



Supported by



# AGRICULTURE AND CLIMATE ACTION PROGRAMME

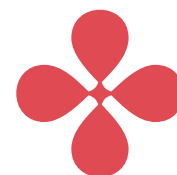
**FY 2024 - 2025**

Enhancing Soil Health Through Diversifying  
Livelihood For Small Holder Farmers

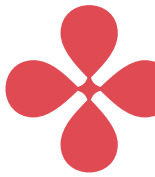
Report Created By **RECONSTRUCT**  
SUSTAINABLE SOLUTIONS



# TABLE OF CONTENTS



<b>01</b>	Purpose of this Report	1
<b>02</b>	Organisation Overview	2
<b>03</b>	Letters from Leadership	3
<b>04</b>	Executive Summary	8
<b>05</b>	Case Studies	10
<b>06</b>	Understanding The Problem	13
<b>07</b>	Early Interventions	14
<b>08</b>	Programme Overview	16
<b>09</b>	Impact Framework	20
<b>10</b>	Soil Testing	22
<b>11</b>	Sheti Shalas	29
<b>12</b>	Exposure Visits	33
<b>13</b>	Post Harvest Support	36
<b>14</b>	SDG Alignment	38
<b>15</b>	Alignment with Indian Agricultural Policy	41
<b>16</b>	Programme Recognition	44
<b>17</b>	Media Coverage	45
<b>18</b>	The Journey Ahead	52
<b>19</b>	Conclusion	55
<b>20</b>	Appendix	



# PURPOSE OF THIS REPORT

Mann Deshi has created a comprehensive Agriculture and Climate Action Programme for small holder agricultural households in rural Maharashtra. They have entrusted Reconstruct Sustainable Solutions to capture the impact of this programme in FY 2024 - 2025, to outline the initiatives yielding positive results, to identify gaps and to recommend next steps.

## METHODOLOGY

1

A reporting framework was created considering the purpose of this report and its intended audience. Available data was collected and analysed.

2

A survey of over 100 farmers (10% of programme participants) was conducted on site by Reconstruct to validate the analysed data.

3

Based on the survey conducted, supplementary data was collected and analysed.

4

Published reports & scientific journals were referenced to add legitimacy to conclusions and recommendations.

5

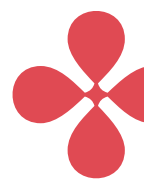
Continuous feedback from team members and industry experts were taken to validate the analysed data.

6

Data driven insights were finalised and the report was made ready to be published and presented.

## CHALLENGES

- Participating farmers are spread across over 200 villages which made it unfeasible to visit a large section of them for data collection.
- Farmers cited hesitation in sharing honest feedback so as to not be excluded from the programme in the future.
- Many farmers could not recall pre-intervention data making it difficult to benchmark results.
- Post intervention data collection depends on time of harvest which varies from crop to crop resulting in incomplete data being available for reporting.
- Unavailability of complete data required prevented a full scale analysis of the programme.



# ORGANISATION OVERVIEW

**Mann Deshi Foundation is a community-based charitable organisation. It was established in 1996 and has its headquarters at Mhaswad, Satara. It works to empower rural women and their communities by providing access to knowledge, capital, markets and social support.**

Mann Deshi's **vision** is to empower women to make their own choices and to be celebrated as equal and valuable members of their families and communities. It's **mission** is to empower rural women entrepreneurs with the knowledge, skills, access to capital and support they require to gain more control over their lives. It also aims to empower farmers to strengthen their livelihood, to create opportunities for children to play sports, to create opportunities for young adults to flourish, and to provide the rural community with access to quality healthcare.

Mann Deshi has strong **values** of empathetic listening, having a collaborative approach, maintaining integrity at all times, championing holistic empowerment, creating a safe space for the local community, fostering community leadership, practicing compassion and compliance with organisational rules.

Over the last decade, Mann Deshi's endeavour has been to increase community ownership over all of its programmes. Being a women centric organisation, all of Mann Deshi's community development programmes have evolved in response to the needs and feedback of the women and communities it serves. All of Mann Deshi's programmes keep women at the centre of the programme's design. It rightly believes that its vision for **women empowerment cannot exist in isolation from the community in which they live**, and that the future direction of the organisation must come from the needs and ideas of said community. The community as a whole must be empowered and must fully participate in order to create an enabling environment for women to prosper.

# MESSAGE FROM OUR LEADER

3



## **Chetna Gala Sinha, President**

At Mann Deshi, our vision has always been clear: to empower women so they can take control of their lives, their livelihoods, and their future. When it comes to women farmers, this empowerment must begin with income, knowledge, and recognition. Our Agriculture and Climate Action programme is a step in that direction.

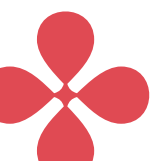
Through our Soil Sakhis, women farmers are gaining access to something they have long been denied: scientific information about their soil. They are learning how to improve soil health - not in abstract terms, but in ways that directly affect their farms, their yields, and their income. When the soil becomes healthier, the income becomes stronger. It's as simple and as powerful as that.

We often forget that it is women who are closest to the soil. From sowing seeds to removing weeds, from harvesting to post-ploughing work - nearly every manual task on the farm is carried out by women. And yet, they are rarely seen as farmers. They are called helpers and workers. But they are the ones who know the land best. They've walked it, worked it, and lived it.

With Soil Sakhis, we are not just talking about soil science - we are talking about reclaiming that knowledge. Women are now learning to read their soil reports, understand nutrients, and make decisions that improve both their productivity and their sustainability. Input costs have fallen, and incomes have risen. But even more importantly, women now have a seat at the table.

For many of these women, this is the first time they have had access to tools, data, and training that were previously reserved for men or outsiders. This is the first time they are being asked for their opinion about what to grow, when to irrigate, and how to manage pests. Their answers are rooted in both experience and new knowledge.

Our programme is not just about farming. It is about recognising that women farmers are not passive recipients of aid - they are leaders in the fight against climate change. And the truth is, women have always led. We are finally learning to follow.



# MESSAGE FROM OUR LEADER

**Karan Sinha,  
Founder, Mann Deshi  
Centre for Climate  
Resilient Agriculture**



In the past year, Mann Deshi has led a significant change in climate technology in the drought-affected areas of Maharashtra. This change has empowered women farmers, placing them at the center of agricultural decision-making. I believe that the next decade will see these drought-prone regions, like Mann Desh, take the lead in the green economy by adopting modern climate technology. By leveraging local knowledge and integrating it with scientific methods, including soil testing, pruning demonstrations, composting, and expert support from agronomists, we've achieved impressive results. The key to this success has been the Soil Sakhis, who connect scientific knowledge to practical farming. Women, who were once identified merely as "farmers' wives", are now actively participating in national training programmes, hosting scientists on their farms, creating their bio-inputs like Jivamrut, and negotiating better prices in the market. They're not just providing labour anymore; they are shaping agricultural strategies. The impact is measurable: fertiliser costs have decreased by 30%, yields have increased by over 25%, and incomes for some farmers, especially those growing pomegranates, have tripled. However, the change extends beyond financial metrics; it's also about personal empowerment and political awareness. Women now confidently identify as farmers, families are choosing to remain on their land instead of migrating for seasonal work, and conversations about climate change are more practical and led by the farmers themselves.

This shift represents more than just a new farming approach; it signifies a new balance of power - transitioning from dependency to independence, and from viewing drought as a hopeless situation to seeing land as a space for innovation. Our programme emphasises that the best climate solutions are built on principles of equity. While technology and finance play essential roles, they are simply means to an end. The true agents of change are trust, solidarity, and the understanding that transformation begins by standing alongside the farmer, rather than in front of them. As we introduce more resources - such as climate financing models, weather stations, and AI, our focus must remain steadfast: these tools should serve the farmer, not the other way around. My vision for this work is simple - Women have always been the backbone of farming, now, they are becoming the face of its future.

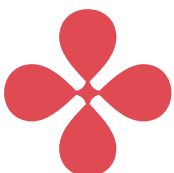
**Mann Deshi Foundation**

# MESSAGE FROM OUR FUNDER

**Aloka Majumdar,  
MD, Head of  
Sustainability, HSBC  
India**



Agriculture holds a central place in India's economy, society, and culture. Enhancing farm incomes by conserving natural resources (soil, water, biodiversity) and providing market access are two important tenets of our engagement with Mann Deshi Foundation. The programme is working with farmers to ensure growth and sustainability for the farming community in Satara district of Maharashtra through multi-stakeholder engagement. Another key aspect of the programme is to create a local cadre of Soil Sakhis who are enhancing knowledge and providing extension services for the farmers. Healthy soil provides essential ecosystem services like nutrient cycling, improving soil moisture and improving biodiversity. The Soil Sakhis are playing an important role in creating awareness on the importance of soil health as a key factor driving agricultural growth and productivity.



# MESSAGE FROM NATIONAL RESEARCH CENTRE ON POMEGRANATE



**Dr. Rajiv Marathe, Director,  
ICAR-NRCP, Solapur,  
Maharashtra**

The Soil Sakhi project has significantly impacted the pomegranate farmers in the drought-prone region. It is very commendable that under this project, 2100 soil samples have been tested in the last 2 years, and notably, 543 of these samples are from pomegranate farms.

By promoting scientific soil testing, the project has helped farmers understand their soil's nutrient status and adopt precise, need-based fertilisation practices. This has not only improved crop health and productivity but also reduced unnecessary input costs. Through agronomy advisory training, both women and farmers have gained knowledge on modern practices such as pruning, fertigation, pest and disease management, and irrigation scheduling. The project has created a strong local knowledge network, where trained women Soil Sakhis are now guiding other farmers, playing the role of community agronomists.

The exposure visits organized under the project—particularly to scientific institutes like NRCP—have boosted farmers' confidence and helped them adopt research-backed practices. This initiative has also emphasized the importance of water-use efficiency and climate resilience, especially vital in drought-affected areas. As a result, pomegranate cultivation in these regions have become more sustainable and profitable.

Mann Deshi Foundation is doing commendable work in this area by integrating soil health awareness, sustainable agriculture practices, climate change mitigation, and women empowerment in rural and drought-prone areas. By enabling rural women to become agents of change through the Soil Sakhi model, the foundation is contributing not only to better farming but also to a more equitable and climate-smart rural future.

# MESSAGE FROM MAHA KESAR BHAGAYAT SANGH

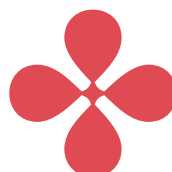


**Dr. Bhagavanrao Kapase,  
Vice President**

This project has had a remarkable impact on the mango industry in drought-prone areas like Satara. Through soil testing and scientific field guidance, farmers have become more aware of the importance of matching mango varieties to specific soil types and understanding soil health before plantation. This has led to a reduction in plantation failure and better long-term orchard planning. Most farmers are now conducting soil and water tests before planting, which was not a common practice earlier.

With the support of the project and the collaboration between Mann Deshi Agriculture & Soil Centre and Mahakesar Amba Sangh, farmers are adopting climate-resilient practices, such as mulching, drip irrigation, organic amendments, and weather-based disease management. The training programmes, exposure visits, and on-field demonstrations have helped growers understand canopy management, flowering regulation, and nutrient scheduling, improving overall mango quality and productivity.

Additionally, the project has encouraged farmers to think beyond just production. Many farmers are now focusing on branding, collective marketing, and value addition, which is helping improve income. The Mahakesar Amba Sangh appreciates how the initiative is building a strong foundation for sustainable mango cultivation in challenging agro-climatic zones like ours.



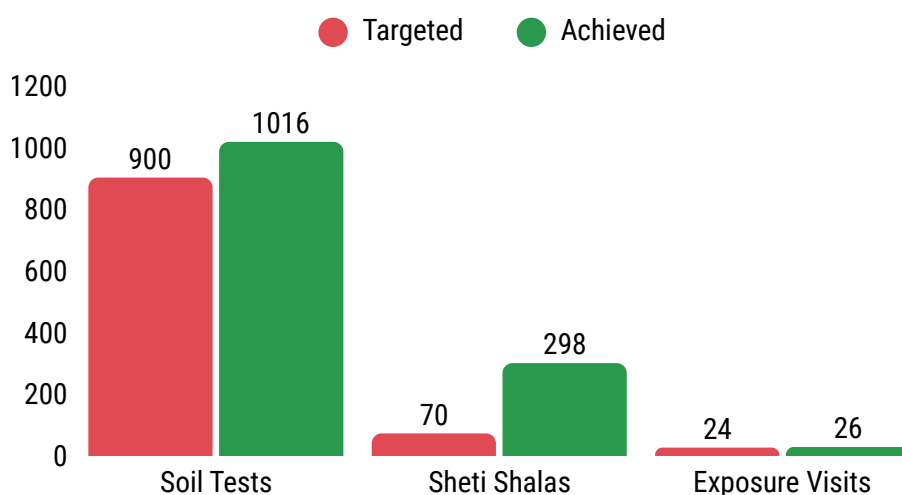
# EXECUTIVE SUMMARY

The purpose of the Agriculture and Climate Action Programme is to improve the lives and livelihood of farmers, to help them improve the quality and quantity of their crop while improving the health of their soil and environment. The Sheti Shalas and Exposure Visits are aimed at capacity building for farmers to help improve their scientific knowledge base, inspire new business exploration and introduce them to new technologies.

In FY 2024 - 2025 the Agriculture and Climate Action Programme has impacted **8,173 farmers** across **236 villages** through its Soil Testing, Water Testing, Sheti Shalas, Exposure Visits and Post Harvest Support initiatives. It has created access to scientific agricultural support, based in rural Maharashtra, through its team consisting of **5** women as Soil Sakhis, **7** Soil Technicians, **5** Agronomists and **2** Community Leaders,

## Programme Goals

In FY 2024 - 2025 the programme has exceeded all its goals.



### 13%

Above Target For  
Soil Testing

### 326%

Above Target For  
Sheti Shalas

### 8%

Above Target For  
Exposure Visits



53%

**Women engaged in Sheti Shalas**



34%

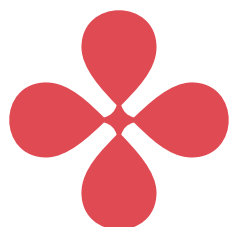
**Women engaged in Exposure Visits**

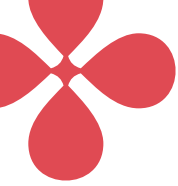
\*Total number of farmers impacted has been calculated as sum of soil samples collected, sheti shala participation, exposure visits participation, farmer participation at the Mann Deshi Mahotsav and farmer participation in weekly markets.

The programme has had a **multifaceted impact** that can be viewed through the sustainability framework of Triple Bottom Line, namely, **social impact** – impact on people, **environmental impact** – impact on planet and **economic impact** – impact on profit.

People	Planet	Profit
Increased sense of hope and support for farmers.	22% reduction in use of chemical fertilisers across 182 farmers growing the same crop.	An average of ₹ 9,474 reduced per farmer in chemical fertiliser cost across 182 farmers surveyed
Created economic opportunities for women employed as Soil Sakhis.	3,119 farmers have been trained on sustainability and climate change.	Exposure and training in allied businesses and new business opportunities.
Increased access to scientific data and information through agronomists.	Over 1,222 acres of land have been soil tested	An average of 40% increase in yield has been seen across 137 farmers growing same crop.
Community building through farmers WhatsApp group.	265 tonnes of Co2e emissions reduced over a sample size of 182 farmers growing the same crop.	32 farmers given access to market linkages at Mann Deshi's Mahotsav
Increased involvement of women in agriculture related decision making.	Transition of farmers from water intensive crop like sugarcane to pomegranate.	A 59% increase in income across 137 farmers surveyed growing same crop.

\*Sample sizes vary based on data available.





# CASE STUDY



**Reshma Kalel**, is a progressive **vegetable farmer** from Andharvad with **1.5 acres of land**. She faced challenges of declining yield, rising input costs, and deteriorating soil health making farming increasingly unsustainable. In 2024, she chose to cultivate capsicum but wanted to adopt improved and sustainable practices. Her journey took a positive turn when she connected with the Mann Deshi Agriculture Centre.

*"I used to rely only on what the shopkeeper advised, but now I understand my soil, my crop, and my field better. Mann Deshi Agriculture Centre gave me knowledge, not just advice. I feel confident and proud to be a capsicum farmer today."*

## Mann Deshi Interventions

**Soil Testing Report:** A detailed soil health check was conducted, which revealed deficiencies in micronutrients and organic carbon.

**Crop-wise fertiliser Schedule:** Based on the soil report, Reshma received a customized fertiliser schedule, promoting a balanced use of organic and chemical nutrients.

**Agronomist Visits:** Regular field visits by Mann Deshi agronomists helped her monitor crop progress, address pest problems, and improve farm management practices.

**Training on Organic Fertiliser Preparation:** She learned to prepare jivamrut, and vermicompost, reducing dependency on chemical fertilisers.

**Thrips Management Training:** She was trained to identify and manage thrips, a major pest in capsicum. She adopted Neem-based sprays, sticky traps, and timely interventions to prevent crop loss.

**Use of Shade Net (Polyhouse):** Use of shade net in capsicum resulted in maintenance of soil and air temperature. Less incidence of sucking pests like thrips, aphids and white fly which reduced use of chemical sprays to control it.

## Impact & Results

- **Soil Health Improvement:** Organic matter increased due to regular use of compost and jivamrut, improving water retention and soil texture.
- **Reduced Chemical Load:** Controlled use of chemical fertilisers and pesticides led to reduced residue in produce and healthier soil biology.
- **Pest Control:** Adoption of integrated pest management techniques helped keep thrips under control without heavy pesticide use.
- **Yield Improvement:** She experienced an increase in production with a recorded yield of 25 Tonnes, compared to her previous average of 8 Tonnes.
- **Reduced Input Cost:** Use of on-farm inputs like jivamrut and compost reduced chemical fertiliser expenses by 40%.
- **Net Income:** Her net income from capsicum increased from ₹ 2.40 Lakh to ₹ 7.5 Lakh with reduced costs and better marketable yield.
- **Creating Employment:** She has employed 10-15 women from her village to work on her farm.

**Mann Deshi Foundation**

# CASE STUDY



**Pruthviraj Bhongale**, a dedicated farmer from Mahalung, Maharashtra, embarked on a journey to cultivate **date palms** on his **6 acre farm** and planted 4500 date palm trees. He faced challenges in soil management, irrigation, and pest control. This is where the Mann Deshi Agriculture Centre stepped in, providing essential training and support.

*"The training I received from Mann Deshi Agriculture Centre changed my life. I was struggling with my farming practices and didn't know how to improve my yield. After learning about soil analysis, fertiliser management, and water conservation techniques, I could see a significant improvement in my date palm cultivation. Not only did I produce more nira and jaggery, I also increased my income substantially. I am grateful for the support and knowledge that Mann Deshi provided. It has empowered me to sustain my farm and contribute positively to the environment."*

## Mann Deshi Interventions

**Soil Analysis:** Mann Deshi analyzed the soil quality and nutrient content, which enabled him to apply the right fertilisers tailored to the specific needs of his date palms.

**Fertiliser Management:** He was trained on the best practices for fertilising date palms, focusing on organic fertilisers and sustainable practices that would enhance soil health without causing environmental harm.

**Water Management:** The training included techniques for efficient irrigation, such as drip irrigation systems, which helped conserve water while ensuring that the trees received adequate moisture.

**Post Harvest Support:** Pruthviraj was helped with market linkages to sell his produce.

## Impact & Results

- **Soil Health:** The use of organic fertilisers improved soil fertility and structure, he now practices 100% organic farming.
- **Water Conservation:** The implementation of drip irrigation systems minimised water wastage, ensuring that every drop was utilised effectively.
- **Biodiversity Promotion:** The date palm trees attracted various pollinators and beneficial insects, contributing to the overall biodiversity of the farm.
- **Production:** Pruthviraj produced approximately 3,000 kgs of jaggery from 45,000 litres of nira collected in his first year of harvest.
- **Revenue Generation:** He produces 1 kg of jaggery for every 15 litres of nira. He sells jaggery at ₹ 1,000 per kg. From the 3,000 kg of jaggery produced, he earned an income of ₹ 30 Lakhs.

**Mann Deshi Foundation**

# CASE STUDY



**Mr. Sukhdev Pawar**, is a **sugarcane** farmer from Umbarde with a **5.5 acre farm**. He used to rely on traditional methods of farming, primarily focusing on single-crop cultivation. He faced several challenges of uncertain yield due to imbalanced soil nutrition, overuse of chemical fertilisers and pesticides, low returns on investment and soil health degradation.

*"Mann Deshi's training gave me a new vision of farming. Earlier I depended only on sugarcane, but now I have diversified my crops. Chia has become my most profitable crop. My soil is healthier, costs are reduced, and income has doubled. I now guide other farmers in my village too."*

## Mann Deshi Interventions

**Soil Testing & Analysis:** A detailed soil test report was prepared by the centre's agronomist. Based on nutrient availability, a customized crop schedule was created for chia, ginger, and sugarcane. Deficiencies in micronutrients like zinc and boron were corrected using organic inputs.

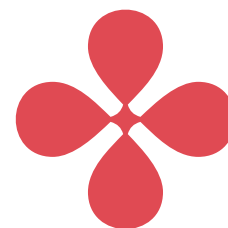
**Crop Planning & Diversification:** Chia seeds were introduced as a short-duration, low-input, high-value crop. Ginger and sugarcane were selected for long-term economic security and local adaptability. Intercropping methods were suggested to make best use of land and water.

**Training on Jivamrut & Bio-inputs:** He attended a hands-on training programme conducted by the Mann Deshi team on: jivamrut preparation using cow dung, cow urine, jaggery, and gram flour. Regular application helped enhance microbial activity in soil, improving root health and nutrient absorption. He was trained on use of biofertilisers like Azotobacter, PSB (Phosphate Solubilizing Bacteria), and Trichoderma for disease control and nitrogen fixation. Importance of organic mulching, vermicompost, and natural pest repellents like Dashparni ark was imparted.

## Impact & Results

- **Soil Health:** Improved soil health, structure and increase in earthworm population observed within one season.
- **Chemical fertiliser Use:** Reduction in chemical usage by over 60% through adoption of jivamrut and biofertilisers.
- **Water:** Water efficiency improved with mulch-based moisture retention practices.
- **Biodiversity:** Encouragement of biodiversity due to crop diversification and natural farming inputs.
- **Crop Diversity:** He has successfully ventured into the commercial cultivation of chia seeds, ginger, and sugarcane—three crops rarely seen together but offering remarkable returns when managed effectively.
- **Productivity and Profitability:** After implementing the new practices for two cropping seasons, he observed significant improvements in productivity and an increase of ₹ 10.8 Lakhs in income.

**Mann Deshi Foundation**



# UNDERSTANDING THE PROBLEM

**Low yield is a problem faced by farmers due to various reasons such as use of unscientific agricultural practices, overuse of chemical fertilisers, lack of access to water, pest attacks, plant diseases, poor soil health, unpredictable weather, poor quality horticultural mother crops and poor quality seeds. This has resulted in economic hardship for farmers and has created a need for affordable science based interventions.**

Mann Deshi is headquartered at a small drought-prone village and its team interacts with and helps farmers on a daily basis. As a farming community, the people of Mann, Malshiras, Atpadi, Khataav, and Sangola have faced significant livelihood challenges. Farmers in this area have struggled to make ends meet, and their plight has only worsened with time. Farmers reported to not being able to recover even 20% of their costs, which is a significant concern.

Increasing temperatures along with the other effects of climate change have negatively impacted farmers and their crop. Excessive use of chemical fertilisers have degraded their soil quality and water supply as well as impacted yield. Further, farmers do not receive any formal training and rely on traditional agricultural practices along with advice from other farmers and shopkeepers to manage these challenges. Due to their geographical remoteness and lack of access to the internet, smallholder farmers in these areas do not have access to the latest developments in their industry leaving them ill equipped to address these mounting challenges.



# EARLY INTERVENTIONS

**Mann Deshi's Agriculture and Climate Action Programme has continuously evolved basis the programmes it has succeeded and the feedback it has received from the community it serves.**

Mann Taluka is drought prone which compels local communities to migrate seasonally. To provide the community with some respite from the drought without having to migrate, Mann Deshi setup it's first Cattle Camp in 2012. Agricultural households were invited to move into a camp like setting where Mann Deshi provided them with water and helped them collectively create silage for fodder. They organised training camps for women to learn how to produce silage from sugarcane leaves and setup four solar run fodder cutters to aid with this process. The cattle camp was held again in 2019 where 30kg of fodder and 120 litres of water were provided per day. 9,934 animals were impacted and 2,214 farmers. The key learning was that empowerment of women cannot be done in isolation from the community who cannot survive without water. Mann Deshi realised a more sustainable solution to this problem was required.



The crop practices in the region are dependent on rain, which is unpredictable and thus requires sustainable management practices of water. This led to water conservation efforts through the building of 17 check dams all along the Man Ganga River. These efforts resulted in the increase in ground water and water available for irrigation for farming.



Mann Deshi then launched a Farm to Market programme aimed at helping farmers sell their produce. Farmers were approached and asked to grow the same crop, aggregate their produce and Mann Deshi would help them find a market where they could sell. The transportation cost was covered by a funder under this initiative. This could not be sustained in the long term and the initiative was discontinued. Some farmers did however continue to sell collaboratively. A key lesson from this initiative was that for most crop a supply chain does not exist and farmers have to undertake all the roles of growing the crop, transporting it and selling it.

Mann Deshi wanted to mobilise women farmers to start their own Farmer Producer companies however it realised that these women's names were not on the land ownership documents. To rectify this, Mann Deshi approached their husbands and had the women farmers names included on the documentation. Three farmer collectives were formed to help farmers form groups, aggregate their harvest and increase their collective bargaining power. To support farmers further, Mann Deshi built a warehouse where they can store their produce till market rates are attractive. A cold storage was also set up with the help of the Government of Maharashtra.

2023 was declared by the UN as the International Year of Millets. Mann Deshi took this opportunity to highlight the voices of farmers. Due to early rains all the millet crop got destroyed, highlighting the vulnerability of farmers to climate change. It also further highlighted the supply chain issues that exist in agriculture, even for traditionally grown crops which are not included in the public distribution system.

Realising that the community is primarily agrarian and struggle with income, Mann Deshi decided to create a more comprehensive programme targeted at farmers. Since farming is a household effort, Mann Deshi expanded its focus from women farmers to agricultural households.

Learnings from all these programmes amongst others, as well as the inputs from the community, Mann Deshi has designed the Agriculture and Climate Action Programme to bridge the gap and include farmers in the conversations around agriculture, increase their participation and create a programme that works for them.

# PROGRAMME OVERVIEW

**Mann Deshi has implemented a comprehensive agricultural programme to address the challenges faced by farmers in Maharashtra. Rural women have been trained to become Soil Sakhis who provide small holder farmers with soil and water testing services. Farmers are given access to agronomists who provide farmers with crop schedules, pest management, trainings on new technologies and climate change awareness. Additionally, Mann Deshi conducts capacity-building workshops through its Sheti Shala programme to increase the farmers scientific knowledge on agriculture and its allied businesses as well as build resilience to climate change and market volatility. Exposure visits are conducted, where farmers visit other farmers or businesses to become aware about different agricultural practices, be inspired and increase their knowledge base. Mann Deshi offers post harvest support through trainings on food waste management, subsidized cold storage facilities, value addition services and market linkages. These four interventions are aimed at empowering farmers and ensuring they earn a sustainable source of income.**

To accomplish this, Mann Deshi has set up an Agricultural Lab in Mhaswad, fully equipped with a chemical lab and a crop pathology centre at affordable rates. It is run by a competent team of Soil Sakhi's, Agronomists, Lab technicians and Data Operators. The purpose of this Lab is to empower farmers with access to scientific knowledge on soil, water and crop health. With the help of this knowledge, the programme aims to increase farmers income and yield while also safeguarding soil and water health. This soil to market intervention focuses on agricultural households and women farmers. It aims to initiate a dialogue within the agricultural community on the latest developments in the industry and bridge the information gap and lack of support experienced by farmers.

## SOIL TO MARKET INTERVENTION

### STEP 1: AWARENESS AND MOBILISATION OF FARMERS

Mann Deshi's team consisting of Soil Sakhis and agronomists conduct farmer meetings in villages to identify farmers that are interested in being a part of this programme. Farmers are explained the importance of soil health, capacity building workshop opportunities like Sheti Shalas and exposure visits as well as how they can build climate change resilience.



### STEP 2: COLLECTION OF SAMPLES

Soil Sakhis visit farmers who have shown an interest in the project to collect their soil and/or water samples as well as baseline data required for testing. Farmers are expected to pay the price of Rs. 300 or Rs. 600, depending on number of parameters tested, which includes a soil test report, a crop schedule and pre sowing to harvest support.



### STEP 3: TESTING OF SOIL & CREATION OF REPORT

Each farmer's soil is tested at Mann Deshi's Agriculture and Soil Testing Lab. The soil test report provides a detailed understanding upto of 16 elements. It helps farmers to understand what is lacking in the soil and what is in excess in their soil. The water test report helps farmers understand the pH level of their water and to what extent the quality of water is affecting crop yield.

### STEP4: CREATION OF CROP SCHEDULES

Based on the soil test report, a crop schedule is prepared for each farmer. This schedule provides a detailed list of activities that farmers need to follow and complete at particular times of the crop cycle.



## STEP 5: CRITICAL MILESTONES

Soil Sakhis and Agronomists regularly visit farmers to check if they are following the activities as expected and if they are completing the critical milestones. They support the farmers to systematically document their process and experiences to build agri-business skills. Completing the three critical milestones, should result in over a 20% increase in yield. Farmers who have undertaken soil testing are encouraged to participate in **Sheti Shalas** and **Exposure Visits** to learn about best practices in agriculture.



## STEP 6: POST HARVEST SUPPORT

At the time of harvesting Soil Sakhis collect data on how much yield is harvested for each farmer and extend post harvest support to farmers that need it in the form of stalls at the Mann Deshi Mahotsav and markets linkages.



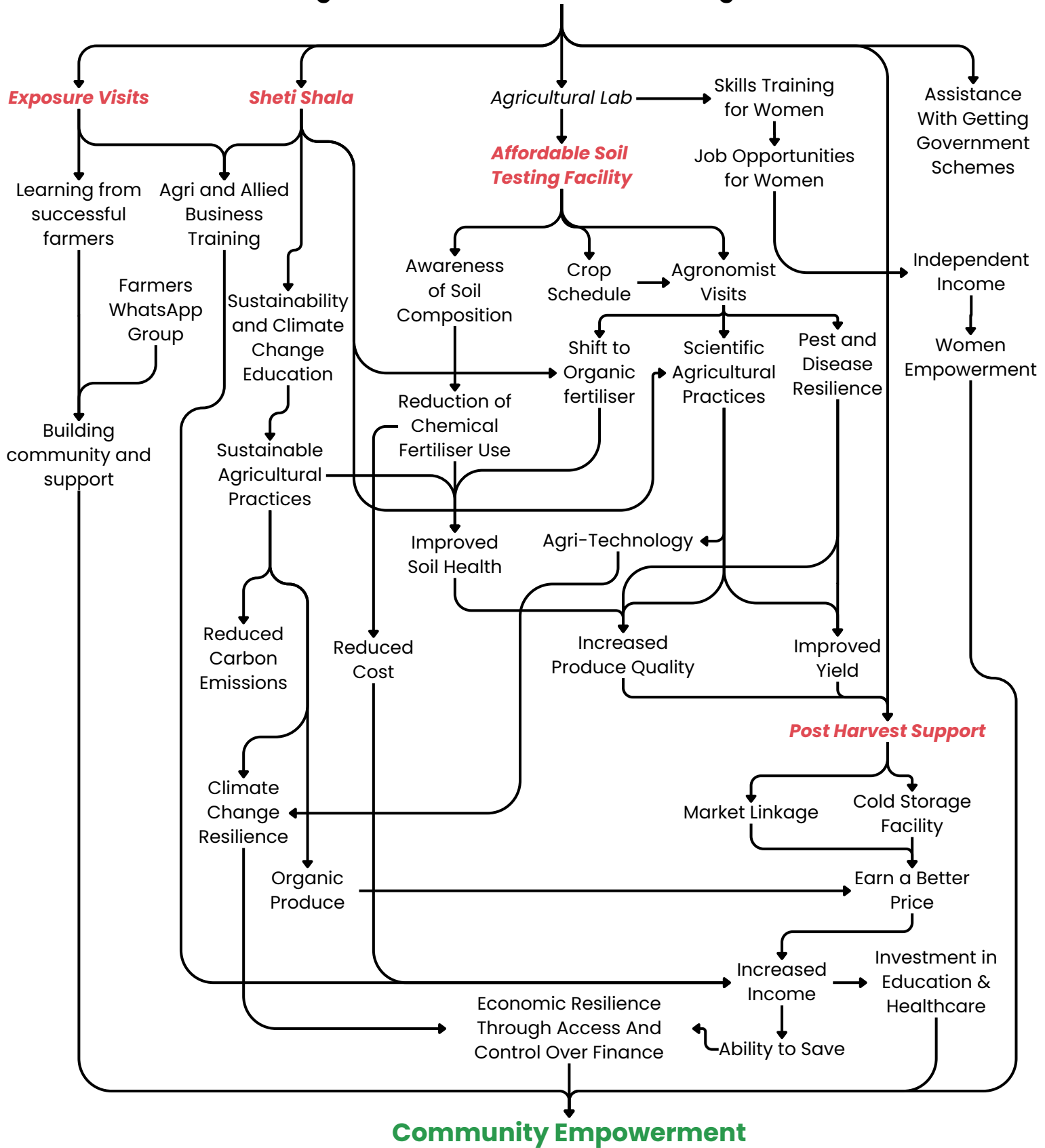
# IMPACT FRAMEWORK

## Theory of Change

Mann Deshi's endeavour over the last decade has been to increase community ownership of all its programmes. They believe that its programmes for women empowerment cannot exist in isolation from the community, and the future direction for the organisation must come from the needs and ideas of the community itself. The community as a whole must be empowered and must fully participate in order to create an enabling environment for women to prosper.

Mann Deshi hopes to scale by sharing its lessons learned and best practices through partnerships with organizations across India.

Through this programme, farmers are given insights into the composition of their soil. This has helped them reduce the amount of fertiliser they use thus reducing their costs while improving soil health. The agronomist visits and crop schedules have also created additional support for farmers particularly in the case of pest attacks and plant disease. This has improved their resilience and given them newfound purpose. The Sheti Shalas has given the farmers new skills in the agri and allied business. The exposure visits have inspired farmers to learn from each other and start businesses of their own. The Agriculture and Climate Action Programme has given farmers a new found sense of confidence and hope in the agriculture sector.



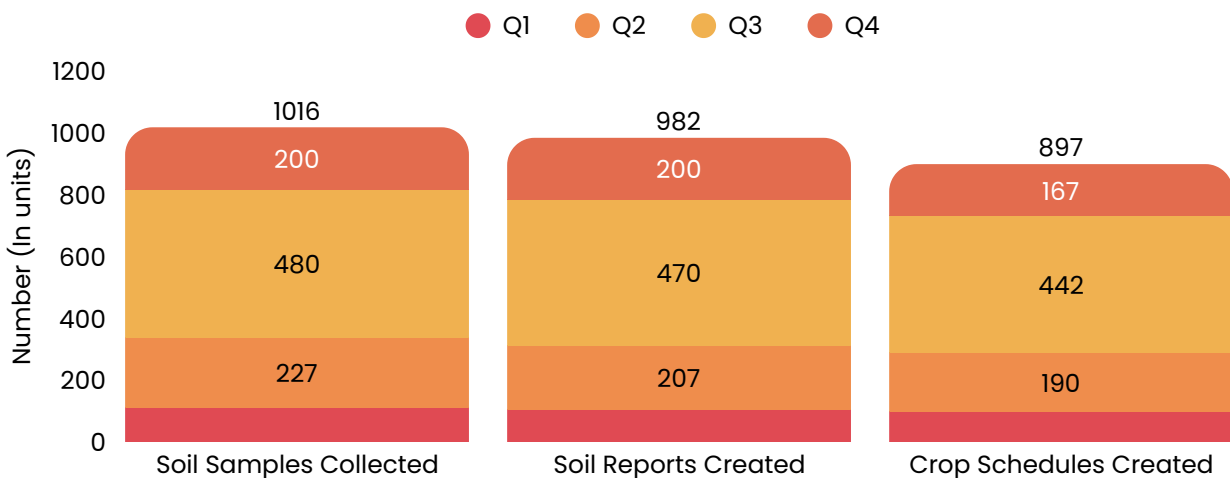
**How to read this Document:**

Start at the top of the page and follow the arrows to track how each initiative leads to Mann Deshis end goal of community empowerment. The four main initiatives are highlighted in red.

# Soil Testing

The soil testing programme is a foundational part of the Agriculture and Climate Action Programme. Mann Taluka is a water scarce and drought-prone region which results in poor soil nutrition as well as lesser adaptability of crops for cultivation. Soil testing is a necessary tool to understand the soil characteristics and to improve farming outcomes. This programme helps in efficient farming with optimum quantities of fertiliser use, growing high yield but low resource demanding crops, crop diversification as well as improving sustainability in various farm activities. It aims to help farmers tackle climate change, use scientific agricultural practices and make farming profitable.

The soil testing programme is a holistic service which includes not only testing but the creation of crop schedules, agronomist plot visits and farm aid support through WhatsApp or phone calls. The programme is driven by women Soil Sakhis who have been trained in sample collection and onboarding of farmers onto the programme. All soil sakhis are given a kit for Sample and Petiole collection. It includes, a scissor, used for petiole sample collection and to cut the leaves and petioles of plant, a scale to measure the depth of the pit, a scoop to easily collect soil samples, hand gloves to protect their fingers and also easily collect soil from a dip, a cotton bag for the collection of the sample and a register to collect farmer plot information.



\*There is a decrease in number of soil reports created as compared to samples collected due to pending payments on the farmers end. Some farmers do not request a crop schedule hence the number of schedules is less than the number of soil reports created.

## Impact on People

Agriculture is a household based activity where everyone in the family participates. This programme is aimed at increasing the participation and empowerment of all members of the agricultural household particularly women.

### Impact on Farmers

- **Impact on Women Farmers:** While the women of the family provide their labour on the farm they are often left out of the decision making process regarding which crop to grow, what fertilisers to use, where to sell, or for how much. One of the goals of this programme is to empower women with the knowledge and tools required to participate in this decision-making process. The Soil Sakhis themselves being women is part of this effort to make the programme more accessible to women farmers.
- **Affordability and Customer Service:** Farmers found this programme to be one of the most affordable options available to them with the best customer service. They cited that the Soil Sakhis come to their farm and collect the sample themselves making it convenient to the farmer. They get the reports quickly over the phone as well as a physical report that is hand delivered to them. This helps them focus their time on tending to their fields.
- **Impact on the Agricultural Community:** Farmers have felt hopeless and alone in their profession due to the lack of support they receive and the adverse impacts of climate change that they face. With this programme we have seen a revitalisation of agriculture in the region. Post soil testing farmers are added to a WhatsApp group with agronomists and other farmers, where there can build community, share queries, receive advice and support from other members.
- **Knowledge and Empowerment:** Farmers previously relied on traditional agricultural knowledge when tending to their field and crop which resulted in unpredictable outcomes. With soil testing they now have access to scientific information which empowers them to make the right decisions for their crop.

## Farmers Testimonies



Today, **Vijay Linge** proudly says, 'With the right knowledge and support, farming can truly transform lives. My orchard is not just a source of income but a symbol of **hope** for sustainable agriculture.'

**Meena Tanaji Banagar** says, 'I am deeply grateful to the Mann Deshi Agriculture Centre for guiding me. Soil testing and adopting sustainable practices have not only increased my pomegranate yield but also **restored my soil health**. I now feel more **confident** about the future of my farm.'



**Madhavi Manoj Katarar** shared her experience: 'Before working with Mann Deshi Agriculture Centre, I felt lost and frustrated with my grape farming. The training and support transformed my approach to agriculture. Now, my farm is thriving, and I'm not just making more money, I'm also **farming sustainably**. I feel **confident** about the future.'

**Sarika Vilas Babar** expressed herself, saying: 'I had almost given up hope of making a profit from my orchard. Mann Deshi Agriculture Centre not only helped me revive my farm but also gave me the **confidence to dream big**. The soil testing and continuous guidance transformed my farming practices. Today, my orchard is **flourishing**, and I am planning to expand.'



This programme has had a profound impact on the farmers it helps but also on the team that runs it, namely the Soil Sakhis, the agronomists, the lab technicians, coordinators, management staff and community leaders.



## Meet the Soil Sakhis!

Sujata Mane, Varsha Khandekar, Chandani Ombase, Roshani Kalel and Shital Kale



### **Karishma Khandekar – Soil Sakhi**

"I always wanted to help farmers, even after my B.Ed, but didn't know how. Soil Sakhi gave me a platform, boosting my farming knowledge and confidence. Now, I confidently talk to farmers about soil testing and sustainable farming. Coming from a small village, I never thought I'd speak with such assurance. Soil Sakhi programme gave me both knowledge and courage. I'm proud to be working for farmers' benefit!"

### **Sheetal Kale – Soil Sakhi**

"I came from a poor family with big dreams, but no direction. Joining Soil Sakhi programme changed everything. At first, I knew nothing about farming, but by working as a Soil Sakhi and connecting with farmers, I learned so much. Now, I travel to villages alone, teach farmers about soil testing and sustainable farming. The confidence I have today is all thanks to Soil Sakhi. I'm proud to make a positive difference for farmers!"



Through this programme, over **1,222 acres** of land have been brought under scientific and sustainable agricultural practices.

## Impact on Planet

- **Reduced Use of Chemical Fertilisers and Increased Use of Organic Fertiliser and Pesticides:** With the help of the soil testing programme, farmers are advised on the optimum usage of fertilisers. Previously farmers relied on advice from shopkeepers, resulting in excess fertiliser utilisation ultimately polluting the soil. There has been a 22% reduction in use of chemical fertilisers through this programme. Through the agronomist visits, farmers are also introduced to organic farming practices, organic fertilisers and pesticides.
- **Increased Sustainable Farming Practices:** Through the connectivity of the WhatsApp group and the routine agronomist visits, farmers are helped with sustainable solutions to their agricultural problems.
- **Reduced Carbon Emissions:** There is a 265 Tonnes reduction in Co2e emissions across 182 farmers who grew the same crop before and after soil testing, estimating the impact of 1,016 farmers who have done soil testing results in 1,479 Tonnes of reduction in Co2e emissions from reduced fertiliser use.
- **Increase in Crop Diversification:** Farmers are advised on crop diversification which offers significant positive impacts on the planet by promoting agricultural biodiversity, improving soil health through diverse root structures and microbial activity, enhancing food security and nutritional quality, and increasing farm resilience to pests, diseases, and climate change.
- **Transition of Farmers Away From Water Intensive Crops:** The agronomists guides farmers based on their soil report to farm crops best suited for their soil and weather conditions. Since it's a drought prone region, water intensive crops are not advisable for farmers without access to water. Drip irrigation is always recommended and support is provided to connect farmers to subsidies for drip irrigation wherever applicable. A transition has been seen amongst farmers from water intensive crop like sugarcane to pomegranate.

Mrs. **Vandana Phadtare**, a wheat farmer from Mhaswad, Satara district, attended a Mann Deshi Agriculture Centre programme. Motivated to better understand her soil, she conducted a soil test that revealed a pH of 8.3, CaCO<sub>3</sub> content of 6.8, and low nitrogen, phosphorus, and potassium (NPK) levels. With guidance from Mann Deshi Agriculture experts, she implemented the prescribed crop schedule, including customized fertiliser application, soil pH correction using organic matter like Farm Yard Manure and acidic fertiliser, and proper micro-nutrient management. These steps significantly improved her crop health, showing profuse tillering for her wheat crop than the previous year, reduced input cost by 20% and expected to increase her yield by 30% this season.

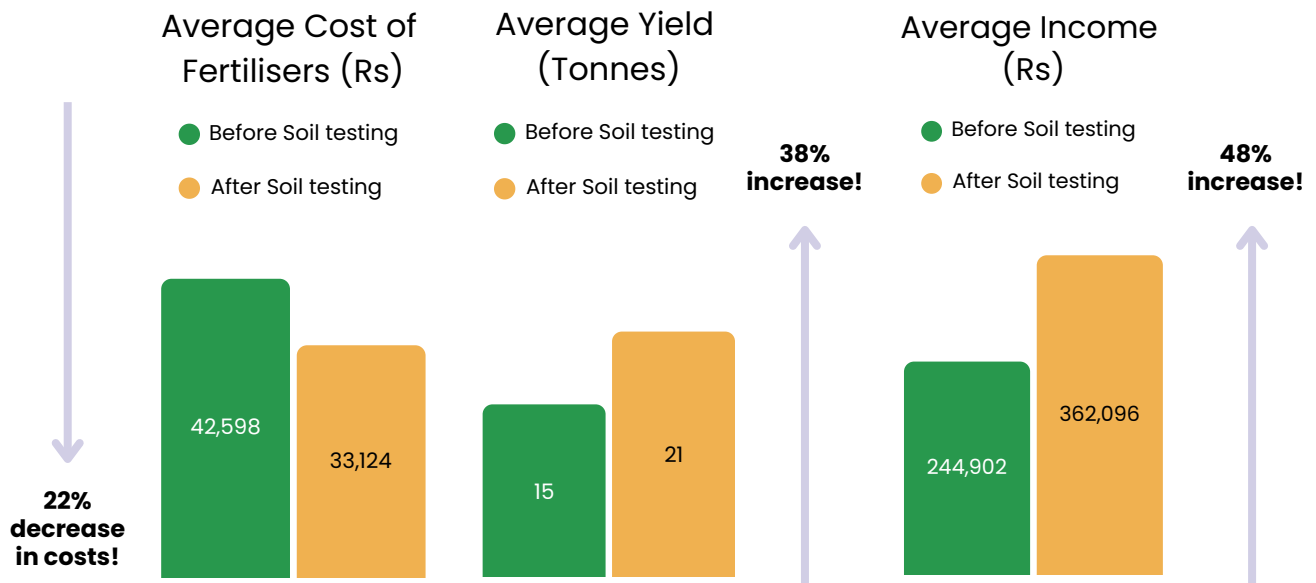


“Before, I was losing 10% of my crop to bacterial blight and wilt. Mann Deshi’s training and soil testing helped me adopt better disease management techniques. Now, my fruits are healthier, and my income has increased. The shed nets and organic practices have made my farm more sustainable. I am grateful to Mann Deshi for guiding me towards a more profitable and eco-friendly farming approach.”

— **Kanchan Vijay Pawar**, Pomegranate Farmer.

**Ganesh Shinde**, a farmer from a village called Diwad used to be a sugarcane farmer. With the guidance of Mann Deshi Foundation, he has successfully planted a Guava orchard with Marigold as an intercrop. The intercrop acts as a trap crop for pests and a repellent for nematodes as well as providing him with an extra income during festival seasons.

**Rahul Chirme’s** adoption of sustainable farming practices has had a positive impact beyond his farm. By reducing his dependency on chemicals and adopting carbon-friendly methods, he has set an example for fellow farmers in Bidal. His journey underscores the importance of environmentally conscious farming in combating climate change.



\*Sample size of 182 farmers growing the same crop

\*Sample size of 137 farmers who grew the same crop in the following growing season

## Impact on Profit

- **Better Utilisation of Land Through Crop Diversification:** Through this programme farmers are advised to use less resource requiring crops. Crop diversification helps them improve their soil and thus utilising their land for more suitable crops which helps them to fetch good returns.
- **Shift to Horticulture:** Shift from cereal or seasonal crops to horticultural crops helps the farmers gain good market returns. In a drought-prone area like Mhaswad, soil testing programme is providing the necessary tools to make agricultural profitable.
- **Cost Saves From Fertiliser Reduction:** Through this programme, farmers reduced their reliance on chemical fertilisers, which reduced their costs by an average of ₹ 26,826.

98%

**Farmers\* who did soil testing saw an increase in income**

**Megha Mane** from Mhaswad village in Mann taluka received her soil report for onion crop showing low phosphorus and slightly alkaline pH levels. Based on the advisory, she reduced nitrogen inputs, added super phosphate, and used organic amendments like Farm Yard Manure and Jivamrut. She also adjusted her irrigation schedule after her water test showed high salt content. As a result, she increased her onion yield by 30% and reduced fertiliser costs by 25%, with an overall income rise of 35%.

**Mann Deshi Foundation**

\*Sample size of 137 farmers who grew the same crop in the following growing season

# Sheti Shalas

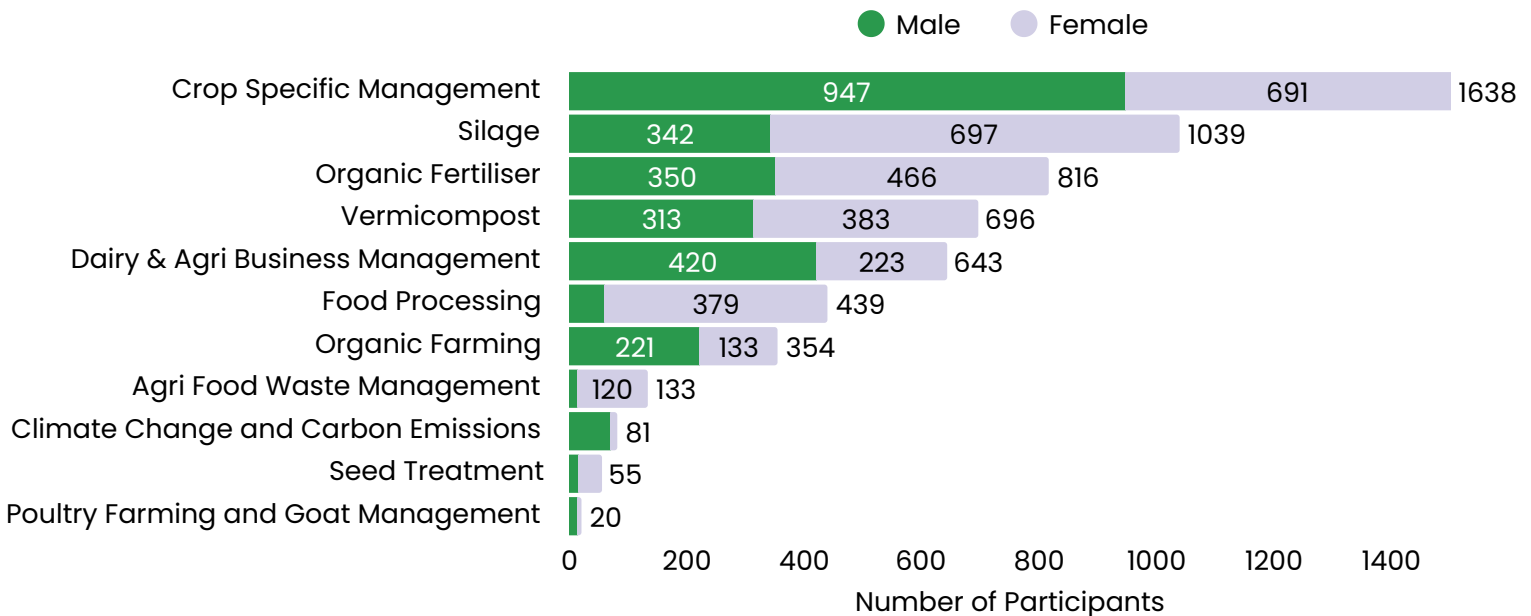
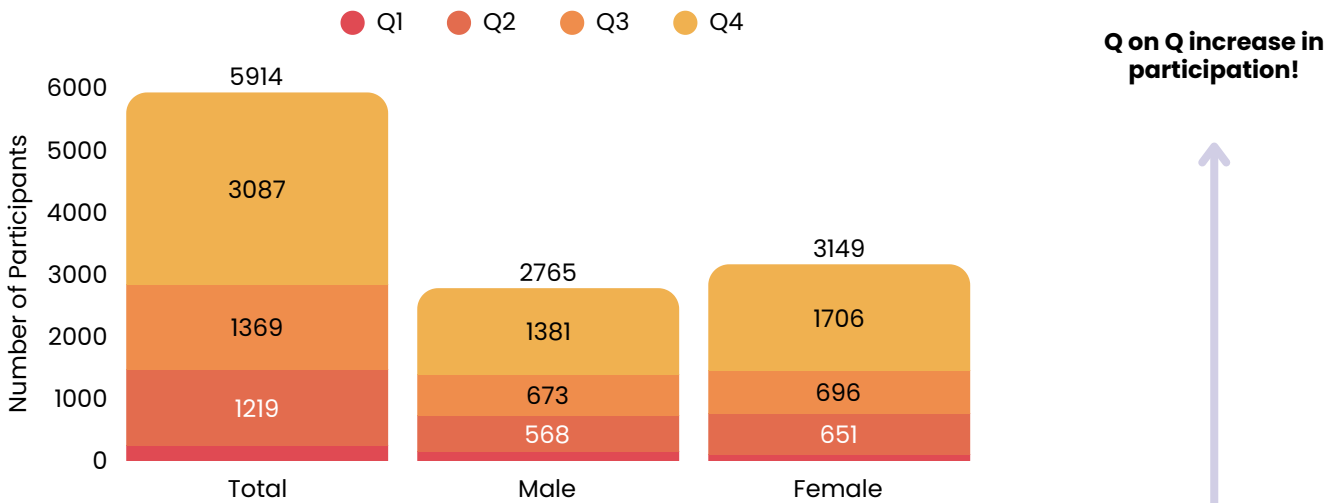
Sheti Shalas are training programmes aimed at upskilling farmers with the knowledge and tools they require to improve their farming practices and to start allied businesses.

## QoQ Participation

5,914 farmers have been trained through the Sheti Shala's against a goal of training 4,900 farmers. The **intended outreach has been surpassed by 120%!**

**298**

Sheti Shalas Conducted



## Impact on People

- **High Women Farmer Participation:** A key goal of the Sheti Shala programme is to encourage women farmers to participate in the decision making alongside men and make agriculture truly a household activity. The Sheti Shala's are often held at the farmers village or a close by location making it accessible for women farmers to participate. This draws them out of the house, empowering them with the knowledge and credibility required to participate in the decision making process regarding their farms.
- **Scientific Agricultural Practices:** Farmers get to learn scientific agricultural practices which can help them feel more confident in themselves and their harvest.
- **Agricultural Community:** These trainings are done in a community setting, giving farmers the opportunity to interact with each other and participate in collective learning.

For **Sandhyarani Deshmukh**, after participating in the Agri-Business Training, she decided to process and sell turmeric powder made from her farm produce. She packaged it under her own name and participated in the Mann Deshi Mahotsav, where she earned **₹80,000** in sales, gaining both financial returns and the **confidence to scale her product further**.

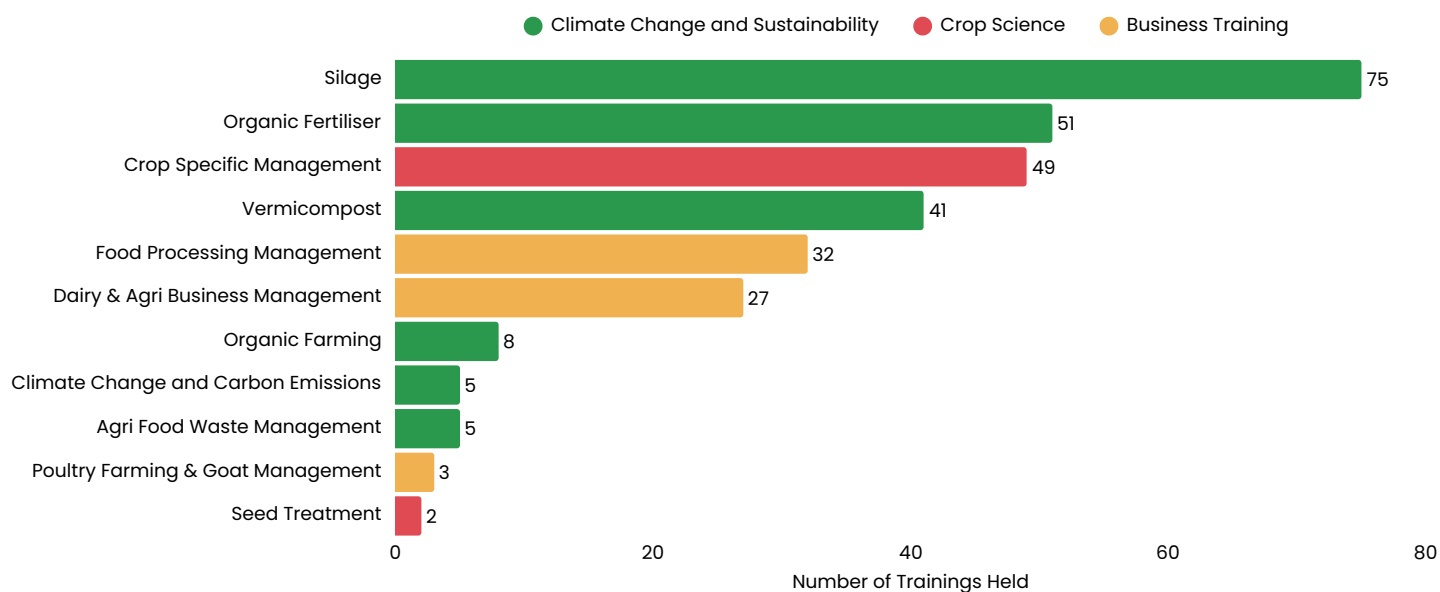


**Mrs. Kanchan Vijay Pawar** from Dhokmod village says:

"My life changed after attending the biogas preparation training with Mann Deshi. I successfully installed a biogas unit, and now I use it for all my cooking, saving on expensive LPG gas. Plus, the by product from the biogas unit is a fantastic fertiliser for my pomegranate orchard, which means I no longer need to buy costly water-soluble fertilisers. I'm incredibly grateful to Mann Deshi for empowering me with this knowledge and technology."

## Impact on Planet

- **Climate Change and Sustainability Focused Trainings:** 3,119 farmers have been educated on climate change, greenhouse gas emissions, environmental impact mitigation and sustainability.
- **Push For Crop Diversification:** A wide variety of crops are covered in crop specific trainings. Crops covered are ginger, sugarcane, okra, pomegranate, mango, grape, guava, jowar, bajra, maize and pear. Farmers are encouraged to practice crop diversification for increased soil health and income sustainability.
- **Waste Management:** Farmers are trained on ways to utilize their agricultural waste to create fodder, fertiliser, compost and other products. This has a two fold environmental impact, one on the efficient use of resources and secondly by preventing emissions from the burning of agricultural waste.
- **Organic Fertiliser:** Farmers are trained on how to create organic fertiliser that they can use on their farms, thus reducing their reliance on chemical fertilisers.



**Kanta Gaikwad**, a pomegranate farmer from Mardi village in Mann taluka reported a 20% reduction in water usage after adopting the double-dripper system. This resulted in healthier trees and improved fruit quality based on learnings through the workshops on irrigation and water management training, as well as visits of agronomists.

**Mann Deshi Foundation**

## Impact on Profit

- **Skills Training and Upskilling of Farmers:** Farmers previously did not have many opportunities to learn about scientific agricultural practices. Through the Sheti Shala programme, they have access to a range of topics on which to expand their knowledge base and use it to improve their farming practices to increase yield as well as start businesses.
- **Agri and Allied Business Trainings:** Farmers in the region are vulnerable in terms of income. These trainings equip them with the knowledge they need to supplement their income through undertaking agri and allied business ventures.
- **Waste Monetisation Opportunities:** Farmers are trained on how to utilise their agricultural waste to make fodder, fertiliser, compost and other products that they can use for their personal consumption and sell the surplus for a profit.
- **Crop Diversification and Income:** Through these trainings farmers are empowered to practice crop diversification which can lead to stability of income.



**Participants in business trainings were women farmers**

## Hear from a farmer herself!

**Shital Nikam** from the Nikamvasti village, **attended the Dairy and Agri-Business Management Training**. Inspired by the sessions, she started a small stall selling lassi and buttermilk using milk from her dairy unit. With some initial handholding and guidance from the programme, Shital not only created a new income stream but also gained confidence in marketing, pricing, and customer interaction, skills she had never used before. **Her venture has started generating steady revenue** beyond her traditional farming of jowar and onion, showcasing how farmers, including women farmers, can diversify their income and step into entrepreneurial roles within the agri-sector.

# Exposure Visits

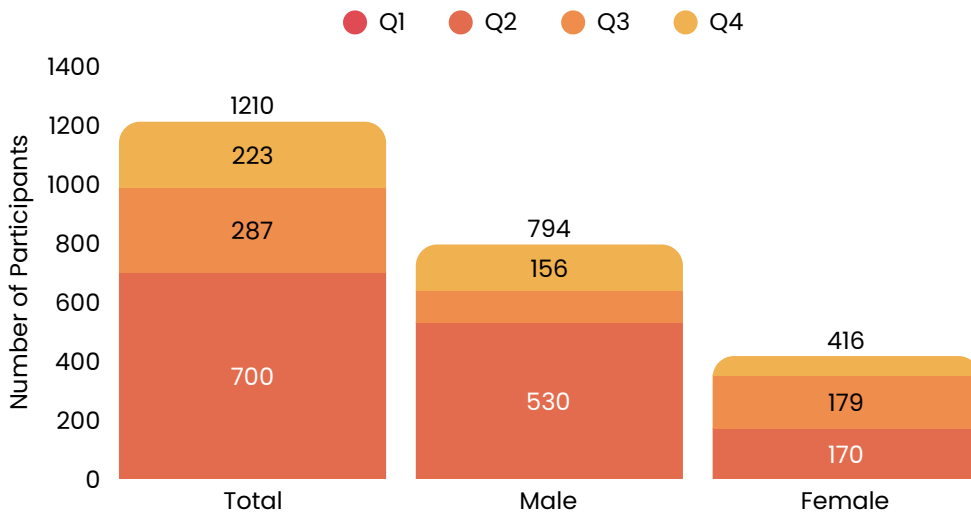
Exposure Visits are off-site visits that farmers are taken on to see how other organisations and farmers run their farms and businesses. The purpose of these excursions are to inspire farmers to learn from others best practices and start businesses of their own.

## QoQ Participation

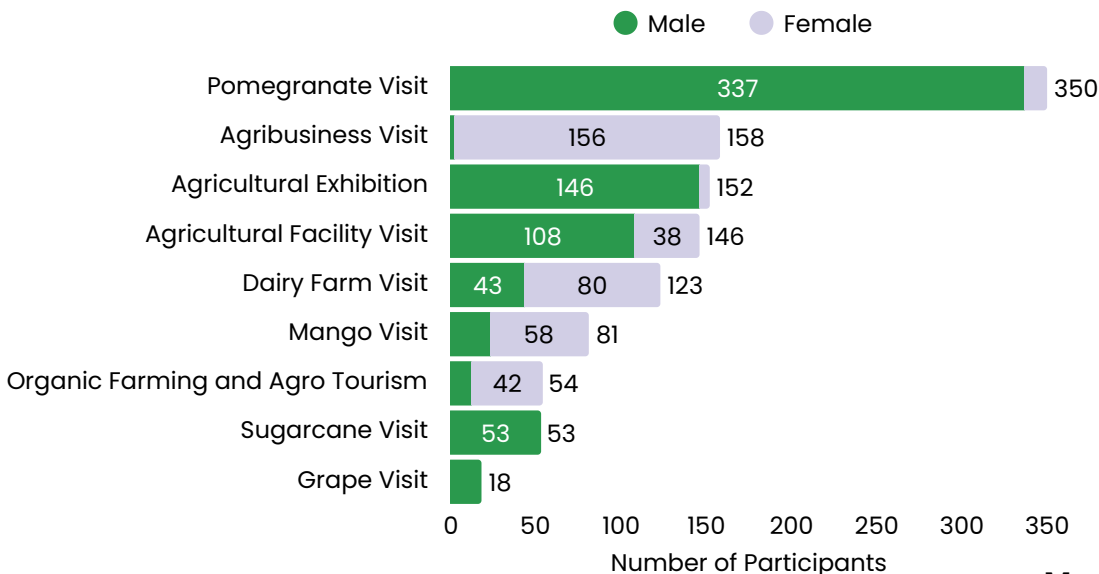
1,210 farmers have participated in Exposure Visits, one third of whom are women farmers.

26

Exposure Visits Conducted



### Participation by Topic



### Addressing low female participation.

Exposure visits are typically day long or overnight, making it challenging for women farmers to participate. They are responsible for the housework making it difficult for them to be out of the home for long periods of time. There is also societal stigma around women going on visits like this. Further, many of these visits are focused on horticultural crops, a field often dominated by male farmers. To correct this, efforts have been made to arrange visits aimed at inspiring women farmers to start their own businesses.

## Impact on People

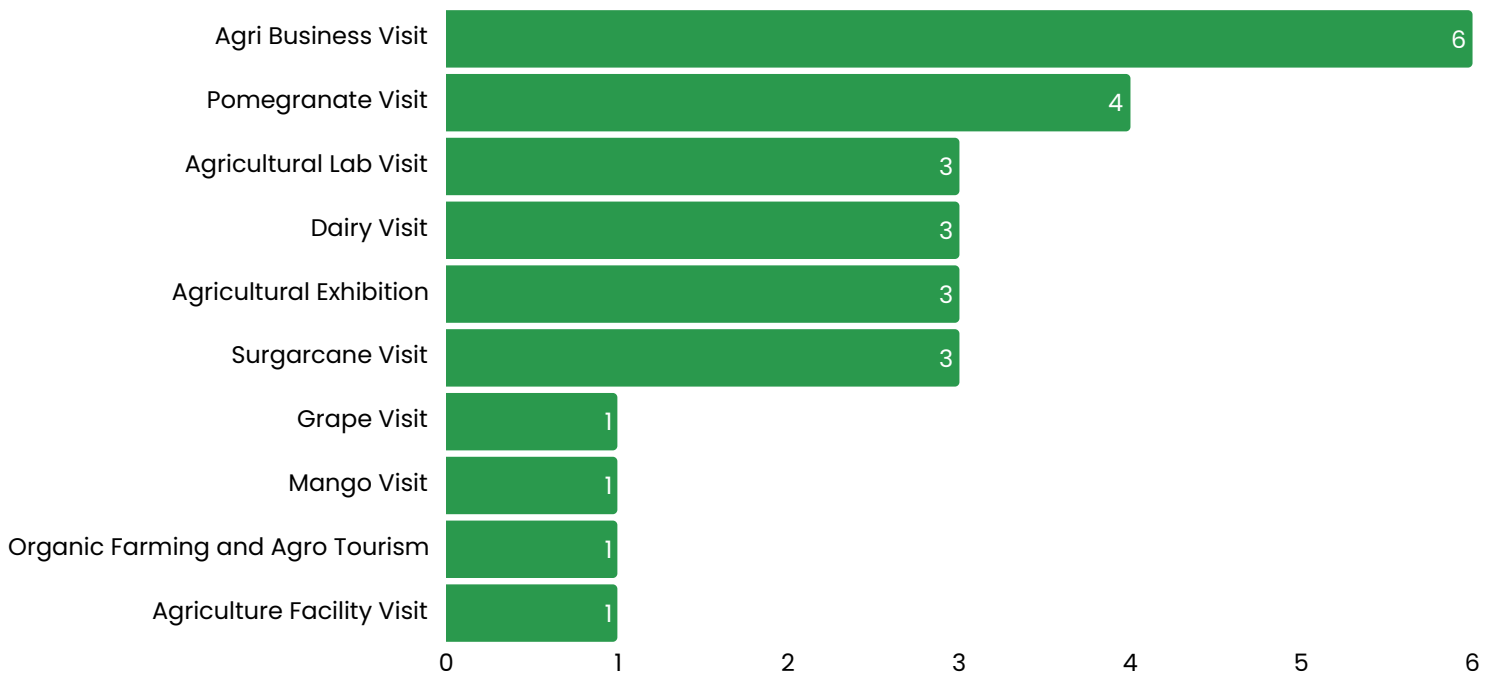
- **Source of Inspiration:** The purpose of the exposure visits is to inspire farmers to view agriculture as a business and encourage them to start agri and allied businesses of their own. Seeing how other farmers have managed to profit from agriculture gives visiting farmers the confidence that they too can achieve the same.
- **Peer to Peer Learning:** Some exposure visits are held on fields of farmers who have adopted new methods or technology, enabling visiting farmers to learn from their peers experiences.
- **Opportunity to go on a Visit:** Farmers tend to not have many opportunities to go on an outing. These visits give farmers a chance to go on an excursion which can bring some much needed fun and novelty to them.
- **Forming Networks:** Farmers get an opportunity to network with industry leaders and with farmers from other villages. Visits like the one to Kisan Vigyan Kendra also help farmers interact with other organisations in the agriculture space that can offer them support.
- **Increased Scientific Knowledge:** Some of the agricultural visits have been to Mann Deshi's Agricultural Lab, allowing farmers to understand the testing process from a scientific point of view.

## Impact on Planet

- **Meeting Sustainable Businesses:** Many of the visits are to farms or organisations that are considered to be sustainable. This helps inculcate good practices amongst visiting farmers.



## Number of Exposure Visits Held



## Impact on Profit

- **Learning from Industry leaders:** Farmers have the opportunity to visit industry leaders like Mapro and Sahyadri Farms to learn from their business models. Farmers can use these learnings to scale their own businesses.
- **Focus on Agri Business:** Most of the trainings held have had an agri business focus to inspire farmers, particularly women farmers, to start businesses of their own.



Pomegranate Farmer, **Mr. Tanaji Banagar** shares,

"The exposure visit to NRCP Solapur, organized by Mann Deshi, was a turning point for me. It gave me crucial technical knowledge about pomegranate farming. Combined with the five Pomegranate Discussion Programs I attended, I now have so much clarity on how to maintain my orchard. I'm even planning to plant a new two-acre orchard! I'm truly thankful to Mann Deshi for this invaluable support."

# Post Harvest Support

Post the soil testing programme, Sheti Shalas and exposure visits, farmers surveyed mentioned that they were still facing difficulties fetching a good rate from the market. To solve for this, Mann Deshi has extended post harvest support through its warehouses, cold storage, Mahotsavs and farmers markets. Mann Deshi also works on creating necessary connections and networks for farmers, enabling them to even export their produce. This programme is in a pilot stage and will be scaled over the next few years.

32

Farmers were given market linkages at Mann Deshi Mahotsav

78,822

Average revenue in ₹ per farmer at Mann Deshi Mohotsav

7

Farmers using cold storage facilities

88.5

Tonnes of produced stored in cold storage

## Impact on People

- **Giving Farmers Hope and Support:** Farmers surveyed reported feeling unsupported previously. They reported feeling high levels of stress and worry over being able to recover their costs and felt at the mercy of the vendors they sell to. Mann Deshi's post harvest support has given farmers the infrastructure needed to be able to face these market forces.

## Impact on Planet

- **Use of Renewable Energy:** The cold storage, warehouse and agricultural lab are powered by solar energy.
- **Reduced Fuel Consumption:** Through this programme, farmers share the trucks used for transportation which reduces overall fuel consumption and its subsequent GHG emissions.
- **Reduced Waste:** Through the warehouses and cold storage facilities provided by Mann Deshi at affordable rates, farmers have a space to store their crops. This increases the longevity of their produce and reduces crop waste.

## Crops Stored in Cold Storage in FY 2024 - 2025

5,002

Kg of Black Beans

990

Kg of Sorghum

1,200

Kg of Yellow Moong

81,335

Kg of Corn

## Impact on Profit

- **Increased Reach:** Despite growing better quality and quantity of crops, farmers are still not able to get a good price due to market dynamics. They feel left at the mercy of the vendors they sell to. Through Mann Deshi Mahotsav farmers had direct access to B2B and B2C market linkages, eliminating the cost of the middle man. Farmers have also been linked to exporters, thus extending their reach out of the country as well.
- **Withstand Market Forces:** Farmers were usually compelled to sell immediately post harvest at poor rates as they are vulnerable and did not have the infrastructure to transport their produce back to the farm from the market or store their produce long term. Farmers surveyed mentioned they had to take whatever price was offered to them and had little to no bargaining power. With the warehouses and cold storage facilities, farmers can now safely store their produce till market rates improve, allowing them to wait for a better price in the market.
- **Increased Earnings:** Since farmers are able to fetch a better price through Mann Deshi's post harvest support, they have managed to increase their income. At Mann Deshi Mahotsav, the 32 farmers who participated saw a collective sales revenue of ₹25,22,300 over a 5 day period. At the farmers market, one farmer selling pomegranate earned ₹74,790. Between Feb 2025 to May 2025, connections were made between exporters and farmers where 2 tonnes of Mangoes were successfully exported to the US and to Dubai worth ₹1.67 lakhs.



# SDG

# ALIGNMENT

The Sustainable Development Goals are a plan agreed to by all world leaders to build a greener, fairer, better world by 2030. Mann Deshi's Agriculture and Climate Action Programme aligns with **10 UN SDGs**.



## NO POVERTY

**1.4** By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

**Through this programme farmers are introduced to new technology and developments in their industry. They are also then assisted in acquiring the finance required.**

**1.5** By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.

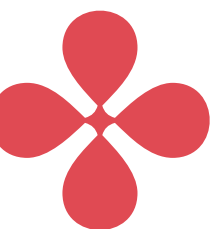
**Through the Sheti Shala workshops, drought affected farmers are made aware of climate change, its impacts and how to combat it.**



## ZERO HUNGER

**2.3** By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

**This programme has contributed to a significant increase in yield in a drought prone area as well as a considerable increase in income for small holder farmers.**



**2.4** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

**The programme is focused on strengthening the agricultural industry in drought prone regions through support given to farmers and directly impacts soil health.**

**2.6** Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

**The programme is based in rural Maharashtra, investing in agricultural infrastructure and technology.**



## QUALITY EDUCATION

**4.3** By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.

**The Sheti Shala programme is focused on providing vocational training on agriculture for people of all genders.**



## GENDER EQUALITY

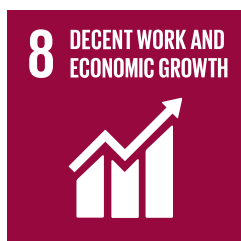
**5.1** End all forms of discrimination against all women and girls everywhere.

**All Soil Sakhis hired are women from the community, creating job opportunities for them. Women farmers are also invited to participate in every level of the programme.**

**5.5** Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.

**The programme empowers women to take part in the decision making process on their farms and within their households.**





## DECENT WORK & ECONOMIC GROWTH

**8.2** Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors.

**The programme exists within the labour intensive agriculture sector. It has seen a sharp increase in yield. The exposure visits, Sheti Shalas and add on initiatives drive technology adoption and innovation in the sector.**



## RESPONSIBLE CONSUMPTION & PRODUCTION

**12.8** By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

**Through the exposure visits, Sheti Shalas, agronomist visits and WhatsApp group, information about sustainable agricultural practices are propagated.**



## CLIMATE ACTION

**13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

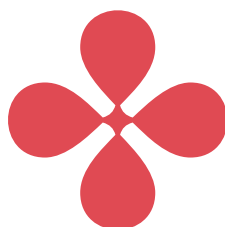
**Specific trainings have been held focused on climate change and it's mitigation.**



## LIFE ON LAND

**15.3** By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.

**This programme is based in drought prone regions with a focus on improving soil health and preventing ground water contamination through chemical fertiliser use.**



# ALIGNMENT WITH INDIAN AGRICULTURAL POLICY

India's Agricultural Policy as outlined by the Ministry of Agriculture and Farmers Welfare, is a government-led framework aimed at increasing agricultural output, improving productivity, and uplifting farmers' livelihoods. It plays a vital role in tackling key sectoral challenges and promoting sustainable growth through innovative techniques and supportive interventions.

## IMPROVING INPUT PRODUCTIVITY

The policy seeks to boost crop yields and overall agricultural productivity. This aspect focuses on improving the efficiency and effectiveness of farming by optimizing the use of key agricultural inputs, including high-yielding variety (HYV) seeds, fertilisers, pesticides, and irrigation.

Through the Agriculture and Climate Action Programme, farmers are encouraged to use optimum level of fertilisers as well as organic inputs like Farm Yard Manure and Jivamrut. To make the practices more sustainable drip irrigation has also been promoted.

## VALUE ADDITION AND CROP DIVERSIFICATION

Value addition involves enhancing the worth of agricultural produce through methods such as processing, packaging, and branding, enabling farmers to earn better prices and higher incomes. Crop diversification refers to the practice of cultivating multiple types of crops instead of depending on just one, reducing risk and improving resilience.

Through the Agriculture and Climate Action Programme, farmers are encouraged to try new crops according to available resources and soil quality. Crops having lower carbon footprint are promoted. Many farmers after adopting crop rotation techniques with maize, wheat, and onion experienced significant benefits.

## ENVIRONMENTAL PROTECTION AND SOIL HEALTH

Promoting environmental protection by preventing soil erosion, pollution, and the depletion of water resources.

The Agriculture and Climate Action Programme fosters sustainable practices through soil testing, mulching, crop residue utilisation and organic farming.



## **AGRICULTURAL RESEARCH AND EXTENSION SERVICES**

Agricultural research aims to create innovative technologies, improved crop varieties, and advanced farming practices to boost productivity and promote sustainability. Extension services play a key role in transferring this knowledge to farmers through training sessions, advisory support, and on-field demonstrations.

**The Agriculture and Climate Action Programme has enhanced the scientific knowledge of farmers through agronomist support, Sheti Shalas, exposure visits and introduction to new technology. Farmers are also trained in climate awareness, carbon emissions and sustainable farming practices.**

## **MODERNIZING AGRICULTURAL PRACTICES**

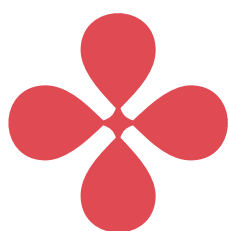
This component focuses on the adoption of advanced technologies and modern farming practices. The Agricultural Policy promotes precision agriculture, farm mechanization, and efficient irrigation systems to enhance productivity and resource use.

**The Agriculture and Climate Action Programme uses modern scientific methods like soil testing to help farmers better understand their soil needs. It teaches modern farming methods like using yellow and blue traps for pest control, organic sprays to attract honeybees, and stem paste to protect mango and pomegranate plants. It provides information on weather stations to help farmers gain real-time weather updates for better crop planning.**

## **SUPPORTING POOR AND MARGINAL FARMERS**

The Agricultural Policy aims to address the needs of poor and marginal farmers through land reforms to abolish intermediaries, expanding institutional credit to provide financial support, and providing subsidies or incentives to make farming more accessible and sustainable for those with limited resources.

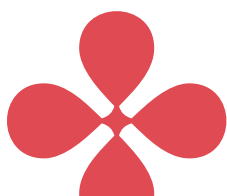
**The Agriculture and Climate Action Programme is aimed at small and marginal farmers. The cost of the soil testing has been kept low so that it remains affordable. The Sheti Shalas and Exposure visits are free of cost. The access to soil labs, agronomist visits, trainings and other benefits of the programme are offered to farmers at a nominal cost of ₹600.**

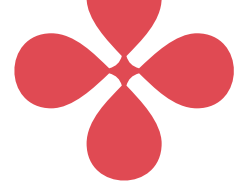


## ELIMINATING BUREAUCRATIC BARRIERS

This aspect of the Agricultural Policy focuses on streamlining administrative procedures to remove obstacles that impede agricultural development. By simplifying processes related to land acquisition, subsidy allocation, and access to credit, the policy seeks to empower farmers and agricultural organizations to function more efficiently and autonomously.

**As part of the Agriculture and Climate Action Programme, an add-on service is helping farmers get access to government subsidiary schemes. This includes schemes related to orchard farming, water storage, irrigation, crop cover, kisan card, amongst others. Mann Deshi team members help the farmers with information about the available schemes, registration and subscription processes.**





# Programme Recognition

Mann Deshi has received much recognition for its Agriculture and Climate Action Programme. The programme has **won the Dasra D4GX Challenge** and was awarded mentorship by **Bloomberg**.

The D4GX Challenge was focused on data for good exchange. Mann Deshi was recognised for transforming communities through its data-led innovations. It's agriculture, soil, water and crop testing initiatives were highlighted, where farmers are provided with vital data about their soil health and water quality as well as crop schedules to help them improve their yield.

The Bloomberg mentorship awarded will help Mann Deshi streamline these initiatives and deliver them in a more impactful way. Mann Deshi has already begun this streamlining by upgrading their processes from manual computation to using a customised software built for this programme.

Mann Deshi was heralded as a changemaker, leading the way in shaping a brighter, more inclusive future with Data for Good under the Climate and Sustainability section.

**ANNOUNCING WINNERS**

Data for Good Exchange 2024 India

**Empowerment Challenge**

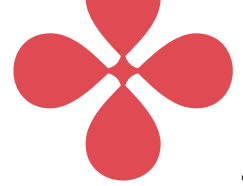
#D4GX

CLIMATE & SUSTAINABILITY

Mann Deshi Foundation

Data Solution  
Agriculture Soil, Water  
Crop Testing Program

#D4GX



# Media Coverage

**Study Tour for Women Entrepreneurs by Mann Deshi : Visit to Mapro Garden Food Processing Unit at Panchgani by Women Participants** - A study tour was organized for women from Mann Desh under the theme of Modern Farming, by the Mann Deshi Soil and Water Testing Center. During this tour, participants had the opportunity to explore and learn about new technologies.

सकाळ

## 'माणदेशी'च्या वतीने उद्योजकांसाठी सहल पाचगणीतील मॅप्रो गार्डन फूड प्रोसेसिंग प्रकल्पाला महिलांची भेट

म्हसवड, ता. २७ : येथील माणदेशी फाउंडेशन संघटित माणदेशी शेती, माती व पाणी परीक्षण केंद्राच्या वतीने शेतकऱ्यांना आधुनिक शेती व शेतीपुरक व्यवसाय, उद्योगांची माहिती देण्याच्या उद्देशाने शेताकरी व महिला नवउद्योजिकांसाठी सहलीचा उपक्रम सुरू करण्यात आला आहे.



पाचगणी : मॅप्रो गार्डन फूड प्रोसेसिंग प्रकल्पाच्या भेटीप्रसंगी खटाव तालुक्यातील महिला.

या उपक्रमामार्फत खटाव तालुक्यातील महिलांना पाचगणी येथील मॅप्रो गार्डन फूड प्रोसेसिंग प्रकल्पाला भेट देण्याची संधी देण्यात आली.

मॅप्रो ही फळप्रक्रिया कारखाने कंपनी १९५९ पासून महाप्रद्युक्त कार्यत असून, फळांची चव आणि गुणवत्ता जपता आहे. येथील फ्रॉमिसिस्ट किरोरी व्होरा वॉनी तस्कल सुरू केलेली ही कंपनी आज मसूर व्होरा यांच्या नेतृत्वाखाली मोठा ब्रँड बनली आहे. मॅप्रोने कढळासमस्या

शेतकऱ्यांना तांत्रिक मार्गदर्शन देऊन त्यांच्या उत्पादनांची गुणवत्ता वाढवण्यात महत्त्वपूर्ण भूमिका बजावली असून, मॅप्रो जॅम, स्वॅरींग, मित्राई, चॉकलेट आणि इतर अनेक उत्पादने बनवते. त्यांची उत्पादने देशभरात प्रसिद्ध आहेत.

या सहलीत महिलांना मॅप्रोचे हे यश आणि या कंपनीच्या उत्पादनाबाबतची माहिती मिळाल्यामुळे उद्योगाबाबत प्रेरणा मिष्ट झबळी. यापूर्वी मासिक येथील प्रगल्बाल कांदा, ब्रास बागायतदार शेताकरी व शेती उत्पादनांवरील आधारित फळ प्रक्रिया उद्योगास भेट देऊन अच्युतस कल्याणसाठी माणदेशी फाउंडेशनने माग

तालुक्यातील शेतकऱ्यांच्या सरलाने आणवून केले होते.

या वेळी मॅप्रोचे संचालक मसूर व्होरा यांनी माणदेशी फाउंडेशनचे आधार मानले. ते म्हणाले, "अशा कार्यक्रमांमुळे शेताकरी महिलांना स्वतःचे उद्योग सुरू करण्यासाठी प्रेरणा मिळते आणि प्रामाण अर्थव्यवस्था मजबूत होते."

Satara, Satara Today 28/10/2024, Page No. 8

## शेतकऱ्यांना डाळिंब व्यवस्थापनाचे धडे

### माणदेशी फाउंडेशनच्या वतीने मेळावा ; शास्त्रज्ञांकडून मार्गदर्शन

म्हसवड, ता. २९ : राष्ट्रीय डाळिंब संशोधन केंद्रच्या साहाय्याने डाळिंब व्यवस्थापनाच्या मार्गदर्शन बैठक, पाच गार्डन फूड प्रोसेसिंग युनिट, पाचगणी येथील माणदेशी फाउंडेशनच्या वतीने आयोजित करण्यात आली. यावेळी शास्त्रज्ञांच्या मार्गदर्शनाखाली शेतकऱ्यांना डाळिंब व्यवस्थापनाबाबतचे महत्त्वपूर्ण माहिती मिळाली.



म्हसवड : शेतकऱ्यांना मार्गदर्शन करताना अच्युत सिन्हा, सचिवतेत दूरी भाकरा.

शेतकऱ्यांना डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देताना अच्युत सिन्हा, सचिवतेत दूरी भाकरा.

यावेळी डाळिंब व्यावसायिकांच्या समस्या सोडवण्यासाठी त्यांची सरला देण्यात आली. यावेळी डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले. यावेळी डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले.

यावेळी डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले. यावेळी डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले.

# पुण्य नगरी

## माणदेशी फाउंडेशनचा डाळिंब परिसंवाद कार्यक्रम उत्साहात

पुण्य नगरीत आयोजित झालेल्या डाळिंब परिसंवाद कार्यक्रमात भागीदारी करणाऱ्या शेतकऱ्यांना डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले.



माणदेशी फाउंडेशनच्या वतीने आयोजित झालेल्या डाळिंब परिसंवाद कार्यक्रमात भागीदारी करणाऱ्या शेतकऱ्यांना डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले.

यावेळी डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले. यावेळी डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले.

यावेळी डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले. यावेळी डाळिंब व्यवस्थापनाबाबतचे मार्गदर्शन देण्यात आले.

## Management Training for Pomegranate Farmers by Mann Deshi

On behalf of the Mann Deshi Foundation, scientists from the National Research Centre on Pomegranate (NRCP), Solapur were invited today to guide pomegranate farmers. During this session, farmers received valuable insights on orchard management, pest control, bacterial blight (oily spot disease), and spot disease management.

# Support for Pomegranate Farmers Assured: Dr. Rajiv Marathe

In a joint initiative by the Mann Deshi Foundation and the National Research Centre on Pomegranate, farmers were guided on how to adopt modern technology for improved farming practices.

Eminent scientists Dr. Somanath Pokhare, Dr. Manjunath, and Dr. Dhupal were present at the event, providing expert insights and support.

# लोकमंथन

## डॉ. राजीव मराठे शेतकऱ्यांना सहकार्य करणार : डॉ. राजीव मराठे

पौढखले / बागमंडार : राष्ट्रीय डॉ. राजीव मराठे आणि डॉ. राजीव मराठे यांच्या संयुक्त प्रयत्नांमुळे शेतकऱ्यांना आधुनिक तंत्रज्ञानाचा प्रसार होईल. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आधुनिक तंत्रज्ञानाचा प्रसार करून घ्यावा. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आधुनिक तंत्रज्ञानाचा प्रसार करून घ्यावा.

मंडळ, डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आधुनिक तंत्रज्ञानाचा प्रसार करून घ्यावा. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आधुनिक तंत्रज्ञानाचा प्रसार करून घ्यावा.

कल्याणची गादी त्यांनी घेतली होती. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आधुनिक तंत्रज्ञानाचा प्रसार करून घ्यावा.

बलदवा या शेतकऱ्यांकून देणे हे तितकेच महत्त्वाचे आहे. शेतकऱ्यांनी आधुनिक तंत्रज्ञानाचा प्रसार करून घ्यावा.

कारण, शेतकऱ्यांनी आधुनिक तंत्रज्ञानाचा प्रसार करून घ्यावा. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आधुनिक तंत्रज्ञानाचा प्रसार करून घ्यावा.

# माणदेशींनी आंबा लागवडीकडे वळावे

सुशील बलदवा; म्हसवडला केशर आंबा बागायतदार मार्गदर्शन मेळावा

म्हसवड, ता. २१ : वंब, उष्ण व उमट हवामानासह पुण्याद जमिनीत आंबा लागवडीकडे शेतकऱ्यांनी वळणे गरजेचे आहे. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आंबा लागवडीकडे वळणे गरजेचे आहे.



शेतकऱ्यांना आंबा लागवडीकडे वळणे गरजेचे आहे. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आंबा लागवडीकडे वळणे गरजेचे आहे.

### पाकिस्तानातून मोठी निर्यात

सध्या भारतातून पाकिस्तानातून मोठी निर्यात होत आहे. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आंबा लागवडीकडे वळणे गरजेचे आहे.

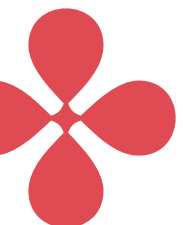
शेतकऱ्यांनी आंबा लागवडीकडे वळणे गरजेचे आहे. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आंबा लागवडीकडे वळणे गरजेचे आहे.

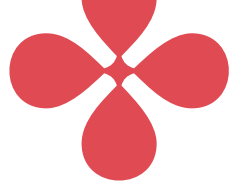
शेतकऱ्यांनी आंबा लागवडीकडे वळणे गरजेचे आहे. डॉ. राजीव मराठे यांच्या मार्गदर्शनाखाली शेतकऱ्यांनी आंबा लागवडीकडे वळणे गरजेचे आहे.

## Mango Cultivation Encouraged for Farmers in Mann Desh

Mann Desh, with its cool, humid tropical climate and well-drained lateritic soil, is well-suited for mango cultivation. Highlighting this, Mr. Sushil Baldawa, Founder President of the Mahakesar Mango Growers Association, shared insights during the event, stating that mango can thrive excellently in this region.

The event was organized by Mann Deshi to address the various challenges faced by mango-growing farmers. This initiative was taken under the vision of Karan Sinha.

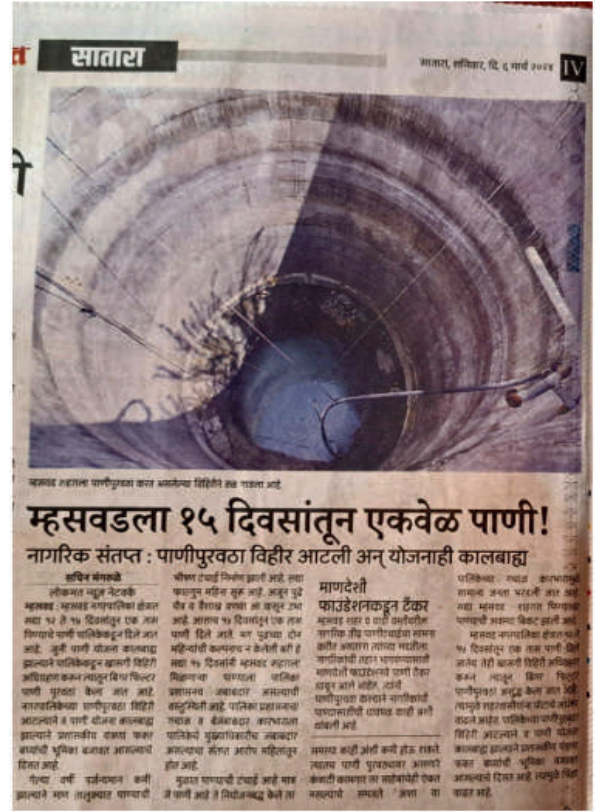




### Water Once Every 15 Days in Mhaswad – Supply Well Dries Up, Scheme Outdated

The well that supplies water to Mhaswad has dried up, resulting in water being supplied only once every 15 days. The existing water supply scheme has become outdated.

In response, Mann Deshi Foundation has started supplying water by tanker to Mhaswad town and nearby settlements. This has provided some relief to the residents.



### लोकमत



माण तालुक्यातील कुकुडवाड येथे द्राक्ष उत्पादक शेतकऱ्यांसाठी माणदेशी फाउंडेशनच्या वतीने द्राक्ष पीक परिसंवाद कार्यक्रम उत्साहात पार झाला.

## माणदेशी फाउंडेशनच्या वतीने द्राक्ष उत्पादकांसाठी परिसंवाद

लोकमत न्यूज नेटवर्क

**महसवड :** माण तालुक्यातील द्राक्ष उत्पादक शेतकऱ्यांसाठी माणदेशी फाउंडेशनच्या वतीने द्राक्ष पीक परिसंवाद कार्यक्रम उत्साहात पार झाला. या कार्यक्रमासाठी प्रमुख पाहुणे म्हणून कृषी क्षेत्रातील तज्ज्ञ मंगेश भास्कर, माणदेशी फाउंडेशनचे करण सिन्हा तसेच माण तालुक्यातील डाॅ.लिंब उत्पादक शेतकरी बांधव यावेळी उपस्थित होते.

कार्यक्रमात द्राक्ष बागांची प्रत्यक्ष भेट घेऊन करण्यात आली. या भेटीदरम्यान तज्ज्ञांनी बागांमधील विविध समस्या पाहिल्या आणि शेतकऱ्यांच्या

अडचणींचा सखोल अभ्यास केला. शेतकऱ्यांना येणाऱ्या अडचणींवर कशी मात करायची, त्याविषयी तज्ज्ञांनी माहिती दिली. विशेषतः यंदा लवकर छाटणी केल्यानंतर काडी व्यवस्थापनावर भर देण्यात आला. पावसामुळे होणाऱ्या घड कुजसारख्या समस्यांवरही चर्चा झाली. संजीवकांचा अचूक वापर करणे, पानदेह परीक्षण करण्याची गरजही शेतकऱ्यांना पटवून दिली. या प्रक्रियेमुळे झाडामधील अन्नद्रव्यांची कमतरता लक्षात येते व त्यानुसार खत व्यवस्थापन करणे गरजेचे आहे. द्राक्ष शेतीतील विविध बारकावे समजावून सांगण्यासाठी सखोल प्रेझेंटेशनही सादर झाले. (वा.प्र.)



### Panel Discussion for Grape Growers Organized by Mann Deshi Foundation:

The event was held directly on a farmer's field, focusing on real challenges faced in grape cultivation. Agricultural expert Mr. Mangesh Bhaskar provided guidance on issues such as berry rotting, cane management, and pesticide spraying. Mr. Karan Sinha was also present during the event, where he listened to and understood the problems faced by the farmers.

Mann Deshi Foundation

## म्हसवड हद्दीत शेतकऱ्यांना सोलर पंपाचा मार्ग मोकळा करण सिन्हा यांच्याकडून पाठपुरावा

लोकमत न्यूज नेटवर्क  
म्हसवड : पीएम कुसुम सोलर पंप योजना म्हसवड परिसरातील शेतकऱ्यांना मिळण्याचा मार्ग मोकळा झाला आहे. करण सिन्हा यांच्या पाठपुराव्याला यश आले आहे. यामुळे म्हसवड परिसरातील शेतकरी बांधवांमध्ये आनंदाचे वातावरण आहे.

म्हसवड नगरपरिषद हद्दीतील शेतकऱ्यांना पीएम कुसुम (सोलर पंप) किसान योजनेच्या लाभापासून आजवर वंचित राहावे लागत होते. मसाईवाडी, मासाळवाडी, वीरकरवाडी या गावांची नावे या योजनेच्या पोर्टलवर दिसत नसल्याने योजनेचा लाभ घेता येत नव्हता. ही बाब करण सिन्हा यांच्या निदर्शनास शेतकऱ्यांनी आपणू दिल्यावर ही बाब समजली असल्याचे करण सिन्हा यांनी सांगितले.

ही बाब सातारा जिल्हाधिकारी जितेंद्र डुडी, राज्य कृषी सचिव यांना प्रत्यक्षात भेट घेऊन हा विषय मार्गी लावला. जिल्ह्याच्या व राज्याच्या सर्व अधिकाऱ्यांना हा विषय समजावून सांगत त्यांच्याशी पत्र व्यवहार करून

आधुनिक माणदेश हा शेतकऱ्यांच्या कष्टाने घडत आहे. शेतकरी आधुनिक होत आहे. पीएम कुसुम सोलर पंप योजनेचा म्हसवड हद्दीतील शेतकऱ्यांना लाभ मिळण्याचा मार्ग मोकळा झाला आहे. यामुळे २०२४-२०२५ या काळात ४०-४५ कोटी रुपयांचा फायदा होईल. हा विषय मार्गी लावण्यास सर्व शेतकऱ्यांनी माझ्याबरोबर दिस-रात्र एक करून काम केले.

- करण सिन्हा, म्हसवड

येथील शेतकऱ्यांच्या विविध प्रश्नांसाठी करण सिन्हा कायमच अग्रणी असतात. येथील शेतकरी बांधवांच्या अडीअडचणी सोडवण्यासाठी ते कायमच पुढाकार घेतात, ते शेतकऱ्यांसाठी सर्वज्ञ आहेत.

- सोमनाथ केवटे, शेतकरी

पोर्टलवर नावे जोडून घेतली. त्यामुळे या परिसरातील शेतकरी सोलर पंपसाठी अर्ज करू शकणार आहेत. त्यामुळे समाधान व्यक्त होत आहे.

Hello Satara  
Page No. 3 Apr 03, 2024  
Powered by: etelego.com

**Solar Pump Distribution Begins for Farmers in Mhaswad Area** - Due to the persistent efforts of Hon. Karan Sinha, the distribution of solar pumps has begun for farmers within the Mhaswad municipal limits in the Maan region. Farmer Somnath Kewate expressed his thoughts, saying that Karan Sinha has always been assertive in addressing various issues faced by the farmers in this area.

## Farmers Should Receive the Benefits of Agricultural Schemes

A memorandum has been submitted demanding that farmers in the Mhaswad municipal area get proper access to various government-supported agricultural schemes. In the Mhaswad region, crops like pomegranate, mango, custard apple, and grapes are cultivated on a large scale. However, farmers are not receiving adequate benefits from the subsidized government schemes. If these schemes are properly implemented, farming will become more modern, the rural economy will be strengthened, and farmers' development will get a strong boost. To ensure that farmers receive the benefits they are entitled to, a representation was made to the municipal authorities.

## शेतकऱ्यांना मिळेल कृषी योजनेचा लाभ

म्हसवड पालिका कार्यक्षेत्रातील शेतकऱ्यांची व्यथा; मुख्याधिकाऱ्यांना निवेदन

म्हसवड, ता. १२ : म्हसवड पालिका कार्यक्षेत्रातील सुमारे पाच हजारांहून अधिक संख्येतील शेतकऱ्यांना शासनाच्या विविध कृषी अनुदान योजनेच्या लाभापासून शासनाने वंचित ठेवण्यात आले आहे. याबाबत करण सिन्हा यांच्या नेतृत्वाखाली येथील शेतकऱ्यांनी पालिका मुख्याधिकारी तथा प्रशासक डॉ. सचिन माने यांना निवेदन देऊन शासनाच्या अनुदानातील कृषी योजनेचा लाभ मिळवून देण्याची मार्गणी केली.

येथील पालिका कार्यक्षेत्रात सुमारे सातशे हेक्टरहून अधिक बागायत शेती क्षेत्र आहे. हंगामी पिके तसेच ऊस, डाळिव, आंबा, सीताफळ, द्राक्षे, केळी आदी बागा लागवडीतून शेतकरी कष्ट करीत आहेत; परंतु शासनाकडून



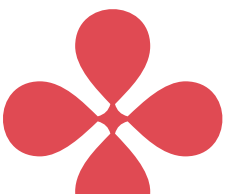
म्हसवड : शासनाच्या अनुदानित कृषी योजनेत पालिकेच्या कार्यक्षेत्रातील नवीन महसुली गावांचा समावेश करावा, याबाबतचे निवेदन प्रशासक डॉ. सचिन माने यांना देताना करण सिन्हा व शेतकरी.

विविध कृषी अनुदानित योजनांचा लाभ मिळत नाही. तो मिळाल्यास शेतकरी आधुनिक होऊन यशस्वी होईल. ग्रामीण अर्थव्यवस्थेवर या शेतीचा मोठा हातभार आहे. महाईबीटीच्या काही योजना

म्हसवड विभागाला लागू होत नाहीत. सोर ऊर्जा पंप योजनाही उपलब्ध नाही. म्हसवड विभागात अल्पधूषारक (पाच एकरपेक्षा कमी क्षेत्र) शेतकरी आहेत.

पान ८ वर >

Satara, Satara-Today  
13/03/2024 Page No. 1



### Government Scheme Awareness Camp Held with Enthusiasm in Mhaswad

Under the initiative of Hon. Karan Sinha, a guidance camp on government schemes was organized in Mhaswad. During the event, information was shared about the benefits of various schemes such as the Annasaheb Patil Economic Development Corporation, the OBC Finance and Development Corporation, the Sant Rohidas Leather Industries and Charm Development Corporation, and the Mahatma Phule Backward Class Development Corporation, among others.

## पुण्य नगरी

### महसवडमध्ये योजनांचा मार्गदर्शन मेळावा उत्साहात

**महसवड / प्रतिनिधी**  
 मयमासीत रोडटय्या घटकातील यत्कीरित शासनाच्या विविध योजना व शरसकीय यत्त किडानेव यीने. य त्रेडुने कुरल सिना यंया संकलनेनून महसवड केये विविध शासकीय योका,एडकी यीने योनास मेळया विविध महामंडलाये अधिकाारी, नगरीकांच्या उरिस्वातित नयसातत इला.  
 विविध शासकीय योकांयानु शाका राजवा आते. त्या या दुष्काळी भावातील नगरीक, तरुण यवालय महत्त समकला पाहिलेय यासटी करण सिना वानी राज्य शासकाच्यवरीने राववण्वात येत असलेल्या अण्णसायिध फटील अधीक यणस निवडस महामंडळ, यारासयणीय विल अधि विकास लोकीये महामंडळ, सात रोडियस फलोडिय अधि यंबका विकास महामंडळ, यसंराय यीक विमुसत जाती व घटका जमाने विकास महामंडळ,यसराटु राज्य विलय विल व विकास महामंडळ,लेकाशाती अण्ण भाड साडे विकास महामंडळ,महात्मा फुले मागसयन विकास महामंडळ, डार मागस बाडन कल्याण विधान,समान कल्याण विधान,विला उडोय केड,समान कल्याण विधान महत्वाच्या योजना, याला मुळमंडळी माळी लाडकी यीण योजना या विविध योनासये किल्लाया

दिकाणी यवालय असलेले अधिकायांय कलवाय येये अर्थात कला येथेत यानु नगरीकांना विविध योनासची यीति स्पष्टत आली.  
 योकोली नशीकांच्या शंका कुकांयने निरसवाही योकोली अधिकायांकडून कलवात आले. योनास लुभ येणकाराती काय काय कायपटरी लावलात? याकीही यीती योकोली स्पष्टत आली.  
 शासकीय योनासये मार्गदर्शन मेळयलात लोकीये येना सिना, विविध योनासये शासकीय अधिकाारी व योकोली संस्थये अधिकाारी, लयायरीकर महसवडमधील नेड नागीक, सीतल, तरुण यानु, सार्व सामाजिक योकांयने उरिस्वातत जेते

Satara Edition  
Aug 25, 2024 Page No. 04

## पुण्य नगरी

### केंद्र, राज्याच्या विविध योजनांचा लाभ देण्याची मागणी

**महसवड / प्रतिनिधी**  
 येथील नगरपरिषद हद्दीतील शेतकऱ्यांन महत्त्व राणी घट्टीन ग्रामीण रोकसर हमी योनास तसेच राज्य व केंद्र शासनाच्या विविध योनासंचा लाभ मिळया. 'क' यन यसरपरिषद हद्दीन अनेक यसाकी योनासंचा लाभ शेतकऱ्यांन होवे यत अयकाय महसवड नगरपरिषद आते. या ठिकाणी कोणत्याही योनासचा लाभ मिळत नसल्याने मुळशिक्षारी डॉ.रविन माने योन करण सिना, महसवड नगरपरिषद हद्दीतील शेतकरी योयवांने निवेदन दिले.  
 निवेदन, महसवड भागातील शेतकऱ्यांना केंद्र व राज्य सरकारकडून विषयक सिचन, शिडार, सिधन शिडार,अण्णवले शीती अण्ण सीरपीपासाटी दिले यणार अडुनत तसेच गाई, मीस

**मुख्याधिकारी डॉ. रविन माने योन देतना करण सिना, शेतकरी योयवा.**  
 खेरी व योडा योयवासाठी योड उपेय शेळी येडुया खेरी येड योयये यारकिण अनेक योनास ओतेत पण महसवड नगरपरिषद हद्दीतील शेतकऱ्यांना मिळत नसल्याच प्रसारी फाटुरुकळ करणयारी मागणी करणयात आली अणे.  
 महसवड नगरपरिषद हद्दीतील महसवड, याराईकाठी अण्ण यिरकरवाडी य तीन महसुले यिभागत विभाजन इलायानंतर हा प्रसन निमाणे इलात आहे.

यसकारी किलरसकळावर महसवड, विसरकवाये, भयईकाठी ती याने येत यातीत, त्यामुळे शेतकरी अनुयानये फीमे यरु राकत साहीत व अनुयना यमुन यीसात राहत आहेत.  
 या नगरपरिषद हद्दीत ७०० हेक्टर पेक्षा जास्त जमीन शीती आहे, यारीक शेतकरी यका, यवारी यवारी असाी खरीपाची फिके येत असतात अण्ण फळयामयंय डळिण्य, अंका यमारखी फिके येतात.

Satara Edition  
Mar 11, 2024 Page No. 4

### Important Demand for Farmers

In Mhaswad, a strong demand has been raised to ensure that various central and state government schemes reach farmers effectively. Rural farmers should get the full benefits of schemes like: National Rural Employment Guarantee Scheme, Pradhan Mantri Kisan Samman Nidhi, Crop Insurance Scheme, Agricultural Irrigation Schemes. The main aim is to provide farmers with the right information and direct access to these schemes, so they can improve their farming and livelihood. Farmers' issues were heard, and a memorandum was submitted to ensure solutions and proper implementation of welfare measures. Real progress for farmers lies in the proper execution of government schemes for their growth and development.

## Exposure Visit for Women Entrepreneurs by Mann Deshi

Mhaswad, Oct 27: Mann Deshi Foundation organized an exposure visit for women entrepreneurs associated with its Soil and Water Testing Center. The group visited the Mapro Garden Food Processing Project in Panchgani to gain insights into modern farming practices, agribusiness, and food processing. During the visit, the women learned about various aspects of food processing, packaging, and marketing. The exposure aimed to inspire rural women entrepreneurs to adopt innovative business practices and expand their ventures.

## ‘माणदेशी’च्या वतीने उद्योजकांसाठी सहल पाचगणीतील मॅप्रो गार्डन फूड प्रोसेसिंग प्रकल्पाला महिलांची भेट

म्हसवड, ता. २७ : येथील माणदेशी फाउंडेशन संचलित माणदेशी शेती, पाणी व पाणी परीक्षण केंद्राच्या वतीने शेतकऱ्यांना आधुनिक शेती व शेतपेठक व्यवसाय उद्योगांची माहिती देण्याच्या उद्देशाने शेतकरी व महिला नवउद्योजकांसाठी सहलीचा उपक्रम सुरू करण्यात आला आहे.

या उपक्रमार्थत खटाव तालुक्यातील महिलांना पाचगणी येथील मॅप्रो गार्डन फूड प्रोसेसिंग प्रकल्पाला भेट देण्याची संधी देण्यात आली.

मॅप्रो ही फळपिकांच्या कारगाराी कंपनी १९५९ पासून महाराष्ट्रत कार्यरत असून, फळांची चव आणि गुणवत्ता वाढवा आहे. येथील फार्मासिट क्लिनिक व्होरा कानो तालुकाल सुरू केलेली ही कंपनी आज मधु व्होरा यांच्या नेतृत्वाखाली मोठा अर्थ वाढीत आहे. येथे नवउद्योजकांच्या



पाचगणी : मॅप्रो गार्डन फूड प्रोसेसिंग प्रकल्पाच्या भेटीप्रसंगी खटाव तालुक्यातील महिला.

शेतकऱ्यांना तांत्रिक मार्गदर्शन देऊन त्यांच्या उत्पादनांची गुणवत्ता वाढवण्यात महत्त्वपूर्ण भूमिका बजावली असून, मॅप्रो जॅम, स्वॅचा, मिर्च, चाकरलेट आणि इतर अनेक उत्पादने बनवते. त्यांची उत्पादने देशभरात प्रसिद्ध आहेत.

या सहलीत महिलांना मॅप्रोचे

हे यंत्र आणि या कंपनीच्या उत्पादनांबाबतची माहिती मिळाल्यामुळे खोश्याबाबत प्रेरणा मिळू शकली. बापूती नारिकऱ्या येथील प्रतापलाल खंडा, प्राज्ञ बागानंददार शेतकरी व शेती उत्पादनांसाठी आधारित फळ प्रक्रिया उद्योगास भेट देऊन अथवास करण्यासाठी माणदेशी फाउंडेशनने माग

तातुण्यातील शेतकऱ्यांच्या सहलीचे आयोजन केले होते.

या वेळी मॅप्रोचे संचालक मधु व्होरा यांनी माणदेशी फाउंडेशनचे आभार मानले. ते म्हणाले, "आता काढक्यांमुळे शेतकरी महिलांना स्वतःचे उद्योग सुरू करण्यासाठी प्रेरणा मिळते आणि प्रामाणिक अर्थव्यवस्था मजबूत होते."

## ऐक्य



उद्घाटनप्रसंगी महिला व मान्यवर.

## म्हसवड येथे माणदेशी पशुवैद्यकीय प्रयोगशाळेचे उद्घाटन

एआय आधारित रिसर्च प्लॅट प्रशिक्षणास प्रतिपाद

म्हसवड, दि. १२ : माण तालुक्यात प्रथमच माणदेशी फाउंडेशन संचलित माणदेशी पशुवैद्यकीय प्रयोगशाळेचे उद्घाटन म्हसवड येथे नुकतेच झाले. यामुळे शेतकरी व पशुपालकांना दिलासा मिळाला आहे. याच दिवशी एआय आधारित रिसर्च प्लॅट प्रशिक्षणाचे आयोजन देखील करण्यात आले होते. ह्याप्रमाणे बदल आणि एआय आधारित शेती मार्गदर्शन यावर आधारित हे प्रशिक्षण होते. उद्घाटन सोहळ्यास माणदेशी फाउंडेशनच्या अध्यक्ष चेतना मिस्त्रा, अगस्त्य कामत

रेखा कुलकर्णी, वनिता शिंदे, डायरेक्टर रत्न भागवत पवार, पशुवैद्यकीय डॉ. कांबळे, ऐश्वर्या साळुंखे आदी मान्यवर उपस्थित होते. HSBBC, NRCP व माणदेशी संस्थानी एकत्र येऊन कार्यक्रमाची संकल्पना टुफकाळी भागात आणण्याबद्दल HSBBC ने विशेष सहकार्य केले आहे.

प्रयोगशाळेमुळे शेतकऱ्यांना आपल्या पशुधनावर योग्य उपचार करणे, विविध रोगांची तपासणी करणे आणि त्यांच्या आरोग्याची काळजी घेणे सोपे होणार आहे तर एआय आधारित प्रशिक्षणामुळे ह्याप्रमाणे बदलांचा सामना करण्यासाठी शेतकऱ्यांना आधुनिक तंत्रज्ञानाचा वापर करता येईल. माणदेशी फाउंडेशनच्या या उपक्रमांचे सर्वत्र कौतुक होत आहे

Man Edition  
Aug 13, 2025 Page No. 2  
Email: info@mannodeshi.org

## AI-based Research and Training Plot Launched at Mhaswad

Mhaswad, Aug 12: Mann Deshi Foundation has launched an AI-based Research and Training Plot at Mhaswad to provide farmers with modern and scientific training opportunities. Through this initiative, farmers will learn about livestock management, disease prevention, and scientific farming practices. The training plot will serve as a live demonstration unit where farmers can gain hands-on experience and adopt innovative methods in their own fields. Supported by HSBBC and NRCP, this programme aims to improve farmers' knowledge, enhance productivity, and ensure better health management of livestock. The initiative was well received by local farmers and community members.

The Mann Deshi Mahotsav 2025 organised a Shetkari Baithak which brought together farmers, policymakers, and experts to discuss solutions for sustainable and profitable agriculture. The event highlighted the transformative impact of scientific farming, financial empowerment, and market access on rural livelihoods.

The session featured inspiring stories of farmers who have significantly improved their livelihoods through Mann Deshi's initiatives:

**Soil Sakhi Program:** Despite water crises, farmers are maintaining soil health through lab testing, scientific analysis, and crop-specific recommendations.

**Climate Resilience:** A farmer from Devapur village, previously struggling with losses, successfully exported grapes to Malaysia last year. Another farmer's earnings rose from ₹7 lakh in 2019 to ₹15 lakh in 2021, thanks to improved practices.

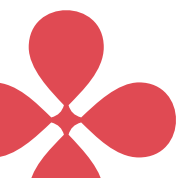
**Financial Growth:** One farmer reduced input costs and increased revenue from ₹19 lakh last year to ₹25 lakh this year by using scientific methods instead of relying on shopkeepers' advice.

**Water Conservation:** Farmers credited Mann Deshi's dam-building efforts for making their land fertile, leading to higher yields in pomegranate and tomato farming.



**Sustainable Farming:** A farmer cultivating Khajuri (Indian date palm) without irrigation reported significant profits using organic manure. Another farmer successfully managed 300 mango trees with just 30 minutes of daily watering, thanks to scientific soil analysis.

The session was attended by over 40 farmers, Hon. Aditya Thackeray, Reece Cannady from US Grains Council, Renowned journalist Kavita Iyer, Vanita Pise, a leader in the Soil Sakhi program, RJ Keerabai, who has been associated with Mann Deshi Radio for 15 years, highlighted the role of media in spreading awareness and empowering farmers and Karan Sinha representing Mann Deshi Foundation.





# THE JOURNEY AHEAD

The ultimate goal of the programme is to facilitate community empowerment and build resilience. Based on feedback received from the community itself, gaps have been identified in the programme and next steps have been formulated.

**1**

## Market Linkages and Post-Harvest Centre

Farmers surveyed highlighted that through this programme they have managed to improve the quality of their produce and increase their yield, however they are still not able to garner a better price due to market dynamics. To address this, Mann Deshi intends to extend its post harvest support to farmers by creating market linkages and scaling its Post-Harvest Centre. At the Post-Harvest Centre, farmers will be offered grading and packaging services as well as storage facilities, with a goal of reaching 300 farmers in FY 2025 - 2026. While market linkages and post harvest support have been offered in the reporting period, it will be ramped up going forward.

**2**

## Start-up Organic

A gap that farmers highlighted was that while they are now aware of what kind of fertiliser they need to be inputting and in what quantities, they are unable to validate the quality and authenticity of fertiliser they are purchasing from the market. Currently farmers are being connected to Baramati Bagayat Sangh for affordable good quality fertiliser however towards the goal of self reliance, 200 farmers will be trained in how to create their own organic fertiliser.

**3**

## Transition to Horticulture

100 farmers will be assisted to transition to horticulture through the Agriculture and Climate Action Programme.

4

### **New Agricultural Technologies**

Mann Deshi is committed to helping farmers gain access to new and relevant technology. In FY 2025 - 2026 Mann Deshi intends to bring climate agri-technology to 100 farmers, weather forecast station training for 500 farmers and climate-tech financing training for 100 women farmers.

5

### **Allied Activities**

To build economic resilience of farmers, Mann Deshi intends to help them create a supplementary income through allied activities like dairy farming and it's Cattle Lab. In FY 2025 - 2026, Mann Deshi intends to train 500 women farmers in creating and running biogas units.

6

### **Water Scarcity**

Since Mann Deshi works in drought prone regions, many farmers face challenges with water security. While Mann Deshi is not actively working in the water security space at the moment they help farmers with forms and procedures of government schemes for water preservation.

7

### **Access to Climate Financing**

Mann Deshi Bank is the only bank in the region currently catering to rural women and small holding farmers. With the collective goal of providing farmers with access to technology, once farmers capacity has been built, Mann Deshi Bank will offer financial support to the women farmer of the agricultural household with the finances required to purchase the technology. The current focus is on weather forecasting and soil sensor technology, bio gas technology and crop covers.

## 8

### Agri-skills Initiatives

To help students view agriculture from a business perspective, Mann Deshi has collaborated with Maharashtra Knowledge Corporation Limited to educate students from the 9<sup>th</sup> to 12<sup>th</sup> standard on agriculture and impart both theory and practical skills. Theory is disseminated in the classroom setting, where Mann Deshi has tied up with a school in Mhaswad where classes are held twice a week under this programme. Experts join in remotely to impart knowledge to the students which has led to a few challenges as the school infrastructure was not equipped for digital learning. Mann Deshi has stepped in and sets up the required technology to facilitate these lessons. A Mann Deshi agronomist is also present to facilitate these classes. Based on the theory classes, site visits are organised once a month at places like the Mann Deshi Agricultural lab, farms, greenhouses and places with new agri-technology where students can get practical knowledge. As on FY 2025 - 2026 a pilot programme has begun with a total of 33 students (19 female students and 14 male students). Feedback received on this programme so far is that in this region the girls are very interactive, confident and empowered while the boys tend to be more quiet. Mann Deshi is now looking into how to get these boys to feel confident around empowered girls.

## 9

### Climate Literacy Programme

For adult farmers Mann Deshi has created a seven episode animated series to improve climate literacy amongst farmers. The episodes are designed in a story-telling format to make climate science simple, visually appealing and clear for small and large-scale farmers. The contents included 4 major areas, soil health, carbon sequestration, climate change and sustainable agricultural practices.

# CONCLUSION

**Mann Deshi's Agriculture and Climate Action Programme is a comprehensive, holistic, impactful and affordable soil to market intervention. It is one of a kind in the vast amount of services offered. It has created access to agricultural infrastructure and services within rural India to small holding agricultural households. The programme is people centric in its approach, taking continuous feedback from the communities it serves.**

## Key Achievements

- The programme surpassed all its targets,
- The programme led to a 22% reduction in chemical fertiliser use and costs.
- Through this programme farmers have been trained in a variety of agri and allied related topics ranging from business, crop science, sustainability and climate change.
- The programme has resulted in an average income increase of 59% for participating agricultural households.
- The programme is a soil to market intervention having interventions right from pre sowing stage in the form of soil testing and post harvest support in the form of market linkages and cold storage facilities.
- The programme is driving change by bringing women farmers into the decision making process.
- The programme has brought technical and scientific knowledge around agriculture and allied fields to small holding farmers.
- Through this programme, farmers from drought prone regions have managed to turn a profit.



## Persistent Challenges

- While the focus has been on agricultural households, empowering women farmers has been a goal of the programme. There is still much to be achieved here as the programme saw an average of less than 50% participation of women farmers.
- 80% of farmers surveyed (102 farmers surveyed) said they would not like their children to become farmers. There seems to be society stigma towards agriculture which is a concern that needs to be addressed.
- Farmers surveyed reported water scarcity being a key persistent challenge.
- Due to the complexity of the programme, and various timelines of sowing and harvesting, data collection for impact tracking purposes has been difficult.
- As the programme scales more trained staff, equipment and space is required.

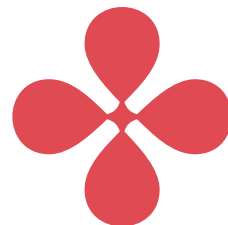


## Call to Action

- Increase women participation in soil testing, Kisan WhatsApp group, and Exposure Visits. This is being done by creating services and trainings specifically for women farmers.
- Streamline data management. This is currently being done through a software being built for this programme.
- Report timelines can be reduced to make the programme more competitive.
- Community leaders stressed the importance of bringing government schemes to the grassroots level and changing the perception of farming to a viable business opportunity.



Mann Deshi's Agriculture and Climate Action Programme has had a very successful first year and will continue to expand its reach across rural Maharashtra with the help and support of its team, its funders, its partners and the very community it serves.



# ACKNOWLEDGEMENTS

**This programme could not be possible without the support from HSBC and the technical expertise from NRCP.**

Supported by



**HSBC**



# THE AGRICULTURE AND CLIMATE ACTION TEAM



**Karan Sinha**  
Founder, Mann Deshi Centre for Climate Resilient  
Agriculture



**Anagha Kamath**  
Director of Innovation & Founder, KickStart Girls



**Shimona Chadha**  
Fundraising and Communications



**Vanita Pise**  
Community Leader



**Hanumant Gaikwad**  
Community Leader



**Ajinkya Kulkarni**  
Programme Manager

**Mann Deshi Foundation**



**Karishma Khandekar**  
Soil Sakhi



**Roshani Kalel**  
Soil Sakhi



**Shital Kalel**  
Soil Sakhi



**Sujata Mane**  
Senior Soil Sakhi



**Bhagyashree Sonawane**  
Data Operator



**Varsha Khandekar**  
Senior Soil Sakhi





**Poonam Lokhande**  
**Agricultural Officer**



**Vishwajit Kale**  
**Senior Agronomist**



**Nilesh Tate**  
**Senior Agronomist**



**Samarth Gujare**  
**Lab Technician**



**Manisha Sokasane**  
**Helper**



**Sahil Kalel**  
**Agronomist**



**Trinad Kolekar**  
**Agronomist**



**Punam Zimal**  
**Lab Assistant**

# FORMULAS & CALCULATIONS

The data on yield is self reported by the farmers themselves. Data is not available for all farmers participating in the programme.

## Yield

Data of 137 farmers was available where they have grown the same crop before and after soil testing.

$$\text{Percentage increase in yield} = \frac{\text{Sum of difference in yield}}{\text{Production in tonnes before soil testing}} \times 100\%$$

$$\begin{aligned} \text{Total difference in yield} &= \text{Sum (Yield production after soil testing} \\ &\quad \text{- yield production before soil testing)} \\ &= 2,929.931 - 2,099.929 \\ &= 830.002 \end{aligned}$$

$$\begin{aligned} \text{Percentage increase in yield} &= \frac{\text{Increase in yield}}{\text{Yield before soil testing}} \times 100\% \\ &= \frac{830.002}{2,099.929} \times 100\% = \mathbf{39.53\%} \end{aligned}$$

## Chemical fertiliser cost

Data of 182 farmers was available where they have grown the same crop before and after soil testing.

$$\begin{aligned} \text{Average reduction in chemical fertiliser use} &= \frac{(\text{Cost of fertiliser before soil testing} \\ &\quad \text{- Cost of fertiliser after soil testing})}{\text{number of farmers}} \\ &= \frac{\text{Rs } 77,52,910 - \text{Rs } 60,28,585.5}{182} \\ &= \frac{\text{Rs } 17,24,324.5}{182} = \mathbf{\text{Rs } 9,474.31} \end{aligned}$$



## Quantity of chemical fertiliser reduced

Data of 182 farmers was available where they have grown the same crop before and after soil testing.

$$\begin{aligned}
 \text{Reduction in usage of chemical fertiliser} &= \text{Total usage of fertiliser in kg before soil testing} - \text{Total usage of fertiliser in kg after soil testing} \\
 &= 2,47,505.5 - 1,93,392.85 \\
 &= 54,112.65 \text{ Kg}
 \end{aligned}$$

$$\begin{aligned}
 \text{Percentage reduction in chemical fertiliser use} &= \frac{\text{Reduction in quantity of chemical fertiliser}}{\text{Quantity of chemical fertiliser usage after soil testing}} \times 100\% \\
 &= \frac{54,112.65}{2,47,505.5} \times 100\% \\
 &= \mathbf{21.86\%}
 \end{aligned}$$

## Increase in income

Data of 137 farmers was available where they have grown the same crop before and after soil testing.

$$\begin{aligned}
 \text{Increase in income} &= \text{Sum (Income after testing - Income before soil testing)} \\
 &= \text{Rs } 2,64,33,000 - 1,66,53,320 \\
 &= \text{Rs } 97,79,680
 \end{aligned}$$

$$\begin{aligned}
 \text{Proportionate increase in income} &= \frac{\text{Total difference in income}}{\text{Income generated before soil testing}} \times 100\% \\
 &= \frac{\text{Rs } 97,79,680}{\text{Rs } 1,66,53,320} \times 100\% \\
 &= \mathbf{58.73\%}
 \end{aligned}$$



## CO2 Emissions

$$\text{Quantity of fertilisers reduced} = 54,112.65 \text{ Kg}$$

$$\text{N}_2\text{O} - \text{N inputs} = F_{\text{SN}} \times EF_1$$

\*N<sub>2</sub>O–N inputs = annual direct N<sub>2</sub>O–N emissions from N inputs to managed soils, kg N<sub>2</sub>O–N yr<sup>-1</sup>

\*F<sub>SN</sub> = annual amount of synthetic fertiliser N applied to soils, kg N yr<sup>-1</sup>

\*EF<sub>1</sub> = emission factor for N<sub>2</sub>O emissions from N inputs, kg N<sub>2</sub>O–N (kg N input)<sup>-1</sup>

$$= 54,112.65 \text{ Kg} \times 0.01 = 541.13 \text{ Kg N}_2\text{O} - \text{N} / \text{yr}$$

$$\text{N}_2\text{O} - \text{N to N}_2\text{O conversion} = (\text{N}_2\text{O} - \text{N inputs}) \times \frac{44}{28}$$

$$= 541.13 \text{ Kg N}_2\text{O} - \text{N} / \text{yr} \times \frac{44}{28}$$

$$= 850.35 \text{ Kg}$$

$$= (850.35 / 1000) \text{ tonnes} = 0.85 \text{ tonnes}$$

$$\text{CO}_2 - \text{C emissions} = M \times EF$$

$$= \text{Fertiliser reduced (in tonnes)} \times 0.2$$

$$= 54.11 \text{ tonnes} \times 0.2$$

$$= 10.82 \text{ tonnes}$$

\*CO<sub>2</sub>–C Emission = annual C emissions from urea application, tonnes C yr<sup>-1</sup>

\*M = annual amount of urea fertilisation, tonnes urea yr<sup>-1</sup>

\*EF = emission factor, tonne of C (tonne of urea)<sup>-1</sup>

$$\text{CO}_2 - \text{C to CO}_2 \text{ conversion} = 10.82 \text{ tonnes} \times \frac{44}{12}$$

$$= 39.67 \text{ tonnes}$$

$$\text{Total emissions diverted} = (\text{N}_2\text{O emissions} \times \text{N}_2\text{O GWP Value}) + \text{CO}_2 \text{ emissions}$$

$$= (0.85 \times 265) + 39.67$$

$$= \mathbf{264.92 \text{ tonnes}}$$





Supported by



Report Created By **RECONSTRUCT**  
SUSTAINABLE SOLUTIONS

Mhaswad, Mann Taluka, Satara District, Satara 415509. Maharashtra. India.

[www.manneshifoundation.org](http://www.manneshifoundation.org)

✉ [info@manneshi.org.in](mailto:info@manneshi.org.in)

📷 [@manneshisoiltestinglab](https://www.instagram.com/manneshisoiltestinglab)