implementation of various state government programmes to augment production of food and cash crops.*

**Jeevamrutham, Panchagavya- Organic manures prepared using cow dung.*

**Sundari cheera- Also called amaranthus pink beauty- plant with red stem and green leaf.*

**Anjila keedaviratti- Pest repellent prepared using cow urine and five different medicinal leaves.*

Radha's childhood passion is now her Therapy

by Neha Madhavan

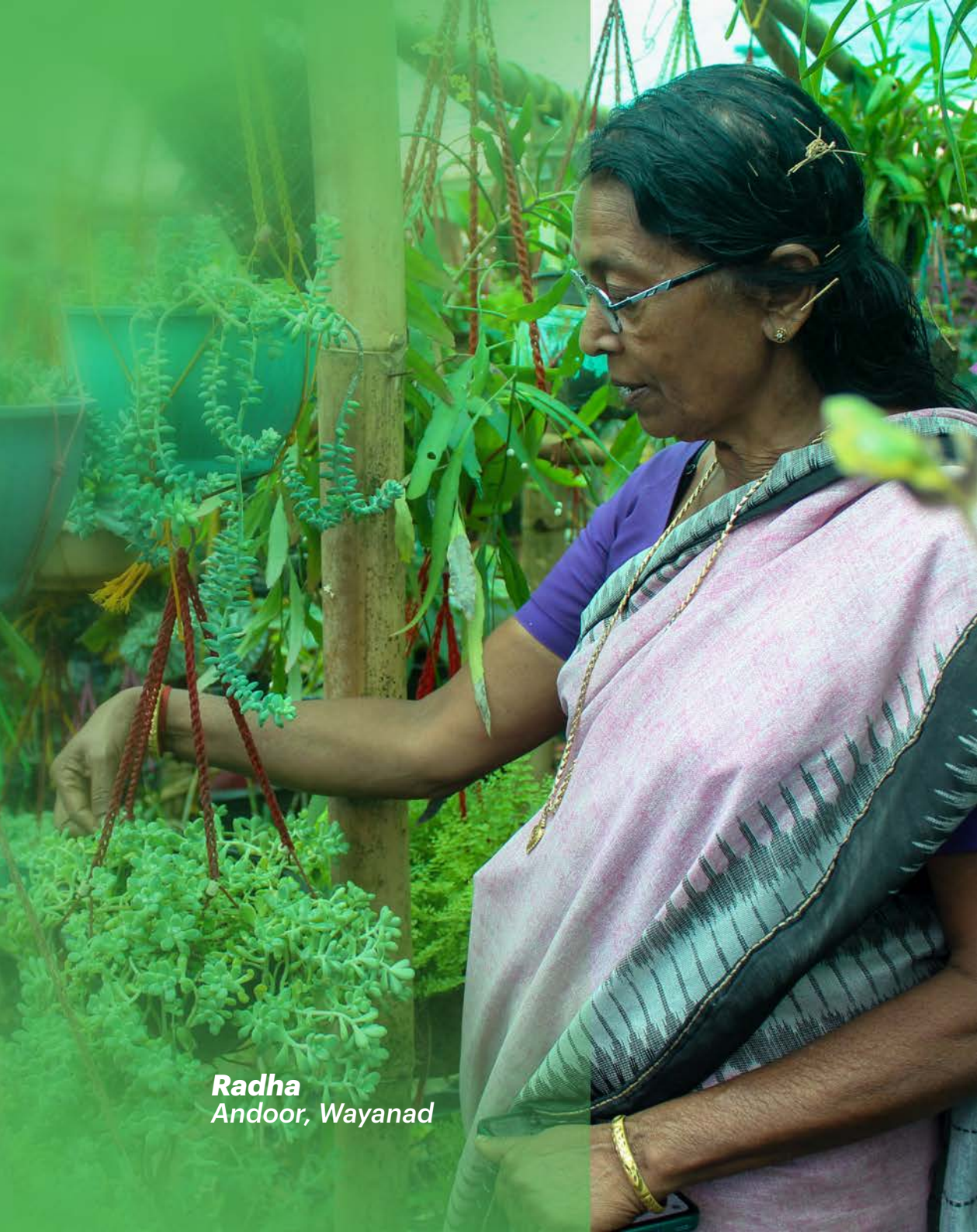
A 65-year-old woman named Radha lives in the peaceful town of Andoor in Wayanad, Kerala. Radha's love for plants began in her childhood. The aesthetic value of ornamental plants in her house motivated her to design a space filled with exotic decorative plants, which acts as a heaven and a kind of therapeutic environment for her.

Radha's farm has around 500 varieties of orchids and different exotic varieties like hoyas, bonsai, air plants, ferns, cactus, etc. She has also constructed a rain shelter to propagate her crops, primarily through leaves. "Every plant feels like my own child," she says, maintaining her farm with exceptional beauty and cleanliness.

Her farming practices are deeply rooted in sustainability. She uses coconut husk, vermicompost and bone meal to ensure the plants grow healthy and strong. Managing pests like snails has been a persistent issue, as there is no easy solution for the damage they cause to her Begonia crops. However, she uses salt to deter the snails and a chilly

"Plants don't speak, but they listen. Growing them gave me peace when I needed it the most,"

Radha
Andoor, Wayanad



extract and other organic methods to control other pest populations.

Radha's journey hasn't been without its trials. Years ago. "Growing plants gave me solace when I needed it the most," she says, smiling softly. The COVID-19 lockdown presented another challenge, bringing financial strain to her family. With the help of her daughter in law she turned her passion into an income source. She started her own venture with ornamental crops, initially focusing on Begonia species. Despite her limited knowledge of English and digital tools, Radha embraced online platforms like WhatsApp and Facebook with the help of her daughter in law, eventually managing her marketing independently. Her plants now reach customers across Kerala, Goa, Mangalore, Himachal Pradesh and even the Andaman and Nicobar Islands.

When passion becomes our sole priority age is just a number, even now she never denies a chance to learn new things and techniques -whether through visiting and observing nurseries, exchanging plants, or refining packaging,

Radha's love for her plants and contributions extend beyond her ornamental crops. She collaborates with women's self-help groups to cultivate five vegetables, including tomato, chili, and broccoli. She



supplies these organic vegetables to her community, earning Rs. 32,000 (\$375) while inspiring others to prioritize healthy, sustainable food production.

With the Panchayat's assistance, she takes part in exhibitions and activities, and her community respects her for her commitment. Given her age, the Panchayat is especially impressed by Radha's dedication to her land. She has a dream of starting a shop for ornamental crops, which soon she will achieve with her dedication and hard work. Through her story, Radha shows us how farming can heal, empower and build a sustainable future.

A rain shelter used by Radha to propagate her exotic plant varieties.





A Retired Officer Cultivating Biodiversity and Inspiration

by Neha Madhavan

Lovely Augustine, a retired agricultural officer who moved to Wayanad in 2007, dedicated her life to promoting sustainable agriculture. After serving as the Agricultural Secretary Director of Wayanad, she retired in 2019 but chose not to leave her passion for farming behind. Instead, she embraced it wholeheartedly, becoming one of the 20 farmers selected by the Biodiversity Board for their exemplary work in preserving biodiversity. Lovely's success is deeply rooted in the support and inspiration of her father, who was also an agricultural officer.

Her 60-cent farm is a place of innovation and sustainable farming practices. Lovely has transformed her land into a biodiversity heaven, cultivating over ten varieties of fruit trees, including mango, jackfruit, rambutan, mangosteen, passion fruit, bilimbi, and java apple. She also grows 10 different species of bamboo, coffee, black pepper, and a plot of seasonal vegetables, with 5,000 plants grown every year. The fishpond and a recreational area complement the landscape, while diverse livestock such as *Vechur* cows, goats, chickens, rabbits, and ornamental species like Persian cats, Abyssinian guinea fowls, guinea pigs, lovebirds, pigeons, and finches.

Lovely consistently experiments and demonstrates how to maximize yields even in limited spaces. Her recent experiments with cultivating turmeric, ginger, and tapioca in sacks have yielded remarkable results,

Lovely consistently experiments and demonstrates how to maximize yields even in limited spaces. Her recent experiments with cultivating turmeric, ginger, and tapioca in sacks have yielded remarkable results

Lovely Augustine
Wayanad

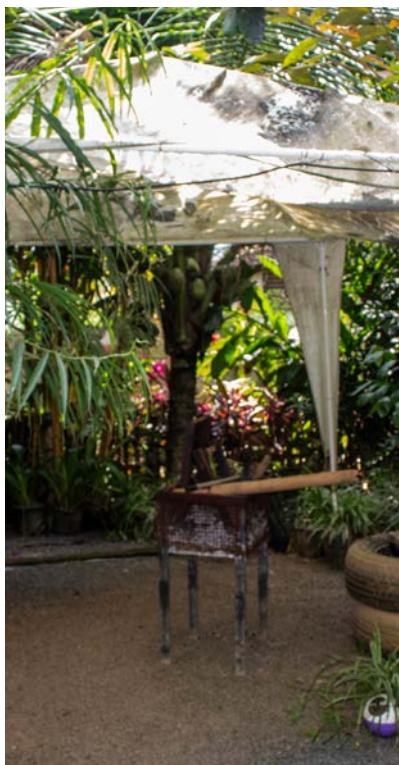
with tubers weighing 5-10 kilograms. *“Proper soil management is the secret to tubers weighing up to 10 kilograms. I believe using native cows’ dung is 10 times better than any other organic or chemical solution”* she explains.

Lovely’s organic farming practices are certified, ensuring that all her produce is healthy and eco-friendly. Her farm generates income through multiple streams, including coffee, black pepper, turmeric, and a range of pickles and spices. She also emphasizes value addition and direct marketing to connect with consumers.

Beyond farming, Lovely is deeply invested in educating others. She welcomes visitors to her farm, offering them the chance to learn, explore, and even taste the farm’s organic produce. The farm stay facilities provide a relaxing retreat for guests, complete with opportunities to experience Wayanad’s other attractions.

For Lovely, farming transcends income; it’s about creating beauty, sustainability, and health. Her vision is to inspire other farmers to adopt agri-tourism, *“Farm tourism is the future for Wayanad’s farmers,”* she asserts.

Lovely’s journey reflects her unwavering belief in the power of action. Her vision is simple yet profound: a biodiverse, sustainable future where farming is not just a livelihood but also therapy for the soul. Lovely Augustine’s farm is a dream realized and a model for others to follow, proving that agriculture can be both profitable and beautiful.



Lovely Augustine with her fresh harvest from the sweet corn fields.

Small Space, Big Impact: Beena Sanu's Terrace Farming

by Sreelakshmi M.S

Beena Sanu **Trivandrum**

Beena Sanu, a retired health department employee from Trivandrum, Kerala, is setting a remarkable example for individuals constrained by limited space. She is proving that farming is not about the size of your land but the strength of your will. On her modest terrace, Beena has built a thriving mushroom farm, demonstrating how passion and determination can transform any space into a green haven.

After retiring, Beena faced the inevitable boredom that many retirees encounter. Instead of succumbing to it, she sought a purpose to keep herself active and engaged. It was during this time that a mushroom farming video on television sparked her interest. Intrigued, she dived into research and enrolled in a training program conducted by Mushroom Farmers Welfare society, where she learned the fundamentals of mushroom cultivation. The organization not only taught her the techniques but also helped her set up a farm on her terrace. For Beena, this was a pivotal moment—a new chapter in her life had begun.

Using her retirement savings as capital, Beena invested



approximately 3.5 lakhs (\$4099) to establish the farm. Although she hasn't fully recouped her investment yet, she is on track to recover it within another year through consistent sales. Now, two years into her journey, she hasn't looked back. Mushroom farming has not only provided her with an additional source of income but also restored her sense of purpose and vitality.

Beena's journey wasn't without its hurdles. Initially, Beena used rice straw as the growing medium, but she encountered severe mold and fungus issues. Determined to improve, she switched to pellets, which are more effective but harder to source. These pellets had to be outsourced from Kannur, incurring additional costs. However, quality mattered more to Beena than expenses. She sterilizes the pellets by soaking 1 kg in 1.5 liters of hot water for 8 hours, ensuring an optimal growing environment.

Another challenge she faced was rat infestations, which caused significant damage to her mushroom beds. To counter this, she fortified her terrace farm with mesh structures and installed rat

traps. Watering the mushroom beds was another labor-intensive task until she introduced an automatic sprinkler system. This innovation not only saved time but also ensured optimal hydration and temperature maintenance for her crops.

Beena cultivates oyster mushrooms, a variety rich in nutrients and known for its health benefits. As a diabetic, she found that incorporating mushrooms into her daily diet helped stabilize her sugar levels. Climbing the stairs to tend to her farm also provides her with much-needed exercise, contributing to her overall physical and mental well-being.

Coming from an agricultural family, Beena always had a deep-rooted love for farming. However, limited space around her home had held her back for years. Undeterred, she transformed her terrace into a flourishing farm and filled every available corner of her sit-out with plants. Her passion for greenery is evident in every inch of her home.

Beena's success would not have been possible without the unwavering support of her family. Her daughter, a postgraduate student, assists her in managing the farm, while her family encouraged her from the very beginning. They wanted her to remain active and engaged, and mushroom farming has provided the perfect outlet.

Beena collects mother spawn from the Agricultural College in Vellayani and nurtures them on her terrace. Marketing her produce turned out to be relatively easy. Living near Thanal Organic Bazaar, a local shop

supporting farmers, Beena quickly found a steady customer base. Her commitment to quality has earned her mushrooms high demand in the market, turning her farm into a thriving business.

Now a veteran in mushroom farming, Beena dreams of making her farm even more advanced. Her future plans include installing air conditioning to maintain optimal humidity and temperature, which would eliminate the need for sprinklers and significantly boost production. With increased yields, she hopes to venture into value-added products like mushroom cutlets and fritters, expanding her business further.

Beena's story is not just about farming; it's about redefining possibilities. "It's not the space but the mindset that matters," she says, emphasizing that limited space should never be a barrier to pursuing one's dreams.

For Beena, mushroom farming has provided more than just financial returns—it has brought her purpose, physical well-being, and immense satisfaction. Her journey serves as an inspiration to retirees and others who believe that their circumstances limit them.

In a world where many retirees struggle to find direction, Beena Sanu has shown that with passion, resourcefulness, and determination, life after retirement can be as vibrant and fulfilling as we choose to make it.



From Terrace to Table

by Sreelakshmi K.J

This story is based on a woman, Vijaya Bhaskar and her thriving journey from a normal housewife, who had a passion for flowers like any other women, to an enduring creative organic farmer who had converted her terrace space into a magical space, which happened only because of her daughter's one question,

“

Mom! Why can't you start cultivating vegetables in this space? and the rest is history.

In the quiet village of Aruvikkara, Kerala, Vijaya Baskar has become a local hero for her dedication to farming. Her hard work and innovative methods have not only revived unused land but also inspired

others in the community to take up agriculture. Through her efforts, Vijaya is helping to bring sustainable farming practices to the forefront, making a real difference in how food can be grown even in terrace with limited utilities if you put your heart and mind to it. Her story is one of passion, resilience, and a deep connection to organic farming.

Her story starts about 10 years ago when Ms. Vijaya Bhaskar was very passionate in gardening and had been growing a lot of flowers. The turning point was when her daughter asked the simplest of questions which most

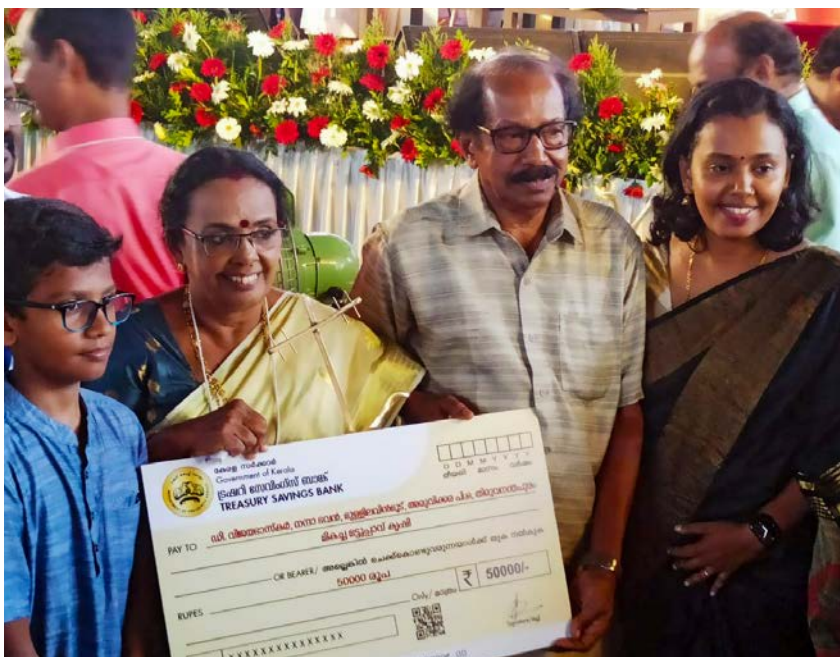
people tend to discard, “Why not start growing vegetable produce too?”

Kickstarting with just 6 saplings gifted by Mr. Ulloor Ravendran, now her produce is more than over 1500 pots with various varieties of vegetables. She quotes, “All this has been a success with major support from her retired husband, Mr. Bhaskaran Nair and her beloved daughter.”

Beyond her own success, Vijaya has made her terrace farm a hub for learning and inspiration. She conducts workshops and hands-on training sessions for students, farmers, and urban dwellers looking to start their own terrace farms. Her classes, hosted in schools, Krishi Bhavans, and through media channels, emphasize the importance of organic farming and sustainable practices.



Vijaya Bhaskar with her family on her Terrace Garden



Vijaya Bhaskar Receiving Best Farmer Award for Terrace Farming by Government of Kerala



Her farm is also open to visitors, who come to learn practical tips, from setting up pots to maintaining soil health and managing pests organically.

She is also a State Award Winner of 2022 and has been noticed with TATA Wiron Karshika Award, Sarojini Damodaran Award, and much more for her perseverance and hardwork. Still, her journey continues to inspire. As urban spaces grow denser and land for traditional farming shrinks, Vijaya's model offers a replicable solution for city dwellers. Her farm produces fresh, chemical-free food while fostering community connections and promoting environmental responsibility. Her story underscores the potential for urban areas to contribute to food security and climate resilience.



Sreelekha
Thiruvananthapuram

Women Uplifting Women

The Friendship that cultivated success

by Athira S Krishnan

Sreelekha's story involves a series of events that led her to Agriculture and is also a best example showcasing how women can uplift one another. After completing her schooling, Sreelekha made several attempts to secure a government job but was unsuccessful. Following her marriage, she put aside her aspirations to focus on her family, dedicating herself to her roles as a wife and mother to two daughters. Her elder daughter was pursuing a BSc in nursing, and Sreelekha was determined to find a way to support their education. As a homemaker, she often felt a great regret of not being able to earn for her family. During this challenging time, her best friend Prameela, a fellow farmer associated with Thanal Organic Bazaar, noticed her struggles. Recognizing her potential, Prameela encouraged Sreelekha to consider organic farming. Despite her love for farming, the lack of open land for large-scale cultivation initially held her back.

"When I was unsure about how to proceed, Prameela introduced me to the growing market demand for organic produce and marketing opportunities at Organic Bazaar. She visited me every day, urging me to start farming and promising to handle the rest," Sreelekha recalls. With this encouragement, she took her first steps into Organic Terrace farming in 2007, initially as a way to cope with her challenges. Over time, farming evolved from a necessity into her passion, helping her shift her focus away from emotional distractions and rediscover her strength.

Over time, she became a certified organic farmer and found herself becoming an integral part of the farming community. She became a regular seller (every Mondays and Fridays) of organic vegetables to the Thanal organic bazaar. In the initial phases, she even experimented into cultivating mushrooms, a pursuit she took up while her younger daughter pursued her studies. However, she had to discontinue mushroom cultivation due to the limitation of suitable space. She started by educating herself through books, friends, workshops, training and interactions with experts in agroecology. Gaining knowledge about agroecological practices was crucial for Sreelekha. She got many training classes from Santhigram (NGO, Trivandrum), Gandhibhavan

(Trivandrum), and Thanal trust (Trivandrum). Presently, she is cultivating a diverse range of crops in terrace including various types of chilly, brinjal, ivy gourd, cauliflower, amaranth, beans, bhindi, cabbage, and papaya, encompassing nearly every variety of vegetable. Sreelekha has achieved a self-sustaining system where she produces the majority of the vegetables needed for her household. Additionally, any surplus yield is supplied to the organic bazaar, contributing to the local organic produce market. All the necessary seeds and seedlings were sourced from both Krishi Bhavan and Thanal Mobile Organic Agrilclinic. In addition, she maintains a poultry farm comprising seven hens and two roosters. The feed for them includes wheat, rice bran, green leaves etc. Her chosen organic manures include neem cake, neem oil, bone meal, composts, coir pith, fish amino acid, egg amino acid and farmyard manure, all of which play a pivotal role in nourishing her crops. For her potting medium, she utilizes dry leaf compost made at home, which serves as an excellent source of manure. Dried leaves collected from the courtyard are stored in sacks on the terrace, where they gradually decompose into a fine powder. Being lightweight, this compost makes it convenient to fill grow bags on the terrace, effectively addressing the challenge of transporting bulky manures upstairs.

Sreelekha's drive from being a homemaker to emerging as a dedicated agroecological women farmer has led her to explore life to the fullest. She has reached a point where she experiences utmost contentment, as she is self-reliant and mentally gratified. This story is a powerful example





of women empowering women—showing how an empowered woman can help another overcome barriers and achieve greatness. Prameela's contribution is a reminder of the strength of community and mentorship, and Sreelekha's success shows the transformative power of encouragement, determination, and shared vision. Together, they highlight the great impact women can have when they uplift one another toward a brighter, more sustainable future. Despite the limitations of a large farming area, Sreelekha achieved success and profitability in agriculture, enabling her to provide financial support to her family. In an era of urbanization and land fragmentation, terrace farming models like this can be adopted for those having limited space for farming and reaching the goal of a sustainable food system in our country.

Sreelekha inspecting and managing her terrace farming





Thanal, OD-3, Jawahar Nagar, Kowdiar P.O,
Thiruvananthapuram - 695 003
Phone: 0471 2727150 | www.thanaltrust.org

   [thanal_trust](#)  [thanal outreach](#)



Subscribe to PANAP
www.panap.net



[@panasiapacific](#)



[@justpesticidefreeasia](#)