

better cotton™

TOWARDS A SUSTAINABLE JOURNEY

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COTTON GROWERS ARE UNDER THIS PROJECT.

511

PROJECT VILLAGES COVERED IN DHULE AND NANDURBAR REGIONS OF MAHARASHTRA

17100

FARM LABOURERS POSITIVELY IMPACTED



The Cotton Stories of Change

TOWARDS A SUSTAINABLE JOURNEY

Cotton is deeply woven into our everyday lives, from the clothes we wear to the comfort of our homes. However, traditional cotton farming practices come with significant environmental costs. These practices are not only depleting the soil and relying heavily on harmful pesticides, but they also demand unsustainable amounts of water. This overuse of water impacts both the environment and the communities who depend on those resources for their survival. Furthermore, these challenges contribute to the marginalization of small-scale farmers, who often lack the means to adapt to the changing conditions and bear the brunt of environmental strain.

Observing these pressing issues, Lupin Human Welfare & Research Foundation (LHWRF) in partnership with Better Cotton Initiative (BCI) has been working to address the environmental, social, and economic aspects of cotton farming in Dhule and Nandurbar regions of Maharashtra. Through the partnership, LHWRF actively supports farmers in adopting sustainable practices that are not only environmentally responsible but also economically beneficial. These sustainable cultivation techniques help enhance soil health and water conservation, while increasing yields by reducing input costs, a crucial aspect for farmers' livelihoods.

LHWRF has played a crucial role in implementing the Better Cotton project in the districts of Dhule and Nandurbar in Maharashtra. Since 2017, this initiative has reached over 95,000 farmers in 511 villages, guiding them on a path toward sustainable farming. This booklet highlights the inspiring stories of farmers from these districts who have embraced Better Cotton practices over the years resulting in reduced agricultural input costs, improved soil health, and enhanced livelihoods.



While the BCI framework remains the guiding force, LHWRF has brought a regional focus, especially in areas like soil health, crop diversification, and promoting organic fertilizers. These efforts not only preserve soil quality but ensure long-term agricultural productivity and environmental sustainability. LHWRF has also emphasized the importance of managing agricultural waste, including both degradable and non-degradable materials. By promoting vermicomposting, this helps farmers convert waste into nutrient-rich fertilizer, addressing pollution and improving soil health.

Beyond environmental benefits, LHWRF-driven BCI project aims to tackle social inequalities. It supports farmers by offering alternative livelihood opportunities, such as poultry farming and goat rearing, enabling them to diversify their income streams. LHWRF has also been instrumental in promoting gender equality within farming communities. Through Women Learning Group (WLG) meetings, LHWRF empowers women by promoting leadership, encouraging active participation in decision-making processes, and creating a more inclusive farming environment.

The broader vision of both LHWRF and BCI is to transform the lives of cotton farmers by promoting regenerative farming practices, providing alternative income opportunities, and ensuring inclusive working conditions. As this project grows, with a goal of doubling "Better Cotton" production by 2030, LHWRF remains committed to driving measurable improvements in environmental sustainability and enhancing the welfare of farming communities. Together with BCI, LHWRF is making cotton farming better for both the planet and the people who depend on it, ensuring that future generations benefit from this vital agricultural resource. With LHWRF leading the efforts in India, it is not only shaping sustainable farming practices but also creating lasting social and economic change in cotton-growing regions.



Cattle of Hope

THE BHIL FAMILY'S NEW BEGINNING

On a busy Tuesday morning, we reached Sadgaon, in Dhule. The roads were narrow, with houses on both the sides, elderly men dressed in traditional white sat in groups and chatted along with each other. Most of the farmers had already left for their fields, eager to start their day early. As we parked our vehicle along one of the main roads, we were met with warm smiles and curious glances, eager to learn the reason for our visit. Familiar faces among the villagers lit up with joy at the sight of the LHWRF staff members, creating an instant sense of connection and community.





As we made our way inside one of the narrow by lanes, an elderly couple were eagerly waiting to meet us. The Bhil family of 6 members lived close knit to each other. We exchanged warm smiles and quickly realized they spoke in a distinct Bhili dialect. Despite the language barrier, 61-year-old Raisingh and his 52-year-old wife tried their best to converse with us.

As we settled onto the khat beside the couple, they excitedly recounted how they had received four goats by contributing just Rs. 6,000 in 2023. Incredibly, within a year, their herd had multiplied. Raisingh, brimming with enthusiasm, explained, “We were given three female goats and one male, specifically to help us rear them and boost our side income.” He went on to share that two of the goats were already pregnant, poised to deliver soon. This marked the beginning of their goat rearing venture.



As a smallholder farmer, relying solely on agriculture had become a daunting task. In most of the months, the entire family worked as farm laborers, and sometimes their sons migrated to Gujarat to fetch work. In such situations, a livelihood that supports their daily bread and butter has become the need of the hour.

Raisingh continued,

We often found ourselves taking loans from moneylenders, whether it was urgently needed for farm work or to support our families. In many ways, turning to them was our only option. There were times when we couldn't repay the loans on time, which led us to borrow from others just to settle our debts, only increasing our financial burdens. However, I must confess that in the past year, our borrowing has significantly decreased. This relief feels like a huge weight lifted off our shoulders."





He smiled, his eyes lighting up as he added, “Now, I dedicate most of my time to raising goats. I take them out to graze, often venturing beyond our village, which keeps me busy and content. I also take along other goats from our village and charge a small fee for grazing them, which supplements our income.

Moreover, during our goat rearing training, we learned valuable techniques for taking care of our goats. At that moment, the farmer field officer chimed in, highlighting the government’s support for our efforts, who organized for medication to be given to all goats as they arrived in Dhule from Rajasthan.”

The project has been supporting small sector farmers with alternative livelihood options, like goat rearing, poultry. The farmers selected for these activities are often the ones who would not be able to purchase cattle on their own. Through this initiative, to empower these individuals and enhance their financial stability.

For many in Adivasi communities like the Bhil's, owning farm animals for the first time has been a beacon of hope, offering a chance to break free from traditional occupational boundaries often dictated by socio-economic status. Purchasing a goat symbolizes a significant step toward social security. Goat rearing not only provides a source of livelihood but also empowers individuals to redefine their futures and embrace new opportunities.



Sowing Change

THE IMPACT OF WATER BUDGETING IN SADGAON

Imagine, a meeting taking place, where all villagers are sitting together to map the present water sources in their village. What do you think the outcome of such a meeting could be?

Involving the community in their own development, leads to them taking ownership & accountability. Something similar happens in Sadgaon, when farmers meet for a similar meeting, called the water budgeting meeting. Villagers leave the meeting not just with a map, but with a renewed commitment to safeguarding their water sources.





Shantaram Keshav Patil and Nandulal Sahebrao Wagh, both in their early forties, were a part of this meeting. They focused on mapping the nearest water source: a check dam constructed by the Zila Parishad in 2016. Upon prolonged neglect, the check dam had fallen into disrepair and was no longer functional. Additionally, the catchment area surrounding the dam lacked the depth and width necessary to effectively hold rainwater, further exacerbating the water scarcity issue in their community.

We sat on the rocky terrain in Sadgaon, adjacent to the check dam, with green fields outstretched as far as the eyes can see. Shantaram and Nandulal reflected on how drastically things had changed in a single year. The lack of rainfall had severely impacted their harvests last year. The only source of hope pertained from the water collected in the catchment area of the check dam that was repaired by LHWRF, which provided enough for villagers to bring their cattle to drink.

The water budgeting process focuses on empowering the local farming community to take charge of their water resources and agricultural practices. Through participatory meetings, such as the water budgeting session, villagers are actively engaged in mapping and assessing their water sources, fostering a sense of ownership and accountability.

This year, however, the tables have turned for the better. A promising monsoon has brought abundant rainfall, revitalizing the landscape and bringing prosperity to the farmers who live near the check dam. Now, we have roughly 700 cubic meters of water stored in reserve from rainwater collected over time.



He further adds,

On 4.9 acres of land that I own, I have planted drumsticks on 2 acres for the very first time, alongside cotton and bajra on the rest. I can hardly believe that I changed my cropping pattern after all these years. At different stages of our crops' growth, we receive training that helps us make informed choices. It was here that I discovered the benefits of altering my cropping pattern to achieve better yields, especially in the light of changing climatic conditions. Plus, drumsticks aren't water-intensive, so even in times of water scarcity, they manage to thrive.



Nandulal chimed in, sharing how adopting new techniques for his cotton crop has significantly improved his yield as well. He appreciated the support from the on-ground staff team, who frequently visit his farm, helping him and other farmers in the village adopt better farming practices. Their shared experiences reflect a vibrant community on the path to sustainable farming and water management, united in their efforts to thrive amid changing conditions. Moreover, the revival of the check dam, coupled with climate resilient farming techniques, has not only improved their yields but also rekindled hope for a better future within the village.

Sowing Resilience

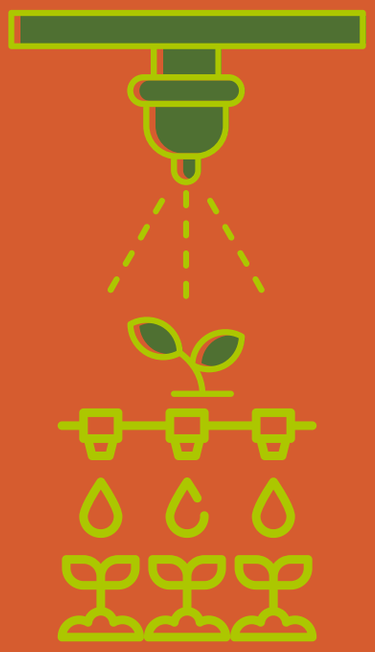
SANGEETA'S JOURNEY IN DEUR VILLAGE

We were on our way towards meeting farmers at Duer, in Dhule village when we spotted a woman wearing a white scarf, busy picking something from the farmland. As we drew closer, we met the same lady, who introduced herself as Sangeeta, while she was carefully harvesting lentils from her field. She also showed us her basket, filled with lentils she had harvested that afternoon.



We introduced ourselves and gradually started chatting about her farm. Her first statement left all of us surprised when she shared, “I single handedly manage all the activities on our farmland, which is of 3 acres. My husband is handicapped so he is unable to contribute towards farm work. Only during months when I require additional help, I hire farm laborers.”





She went on to explain that she recently received a drip irrigation system, which she believes will significantly improve her farming practices. Chetna, the farmer field officer, chimed in, "With the drip system, the field will now receive water uniformly, which would promote healthier plant growth. This method reduces the need for weeding, ultimately saving costs associated with hiring laborers for that task. Additionally, the right proportion of fertilizer can be applied through the drip system, ensuring that the crops receive the necessary nutrients at the right time."



We noticed yellow, square-shaped patches scattered across her farmland. Curious, we inquired about them, and Sangeeta explained, "Those are sticky traps. They attract pests and help protect the crops from infection. It's such a simple tool; we learned about it during a farmer field session, and the LHWRF team provided them."

She continued, "My farm is bordered by pigeon pea crop. If there's a pest attack on the adjoining farm, it can spread quickly. However, the pigeon pea acts as a barrier, helping to protect my cotton and maize from potential infestations." Sangeeta was enthusiastic about her decision to intercrop lentils with cotton, eager to share how it has enhanced her yield.

The knowledge I have gained through the training has been incredibly useful. I love experimenting with new techniques on my farm. Most of the remedies suggested are cost-effective, which means they don't add an extra financial burden. Additionally, receiving assistance to purchase the drip irrigation system was a major relief for me."



The project has been facilitating the support of drip and other farm allied activities at subsidized rates, ensuring that farmers are not burdened financially. Since they pay a quarter share for the same, it ensures more ownership towards the farm-allied input received.

Avinash Borse, the PU Manager, added, "We focus on smallholder farmers with upto 5 acres of land, and follow specific guidelines to carry out our intervention activities. This approach helps maintain equality and ensures transparency in the process."

Sangeeta's aspirations reach far beyond farming; she is focused on creating a brighter future for her son, who is currently enrolled in a school in Nashik. Her unwavering commitment & hard work in the fields showcases her will to leave no stone unturned in securing a quality education for him. Her simplicity throughout our conversation left a lasting impression on us. Despite her husband's challenges, Sangeeta remains steadfast in her positive outlook and determination to move forward.

From Degraded lands to Horticulture Dreams

JOURNEY OF THE DEORE FAMILY

In Pimparkheda village, Dhule, we were greeted by vibrant wall paintings outside the government school, conveying powerful messages about child labor. As we continued our journey, the narrow road, flanked by thorny plants, only allowed for two-wheeler movement. Some of us opted to walk while others hopped on the bikes that the field staff members had.



Heavy rainfall had transformed the path leading to the farm into a shallow pond, forcing us to wade through the water with our pants rolled up to our knees. After crossing the muddy patch, we ventured through towering maize plantations that reached five feet high.

After a good 15 minutes of walking, we finally arrived at Deore's farm. There, we witnessed a family diligently de-weeding and working under the scorching sun. Upon introducing ourselves and getting acquainted with Sanjay Sahebrao Deore, a 44-year-old farmer, we learnt that both of his parents accompanied him every day to carry out farm and allied work.



Timely training and the availability of field officers and on-ground staff enable farmers to make informed decisions and gain essential knowledge about their crops. This support allows them to act promptly and implement best practices effectively on their farms.

Sanjay proudly shared,



By using these techniques, we have increased our farm yield by at least 30%. Learning to create vermicompost and applying it to our fields has been transformational. We also make organic fertilizers on our farm now, which was taught to us in the farmer field school.

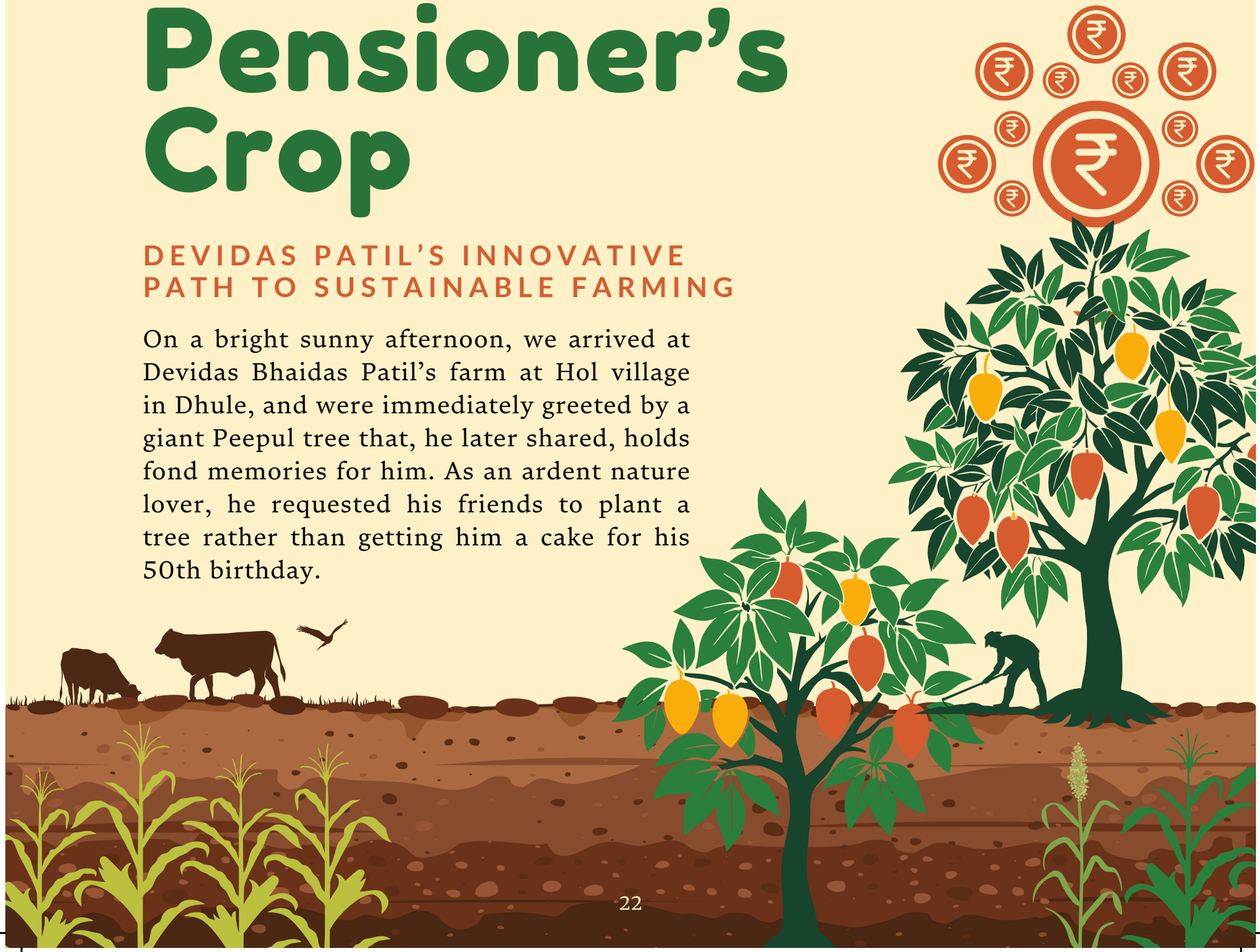
His father, Sahebrao, further added, "The area you saw us de-weeding was once deemed uncultivable. For years, we didn't plant anything here. However, just last year, it was the first time we planted 50 guava saplings and lentils as an intercrop. The only manure we are using is vermicompost. This wouldn't have been possible without the guidance of our field officers. Our trust on these field officers is immense, not only do they provide timely guidance but provide cost effective solutions. More than that, they have become like family to us."

The Deore family's farming transformation is not just about increased yields; it symbolizes a broader movement toward sustainable agriculture that empowers farmers and enriches their lives. With renewed hope and strengthened knowledge, they are paving the way for a more prosperous future for themselves and their village.

The Pensioner's Crop

DEVIDAS PATIL'S INNOVATIVE PATH TO SUSTAINABLE FARMING

On a bright sunny afternoon, we arrived at Devidas Bhaidas Patil's farm at Hol village in Dhule, and were immediately greeted by a giant Peepul tree that, he later shared, holds fond memories for him. As an ardent nature lover, he requested his friends to plant a tree rather than getting him a cake for his 50th birthday.



By 5 am every morning, he is already at work, tending to his cherished cattle that involve buffaloes, a pair of bulls, a cow and two playful calves. With meticulous care, he milks them patiently, collecting a generous 10 to 15 liters of fresh milk daily. Rearing chicken provides him with 10 -15 eggs every day, adding to his income.





This year, Devidas has introduced what he calls the “pensioners crop” on his 4-acre plot, which typically grows cotton and maize. His fields now feature vibrant custard apple seedlings, exotic ramphals, and juicy mangoes, intercropped with his cotton plants. “These fruit trees, once established, require much less ongoing care,” Devidas explains. “As I age and physical labor becomes more challenging, this strategy ensures my farm remains productive and profitable—a built-in pension plan.”



From the past 5-7 years, I am moving towards adopting organic farming and have made significant progress towards it too. I also use organic formulations like nimboliark *and* dashparni *ark to spray on the crops.*

In one of the trainings organized by LHWRF, we were told how to distinguish between the pests that attack our crops and the different types of pesticides to use for them. Most importantly, I learned that not all pests are harmful; some actually benefit the crop. If we apply a highly chemical-based fertilizer indiscriminately, it can harm these helpful insects, ultimately affecting the crop's health.

He shared his initial concerns regarding possible pest infestations when the LHWRF team recommended using an organic fertilizer instead of the usual chemical options he had been using so far. However, applying the organic fertilizer turned out to be highly effective in managing the pest attack, providing much-needed relief and assurance. Intrigued, Devidas went to a government shop where they sell farm allied inputs, and upon enquiry, this fertilizer was not available. The PU Manager then interrupted saying, "The margin of profit received on these fertilizers is comparatively less than the heavy chemical fertilizers sold by these shops, therefore they are not promoting these at all, which is a sad reality." He concludes, "I intend to plant amla trees in the near future too, the fruit has diverse benefits and can be processed into various food items as well."

This initiative by LHWRF also facilitates knowledge transfer through timely training at various stages of crop growth, providing guidance on measures that are both effective and cost-efficient, thereby ensuring they do not harm the environment.

Adoption of a holistic approach has allowed Devidas to plan thoughtfully for his future. By integrating progressive farming techniques and maintaining additional sources of income, he ensures that he isn't financially strained, even if market prices fluctuate. His commitment to innovation and his willingness to share his knowledge with the community reflect a deep passion for sustainable farming.



From Retiree to Organic Advocate

VINAYAK DEWARE'S GREEN REVOLUTION

It was almost mid-afternoon; the sun beat us down immediately as we stepped out of our vehicle to visit another farmer's field. We were greeted by a stunning panorama of lush maize fields stretching out in every direction. The air was crisp, filled with the earthy aroma of fertile soil and the promise of harvest. Following a winding, narrow motorable road occupied by some chickens on the way, our anticipation grew with each step.



Our destination? The vibrant farm of a 71-year-old Vinayak Kautik Deware, a true enthusiast of organic farming. His passion for cultivating crops without chemicals radiated from his eagerness to explain the work he has done. He greeted us with pleasure and patiently showed us all the containers in which he prepared organic fertilizers.





Vinayak shared, “To make the dashparni ark, we use leaves of the plants that are not consumed by cattle, since they mostly tend to be bitter. These leaves are easily found in our villages and it proves to be extremely effective for pest attacks.” After demonstrating its use, he went on to narrate the benefits of another fertilizer made by him called the Nimbuli ark. It was interesting to see how he had learnt to make some fertilizers on his own post-retirement, often relying on books, YouTube or by meeting farmers who were organic farming enthusiasts. There were around 5 to 6 different fertilizers prepared, stored in huge containers to be used for this farmland.

With a twinkle in his eye, Vinayak proudly shares, “It has been 10 years since I made the rigorous shift from chemical-intensive farming to embracing organic practices.” His journey was driven by firsthand observations of the transformative benefits: not only had his yields increased, but his crops also flourished, displaying resilience against pests. “What’s even better,” he adds, “is the low cost of preparing these organic fertilizers.” He emphasizes the hidden treasure that lies in the weeds often discarded by farmers.



“These weeds are gold! Instead of throwing them away, we should cut them and mulch them back into the fields. This practice not only eliminates costs but also enriches the soil with vital nutrients.”

The project focuses on empowering farmers by teaching them how to prepare micronutrients through hands-on demonstrations. By identifying passionate villagers like Vinayak, who have embraced organic practices, the initiative fosters a supportive environment for learning and adoption. These local champions not only share their expertise but also inspire their peers to incorporate sustainable methods into their farming. This approach ensures that the transition to organic farming is both accessible and practical, helping the community reap the benefits of healthier crops and improved soil fertility.



The LHWRF team rented out an office space in a building owned by Vinayak, due to which he would meet them regularly and learn about the activities. It was during these meetings, which widened his knowledge and fueled his passion of preparing organic fertilizers.

Now, as a retired Personal Assistant to the Principal of the government school, Vinayak Kautik Deware has seamlessly transitioned from his professional life to becoming a community cornerstone in his village.

Each evening, he gathers with fellow elders and passionate farmers, fostering companionship and sharing knowledge. Vinayak generously offers his homemade organic fertilizers, eager for his neighbors to experience the benefits firsthand. His aim is simple yet profound: to empower farmers to make informed choices about their farming practices.

United in Growth

THE JOURNEY FROM LABOR TO ABUNDANCE

In the remote Adivasi village of Kurkhali in Dhule, three friends—Sitaram, Gambhir, and Yuvraj—held a small piece of land granted by the government. These men who have had pretty humble beginnings and limited resources, the patches of land symbolize a rare chance at stability. Yet, without water, the dream of year-round farming seemed impossible. Their hopes rested solely on the monsoon rains, allowing just four months of cotton cultivation. For the remaining eight months, they labored wherever they could find work, often journeying to nearby villages to support their families.





One rainy afternoon, as we crossed their farmland bordered by rolling hills, newly laid pipelines caught our attention. Curious, we asked, "Was your land as fertile in the past as it is now?" Gambhir Soma Bhil's face brightened as he recounted their journey. Over time, they had leveled the land, and with the support of a shared borewell, they could finally irrigate it round the year. His pride was evident as he described how their collaborative approach to water access transformed not only their livelihoods but also their community's resilience.

In 2020- 2021, the on-ground team of Lupin Human Welfare and Research Foundation (LHWRF) had suggested to them that they would help in digging the borewell and the three of them could share the water. The PU Manager of the area pitched in to share, "As the cost of constructing one borewell is high, we thought of providing a group of farmers with a single borewell, whose water they could share."

Sitaram Phula Bhil, a farmer from this group acknowledged saying that they have allocated different days from the week respectively, on which they take turns to pump water from the borewell.

Upon being asked of the impact of the intervention, Gambhir Bhil was thrilled to inform that they currently earned at least triple the amount of their previous income.

“With consistent water supply from the borewell, we can cultivate multiple crops throughout the year instead of only relying on a single cotton harvest," he explains.

"This shift has enabled us to diversify into vegetables and grains, which not only fetch better prices in the local market but also provide a steady stream of income across the seasons. We no longer have to worry about finding work either, as our farms now provide all we need.”



Yuvraj Kashinath Koli, the youngest member of this group adds that they have been able to quit working as farm laborers altogether. Earlier, we were compelled to travel to other villages in search of work, which is no longer the case since most of their family members also contribute to the farm duties.

An LHWRF field representative explained that a thorough survey of the villages was done to identify villagers who did not have any existing water resource of their own. Barring these three, around 30 such farmers in the same region have been supported with the construction of 10 other borewells. The nearby Tapi River plays a crucial role in maintaining the groundwater table, further reassuring the farmers

“Its presence is a lifeline for our crops,” Gambhir adds.

Through their journey, it was clear that Sitaram, Gambhir, and Yuvraj had transformed their lives. With reliable water access, they turned dreams into reality, forging a brighter future for themselves and their families. Their experience demonstrated how collaboration and shared resources can uplift an entire community, fostering resilience and hope.



Empowering Women Farmers

A JOURNEY TOWARDS SUSTAINABLE AGRICULTURE

Dhamnar is another village located in Dhule district, Maharashtra, with a population of 4,861 as per the 2011 Census, half of which are women (2,326). Upon arriving in Dhamnar, we observed a training session taking place where a group of women had gathered at one of the village homes to participate. Some of them expressed how these meetings have become foundational for building community and fostering dialogue among themselves. They eagerly anticipate each session, excited to learn something new. The presence of women in these roles symbolizes a break from traditional societal norms, inspiring others to embrace financial independence and empowerment.



The project engages women to make informed choices about their crops and farming patterns through the training. Women farmers participate in dedicated training sessions led by female farmer field officers. These gatherings create a safe and supportive space for women to exchange knowledge about crop care, throughout the different stages of the crop growth.

Jayashree Kishor Patil, a 46-year-old farmer from Dhamnar, shares her transformative journey:

We used to rely heavily on chemical fertilizers for our farm, but over the past three years, my dependence on them has drastically decreased. This shift was made possible by the training I received on making organic fertilizers. As soon as I learned how to prepare them, I started using them on my farm, and I've noticed a significant improvement in yield. Not only that, but I've also saved a substantial amount of money that I previously spent on chemical fertilizers.





Jayashree also mentioned, “I used to plant two seedlings together, but I learned the importance of planting just one. This change has not only reduced my seed costs but also positively impacted my harvest.” She diligently follows the advice from her training, using techniques like sticky traps to protect her crops from infestations.

This year, Jayashree embarked on a new journey into horticulture, planting 30 mango and 20 guava trees on one acre of land. LHWRF supported her by helping with land preparation, providing a drip irrigation system, and supplying 50 fruit saplings. She contributed a portion of the costs to access these benefits.

The project has introduced horticulture and made available different fruit saplings and allied farm material easily available to farmers at subsidized rates.

On a personal note, Jayashree is a true warrior. Beneath her cheerful demeanor lies a dedication to hard work and resilience in the face of challenges. After losing her husband when her children were just in class 5 or 6, she took on the responsibility of transforming her farming practices to support her family.

Bhagyyashree Shinde, a farmer field officer who was steering this meeting shares, “We club 40 women farmers together in each group and impart various trainings, these take place at different intervals: the first is during the sowing season for cotton, after which, the focus shifted to educating farmers on creating organic fertilizers and providing guidance on the correct application and dosage of various fertilizers.”



“We also teach them on how to reduce their dependence on chemical fertilizers, followed by a training while the crop reaches its harvest stage, like what practices can be adopted to pluck the cotton, its storage and how to sell and get a fair price for their crop.”



She further adds, “We recognize that many villagers also work as farm laborers, so we prioritize their safety by raising awareness about self-care practices, particularly during fertilizer application. We provide them with Personal Protective Equipment (PPE) kits at subsidized rates, trying to ensure that everyone can access the necessary gear to protect themselves while working in the fields.”

Other activities in these women’s training sessions include raising awareness about important social issues such as child labor, children’s rights, etc. aiming to educate and empower women to address these challenges within their communities.

As Bhagyashree mentions, “To further amplify our message, we have organized rallies in schools, where students march through their village, chanting slogans, urging people to recognize and take action against any instances of child labour. Since farming is often a family effort, we empower women to actively participate in decision-making regarding farm-related activities, emphasizing the importance of collaboration between genders in adopting informed and sustainable farming practices."

A key observation made by the on-ground staff implied that women are actively making organic fertilizers on their farms after learning the techniques in training sessions. They play a crucial role in persuading their families to adopt these practices. By doing so, they not only improve the soil health of their farms but also increase yields and reduce dependence on costly chemical inputs, thus highlighting the positive domino effects that have taken place simply by engaging and empowering women through skill-building activities and learning sessions in a local, accessible setting.



A New Crop of Opportunities

BIJADEVI'S AGRICULTURAL REVIVAL

Once reliant on traditional crops and struggling with inconsistent water supplies, the villagers of Bijadevi in Nandurbar, are now embracing new opportunities. Through improved irrigation and water storage solutions, they are diversifying their crops and boosting their incomes, turning their lands into productive assets throughout the year.



As we stepped out of our vehicle in Bijadevi, the scene was serene: lush green farmlands stretched out on either side of the road, water flowed beneath the constructed concrete road, and the gentle rain added a touch of enchantment. It seems like a nice picnic spot, for a city dweller, right? However, the flowing water and the fields seen here represented something quite different for the villagers.



The BCI project is dedicated to advancing sustainable agriculture by providing comprehensive support to farmers. A key aspect of this initiative involves repairing check dams, which enables the efficient storage of rainwater rather than allowing it to flow away. This not only conserves valuable water resources but also enhances agricultural productivity by ensuring a reliable water supply throughout the year.

We continued walking on the road, and to our amazement we came across a chilli farm. A young couple, Pratibha and Vishal Gamit in their early twenties spend their time working on the chilli farm along with their parents. The farm spread across 2.5 acres of land, had drip irrigation facilities installed and ripe green chillies were being picked by around 20 farm laborers.

Vishal Gamit shares

The rains have been abundant this year, which encouraged us to diversify our cropping pattern. Until last year, we were growing cotton mainly in the kharif season. But when we noticed that vegetables can fetch us a better income and can harvest the crop at least 5 to 6 times, we decided to experiment with chilli this year."

Pratibha adds, "However, having access to water throughout the year was a major challenge. Although we have a check dam constructed, adjacent to our farmland, it was extremely difficult for it to store water. Upon recognising this issue, all the farmers residing along the dam raised their concern with the LHWRF team, who then helped in repairing it."



While we were conversing with the Gamit family, a crowd of interested farmers gathered around us. Jugnu Desai, a 42 year old farmer, happened to tell us his story.



He narrated that he is now farming soybean in the monsoons on a portion of his 6 acres of land along with cotton. He explained that he has also embraced the idea of crop diversification. He also mentioned that his aged father had an additional 7 acres of land, on which his entire family of 7 members work tirelessly. In the summer months, his family decided to harvest green gram for the first time too.

For both the Desai and Gamit families, experimenting with vegetables and lentils is a new venture aimed at increasing their income. This shift was made possible by the repaired water storage systems, which allow for year-round farming. Previously, the land would remain unused until the rabi season after cotton was harvested in the monsoons. Thanks to improved water management facilities, these families can not only diversify their crops now but also look forward to maintaining a steady income throughout the year.

From Fortified Fields to Flourishing Futures

THE VALVI FAMILY'S JOURNEY OF RESILIENCE AND RENEWAL

The clock strikes 7 in the morning when Raju and Meena Valvi set out on their daily journey to their farmland from village Dokare in Nandurbar, Maharashtra. But this is no simple route. Reaching their farm, particularly during the monsoons, is a formidable challenge. After descending from the nearest *pakka* road, they follow a narrow path alongside a stream, navigating through mushy patches that threaten to pull them down with every step. They then tackle a rocky terrain, where water flows over the uneven stones, adding to the treacherous nature of their route. Their journey culminates in a small uphill climb that leads to their unique farmland, nestled partially within the walls of an old fort. Yes, you read that correctly—a fort! Raju's forefathers practised agriculture on the same patch of land, which was then passed down to his family.



We experienced their journey firsthand while making our way to their farm. From navigating the dense, overgrown grass to slogging through the slippery mud while it was raining, we felt the full brunt of their daily ordeal. We faced these challenges for just one day while Raju and Meena endure this journey every single day, often carrying the farm produce with them, on their way back home.

On what would have been the courtyard of the fort, a patch of 2.5 acres of land, Raju and Meena have planted cotton, bitter gourd and brinjal. They had no source of water of their own, and relied severely on the water from the stream for farming. An additional agricultural input tool of drip irrigation has eased their efforts of providing sufficient water and fertilizers to their crops.

LHWRF has been actively promoting sustainable agricultural practices along with providing drip irrigation sets, seeds and other farm allied tools at subsidized rates, covering 80 % of the costs, that has made it easier for several farmers like Raju and Meena, having less than 5 acres of land, to avail its benefit.

Raju proudly shares,

Planting Brinjal for the very first time has been a great success. We planted it a month before the monsoons arrived this year. Within a month, we could harvest the first batch of the crop. Now, after every 8-15 days, we have repeatedly been able to harvest the crop. We also brought brinjal saplings from a nursery recommended by the farmer field officer. This approach allows us to plant the vegetables in staggered batches, ensuring a continuous harvest as well. Many of our neighbors visit our farm and have expressed interest in changing their cropping pattern as well.



Meena adds, “I am extremely happy that we can afford to fund our daughters' education now. The brinjal harvest looks promising and we are glad to have taken the leap of planting it. Moreover, brinjal is relished in several festivities in our village, so we have a ready market for them available right where we live, besides the local bazaar!”

A financially successful harvest not only brings prosperity to the farmer but also ignites the dreams and ambitions of their family. Last year, the Valvi family faced disappointment with a poor harvest that dashed their hopes of sending their daughter to nursing college. However, this year’s bountiful yield has reversed their fortunes, and they are now excited and optimistic about supporting their daughter’s educational aspirations and helping her achieve her dreams.

The Valvi family’s journey from daily hardships to a thriving harvest reflects their resilience and underscores the value of timely guidance and support. Their daughter’s dreams are now within their reach and with the possibility of a secure future ahead, they stand as a powerful example of how persistence and assistance can transform even the toughest challenges into promising opportunities.

The Impact of a Demo Plot

APEKSHA'S FARMING TRANSFORMATION

Set against the backdrop of somber hilltops and muddy roads, Apeksha's farmland of 3 acres unfolded before us, inviting and vibrant. A sturdy shed stood nearby, purposefully designed to house her essential farming tools and equipment, ready for the tasks that lay ahead.





Apeksha Ganesh Bachav, a dedicated farmer from Dhamar village, has generously set aside 0.4 ghuntas of her land as a demonstration plot, showcasing her commitment to innovative farming practices. In this plot, she has planted a cotton crop, meticulously following the guidance provided by the LHWRF team. To boost the health of her cotton plants, Apeksha has cleverly incorporated marigolds into her farming strategy. These vibrant flowers act as natural pest magnets, drawing harmful insects away from her main crop and fostering biodiversity in the soil. Complementing this, she has intercropped with moong beans, a choice that not only enriches the soil but also enhances overall yields.

Apeksha emphasized the significance of planting just one seedling per spot, a technique she had learned during her training that reduces seed costs while promoting healthier growth. She highlighted the timing of her organic fertilization practices, stressing the importance of spraying nimboli ark 45 days after sowing the cotton. This is followed by a second application of dashparni ark, which ensures that her crops receive the nutrients they need at critical growth stages.

She further added,



We were introduced to six different organic fertilizers—three for spraying and three to be delivered through the drip irrigation system. The LHWRF team provided us with detailed instructions on how and when to use each fertilizer, ensuring we were well-equipped to support our crops. To facilitate ongoing learning and communication, they even created a WhatsApp group where farmers can exchange vital information and updates."



Demo plots are vital in facilitating practical learning, fostering community engagement, and promoting the adoption of sustainable practices. Their tangible benefits can significantly enhance productivity, improve soil health, and contribute to a more resilient farming community. As a result, the project actively promotes the establishment and use of demo plots to empower farmers and encourage the transition to better agricultural methods.

Apeksha beamed with pride as she shared, "We decided to apply everything we learned from this demo plot to our entire farmland. We've completely transformed our farming practices by planting just one cotton seedling per spot and intercropping with moong beans. It’s eye-opening to realize how heavily we relied on chemicals in the past—now, we've made the switch to organic fertilizers and are following the same spraying techniques we practiced here."

She added that PPE kits have been hugely beneficial, also introduced to her by the LHWRF team. Prior to that, farmers would often experience itching from chemicals but thought there was no alternative. This has been changed and every family member wears the kit, keeping them safe while they work.

Apeksha's excitement was evident as she recounted a significant milestone: “I’ve even flown in an airplane, thanks to BCI!” She explained that she was invited to a conference in Delhi to present her experiences and insights on sustainable farming. “As a woman, I never imagined I’d travel so far. The experience boosted my confidence and deepened my commitment to eco-friendly farming practices. We’re seeing better yields because of it, too.”



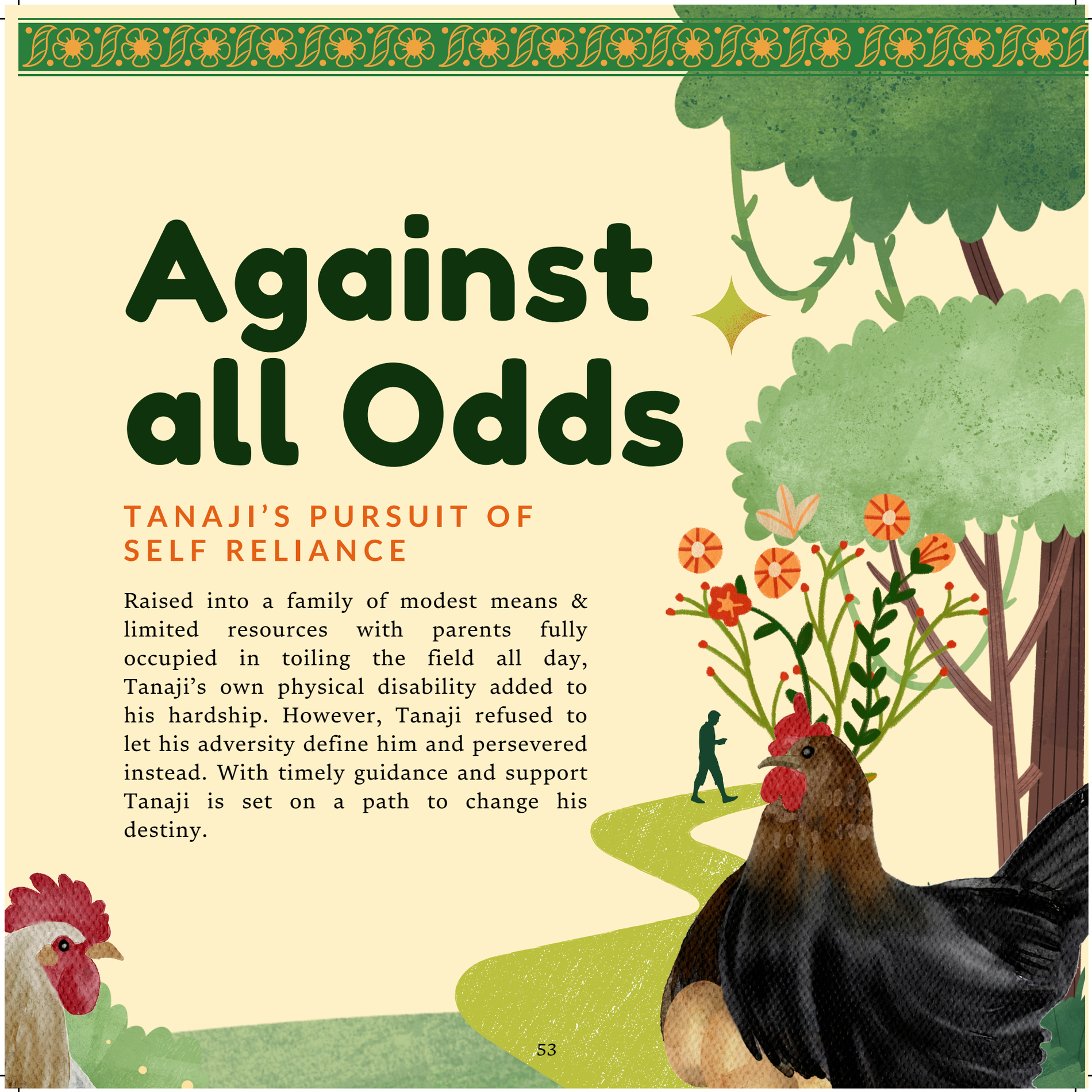


She mentioned how their neighbour had been quietly observing their practices and has now adopted the same methods for cotton cultivation on his own farm. "Many farmers frequently visit us, and we are always happy to answer their questions. We love showing them the tangible differences in crop health that they can see right in the demo plot."

Against all Odds

TANAJI'S PURSUIT OF SELF RELIANCE

Raised into a family of modest means & limited resources with parents fully occupied in toiling the field all day, Tanaji's own physical disability added to his hardship. However, Tanaji refused to let his adversity define him and persevered instead. With timely guidance and support Tanaji is set on a path to change his destiny.



As we approached Tanaji Naik's farm, a young 28-year-old resident of Karanjvel village in Nandurbar, nestled beside the main road, we were led into a modest shed bustling with chickens. Amidst the cluck of poultry and the scent of cow dung, Tanaji welcomed us with warmth and gratitude that spoke volumes even before we exchanged words. As we saw him for the first time, we learnt that Tanaji was born without hands. His demeanor hinted at a profound story of resilience and adaptation, leaving us eager to learn more about his journey.





Sitting on the *khat* outside his poultry shed, Tanaji, revealed that the chickens had become his cherished companions. He spent his days feeding and caring for them. Despite holding a graduate degree, Tanaji struggled to find employment due to his physical disability, which also prevented him from contributing towards his farm work, where cotton was grown majorly.

LHWRF and BCI strongly believe in providing alternate sources of livelihood to supplement a farmer's income. For the same, farmers are offered various options like poultry and goat rearing

We were at a loss trying to imagine the frustration of feeling powerless to shape one's own path due to limited means & circumstances. How does one carve a life of one's own, while having no means to change one's fate? The yearning and hunger to secure a livelihood was evident in his eyes. Thus, he relates, when LHWRF offered him a poultry unit, he saw a ray of hope. Yet, despite his resolve, one major hurdle remained: Tanaji lacked the funds to cover his share of the investment, making even this opportunity seem out of reach. His sister, showed remarkable support, as she mortgaged her jewels and provided him with Rs. 4,000. Still short of another Rs. 500, the farmer field officer from LHWRF, stepped in as a friend and helped him out by bridging the gap and providing the remaining amount needed to make his dream a reality. The camaraderie and friendship shared between the two, was clearly visible as we were conversing with them.

In the autumn of 2023, Tanaji received a poultry unit, which included 100 Sonali chickens, feed, and a cage. Due to his diligent care and supervision, 90 of the chickens thrived. By early months of next year, Tanaji was able to sell each chicken for approximately Rs. 250 to 300. He even kept a few aside for breeding, to keep his business going. With the proceeds, he constructed a larger shed and purchased additional feed. He also shared that the chickens were vaccinated three times, and this crucial support was also provided by LHWRF.



We could sense the profound difference this poultry unit has made in his life; it was for the first time he could earn a living for himself. As he started keeping himself occupied with his new business, he has been hopeful of carving a better life. In the near future, Tanaji aspires to expand his poultry business to 500 chickens.

He is confident that expanding his poultry business will help change societal perceptions that considered him “different and incapable”. This ambition drives him not only to build a thriving business but also to alter how others view him and his potential.

Lupin Human Welfare & Research Foundation (LHWRF) is the social responsibility arm of Lupin Limited, founded by Dr. Desh Bandhu Gupta in 1988. In its journey spanning over three decades, the foundation has impacted more than 1.57 million beneficiaries across 4700 villages in 24 districts, spread across eight states in India.

Throughout its journey, the foundation has primarily focused on creating sustainable livelihood opportunities and fostering economic growth in some of the most underdeveloped districts in India. It adopts a family-centered approach and initiates measures to help break the cycle of poverty, thus making a positive impact on the lives and livelihoods of the beneficiaries.

The **Livelihoods Program** has been a critical and instrumental element of our development efforts for the last decade. With a drive to create a profound impact, the livelihoods program focuses on establishing sustainable solutions for the disadvantaged and vulnerable communities. Capacity building, natural resource management, livestock development, strengthening grassroots value chains, and improving farmers' market access are vital components of our Livelihoods strategy.

The **Lives Program** focuses on enriching the quality of life within communities and ensuring better access to healthcare services. A strategic engagement aimed at strengthening health systems to address Chronic Obstructive Pulmonary Disease (COPD) and Cardiovascular Diseases (CVDs) stands as an irreplaceable building block of our Lives strategy.

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