

INCLUSIVE BUSINESS IN ACTION

Inclusive Business Awards 2026
Compendium of Selected Inclusive Businesses



Published By

ecociate



INCLUSIVE BUSINESS IN ACTION

Inclusive Business Awards 2026

Compendium of Selected Inclusive Businesses

Published By

ecociate



Inclusive Business Awards 2026

Compendium of Inclusive Businesses Transforming Agriculture, Livelihoods and Rural Economies in India (Top 15 Businesses selected in IB Awards 2026)

Published by

Ecociate Consultants Private Limited
Under the aegis of the
Inclusive Business Ecosystem Network (IBEN)
Noida, India

Contributors

Inclusive Business Future Leaders (IBFL) Cohort 3.0
Ecociate Team

Publication Year 2026

Contact Information

A-226, Ground & First Floor, Transport Nagar, Sector 69, Noida – 201301, Uttar Pradesh, India

Email: admin@ecociate.com | **Website:** <https://ecociateconsultants.com/>

LinkedIn: <https://www.linkedin.com/company/ecociate-consultants/?originalSubdomain=in>

Publication Theme

This compendium documents and analyses fifteen emerging and established Inclusive Businesses operating across India's agriculture and food systems. Through a structured Inclusive Business Lens focusing on Technology Inclusion, Financial Inclusion, and Market Inclusion, the publication examines how enterprises create shared value while integrating low-income and underserved communities into their business models.

COPYRIGHT

© 2026 Ecociate. All rights reserved.

This publication may be reproduced, stored in a retrieval system, transmitted, or quoted in part for educational, research, policy, advocacy, and non-commercial purposes, provided appropriate acknowledgement is given to Ecociate and the Inclusive Business Ecosystem Network (IBEN) as the source.

No part of this publication may be reproduced for commercial purposes without prior written permission from Ecociate.

The findings, interpretations, analyses, and conclusions expressed in this publication are those of the authors and contributors and do not necessarily reflect the views of participating enterprises, supporting institutions, funding organizations, partners, or stakeholders associated with the Inclusive Business Awards initiative.

The content presented in the compendium is based on information provided by participating enterprises through applications, interviews, publicly available information, and supplementary documentation shared during the assessment process. While every effort has been made to ensure accuracy, Ecociate does not guarantee the completeness or absolute accuracy of all information contained herein.

All photographs, graphics, illustrations, logos, and trademarks remain the property of their respective owners unless otherwise indicated.

For permissions and inquiries regarding the use of this publication, please contact:

Ecociate Consultants Private Limited

admin@ecociate.com

<https://ecociateconsultants.com/>

Suggested Citation:

Ecociate. (2026). *Inclusive Business in Action: Technology Inclusion, Financial Inclusion and Market Inclusion- A Compendium of Inclusive Businesses from India's Agriculture and Food Systems*. Noida: Ecociate.

DISCLAIMER

This publication has been developed as a knowledge and learning resource to advance understanding of Inclusive Business models within agriculture and food systems.

The enterprises featured in this compendium were assessed using the Inclusive Business Lens developed by Ecociate and applied as part of the Inclusive Business Awards 2026 evaluation process. Inclusion in this publication should not be interpreted as an endorsement, certification, accreditation, investment recommendation, or guarantee of future performance.

The analyses presented are intended to document business models, innovations, inclusion pathways, and development outcomes based on available information at the time of publication. The publication does not constitute financial, legal, investment, regulatory, or professional advice.

While reasonable efforts have been undertaken to verify information provided by participating enterprises, Ecociate, IBEN, contributors, reviewers, and associated partners shall not be held responsible for any errors, omissions, losses, or consequences arising from the use of information contained in this publication.

References to specific organizations, products, technologies, services, or business models are made solely for analytical and educational purposes and should not be construed as endorsements.

The views expressed by contributors, interviewees, and participating organizations remain their own and do not necessarily represent the official position of Ecociate, IBEN, associated institutions, or publication partners.

CITATION FORMAT

Recommended Citation

Ecociate. 2026. Inclusive Business in Action: Technology Inclusion, Financial Inclusion and Market Inclusion- A Compendium of Inclusive Businesses from India's Agriculture and Food Systems. Noida: Ecociate.

Citation for Individual Enterprises

Author/Contributor Name. 2026. "Title." In *Inclusive Business in Action: Technology Inclusion, Financial Inclusion and Market Inclusion- A Compendium of Inclusive Businesses from India's Agriculture and Food Systems*. Noida: Ecociate.

In-Text Citation Example

(Ecociate, 2026)

Short Citation

Ecociate (2026)

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	5
FOREWORD	6
ABOUT ECOCIATE.....	8
ABOUT INCLUSIVE BUSINESS ECOSYSTEM NETWORK (IBEN).....	8
ABOUT INCLUSIVE BUSINESS FUTURE LEADERS (IBFL) PROGRAMME	8
UNDERSTANDING INCLUSIVE BUSINESS	11
WHY INCLUSIVE BUSINESS MATTERS FOR INDIA	14
THE INCLUSIVE BUSINESS AWARDS 2026	17
BRIEF OVERVIEW OF SELECTED BUSINESSES.....	19
AGROZEE ORGANICS PVT. LTD. (MILLETS NOW).....	21
AIO IMPEX PRIVATE LIMITED.....	27
AQUA DOCTOR SOLUTIONS	33
BIOME TECHNOLOGIES PRIVATE LIMITED	39
DVARA E REGISTRY PRIVATE LIMITED	45
EF POLYMER PVT LTD.	51
FARMS2FORK TECHNOLOGIES PRIVATE LIMITED (CULTYVATE).....	57
HUMBLE BEE (BUZZWORTHY VENTURES PRIVATE LIMITED).....	63
MERCREDI SOLUTIONS PRIVATE LIMITED.....	67
RAHEJA SOLAR FOOD PROCESSING PVT. LTD.	73
RAM RAHIM PRAGATI PRODUCER COMPANY LIMITED	79
RANG DE P2P FINANCIAL SERVICES LTD.	85
SCANXT SCIENTIFIC TECHNOLOGIES PVT LTD.....	91
SICKLE INNOVATIONS PVT LTD.	97
VARAHA CLIMATEAG PRIVATE LIMITED	103
COLLECTIVE IMPACT OF SELECTED 15 ENTERPRISES	111
FUTURE OF INCLUSIVE BUSINESS	112
CONCLUSION	115
INCLUSIVE BUSINESS FELLOWS AND FIRST AUTHORS OF COMPENDIUM	116

ACKNOWLEDGEMENTS

We express our sincere gratitude to all participating enterprises that generously shared their experiences, insights, business models, impact data, and lessons from the field. Their openness and willingness to engage made this publication possible.

We extend our appreciation to the experts, practitioners, mentors, and thought leaders who contributed their knowledge through consultations, discussions, review sessions, and capacity-building engagements throughout the Inclusive Business Future Leaders Programme.

This publication is the result of the efforts of the Inclusive Business Future Leaders (IBFL) Cohort-3.0 2026, comprising of emerging professionals from diverse disciplines including rural management, public policy, development studies, forestry, business management, economics, sustainability, and social entrepreneurship. Their commitment to documenting and analysing innovative business models is commendable.

We also acknowledge the broader ecosystem of investors, policymakers, academic institutions, development agencies, civil society organizations, farmer producer organizations, self-help groups, cooperatives, and community leaders whose work continues to strengthen the enabling environment for Inclusive Business in India.

Finally, we dedicate this publication to the millions of smallholder farmers, tribal communities, women entrepreneurs, producer collectives, and rural innovators whose resilience, enterprise, and aspirations form the foundation of truly inclusive and sustainable development. Their participation in markets and value chains is not only central to the success of Inclusive Businesses but also to the future of equitable economic growth.

FOREWORD

For decades, development discourse has focused on how to support marginalized communities through welfare programmes, public investments, and philanthropic interventions. While these efforts have contributed significantly to improving lives, the scale and complexity of contemporary challenges demand new approaches- approaches that recognize low-income communities not merely as recipients of development but as active participants in economic growth.

Inclusive Business represents one such approach.

At its core, Inclusive Business challenges traditional assumptions about markets and development. It demonstrates that commercial success and social progress are not mutually exclusive. Rather, when businesses intentionally integrate smallholder farmers, tribal communities, women entrepreneurs, rural youth, and other underserved populations into their value chains, they create opportunities for shared prosperity while strengthening the resilience and competitiveness of their own enterprises.

Nowhere is this more relevant than in India's agriculture and food systems.

Agriculture continues to sustain millions of livelihoods, yet a significant proportion of producers remain excluded from technology, finance, market opportunities, and value addition systems. Climate change, resource degradation, fragmented landholdings, and widening inequalities further compound these challenges. Addressing these issues requires solutions that are scalable, sustainable, and capable of creating lasting economic incentives for inclusion. The enterprises featured in this compendium provide compelling examples of how this can be achieved. They represent a new generation of businesses that are redefining the relationship between businesses and communities. Through innovative business models, technology-enabled solutions, equitable market linkages, climate-responsive practices, and inclusive financial mechanisms, they are demonstrating that growth can be both commercially viable and socially transformative. This publication is a reflection of a broader movement that is gaining momentum across India and beyond- a movement that seeks to place inclusion at the heart of economic development.

The Inclusive Business Awards were conceived with this vision. By identifying, documenting, and celebrating enterprises that successfully integrate underserved communities into their core business operations, we hope to bring forth critical success factors, inspire scaling up, replication, and contribute to a stronger ecosystem for Inclusive Business.

We are particularly proud that this compendium has been developed through the efforts of the Inclusive Business Future Leaders Programme, which seeks to nurture a new generation of professionals committed to advancing inclusive and sustainable development through market-based solutions.

As you engage with these enterprises, we invite you to view them not simply as examples of successful ones, but as indicators of what the future of development can look like- one where communities become partners in value creation, where sustainability drives competitiveness, and where economic growth is measured not only by profits generated but also by opportunities created.

The future of development lies in building systems that are both economically productive and socially inclusive. The stories contained within these pages remind us that such a future is not only possible—it is already emerging.

Kirti Prasanna Mishra Co-Founder Ecociate Consultants Private Limited	Santosh Gupta Director Ecociate Consultants Private Limited
Convenor Inclusive Business Ecosystem Network (IBEN)	Co-Convenor Inclusive Business Ecosystem Network (IBEN)

ABOUT ECOCIATE

Ecociate is a development consulting and knowledge institution committed to designing, strengthening, and scaling solutions that create shared value across communities, markets, and ecosystems. Established with the vision of harmonizing ecological sustainability, economic opportunity, and social inclusion, Ecociate works at the intersection of livelihoods, agriculture, food systems, climate resilience, entrepreneurship, and community-led development. Through research, advisory services, capacity building, ecosystem development, and collaborative action, it seeks to create pathways that not only builds private sector's capacity to strategically partner with the underserved communities but also supporting smallholders and marginalised to participate more effectively in economic growth and value creation.

ABOUT INCLUSIVE BUSINESS ECOSYSTEM NETWORK (IBEN)

Recognising the growing importance of market-based approaches to development, Ecociate launched the Inclusive Business Ecosystem Network (IBEN), a multi-stakeholder platform dedicated to advancing the practice, policy, and ecosystem of Inclusive Business in India and beyond. IBEN brings together enterprises, farmer organizations, development agencies, investors, academic institutions, government bodies, ecosystem enablers, and social innovators to collectively strengthen inclusive business solutions within agriculture and food systems. The network serves as a platform for knowledge exchange, capacity building, collaboration, evidence generation, and ecosystem strengthening.

Inclusive Business Awards, Inclusive Business Future Leaders Fellowship and Inclusive Growth Conference are among the key initiatives of IBEN. Together, these initiatives are aimed at creating an enabling ecosystem for an inclusive and sustainable growth. The diagram below captures key highlights of IBEN since its inception in September 2024.

01

50+ Members from Private Sector, FPOs and Civil Society Organizations

02

Nurtured 24 Students as part of 3 Cohorts of IBFL Fellowship, more than 300 Students applied for the fellowship

03

Attended 10+ Inclusive Business focused conevenings including ASEAN IB Forum and summit in Laos & Malaysia

04

Published 3 knowledge documents

05

Recognising impact focused business through IB Awards

ABOUT INCLUSIVE BUSINESS FUTURE LEADERS (IBFL) PROGRAMME

The challenges confronting agriculture, food systems, livelihoods, climate resilience, and rural development are becoming increasingly complex and interconnected. Addressing these challenges requires a new generation of leaders who can navigate the intersections of business, development, sustainability, technology, and public policy while creating solutions that are both impactful and economically viable.

The Inclusive Business Future Leaders (IBFL) Programme was established with this vision.

Launched under the Inclusive Business Ecosystem Network (IBEN), the programme is a unique experiential learning and leadership development initiative designed to cultivate future practitioners, entrepreneurs, policymakers, researchers, and ecosystem builders committed to advancing Inclusive Business and sustainable development.

IBFL seeks to bridge the gap between academic learning and real-world development practice by exposing participants to contemporary challenges, emerging innovations, inclusive business models, and ecosystem-level solutions operating across agriculture and food systems. At its core, the programme is founded on a simple belief: ***The future of development will be shaped by leaders who can create shared value- leaders who understand that economic growth, social inclusion, and environmental sustainability must advance together rather than in isolation.***

A Learning Journey Beyond the Classroom

The programme combines structured learning, field engagement, enterprise interactions, research, mentorship, and collaborative problem-solving to provide participants with a comprehensive understanding of Inclusive Business ecosystems. Participants engage with a diverse network of stakeholders including, but not limited to, Inclusive Businesses and social enterprises, Farmer Producer Organizations (FPOs), Cooperatives and community institutions, Development organizations, Impact investors, Policymakers and government agencies, Corporate sustainability and CSR leaders, Researchers and academic experts & Ecosystem enablers and innovation platforms.

Through these engagements, IBFL Fellows gain first-hand exposure to how businesses and institutions address challenges related to livelihoods, market access, climate resilience, financial inclusion, technology adoption, entrepreneurship, and rural transformation and take steps towards becoming Future Leaders for fostering Inclusion.

Inclusive Business Future Leaders (IBFL)

Learning | Leadership | Inclusion | Impact.



FIGURE 1 IBFL Cohort-1: Summer-2025



FIGURE 2 IBFL Cohort-2, Winter-2025



FIGURE 3 IBFL Cohort-3, Summer 2026



UNDERSTANDING INCLUSIVE BUSINESS

Creating Shared Value Through Markets

Inclusive Business has emerged as a powerful approach to addressing social and economic inequalities through commercially viable business models. Unlike traditional development interventions that often operate alongside markets, Inclusive Businesses integrate low-income and underserved populations directly into their core operations as suppliers, producers, employees, distributors, entrepreneurs, or consumers.¹ By aligning business growth with community prosperity, these models create shared value for both enterprises and society.



Source Acknowledgement

The Image is derived from Pérez Cusó, Marta & Mikic, Mia & Wong, Jonathan & Pirzer, Christian & Mahdayani, Wiwik. (2021). *Towards a Roadmap for Inclusive Business in Wellness Tourism in Indonesia REPORT.*

Evolution of Inclusive Business

The concept of Inclusive Business gained prominence during the early 2000s as businesses and development institutions began exploring market-based approaches to poverty reduction. Building on the idea of the “Base of the Pyramid” (BoP), Inclusive Business evolved from simply serving low-income consumers to actively integrating underserved populations into value chains and economic systems.²

Today, Inclusive Business is recognized globally as an important mechanism for advancing economic inclusion, improving livelihoods, and accelerating sustainable development while maintaining commercial viability.

A Global Perspective

Across Asia, Africa, and Latin America, Inclusive Businesses are increasingly addressing challenges related to agriculture, healthcare, energy access, financial inclusion, education, and livelihoods. International organizations such as UNESCAP, UNDP, IFAD, and the Inclusive Business Action Network (iBAN) have promoted Inclusive Business as a practical pathway for achieving development outcomes through market-based solutions.³

¹ United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Inclusive Business Accreditation Framework, Bangkok, 2023.

² Prahalad, C.K., *The Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits*, Wharton School Publishing, 2005.

³ Inclusive Business Action Network (iBAN), Inclusive Business Landscape Reports; UNESCAP, Inclusive Business in Asia and the Pacific; IFAD, Rural Development Report 2021.

In India, the concept is particularly relevant given the country's large rural population, growing entrepreneurial ecosystem, and ongoing efforts to strengthen agricultural value chains and rural livelihoods.

Inclusive Business vs CSR

While both Inclusive Business and Corporate Social Responsibility (CSR) seek positive social outcomes, they differ fundamentally in their approach. CSR initiatives are generally undertaken as supplementary activities outside a company's core business operations and are often driven by philanthropic or compliance objectives. Inclusive Business, on the other hand, embeds inclusion directly into the business model itself. The participation and success of underserved communities become integral to commercial success rather than an external social commitment.⁴

Inclusive Business vs ESG

Environmental, Social, and Governance (ESG) frameworks primarily focus on how businesses manage environmental, social, and governance risks and responsibilities. ESG helps organizations improve sustainability performance and accountability. Inclusive Business goes a step further by intentionally creating economic opportunities for underserved populations through products, services, sourcing models, employment, entrepreneurship, and market participation. While ESG measures responsible business practices, Inclusive Business focuses on expanding participation and creating shared value.⁵

Inclusive Business vs Social Enterprise

Social enterprises are typically established with a primary social mission and often reinvest profits toward achieving social objectives. Inclusive Businesses may or may not be social enterprises. They can include mainstream private companies, cooperatives, producer-owned enterprises, start-ups, or corporations whose business models incorporate underserved communities into their value chains.

The defining characteristic of Inclusive Business is not organizational form but the extent to which inclusion is embedded within commercial operations.⁶

Inclusive Business and the Sustainable Development Goals

Inclusive Business contributes directly to several Sustainable Development Goals (SDGs), including poverty reduction, food security, gender equality, decent work, reduced inequalities, responsible consumption and production, climate action, and partnerships for development.⁷

⁴ Government of India, Ministry of Corporate Affairs, Companies Act 2013 – Corporate Social Responsibility Provisions; UNESCAP, Inclusive Business Accreditation Framework, 2023.

⁵ United Nations Development Programme (UNDP), SDG Impact Standards for Enterprises; World Economic Forum, Measuring Stakeholder Capitalism, 2020.

⁶ Organisation for Economic Co-operation and Development (OECD), Inclusive Business for Sustainable Development, Paris.

⁷ United Nations, Transforming Our World: The 2030 Agenda for Sustainable Development, New York, 2015.

By creating sustainable economic opportunities while addressing social and environmental challenges, Inclusive Businesses provide a practical mechanism for translating global development goals into locally relevant and scalable solutions.

Inclusive Business and Rural Transformation

Rural transformation requires more than productivity enhancement—it requires stronger market systems, better access to finance and technology, greater participation of women and marginalized communities, and resilient local institutions.

Inclusive Business models contribute to this transformation by connecting rural producers to markets, strengthening value chains, promoting entrepreneurship, enabling technology adoption, and creating opportunities for value addition closer to communities. In doing so, they help shift rural populations from being passive beneficiaries of development programmes to becoming active participants in economic growth.

As the enterprises featured in this compendium demonstrate, Inclusive Business is not merely a business strategy. It is an approach that reimagines how markets can become more equitable, resilient, and inclusive while generating sustainable economic, social, and environmental value.



WHY INCLUSIVE BUSINESS MATTERS FOR INDIA

India's development journey is increasingly shaped by its ability to create growth that is not only rapid but also inclusive, resilient, and sustainable. While the country has made significant progress in reducing poverty and expanding economic opportunities, large segments of the population—particularly smallholder farmers, tribal communities, women producers, and rural entrepreneurs—continue to face structural barriers that limit their participation in markets and value chains⁸.

As economies become more interconnected and development challenges more complex, there is growing recognition that governments alone cannot drive inclusive growth. Businesses, investors, producer organizations, and market institutions must also play a central role in creating opportunities for underserved communities. It is within this context that Inclusive Business has emerged as an important approach to development—one that combines commercial viability with social inclusion and environmental sustainability.⁹

Agriculture and the Rural Economy

Agriculture remains one of the most important pillars of India's economy and rural livelihoods. The sector contributes significantly to employment and supports millions of households directly and indirectly through farming, livestock, fisheries, forestry, processing, logistics, and agri-enterprise activities.¹⁰

However, the challenge facing rural India is no longer limited to increasing production. The greater challenge lies in ensuring that producers are able to participate effectively in markets, capture greater value from their produce, access modern technologies, and build resilience against economic and environmental shocks. Strengthening rural prosperity therefore requires business models that can create sustainable economic opportunities while improving access to services, markets, and innovations.¹¹

The Smallholder Challenge

India's agricultural sector is dominated by small and marginal farmers, who account for nearly 86 percent of operational landholdings.¹² Despite their critical contribution to food production and rural economies, many smallholders continue to face challenges related to fragmented landholdings, inadequate access to finance, limited bargaining power, information asymmetries, and weak market integration.

⁸ Government of India, Ministry of Finance, Economic Survey 2024–25, Government of India, New Delhi.

⁹ United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Inclusive Business Accreditation Framework, Bangkok, 2023.

¹⁰ Government of India, Ministry of Agriculture & Farmers Welfare, Agriculture at a Glance 2024, New Delhi.

¹¹ NITI Aayog, Strategy for New India @75, Government of India, New Delhi, 2018.

¹² Government of India, Ministry of Agriculture & Farmers Welfare, Agriculture Census 2015–16 (Phase I and II Results), New Delhi.

These constraints often result in low productivity, reduced profitability, and heightened vulnerability to market and climate-related risks. As a result, many farming households struggle to transition from subsistence-based production systems to commercially viable enterprises. Inclusive Business models can help address these gaps by connecting farmers to technology, finance, aggregation systems, value addition opportunities, and more reliable market channels.

Tribal Inclusion

India is home to one of the world's largest tribal populations, many of whom reside in remote and ecologically sensitive regions. While tribal communities possess rich traditional knowledge systems and contribute significantly to agriculture, forestry, and biodiversity conservation, they frequently remain excluded from formal markets, financial systems, and value chains.¹³

The resulting economic isolation often limits income opportunities and constrains local enterprise development. Inclusive Business approaches can help bridge this divide by strengthening community enterprises, improving market access, enabling local value addition, and creating opportunities that recognize tribal communities as economic partners rather than beneficiaries of development programmes.

Women's Economic Participation

Women play an indispensable role in India's agricultural and rural economy. They contribute substantially to farming operations, livestock management, seed preservation, post-harvest activities, food processing, and household food security. Yet their contributions often remain undervalued and under-recognized.¹⁴

Persistent barriers related to land ownership, access to productive assets, financial services, technology, training, and decision-making opportunities continue to limit women's economic participation. Increasing evidence suggests that empowering women within agricultural value chains not only improves household incomes but also contributes to better nutrition, education, and community development outcomes.¹⁵

Inclusive Businesses are increasingly demonstrating how women can participate as entrepreneurs, producers, service providers, distributors, and leaders within commercial ecosystems, thereby creating pathways for both economic empowerment and social transformation.

Climate and Market Risks

The future of rural livelihoods will be shaped by the ability to adapt to a rapidly changing environment. Climate change is already affecting agricultural productivity through rising temperatures, erratic rainfall patterns, water stress, soil degradation, and increased frequency of extreme weather events.¹⁶

¹³ Government of India, Ministry of Tribal Affairs, Annual Report 2023–24, New Delhi.

¹⁴ Food and Agriculture Organization (FAO), The Status of Women in Agrifood Systems, Rome, 2023.

¹⁵ United Nations Development Programme (UNDP), Gender Equality Strategy and Rural Livelihoods Studies, various publications.

¹⁶ Intergovernmental Panel on Climate Change (IPCC), Sixth Assessment Report: Impacts, Adaptation and Vulnerability, Geneva, 2022.

At the same time, farmers and rural enterprises face growing market uncertainties arising from price volatility, changing consumer preferences, sustainability standards, and global supply chain disruptions. These risks disproportionately affect low-income producers who often lack access to risk mitigation tools and adaptive technologies.

Businesses that can connect producers to climate-smart technologies, resilient production systems, financial services, and diversified market opportunities will play an increasingly important role in strengthening rural resilience.

Why Traditional Models Are Not Enough

For decades, development efforts have focused on welfare programmes, subsidies, and project-based interventions to address rural poverty and exclusion. While these approaches have generated important social outcomes, many challenges persist because they often operate outside market systems and may not always create sustainable economic incentives for long-term change.¹⁷

Inclusive Business offers a complementary pathway. Rather than treating underserved populations solely as beneficiaries, it integrates them into core business operations as producers, suppliers, entrepreneurs, employees, distributors, and consumers. In doing so, it creates mutually reinforcing relationships between business growth and development impact.

This shift- from beneficiary-centric development to participation-driven development- lies at the heart of the Inclusive Business approach. By embedding inclusion within commercially viable enterprises, businesses can create sustainable pathways for income generation, resilience, innovation, and shared prosperity.

The enterprises featured in this compendium demonstrate that inclusion is not simply a social objective; it can also be a strategic business imperative. Their experiences offer valuable insights into how markets can become more accessible, equitable, and responsive to the needs of underserved communities while simultaneously generating economic, social, and environmental value.

¹⁷ International Fund for Agricultural Development (IFAD), Rural Development Report 2021: Transforming Food Systems for Rural Prosperity, Rome, 2021.

THE INCLUSIVE BUSINESS AWARDS 2026

Celebrating Enterprises that demonstrate inclusion

Across India, a new generation of enterprises is demonstrating that business growth and social inclusion can reinforce one another. These organizations are not treating low-income communities as beneficiaries of development programmes but as producers, entrepreneurs, suppliers, distributors, innovators, and partners within their business models.

The Inclusive Business Awards 2026 were instituted to identify, recognize, amplify and celebrate such enterprises. More than an awards platform, the initiative seeks to build evidence, strengthen visibility, foster collaboration, and accelerate the adoption of Inclusive Business practices across sectors. The Awards celebrate enterprises that are creating shared value by integrating underserved communities into commercially viable and scalable business models.

The Awards recognize enterprises that conform and demonstrate following Inclusive Business Metrics; - (i) Shared Value Creation, (ii) Community Participation, (iii) Inclusive Innovation, (iv) Sustainable Livelihoods, (v) Equitable Market Access, and (vi) Development Impact at Scale. By spotlighting such enterprises, the Awards aim to encourage replication, attract investment, strengthen ecosystems, and inspire future business leaders.

The Three Pillars of Inclusion

The Awards Framework is anchored around three dimensions that define meaningful inclusion within business models.

1. **Technology Inclusion:** How effectively does the enterprise democratize access to technology, knowledge, innovation, and productivity-enhancing solutions?
2. **Financial Inclusion:** How effectively does the enterprise improve access to credit, insurance, investment, financial services, and risk management mechanisms?
3. **Market Inclusion:** How effectively does the enterprise create equitable market access, strengthen value-chain participation, and improve economic opportunities for underserved communities?

Award Categories

The Awards recognize excellence across the broader spectrum of Inclusive Business innovation.

Category	Focus Area
Inclusive Business of the Year	Overall excellence in inclusive business practice
Inclusive Technology	Technology-led inclusion and innovation
Inclusive Finance	Access to finance and financial empowerment
Inclusive Market	Market access and value-chain integration

Selection Process

The Awards followed a structured, multi-stage evaluation process designed to ensure transparency, rigor, and objectivity.

1. Applications received
2. Eligibility Screening
3. Desk Reviews and Primary Scoring
4. Inclusive Business Lens Assessment
5. Shortlisting of Top Enterprises
6. Enterprises 15 Interviews
7. Documenting the Selected Enterprises

Further process included presentation to the Jury members by selected enterprises followed by the Jury rankings and selection of winners based on the Jury score. The process is not detailed here as this report only captures the profile of selected 15 enterprises, before the Jury round.

OVERVIEW OF SELECTED BUSINESSES



BRIEF OVERVIEW OF SELECTED BUSINESSES

This compendium presents a diverse portfolio of inclusive businesses operating across India's agriculture and food systems ecosystem. The enterprises featured in this compendium represent a broad spectrum of sectors, including climate-smart agriculture, agri-biotechnology, precision farming, aquaculture, sustainable input solutions, agri-fintech, organic and export-oriented value chains, and nutrition-focused food processing. Despite operating in different segments of the agricultural economy, these companies share a common vision of integrating smallholder farmers, tribal communities, women, and other marginalized groups into commercially viable and sustainable business ecosystems.

More crucially, these enterprises also demonstrate the varied pathways through which IBs create impact: some enterprises strengthen production systems through innovations such as AI-enabled advisory services, IoT-based farm monitoring, soil microbial diagnostics, climate-resilient inputs, and sustainable aquaculture technologies, while others focus on building inclusive value chains by facilitating access to quality inputs, fair and transparent procurement systems, international and domestic markets, financial services, and value-added processing opportunities. Several companies further create decentralized livelihood opportunities by engaging women's self-help groups, farmer producer organizations, and local entrepreneurs as active participants in service delivery, processing, and distribution networks.

Collectively, these enterprises showcase how IBs can bridge persistent gaps in India's agricultural landscape by combining financial support, technological innovation, market-driven approaches, and deep community engagement. Rather than viewing vulnerable communities solely as end beneficiaries, the companies position them as essential stakeholders and contributors within the value chain and simultaneously advance economic empowerment, social inclusion, and environmental sustainability, which is what makes them inclusive in nature.

How to Read the Enterprises profiled in the Compendium

All the enterprises in this compendium are structured not merely to provide an overview of the enterprises and their operations, but to understand how they create inclusive impact through their engagement with communities and the resulting economic, social, and environmental outcomes. They highlight the ways in which businesses integrate underserved communities into their core value chains, demonstrating how commercial models can simultaneously generate sustainable livelihoods, strengthen resilience, and address broader systemic challenges within agriculture and food systems.

Each enterprise follows a common structure that enables readers to systematically understand the inclusive business model, the challenges it addresses, and the pathways through which it generates impact. While the sectors, technologies, and communities vary across the enterprises, the standardized framework allows for meaningful comparison of different approaches to inclusion, innovation, and sustainable value creation.

Company Overview introduces the enterprise, its sector of operation, geographical presence, core products or services, and its broader vision and role within the agriculture and food systems ecosystem.

Problems Addressed outlines the key challenges or systemic gaps that the enterprise seeks to resolve, including issues such as low productivity, limited market access, financial exclusion, climate vulnerability, environmental degradation, technological barriers, and livelihood constraints faced by the communities it serves.

Community Profile identifies the primary communities engaged by the enterprise, including smallholder farmers, tribal populations, women farmers, Self-Help Groups (SHGs), Farmer Producer Organizations (FPOs), fisher communities, and other vulnerable groups. This section highlights their socio-economic context, existing challenges, and the reasons for their integration within the business model.

Innovation presents the key products, services, or process innovations developed by the enterprise in response to the challenges faced by these communities, highlighting how innovation serves as an enabler of inclusion and scalability.

Business Model and Community Integration explains how the enterprise creates, delivers, and captures value while embedding communities within its core operations. It examines different stages of the value chain, including input provision, production support, aggregation, processing, technology deployment, market access, and revenue generation, while highlighting the roles communities play as producers, entrepreneurs, service providers, suppliers, or consumers.

Impact Coverage captures the multidimensional outcomes generated by the enterprise across economic, social, and environmental dimensions, demonstrating the broader changes created through the inclusive business model.

Operational Challenges discusses the constraints that enterprises continue to face despite their impact, including challenges related to technology adoption, financing, market development, ecosystem limitations, policy gaps, and operational scalability.

Awards and Recognitions highlights notable achievements, certifications, partnerships, and institutional acknowledgements received by the enterprise, offering external validation of its innovation, credibility, and impact.

Finally, each enterprise concludes with a Message to the Community, where founders and representatives share reflections, lessons, and insights from their entrepreneurial journey, offering perspectives on innovation, community engagement, and the future of inclusive development.

Millets
NOW

A Healthy Life Begins Now.

Agrozee Organics Pvt Ltd

Millets
now
Clean, Safe, Big Healthy

Nutty
Dabba

Net Weight
250g

NATURALLY RICH
Iron + Zinc

NO
TRANS
FATTED OILS
ADDED FLAVOUR

Contact Details

+91 8432362879, +91 9209431336

support@milletsnow.com

www.milletsnow.com

Agrozee Organics Pvt. Ltd. (Millets Now)

“A Healthy Life Begins Now”



Company Overview

Millets Now, operating under Agrozee Organics, is a Maharashtra-based agri-food enterprise founded by Mahesh Londhe in 2021. The company operates across an end-to-end millet value chain- from quality seed supply and farmer support services to the production of value-added millet-based food products- with the aim of addressing nutritional challenges while creating sustainable livelihood opportunities for smallholder millet farmers.

The company is active across 5 districts in Maharashtra, including Nandurbar (an aspirational district), and has extended operations to Punjab, Haryana, Uttar Pradesh, and Jharkhand.

Its patented technology is the Hydro NIR Technology and flagship product line, Nutri Dabba, comprising of a range of millet-based products distributed through school feeding programmes, the company's website, e-commerce and quick-commerce channels, and retail market chains.

Problems Addressed

The company targets multiple interconnected challenges affecting tribal and smallholder millet farmers, nutritionally vulnerable communities, and India's broader food system.

Malnutrition and Iron Deficiency Anaemia

Iron deficiency (Anaemia) remains a significant public health challenge, particularly amongst women and school-age children. Millets, especially pearl millet, offer a locally available and nutrient-rich dietary intervention, whose production and distribution, in turn, is spearheaded by the company.

Farmer Income and Lack of Quality Seeds

Many millet farmers face low productivity due to limited access to quality seeds and inadequate market linkages. The company addresses these challenges through improved seed supply, agronomic support, and fair-price procurement.

Limited Market Availability and Consumer Acceptance

Despite their nutritional benefits, millets have historically faced challenges related to shelf life, digestibility, and consumer acceptance beyond traditional millet-consuming regions, limiting their wider adoption.

Community Profile

The company primarily works with small and marginal millet farmers- largely from BPL and tribal communities- with landholdings of less than one acre.

Consumer communities served include school-going children through the school feeding programme, along with health-conscious urban consumers via e-commerce and retail.

Finally, the company also engages with women Self-Help Groups (SHGs) participate in processing and packaging activities, creating livelihoods that prevent seasonal distress migration from rural areas.

Innovation

Their core innovation is their patented Hydro NIR technology- a three-step process of soaking, steaming, and drying designed to improve shelf life, digestibility, and nutrient bioavailability in

millet-based products, that has been validated by NIFTEM (Sonipat), while the company's products have been tested at the National Institute of Nutrition (NIN).

The company also uses digital tools, including an AI-assisted crop disease monitoring application and an AI-based grading system to support crop management and transparent procurement.

Finally, its flagship product is the 'NutriDabba', a box packed with iron rich products like Laddoos, Khichdi Mix, Malt, Biscuits etc. intended to fight iron deficiency¹⁸.



Figure 1: The 'NutriDabba'¹⁹

Business model and Community Integration

The company's Business Model and community integration can be understood in the following sequence:

Business Model

Their business model centres on engaging smallholder millet farmers across the value chain through sustainable farming practices, value addition, and direct market linkages. They also combine agricultural production with rural livelihood generation and community-based entrepreneurship.

A. Sustainable Agriculture and Input Support

They promote sustainable millet cultivation through the supply of bio-fortified seed varieties, farmer training, advisory services, and capacity-building programmes, while also providing rental machinery support across the cultivation cycle, from sowing to harvesting.

B. Sourcing and Aggregation

Further, they procure pearl millets and other millet varieties directly from small and marginal farmers through decentralised village-level procurement systems, reducing dependence on intermediaries while supporting transparent procurement and fair-price determination through an AI-based grading system.

C. Processing and Value Addition

After procurement, the company applies its Hydro NIR technology - a process of soaking, steaming, and drying to produce shelf-stable millet flour. Processing by-products are reused as cattle feed and fodder, supporting resource-efficient operations across the value chain.

D. Women-Led Livelihood Generation

Further, they engage rural women through Self-Help Groups (SHGs) in processing, packaging, and local value-addition activities, participation in which, along with skill development initiatives, creates additional livelihood opportunities and supplementary household income.

E. Market Linkage and Distribution

Finally, they supply their products to institutional buyers, including school feeding programmes and corporate clients, while also reaching consumers through e-commerce, quick-commerce, and retail channels.

¹⁸ Agrozee Organics. (n.d.). Know more. Millets Now. <https://milletsnow.com/pages/know-more>

¹⁹ Agrozee Organics. (n.d.). Know more. Millets Now. <https://milletsnow.com/pages/know-more>

F. Revenue Generation

Millets Now generates revenue through multiple channels, including B2B institutional sales, B2G school feeding programmes, and direct consumer sales through e-commerce, quick-commerce, and retail markets. This diversified approach allows the company to serve different customer segments while reducing dependence on a single market channel.



Figure 2: Value Chain of the Company

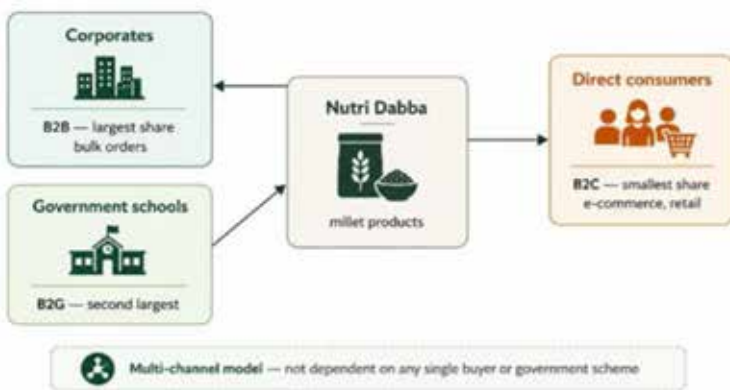


Figure 3: Revenue model of the Company

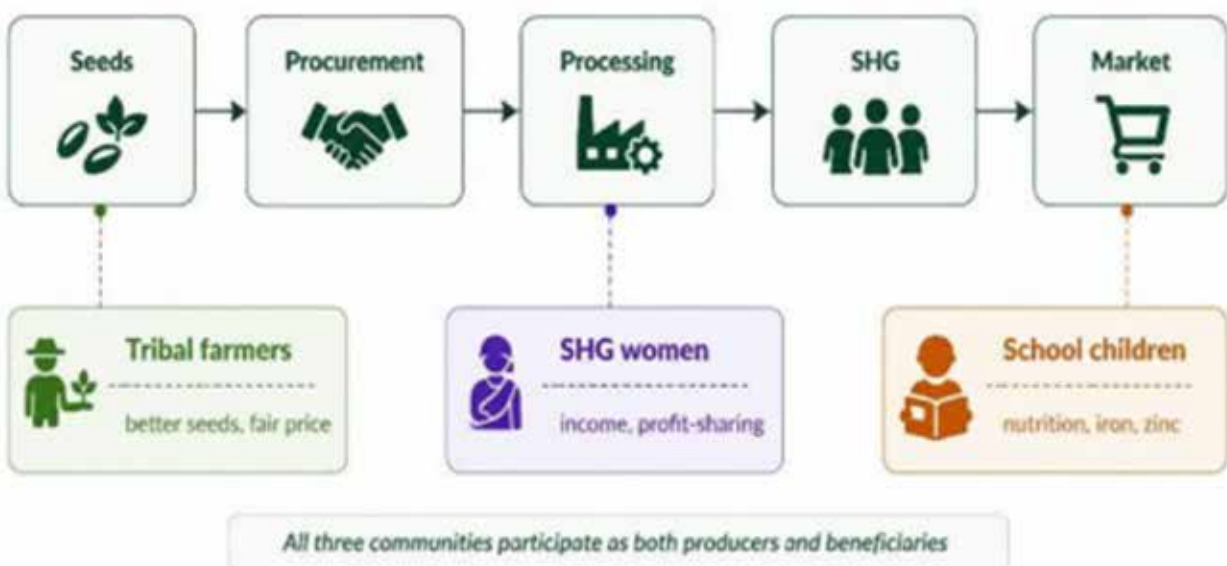


Figure 4: Community Integration of the Company

Community Integration

Across its value chain, the company integrates Bottom of the Pyramid (BoP) communities as both value creators and beneficiaries.

Smallholder and tribal farmers participate through seed production, cultivation, and procurement activities, while women from Self-Help Groups (SHGs) contribute through processing and packaging operations.

School children benefit through access to affordable and nutritious millet-based food products distributed through feeding programmes.

By connecting production, value addition, and consumption within a single ecosystem, the model creates livelihoods, strengthens local participation, and improves nutritional outcomes.

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>Improves farmer income through fair buyback pricing</p> <p>20% improvement in crop yield through Bio-fortified seeds</p> <p>Over 30% income increase per Kharif Season</p> <p>SHG Women earn through manufacturing and packaging</p>	<p>Smallholder millet farmers reached across 5 states</p> <p>Shift from Anaemia to normal haemoglobin levels in communities</p> <p>Training and capacity building for farmers and SHG women</p>	<p>Millets only need 300 litres/ kg water compared to that of 5,000 litres/ kg of Rice</p> <p>Zero-waste operations- by-products used as cattle feed and fodder</p> <p>Fully solar powered manufacturing plant in Pune (50 kw)</p> <p>No synthetic fertilizers or pesticides used in farming</p>

Operational Challenges

A key challenge for the company is increasing consumer acceptance of millet-based products beyond traditional millet consuming regions. As the company expands into states such as Uttar Pradesh, differences in dietary preferences and food habits require greater awareness-building and market development efforts.

Another challenge is scaling the Hydro NRI technology from its current processing capacity of 25 kg per hour to larger commercial volumes.

Finally, expanding production capacity and replicating the model across new regions will also require continued investment, technology development, and operational support.

Awards and Recognitions

The company has accumulated wide-ranging industry recognition, earning the Start-Up Grand Challenge by MoFPI 2023, the 5th Edition of LiFE Challenge 2023 by MAGIC, the Poshak Anaaj Award 2023, and the Winner of AgLive @2023 the Millet Challenge by CII.

They were also named the Nutri-cereals Start-Up of the Year 2023 by Agriculture Today and secured the Winner of Falling Wall Lab India 2022 alongside the Best Entrepreneur Excellence Award by deAsra Foundation. It has also received the Nature Care Samman Award 2024, the Agri Value Chain Partnership Meet recognition, the Uttkrusht Vyapari Puraskar 2025, the Best Agri Start-Up in Millet by FICCI, and emerged as the Winner of India's First International Agri Hackathon 2025.

Note to the Community

“Be consistent in your work. It takes around a year to develop a single product – have the patience and dedication for it. To the farmers we serve: your biggest need is income, and that is what we are here to help create. Use the technology available to you- every farmer with an android phone today can access tools that were unimaginable a decade ago. Find the real problem, build the right solution and do not stop”

- Mahesh Londhe
Founder and CEO
Agrozee Organics Pvt. Ltd.

Website of the Company: www.milletsnow.com



AIO Impex Pvt Ltd

Contact Details

+91 7993337979

info@ancientindiaorganics.com

<https://www.ancientindiaorganics.com/>

AIO Impex Private Limited

Company Overview



AIO Impex Private Limited is an agri-export enterprise operating as a vertically integrated, certification-driven supply chain company sourcing, processing, and exporting premium organic and sustainably certified spices and agri-commodities from tribal and rural farming communities across India.

Founded by Aastha Lalit Bajaj (CEO and Founder) and supported by Anamika Nayak in 2019, the company is based in Vishakhapatnam, Andhra Pradesh, and works with commodities such as ginger, turmeric, black pepper, and related spice crops across tribal farming belts of Andhra Pradesh and 8 other states and across countries like Netherlands, Germany, USA, China, Switzerland, Sri Lanka, Canada, Australia etc.

Through their end-to-end supply chain model, keeping the farming community at the centre, they play a crucial dual role: as an agri-export enterprise landing premium international contracts through rigorous certification standards, and as a community development partner that continuously invests in farmer capacity, sustainability, and livelihoods.

They also hold numerous certifications including Rainforest Alliance, Fair Trade, USDA Organic, European Organic, NPOP, and UEBT, all investments made by the company itself at no cost to the farmers.

Problems Addressed

The company addresses four interlocking problems across the Indian agri-export sector and the tribal farming communities it works with:

Unorganised, Agri Sector

India's agriculture sector is deeply fragmented, lacking channelisation despite massive export potential. Operators do not consistently work with the same set of farmers, supply chains lack traceability, and grassroots practices remain traditional and disconnected from modern standards. The company addresses this by building a structured, certified, and continuously monitored supply chain that creates order, reliability, and accountability from farm to export.

Income Volatility and Lack of Guaranteed Livelihood

Smallholder tribal farmers, many with landholdings of less than one acre, face extreme income vulnerability due to yield uncertainty, price volatility, and exploitative intermediaries. They bridge this gap by providing guaranteed procurement above market price with 100% upfront cash payment, eliminating the need for farmers to approach middlemen, and continuously working with the same farming communities year after year to build economic stability and trust.

Global Competitive Pressure and Quality Defects

Indian agri-exporters face intense competition from cheaper suppliers. The path to sustainable differentiation lies in certified organic and sustainability standards but certification infrastructure, agrochemical discipline, and post-harvest quality management are weak at the grassroots level. They resolve this issue by bearing the entire cost of certification across their supply chain and running continuous training, monitoring, and quality interventions to ensure Indian tribal produce can secure premium international contracts.

Environmental and Social Vulnerability of Farming Communities

The tribal farming communities they work with face compounding challenges beyond agriculture: deforestation, water insecurity in rain-fed hilly terrain, soil degradation, food and fuel insecurity, and limited access to sanitation, education infrastructure, and formal financial systems. Through their sustainability standards framework (RA, Fair Trade, UEBT), they build structured, evidence-based annual intervention targets to progressively address these systemic vulnerabilities within its supply chain communities.

Community-Profile

The company partners with over 10,000 tribal and rural farming families across the Eastern Ghats (Andhra Pradesh, Odisha, and Chhattisgarh). Most farmers own less than one acre and are below-the-poverty-line households.

Around 30-35% of farmers are women. The company promotes women's leadership by requiring each Farmer-Producer Organization (FPO) in its supply chain to include a woman on its Board and is also working towards forming a women-only FPO. These communities also rely on rain-fed agriculture in hilly terrain and face challenges like soil erosion, water scarcity, and lack of irrigation and basic facilities.

In order to engage with them and resolve these issues, the company has also built lasting relationships with them, many spanning over 10 years.

Innovation

The company's key innovation lies in its certification-led and sustainability-focused supply chain model. Unlike many agri-export companies, they combine international certifications, community development, digital field monitoring, and scientific farming practices to build a transparent and sustainable supply chain.

They also use GPS-based field applications to track plantation visits, monitor quality, and maintain compliance through regular audit reports.

At the farm level, they also promote eco-friendly practices such as Integrated Pest Management (IPM), soil fertility restoration, biodiversity-supporting crops, and sustainable alternatives to invasive plantation methods. These initiatives improve soil health, reduce chemical use, and strengthen long-term farmer productivity.

Business Model and Community Integration

Both their business model and integration with the community can be understood through the following sequence:

Business Model

The company follows a sustainability-driven agri-export business model that combines organic farming, farmer inclusion, technology-based monitoring, and international market linkages. They work directly with tribal and rural farming communities to create a transparent supply chain focused on quality, certifications, and long-term livelihood development.

A. Input Supply Support

Firstly, they support farmers by supplying certified seeds, saplings, and natural farming inputs to improve productivity and crop quality.

They also introduce high-yield and sustainable crop varieties, provides training on organic farming practices, and promotes eco-friendly inputs such as compost, farmyard manure, and natural pest-control solutions, which help farmers improve yield, soil fertility, and long-term sustainability.

B. Sourcing

Further, they also source directly from tribal farming communities through their own field teams.

Procurement is scheduled through community collection points with GPS-tracked vehicles,

advance notices to lead farmers via WhatsApp in Telugu, and guaranteed above-market procurement prices paid 100% upfront in cash. Small-quantity sellers (200-500 kg) are equally accommodated, and transportation is provided regardless of volume, aiding inclusion of marginal farmers.

C. Market Linkages

Their distribution model is centred on long-term, premium international B2B contracts secured through its certification portfolio.

All market linkages are handled entirely in-house, with no involvement of third-party brokers or intermediaries, with some client relationships being over ten years old and continuing to grow in volume and depth of engagement.

The certification framework (RA, Fair Trade, USDA Organic, EU Organic, UEFT) are also the core competitive differentiators that enable them to establish a niche and retain repeat business despite global price competition from Africa and China.

D. Revenue Model

Finally, revenue is generated through the export of premium certified organic and sustainably sourced spices to international B2B buyers.

A portion of this revenue is directly reinvested into the supply chain through above-market farmer premiums, certification costs, transportation support, seeds and sapling distribution, and community development interventions.

They are a for-profit organisation that treat upstream community investment as core business strategy not philanthropy because farmer retention, trust, and certified quality compliance are the direct drivers of premium contract retention.

Community Integration

The company integrates communities, particularly tribal women farmers, into its business operations through a community-driven and inclusive approach.

A. Technological and Field Monitoring Inclusion

They use GPS-enabled field applications to monitor field activities and maintain transparency. Farmers also receive local-language advisories and updates through WhatsApp for better communication and awareness.

B. Market Linkages and Economic Inclusion

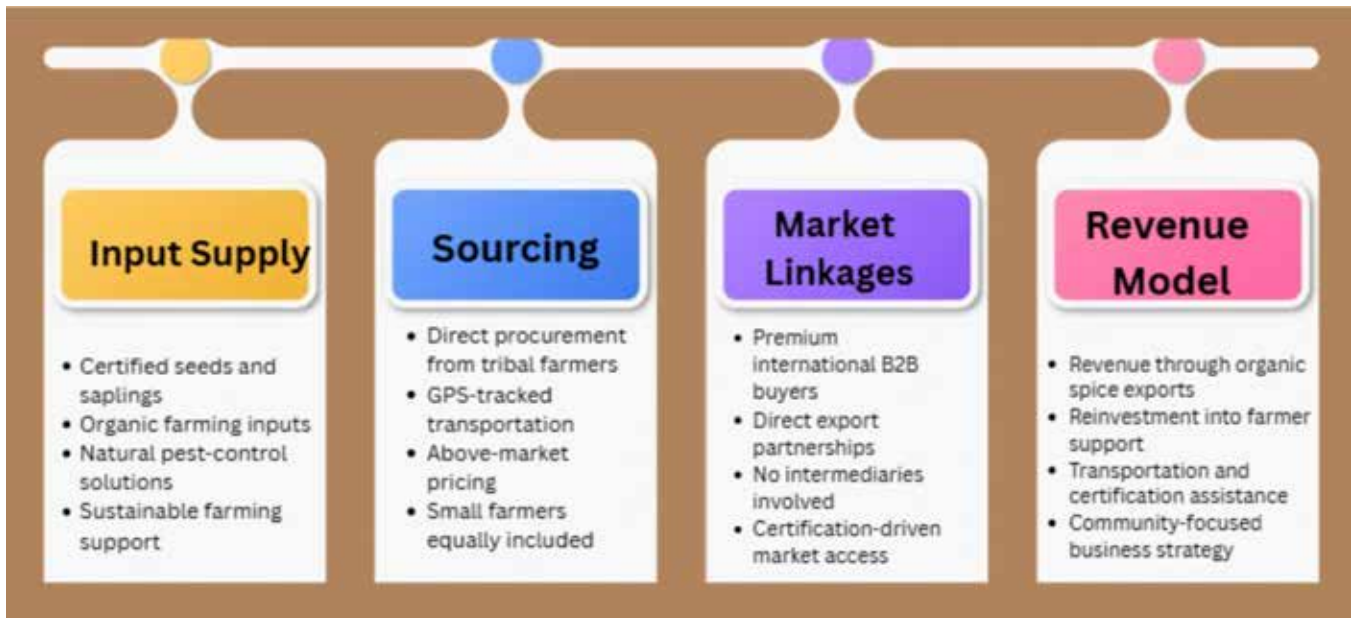
They provide farmers with assured market access, premium prices above market rates, transportation support, and direct procurement without intermediaries, which ensures stable income and long-term trust with farming communities.

C. Agronomic Advisory and Capacity Building

They conduct regular training on organic farming, Integrated Pest Management (IPM), soil conservation, moisture control, and natural farming inputs. Training is customised according to the needs of each farming community.

D. Community Resilience and Livelihood Support

They also work on improving water security, soil health, biodiversity, renewable energy use, and women's participation through initiatives like farm ponds, compost pits, women-led FPOs, and school support projects in collaboration with partner organisations



Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>Farmers receive prices above market rates along with assured procurement and upfront payments.</p> <p>Transportation and collection support reduce farmers' selling and logistics costs.</p> <p>Introduction of certified seeds, saplings, and sustainable farming practices improved productivity and crop quality.</p> <p>Field-level processing opportunities for crops like turmeric and black pepper helped farmers earn higher incomes.</p> <p>Creation of long-term export market linkages generated stable and recurring business opportunities for farming communities.</p>	<p>Improved livelihoods of more than 10,000 tribal and rural farmers through stable market access and premium pricing.</p> <p>Increased participation and leadership of women farmers through women representation in FPOs and women-focused initiatives.</p> <p>Regular farmer training on sustainable agriculture, hygiene, and quality practices improved awareness and skills.</p> <p>Support for rural communities through initiatives related to school infrastructure, sanitation, and livelihood diversification.</p> <p>Strengthened long-term trust and engagement between farming communities and the company.</p>	<p>Piloted 200 biogas plants with BIF to replace wood-based cooking fuel and reduce deforestation</p> <p>Over 1,000 metric tonnes of farmyard manure were distributed and compost pits activated.</p> <p>Water bunds, farm ponds, and stone bunds were built across rain-fed hilly terrain .</p> <p>Agrochemical use is actively monitored across the supply chain, with biological and IPM alternatives.</p> <p>Native species and trap crops like marigold are promoted in field buffer zones to support local biodiversity and reduce pest pressure naturally.</p> <p>The company is building its knowledge of carbon footprint measurement and plans to begin formal carbon accounting for its supply chain soon.</p>

Operational Challenges

Despite the impact created, the company faces significant operational challenges:

Quality Discipline at the farm level

This remains the most persistent challenge. Farmers frequently attempt to sell produce with moisture levels above contract specifications a difference that can translate to crores in value loss per shipment (for example, a 50-lakh truckload of black pepper with excess moisture loses substantial weight and commercial value during transit). The company has spent years building farmers' awareness of moisture standards for black pepper and continues to do so with newly onboarded communities.

Agrochemical Compliance

Despite organic certification, isolated instances of agrochemical use are periodically detected during internal inspections, which must be investigated and resolved without compromising the integrity of the supply chain or the certification. The company's field teams

work continuously to substitute agrochemical solutions with IPM alternatives and natural inputs.

Awards and Recognitions

The company has received recognition within India's sustainable agri-export ecosystem for their certification-led, community-integrated supply chain model.

They also live certifications from Rainforest Alliance, Fair Trade (FLO), USDA Organic (NOP), European Organic Regulation, NPOP, and UEFT (Union for Ethical BioTrade) among the most rigorous international sustainability standards applicable to agri-supply chains, which are also subject to annual third-party audits and are held jointly by the company, its processing facility, and all farmers in its supply chain.

The company has received project support and collaboration from GIZ (for training scale-up), IFAD (an active project partnership), BIF (for a biogas plant pilot), TechnoServe, and Rainforest Alliance's Sabal Project (for seed and sapling distribution to enhance farmer productivity).

Note to the Community

"I feel India has huge potential. India is having so much potential. I don't think it has completely been explored yet. And the more we empower our farmers community, the more India will become a leader in agriproducts across the world. So, India, I think in terms of potential, is massive, but the more we regulate the industry, the more we channelize, the more support we provide to the supply chain, the better Indian products will become across the world. That's something I really personally feel. The potential is huge. Like the effort we are making is nothing in comparison to the potential that exists in the Indian Agri sector."

- Anamika Nayak
Executive Assistant/ Liaison Officer
AIO Impex Pvt Ltd

Website of the Company: <https://www.ancientindiaorganics.com/>



Aqua Doctor Solutions

Contact Details

+918045815220

 <https://www.aquadoctorsolutions.com/>

Aqua Doctor Solutions

“One Shop-One Stop for Solutions for Aquaculture & Fisheries”.



Company Overview

Aqua Doctor Solutions is an innovative aquaculture consultancy and Aqua-Tech enterprise operating as a centralized, tech-driven platform. The company is dedicated to transforming traditional, high-risk aquaculture systems into climate-resilient, data-driven, and highly profitable ecosystems for smallholder farmers.

Registered as a Limited Liability Partnership (LLP) in 2020, the enterprise was born out of a rented room in Calcutta and is currently headquartered in Jadavpur, Kolkata, West Bengal. Despite maintaining a highly lean operational core of fewer than ten dedicated employees, the company operates as a major supplier, trading entity, wholesaler, and retailer, holding rigorous operational standards and maintaining active certifications across GMP, ISO, FSSAI, UDAYAM, and ICE frameworks.

The company has rapidly scaled its presence to dominate the Eastern and Northeastern aquaculture corridors of India across West Bengal, Bihar, Jharkhand, Odisha, Uttar Pradesh, Assam, Tripura, Meghalaya, and Manipur. Beyond domestic borders, they have successfully established a robust B2B export and supply chain channels extending into Nepal and Bangladesh.

Problems Addressed

Aqua Doctor Solutions strategically intervenes to dismantle a complex web of systemic and structural barriers that historically render unorganized, smallholder aquaculture a high-risk, low-reward livelihood. The core challenges addressed include:

Knowledge Deficits and Technological Apprehension

Despite the high economic potential of the sector, rural fish farmers remain tethered to traditional, outdated farming methods. There is a pervasive lack of scientific training regarding essential practices like water quality management, biosecurity, and species diversification. Furthermore, these communities exhibit a deep-seated psychological apprehension toward adopting modern Aqua-Tech (such as IoT monitoring or Bio floc systems) due to historically low digital literacy and a lack of accessible, on-ground demonstration.

Financial Exclusion and Capital Constraints

Transitioning a traditional pond into a high-yield, climate-resilient asset requires critical upfront capital for modern infrastructure (e.g., solar aerators, formulated feed). However, the target demographic operates almost entirely within the unorganized sector, suffering from severe financial exclusion. The absence of direct institutional credit linkages and tailored microfinance (MFI) facilities renders the adoption of yield-boosting technology prohibitively risky, locking smallholders into a perpetual cycle of low investment and low yield.

Fragmented and Exploitative Supply Chains

The rural aquaculture ecosystem is heavily stratified and dominated by multiple layers of intermediaries. This fragmented structure actively works against the farmer, denying them direct access to standardized, high-quality inputs (seeds, feed, medicine) at fair market prices. Furthermore, the absence of trustworthy, localized advisory means farmers are frequently misinformed by profit-driven middlemen, leading to the costly misuse of inputs and severe pond mismanagement.

Community Profile

They primarily engage with smallholder fish farmers, traditional fisherman communities, and marginalized fisherwomen across Eastern India.

To ensure successful grassroots mobilization and last-mile delivery, the company strategically embeds itself within existing community frameworks. They partner extensively with Farmer Producer Organizations (FPOs), Self-Help Groups (SHGs), and rural cooperatives, such as the Switch ON Foundation.

Crucially, they actively dismantle systemic gender bias by transitioning rural women into independent micro-entrepreneurs, most notably through the establishment of localized, completely female-run eco-hatchery models.



Figure 1: Community Profile Breakdown

Innovation

Aqua Doctor facilitates high-integrity aquaculture via three core technological innovations:

Matsya Sathi Application

Serving as India's first integrated aquaculture SaaS platform, this digital tool bridges the technology gap by offering 24x7 expert advisory, e-commerce for quality inputs, capacity building, and direct market/ insurance linkages.

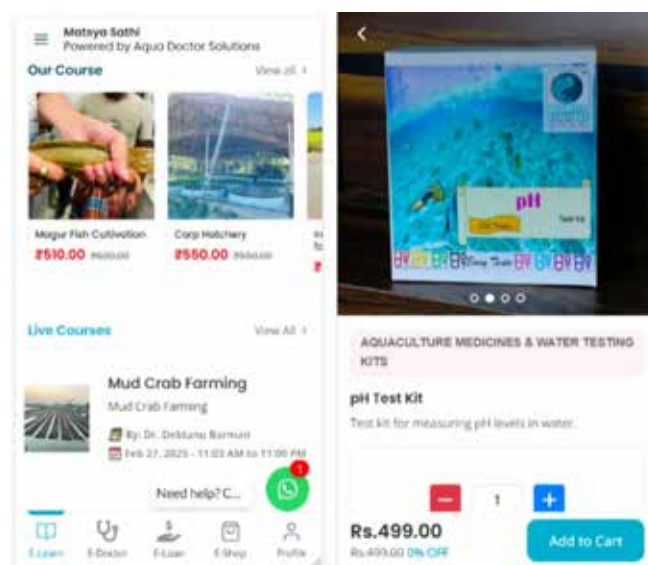


Figure 2: Matsya Sathi Application

SIMBA Feed (Waste-to-Wealth)

A patent-pending, premium aqua feed developed from seaweed, insect waste, and fish market waste. This eco-friendly alternative mitigates dependency on volatile conventional ingredients (like mustard oil cake) while promoting a low-emission, blue carbon economy.

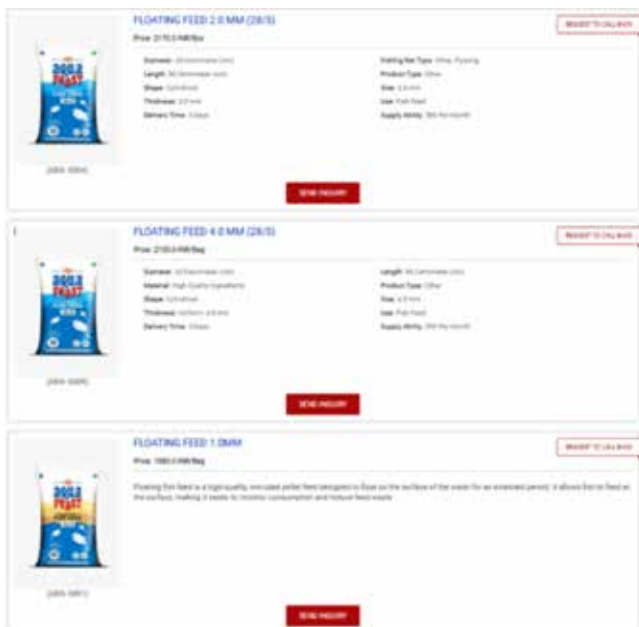


Figure 3: Range of Aqua Feed²⁰

Solar and IoT Infrastructure

Backed by startup grants from IIT Guwahati and IIT Kharagpur, the company deploys solar-powered aerators and pumps via microfinance (MFI) models, coupled with IoT devices for real-time, data-driven water quality monitoring.



Figure 4: Solar-powered Paddle Wheel Aerator²¹

Business Model and Community Integration

Both their Business Model and integration with the community can be simplified and understood in the following sequence:

Business Model

Their Business Model can be understood along the following components:

A. Sourcing

They source materials and manufacture crucial inputs in-house, primarily through their SIMBA feed vertical, where agricultural and fish market waste is processed to produce low-emission fish feed. They also manufacture their own proprietary aquatic medicines and water conditioners, maintaining rigorous GMP and ISO standards.

B. Operations and Technology

They deploy the Matsya Sathi App to monitor the 6-8 months' culture cycles and integrate smallholder farmers into a formalized e-commerce system. Alongside technological integration, they also provide intensive agronomic advisory services through its 'Adopt the Village' program, supporting farmers in shifting to high-yield models like Biofloc and deploying solar aerators to manage water dissolved oxygen levels efficiently.

C. Market Linkages

By ensuring fair trade, they buy output directly from farm clusters and supply it to larger retail chains. Furthermore, their market linkages extend to B2B channels, successfully exporting aquaculture inputs to neighbouring markets like Nepal and Bangladesh as their Expansion Strategy for Aquaculture.

D. Revenue Model

Finally, their revenue model is highly diversified across B2C, B2B, and B2G channels. The primary stream stems from direct sales of in-house fish medicines, feed, and equipment to farm clusters, which yields an approximate 30% net profitability. Additional revenue is secured

²⁰ Aqua Doctor Solutions. (n.d.). FISH FEED. <https://www.aquadoctorsolutions.com/fish-feed.html>

²¹ Aqua Doctor Solutions. (n.d.). 2 Paddle Wheel Aerator. <https://www.aquadoctorsolutions.com/2-paddle-wheel-aerator-8949563.html>

by facilitating market linkages and value-added product sales, which boosts margins by 20-25%.

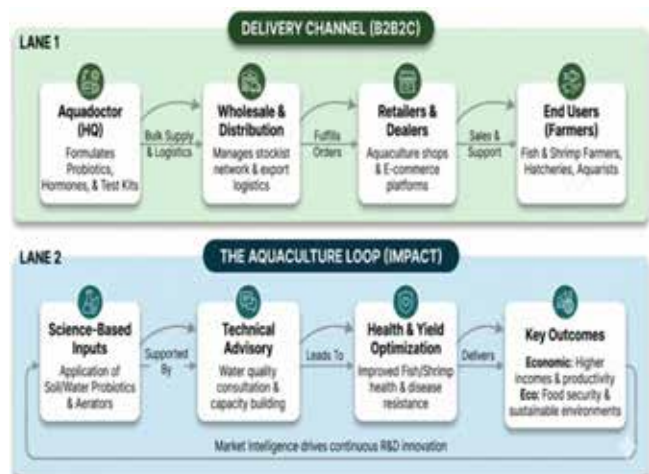


Figure 5: Business Model of the Company

Community Integration

Across all its operations, the company integrates the community as core economic partners alongside a three-pronged approach:

A. Technological Inclusion

They include smallholders by providing the Matsya Sathi platform and IoT infrastructure. Because digital literacy is historically low, grassroots staff conduct intensive hand-holding sessions, enabling not only data-backed pond management but broader technological inclusion for marginalized farmers that was not their earlier.

B. Market Linkages and Economic Inclusion

By bypassing exploitative multi-layered middlemen, they connect these farmers directly to willing commercial buyers and retailers. They ensure market linkages for the smallholders and facilitate the creation of value-added products (e.g., head-cut, tail-cut fish), thus ensuring that a significantly higher profit margin flows directly back to the farmers.

C. Agronomic Advisory

They also provide technical advisory to transition farmers from traditional, high-risk practices to scientific aquaculture. This reduces their

reliance on costly, misinformed input usage and improves long-term pond biosecurity and climate resilience that will help the farmers.

D. Circular Waste-to-Wealth and Gender Inclusion

Through their SIMBA feed, they engage in a circular economy by transforming fish market waste and insect waste into premium feed. Additionally, they actively integrate marginalized fisherwomen into the economy by establishing decentralized, entirely female-run eco-hatcheries, creating new, sustainable employment opportunities.

Operational Challenges

The primary operational constraint for the company lies in macro-market feasibility: while the cost of vital inputs continuously escalates, the farm-gate output price for fish remains stagnant, severely compressing baseline profitability.

In order to mitigate this constraint and further scale operations, they recognize a critical need for nationwide campaigns to boost domestic fish consumption and a stronger industry-wide focus on product value-addition.

Awards and Recognitions

The company's notable accolades include the National Adult Samman Award in New Delhi, the Delhi MSME Award for the Eastern Zone, and the Social Empowerment Award presented by the Ministry of Social Justice. Furthermore, their commitment to community upliftment earned them the Swami Vivekananda International Award from the Ramakrishna Mission.

In addition to this, their technological interventions, such as the solar aerator and IoT deployments, have been validated and supported by institutional startup grants and incubation backing from premier institutes, including IIT Kharagpur, IIT Guwahati etc.

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>Facilitated a 51-75% increase in smallholder farmer incomes by enabling 2x to 3x higher production yields compared to traditional farming methods.</p> <p>Creates a highly profitable revenue stream for unorganized fish farmers by transitioning traditional household ponds into productive, high-yield assets</p> <p>Reduces overhead input costs through bulk cluster procurement and significantly boosts profit margins (by 20-25%) by bypassing exploitative middlemen via direct market linkages.</p>	<p>Engages deeply with marginalized smallholder fish farmers, traditional fisherman communities, and rural fisherwomen across Eastern and Northeastern India.</p> <p>Fosters critical digital literacy among historically excluded groups through intensive, on-ground hand-holding, successfully onboarding rural farmers onto the digital Matsya Sathi platform.</p> <p>Drives grassroots mobilization by partnering with community institutions, including Farmer Producer Organizations (FPOs), Self-Help Groups (SHGs), and rural cooperatives like the Switch On Foundation.</p>	<p>Promoted climate-resilient aquaculture through the mass integration of green energy, specifically deploying solar-powered aerators and solar pumps via MFI models.</p> <p>Implemented rigorous water conservation and quality management systems to restore and maintain pond ecosystem biosecurity.</p> <p>Diverted significant volumes of fish market waste, seaweed, and insect waste from local ecosystems to create their patent-pending SIMBA feed, fostering a localized, low-emission circular economy.</p>

Note to the Community

“For the young people, I should say that you should go in the field first. Learn from field, act on field, and, you know, hurdles of field. When you understand, then you can develop the solution. But don’t develop your solution in AC room. Move out yourself in the field, go down the field, understand people’s real problem, be part of the community, and do something good for the community.”

- Dr. Debtanu Barman
CEO and Founder
Aqua Doctor Solutions

Website of the Company: <https://www.aquadoctorsolutions.com/>



Biome™

Our innovations your Edge to Lead
Technologies Pvt. Ltd.

Biome Technologies Pvt. Ltd.

Contact Details

+919559195005

service@biometechnologies.in

<https://www.biometechnologies.in/>

“संशोधनातून समृद्धीकडे...”

Company Overview

Biome Technologies Private Limited is a Deep Tech Agri Biotechnology Company working at the intersection of IoT, AI, and climate-smart agriculture.

Founded in 2021 by Dr. Prafull Gadge (Founder and Director) and Dr. Naresh Shejawal (CSO), and based in Ahilyanagar, Maharashtra, its core focus is on bridging the gap of information pertaining to soil's biological health (i.e. microbial health) amongst the smallholder farmers.

The company primarily works with smallholders in Maharashtra across food grains, oilseeds, vegetables, spices, and horticulture, and has active expansion in other states as well.

Through their product and brand, they also play a key role in the 'Agri Solutions and Tech Integration' sector, focusing on bridging the gap between laboratory science and scalable farming by both offering an advanced soil diagnostic kit and developing bio-inputs as prescriptions under their brand, thus both closing the loop and providing a solution for testing, retaining, and maintaining soil health.

This enables the farmers to cut agrochemical dependency, know their soil and its nutrient requirements better, and judiciously spend on inputs accordingly.

Problems Addressed

The company addresses four interconnected and critical challenges in the Agriculture and Food Systems sector:

- Absence of affordable and rapid soil diagnostics and prescription
- Blind spending (sometimes 30-40% more than necessary) and application of

agrochemicals by farmers, resulting in degradation of beneficial microbial life driving nutrient cycling, disease resistance, and yield stability

- Smallholders being locked out of export markets, climate finance, and carbon credits due to lacking verified soil data
- Lack of a structured economic role for the community (primarily women and youth) in the agricultural services ecosystem

Community Profile

In order to resolve the aforementioned issues, the company primarily works with three overlapping community groups at the most vulnerable end of India's agricultural economy:

Smallholder Farmers

The first and largest group are the smallholder farmers in Maharashtra's rain-shadow and semi-arid districts including Ahilyanagar, Sambhajinagar, Nanded, Solapur, and Nashik.

The families of these regions cultivate fewer than two hectares, grow food grains, oilseeds, onion, sugarcane, and spices, and spend 30-40% of their income on chemical inputs, with no soil data to guide them, and many carrying persistent debts with little buffer against a bad season.

Women from Self-Help Groups

The second group are the women from Self-Help Groups (SHGs) with no formal economic role in agricultural services.

Farmer Producer Companies

The third group are the Farmer Producer Companies (FPCs) with limited access to agri-service infrastructure and working capital.

Innovation

In order to bridge the gap between farmers and their knowledge pertaining to soil's microbial health, the company has two key innovations:

Firstly, their flagship product, the 'Soilometer', is India's first ICAR-validated, patent-protected (No. 586022), portable soil microbial diagnostic kit, priced at Rs. 390 per test, having no additional pre-requisites (such as laboratory, science degree, or specialist infrastructure), and measuring six parameters at the farm gate in under three hours.



Figure 1: The Soilometer Kit²²

Further, their Brand 'Prolifert' daily produces ~ 5000 litres of more than 35 proprietary bio-fertilizers, bio-pesticides, and bio-controls in-house.



Figure 2: 'Prolifert'²³ and its Products²⁴

Business Model and Community Integration

Both the company's business model and integration with the community can be simplified and understood in the following sequence:

The Twin Components

The company's business model primarily revolves around 2 key components: the Soilometer Kit and the brand 'Prolifert':

Aspects of Community Integration

Centered around these twin components, and through economic incentive and mutual accountability, the company integrates the community in various ways or through various modes:

Affordability and Usability

The Soilometer Kit is priced at Rs. 390 per test, a fraction of the Rs. 10,000 or more that commercial labs charge, also requiring no prior laboratory, science degree, or specialist infrastructure.

To test soil health using the kit, the tester needs to collect a representative soil sample (10-15 g) from the crop root zone at a depth of 4-6 inches. Then they need to add 6 ml of solution from tube A and the entire contents of tube B into tube C, and then add 1 g of soil, mix thoroughly, and keep the tube upright in the dark for three hours.

For biofertilizer testing, they would prepare the same solution in tube C, add 1 g of biofertilizer, mix well, and wait for three minutes.

Finally, in both the tests, there will be a colour comparison of the resulting colour change with the provided colour chart, and the intensity of the colour will indicate the level of microbial activity

²² Biome Technologies. (n.d.). Soilometer. <https://www.biometechnologies.in/products/37/>.

²³ Biome Technologies Pvt. Ltd. (n.d.). Prolifert - Hindi brochure [Brochure]. <https://biometechnologies.in/static/img/Prolifert%20-%20Hindi%20Broucher.pdf>.

²⁴ Biome Technologies Private Limited. (n.d.). Sustainable agriculture & crop innovation. <https://www.biometechnologies.in/>.

or biofertilizer quality, with the accompanying guide providing recommendations and actions based on the results.

This simple procedure makes the product both affordable and usable for the community.

Operational and Economic Inclusion

The company recruits SHG women under their Soil Warrior Program, trains them to do soil testing at no upfront cost, provides kits on a zero-advance credit model, and pays Rs. 100 per test, building a genuine livelihood of Rs. 1.5 to 2.5 lakh annually.

It also connects with smallholder farmers through FPCs, who also act as their distribution hubs, giving them Rs. 90 margin per test and access to 'Prolifert', creating recurring institutional revenue.

Procedural Simplification and Inclusion

Test data is fed into a cloud AI platform, generating crop-specific Soil Biome Index scores, and the results are delivered in under three hours at the farm gate, in Marathi, via WhatsApp. Finally, every soil test results into a Prolifert prescription, closing the loop, with the procedure ultimately ensuring that a smallholder with fewer than two hectares gets the same quality of soil intelligence as a large commercial farm.

Business Model

Based on the above, their business model can be succinctly summarized into the following three segments:

Operations and Technology

As part of its operations, the company deploys the Soilometer Kit, through a network of Soil Warriors and FPC. SHG women and local youth are onboarded under their 'Soil Warrior Program', with zero upfront capital, as 'Soil Warriors' to collect physical samples directly at the farm gate. The captured data is uploaded to a cloud-based AI platform that automatically

calculates crop-specific 'Soil Biome Index' scores in under three hours, given to the farmers via WhatsApp in Marathi.

Prescriptions

This leads to targeted prescriptions from Prolifert, thus closing the loop.

Revenue Generation

The company drives ecosystem participation by economic incentivization, with FPCs acting as distributors and earning Rs. 90 per soil test, creating a recurring institutional revenue stream. An FPC running 500 tests a month generates Rs. 45,000 in monthly income, alongside Prolifert biological margins. Soil Warriors earn Rs. 100 per test, and a Soil Warrior conducting 10-15 tests per week earns Rs. 1.5-2.5 lakh annually.

They also derive income from training sessions to farmers, charging Rs. 3,000 for the entire training.

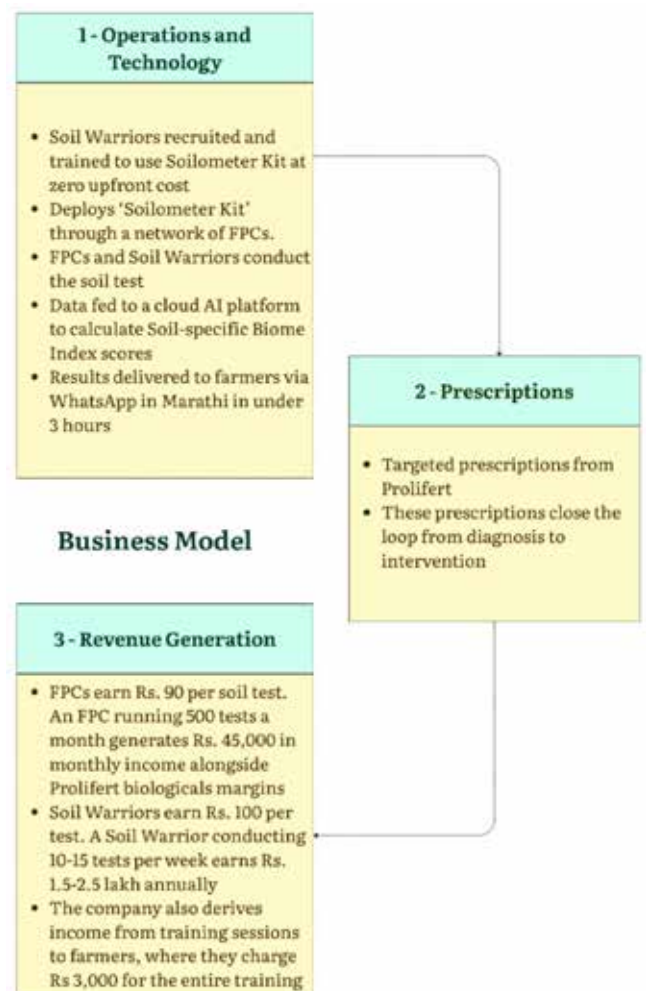


Figure 3: Business Model of the Company

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>Creates entrepreneurship opportunities for the community:</p> <p>FPCs earn Rs. 90 per soil test, while also acting as distributors. An FPC running 500 tests a month generates Rs. 45,000 alongside Prolifert biologicals margins</p> <p>SHG women earn Rs. 100 per soil test and also receive training to use Soilometer. A Soil Warrior (SHG women and rural youth) conducting 10 to 15 tests per week earns Rs. 1.5-2.5 lakh annually</p>	<p>Served more than 20,000 farmers</p> <p>Of them, more than 75% are smallholders</p> <p>Trains the farmers and makes them aware of agrochemical usage and soil microbial health through their movements and campaigns</p> <p>Enables smallholders to have equal and good quality soil testing, while also making the entire process FPC and SHG-driven, thus integrating the community</p>	<p>Across 28,000 hectares and 1,15,000 completed soil tests:</p> <p>95.5% of farmers reduced chemical fertilizer use, while 95.3% reduced pesticide application</p> <p>24.8% reported increases in soil organic carbon, while 89.8% observed improved soil texture, and 28.5% noted better water retention</p> <p>81.7% recorded more beneficial soil organisms, 73.8% saw increased earthworm populations, and 62.9% observed healthier soil colour</p>

Operational and Ecosystem Challenges

Despite the impact created, the company continues to face significant operational and ecosystem challenges:

Ecosystem Challenges

In its initial phase, the company faced problems in gaining validation from recognized, statutory institutions (such as ICAR), since in front of whichever official they pitched their product, they were told that soil microbial health will be required in the future and not in the present.

Further, there are also no Government guidelines or resources for the validation of soil microbial health. Due to the above, gaining validation for their product was a cumbersome procedure.

Operational Challenge

There are problems pertaining to awareness creation itself: since farmers don't understand the standard NPK test, making them aware of and shift to Soil Microbial Health was, and still is, a challenge for the company.

Awards and Recognitions

The company has received a wide range of awards and recognitions:

They have received two global recognitions: ImagineNext Top 50 Planet-First Startups, awarded by the Sustainable Innovation Council on April 21, 2026 and being one of 33 global finalists of the WIPO Global Awards 2026, selected from more than 1,300 applications across 126 countries.

Their Soilometer was inaugurated by former Union Agriculture Minister Narendra Singh Tomar in February 2024 at the CCSHAU Agri Innovation Centre in Jaipur. Further, their growth has also been supported through multiple funding and incubation partnerships.

Between 2024 and 2025, 56 farmers associated with the company have also received the ICAR Millionaire Farmer of India (MFOI) Award.

In 2026, Dr. Gadge has also received the Tifan Krushi Gaurav National Prestige Award for contributions to Indian agriculture and farmer welfare.

Adaptation, Training, and Awareness

To make the farmers understand the importance of soil microbial health, the company has started providing both standard NPK and soil microbial health tests. Further, they have also conducted several training sessions for the farmers, including their most important training under the कृषि रसायन साक्षरता अभियान (Agrochemicals Literacy Movement), for the cost of Rs. 3,000, under which they bring farmers to their laboratories, show them why soil microbial health is important, along with giving them the Soilometer Kit, Bio-inputs, whole year's advisory, and notes of the training, through which they've trained more than 3,000 farmers in their laboratory and more than 5,000 farmers outside their laboratory. Finally, they also conduct awareness campaigns, including 'सुनो मिट्टी की आवाज़', 'Healthy Soil Equals Healthy Nation' etc.

Adaptation, Training, and Awareness

"Healthy Soils Equals Healthy Nation. If we keep our soil healthy, then only the farms will thrive, and then only the farmers will be prosperous, and the cycle will continue to lead to the nation becoming stronger. This is our strength even today. More than 65% of our population is either directly or indirectly still dependent on Agriculture. It is only Agriculture that survived during Covid-19, and had a positive GDP, and the rest GDPs were in the minus. So, it has a huge potential and entrepreneurial opportunity."

- Dr. Prafull Gadge
Founder and Director,
Biome Technologies Private Limited

Website of the Company: <https://www.biometechnologies.in/>

Dvara E Registry Private Limited



Contact Details

+91 8754511844

 dvaraeregistry@dvara.com

 <https://www.dvaraeregistry.com/>

Company Overview

Dvara E-Registry (DER) Private Limited is an agri-fintech company founded in 2019 that works to improve financial inclusion, productivity, and market access for smallholder farmers, tenants, women farmers. It is an integrated solutions provider for the agri value chain, using data, AI, remote sensing, and GIS to bridge information gaps between farmers and financial institutions.

Their core platform, Doordrishti, supports plot digitisation, crop analytics, advisory services, weather alerts, insurance enablement, and market linkages, helping farmers make better production and selling decisions. The company also offers KhetScore, an alternative credit analytics solution that assesses land parcel productivity and farm risk so lenders can serve productive farmers who may lack formal credit histories or strong land titles.

The company works through more than 300 FPOs, more than 1,35,000 farmers, and more than 7,000 villages across 5 lending states, reaching smallholder, women, and tenant farmers through FPOs and local field teams.

By combining digital tools with assisted delivery, it helps even low-literacy households access finance, advisories, and markets, while also linking farmers to climate-smart practices, resilient inputs, and better price realization.

Problems Addressed

The company addresses structural barriers faced by smallholder farmers, especially climate risk, low insurance penetration, weak market access, and exclusion from formal credit.

Many smallholders lack formal credit histories, clear land titles, and financial literacy, which

pushes them toward informal lenders and high-cost borrowing.

Women farmers face even greater exclusion due to low land ownership and limited access to institutional finance.

At the same time, access to climate-smart advisories, resilient seeds, quality inputs, and transparent crop insurance remains limited.

The company addresses all these gaps by combining digital farm intelligence, alternative credit assessment, assisted service delivery, and FPO-led aggregation into one ecosystem that improves resilience, inclusion, and productivity.

Community Profile

The company primarily works with smallholder, women, and tenant farmers who are among the most vulnerable groups in India's agricultural economy.

These farmers usually cultivate small landholdings, often have weak or no formal land titles, and remain excluded from institutional credit, insurance, and organized markets. Many are new-to-credit and highly dependent on informal borrowing.

Women farmers face added barriers such as low asset ownership, lower mobility, and limited decision-making power despite contributing significantly to agricultural labour.

The company engages these communities through an FPO-led assisted delivery model. FPOs serve as trusted local anchors, while Farmer Solution Officers onboard farmers, digitize land and crop data, and facilitate access to credit, insurance, advisories, and

market linkages. This approach ensures inclusion even for farmers with low digital or financial literacy and helps integrate them into formal economic systems over time.

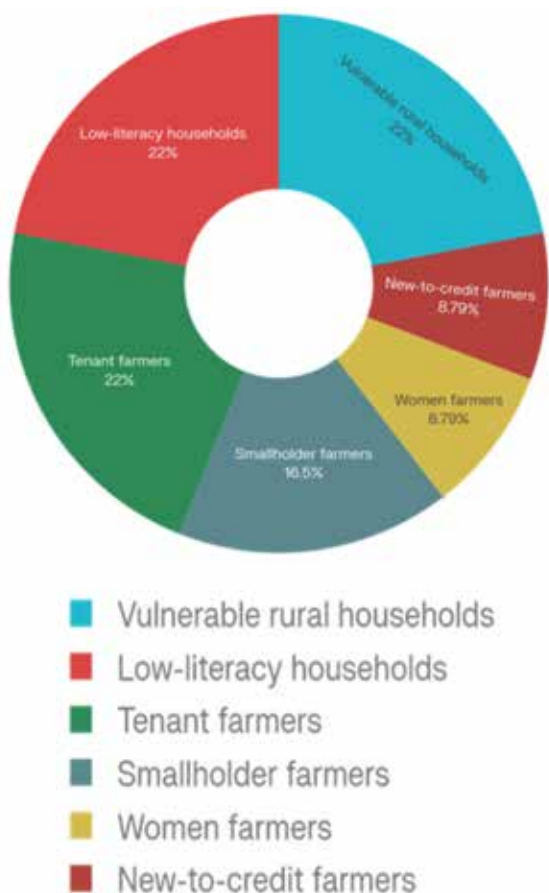


Figure 1: Pie Chart showing Community Profile of the Company

Innovation

Dvara E-Registry's innovation stack is anchored by Doordrishti and KhetScore, with the farmer-facing Krishak mobile application extending these services directly to the field.

Doordrishti Integrated Platform

Doordrishti serves as the frontline intelligence and engagement layer, delivering localized crop advisories, block-level weather alerts, input access, price intelligence, and market linkage support that help farmers make better day-to-day production and selling decisions.

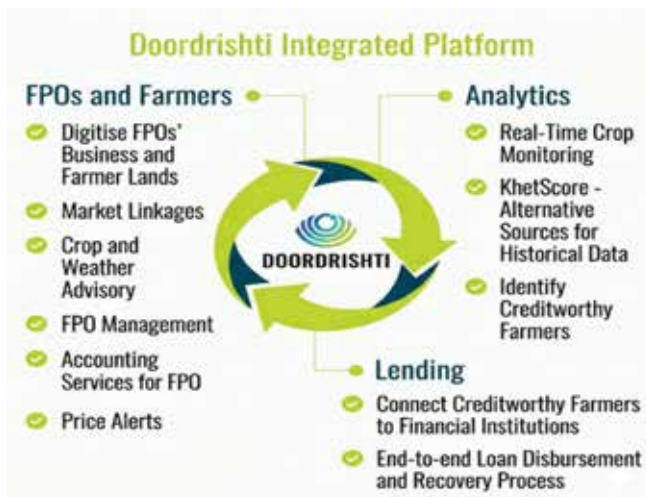


Figure 2: Doordrishti Integrated Platform

KhetScore

KhetScore strengthens this stack by functioning as an AI and remote-sensing-based alternative credit score that evaluates more than 200 data points from geofenced farms, including crop health, soil moisture, land productivity, and climate stress, enabling lenders to assess farmer risk without depending only on land titles or conventional credit history.

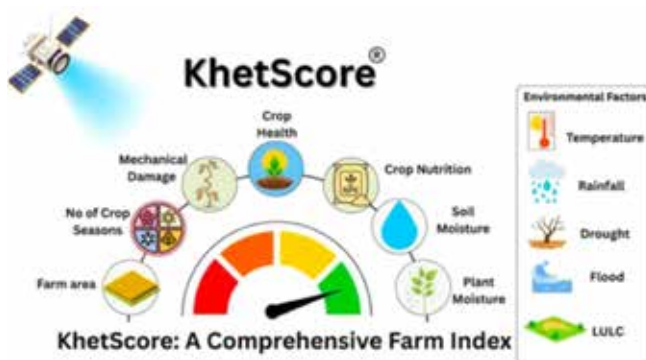


Figure 3: Diagram of KhetScore

Ongoing Innovation Efforts

Other than the aforementioned innovations, the company also has numerous ongoing innovation efforts:

Land Suitability Platform

Odisha's Land Suitability Platform helps identify the right crop for the right land using GIS-AHP and multiple agro-climatic parameters such as soil, elevation, slope, temperature, sunlight, rainfall, and organic matter. It is being used for crops like coffee, potato, and dragon fruit, helping improve productivity and climate-resilient crop selection.

Price Forecasting

Their price forecasting platform for horticultural crops in Odisha estimates future prices using market, demand-supply, seasonal, and climate factors, helping farmers choose the most profitable crop, plan harvest timing, and negotiate better prices.

Business Model and Community Integration

The company operates on a B2B2F platform model, where it works primarily through institutional and community intermediaries such as FPOs, banks, NBFCs, insurers, agri-input companies, buyers, and field teams, and then reaches smallholder farmers through these channels at scale.

For enterprise

On the enterprise side, Doordrishti helps FPOs digitise farmer and plot records, understand crop area and crop health, estimate input demand, manage communication, support accounting and compliance, improve procurement planning, and build backward and forward linkages with suppliers and buyers.

For financial institutions

On the financial services side, KhetScore and related analytics reduce lending risk by providing alternative credit-underwriting data, historical farm-level intelligence, and remote crop monitoring, allowing lenders to evaluate farmers beyond traditional collateral or credit-history constraints.

For farmers

On the farmer side, the same ecosystem, comprising of these twin components, improves access to credit, crop advisory, weather updates, insurance support, price intelligence, warehouse information, and market opportunities through an assisted delivery model rather than a purely self-serve app.

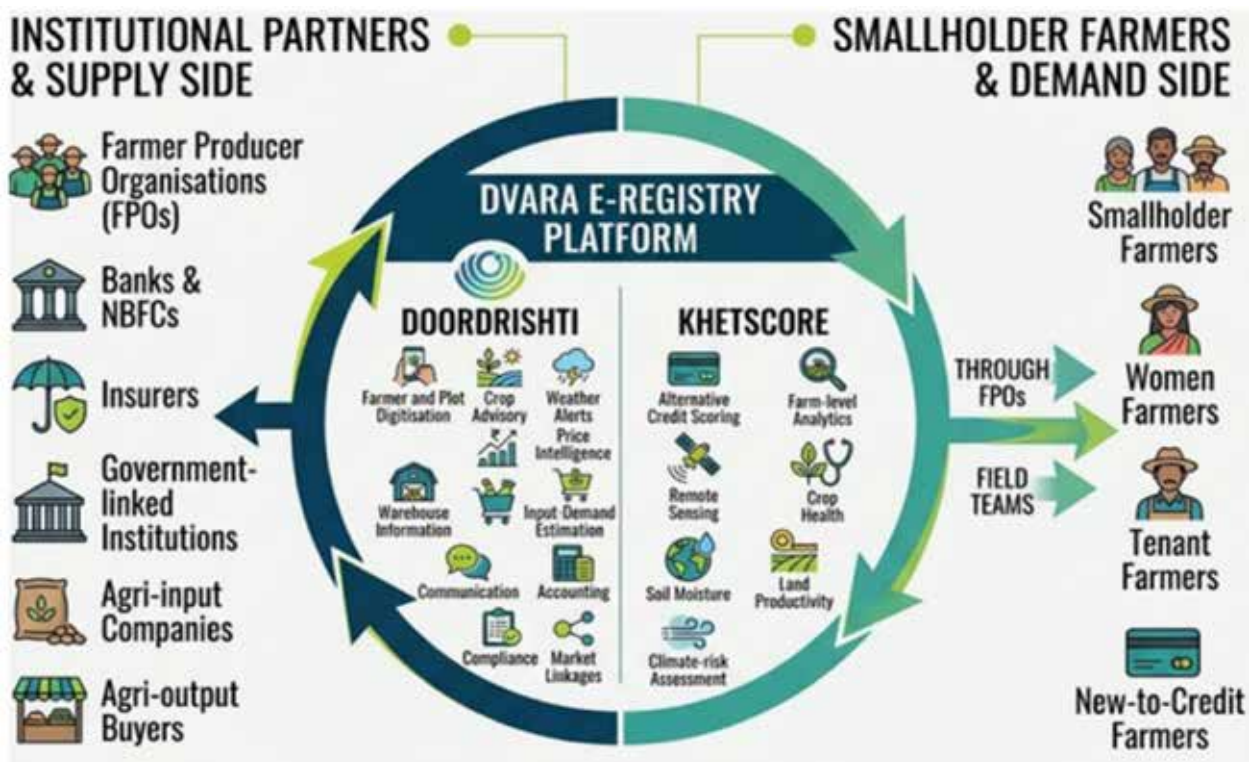


Figure 4: Business Model of the Company

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>Enabled more than Rs. 200 Cr. in credit to over 40,000 farmers.</p> <p>Facilitated more than Rs. 90 Cr. in market linkages.</p> <p>Reported a 10-13% reduction in input costs.</p> <p>Reported a 2-5% increase in income from produce.</p> <p>Reduced borrowing costs by 25-50% compared to informal sources.</p>	<p>Reached more than 50,000 farmers and community members.</p> <p>Worked with more than 300 FPOs to improve local access and trust.</p> <p>Included 26-50% women members and supported more than 75% small holder farmers</p> <p>Delivered more than 0.6 million customized crop advisories</p>	<p>Brought more than 56,000 acres under climate-smart agriculture.</p> <p>Saved nearly 400 billion litres of irrigation water.</p> <p>Prevented 56,000 MT of CO2-equivalent emissions.</p> <p>Supported 2,500 farmers and more than 3,000 acres for seed multiplication of climate-resilient seeds.</p> <p>Supported more than 2,000 acres through soil amelioration interventions.</p>

Operational Challenges

The company faced numerous challenges at the initial phase and still face various operational problems. Banks took time to trust the model and integrate it. Further, the business needed field staff, so growth was not fully digital. Farmers also needed repeated training and many lacked smart-phone access. Moreover, timing had to be adjusted to fit women farmers' household duties. Finally, for the tenant communities, lack of land titles made lending more complex.

Awards and Recognitions

The company has secured extensive global recognition for its innovative integration of climate-smart agriculture and inclusive rural fintech platforms. Within the environmental and agricultural technology sectors, the startup

was named a winner of the World Economic Forum's Smarter Climate Farmers Challenge for its digital farming platforms. It has also won the WE4F Grand Challenge for Development for its water- and energy-saving agricultural solutions. Their advanced analytical tools earned them the BRICS Solutions Award in the Climate and Environmental Technologies category for its project, "Enhancing Climate Resilience through Remote Sensing, AI, and ML." Their technology-driven financial inclusion initiatives also earned them the Fintech for Bharat Award at the Global Inclusive Finance Summit, the Emerging Start-Up category title at the PICUP Fintech Awards, and a selection in the global Inclusive Fintech 50 cohort, cementing its dual impact as an elite agri-fintech innovator.

Message to the Community

"Farmers are the real teachers- listen to them closely, take a holistic approach, keep unit economics in mind, and co-create solutions that truly work for their needs."

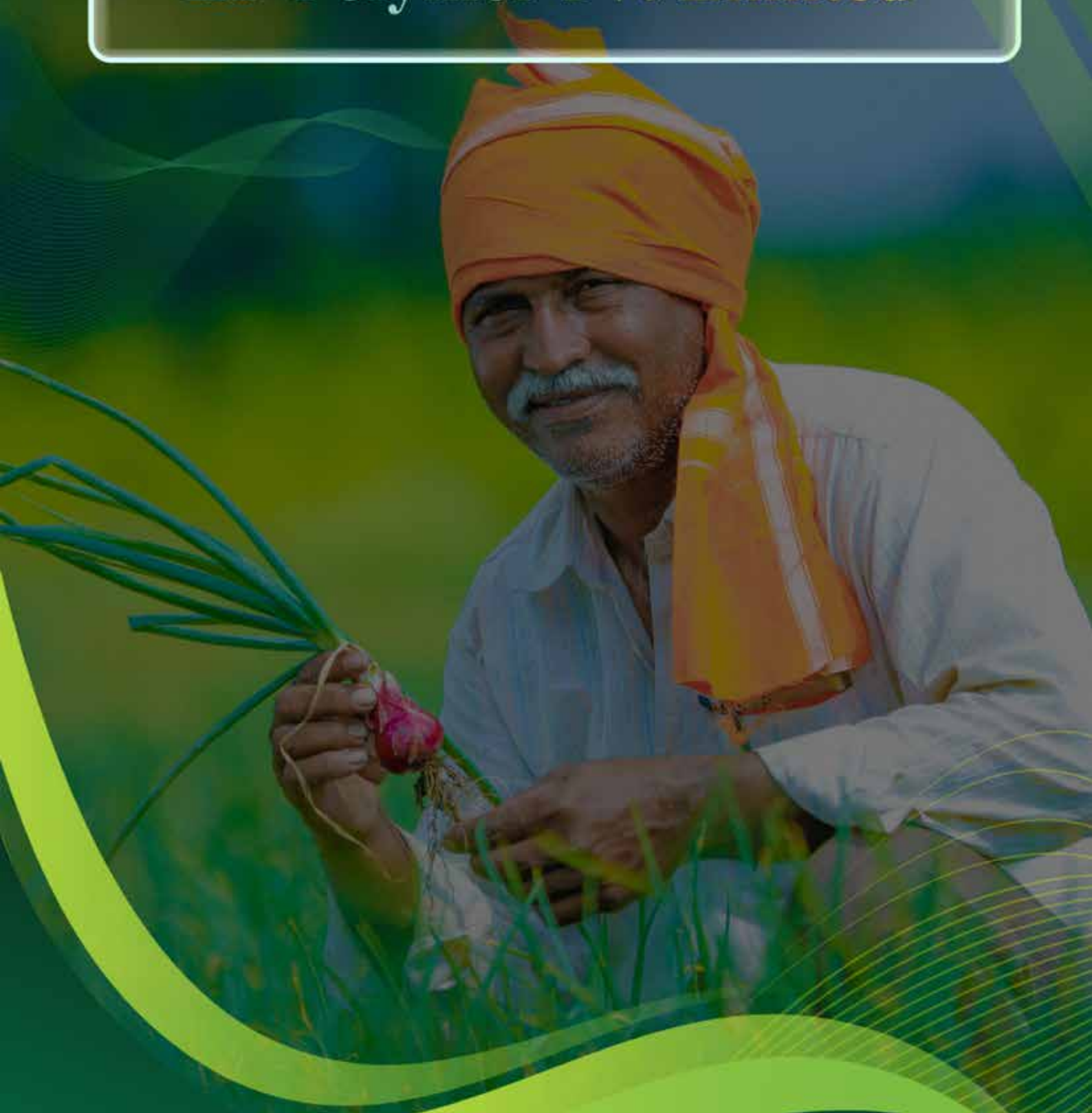
- Pankaj Gaur
Co-founder
Dvara E-Registry

Website of the Company: <https://www.dvaraeregistry.com/>





EF Polymer Pvt Limited



Contact Details

✉ support@efpolymer.com

🌐 <https://www.efpolymer.com/en-us>

EF Polymer Pvt Ltd.



“Nature’s Answer to Drought, Heat & Water Scarcity.”

Company Overview

EF Polymer is a company working at intersection of agri-tech and nature-based solutions.

It began as a student-led idea and eventually grew into a global enterprise. The journey started around 2012-13, when Narayan Lal Gurjar and his teammates, who came from farming backgrounds in Udaipur, began working on a solution to the water scarcity problems their families were facing in agriculture. Over time, the idea evolved into Fasal Amrit, world’s first 100% organic and biodegradable super absorbent polymer made from fruit peels and bio-waste. It is a patented technology that began as a university-level innovation, developed and tested with the guidance of professors and early encouragement from the Rajasthan government. A major turning point came during a startup accelerator program in Okinawa, Japan, which gave them better research support, infrastructure, and technical guidance.

Today, domestically, the company is present in Uttar Pradesh, Madhya Pradesh, Rajasthan, and Haryana through its direct B2B2C route, and also in Andhra Pradesh, Gujarat, West Bengal, Bihar, Nagaland, Himachal Pradesh, and Uttarakhand through B2B partnerships. Globally, it operates in 10 countries including India, Japan, France, Portugal, the USA, Thailand, Saudi Arabia, Turkey, Mauritius, and Spain.

They turn food waste into a soil solution that helps farmers save water, thus offering a cleaner alternative to chemical and petroleum-based polymers, making it useful for sustainable agriculture at a larger scale.

Founders’ Profile

Narayan Lal Gurjar (Founder and CEO)- He began the idea while still a student and was recognized in Forbes Under 30 Asia 2024 and Forbes JAPAN 30 Under 30 2025.

Ankit Jain (Co-Founder and CBDO)- He has been with the company since its early stage, works on business development and partnerships, and was recognized in Forbes Under 30 Asia 2024.

Puran Singh Rajput (Co-Founder and COO)- He has been involved since the startup’s initial phase and oversees operations, research coordination, and management.

Problems Addressed

The company resolves various problems in the agriculture and food systems sector including:

Water scarcity in agriculture

Farmers in drought-prone and water-stressed areas suffer from water scarcity. A large amount of water is needed in normal farming. The company’s product, Fasal Amrit saves up to 30-40 percent of water in each crop cycle, thus conserving the resource.

Soil degradation and weak soil health

In a world reeling under drought and soil degradation, soil health is a major concern for farmers. Fasal Amrit is made from discarded fruit peels. After being applied to the soil at the time of sowing, Fasal Amrit degrades naturally

between six to twelve months, releasing essential micronutrients into the soil. This process enriches the soil, promoting healthier and more robust plant growth.

Low crop productivity and income pressure

Problem of low productivity, where farmers do a lot of work but still earn less because water and soil conditions are poor. By improving soil health and nutrient availability, Fasal Amrit increases crop yields by 20-30%. Consequently, farmers experience a 15-25% boost in their income, contributing to better financial stability and growth.

High fertilizer consumption

Fertilisers are costly for farmers, and their overuse can also hurt soil and the environment. Fasal Amrit saves up to 15-20% of fertiliser in each crop cycle.

Need for climate-smart and affordable solutions for small farmers

Lack of affordable, easy-to-use solutions for low-income farmers facing climate stress, which is resolved by Fasal Amrit's affordability, with prices ranging between Rs. 400 to Rs. 600 per kilogram.

Community Profile

EF Polymer works mainly with smallholder and marginal farmers, especially in water-stressed rural areas.

The company also engages women farmers, FPOs, NGOs, SHGs, foundations, and local institutions to spread adoption through demos, training, and field support.

EF Polymer works with 10,000–50,000 farmers in water-stressed regions, primarily consisting of 26–50% Smallholder Farmers and 11–25% Women Farmers.

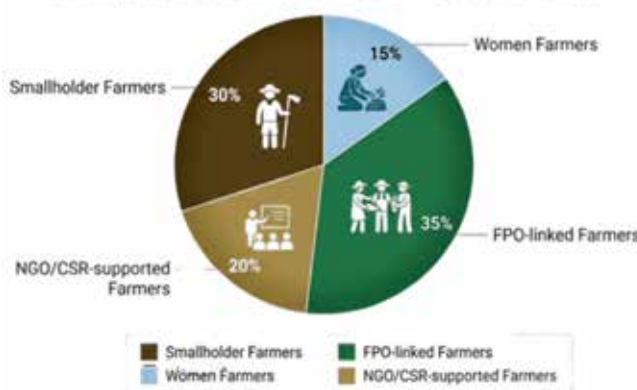


Figure 1: Pie Chart of Community Profile of the Company

Innovation

EF Polymer's innovation is Fasal Amrit, a world-first organic and biodegradable soil conditioner made from fruit peel biowaste. The company turns discarded orange peels, banana peels, and other organic residues into a super absorbent polymer that improves soil moisture retention, reduces irrigation needs, lowers fertilizer use, and increases crop productivity.

The product works like a 'soil battery' absorbing up to 50 times its own weight in water and then releasing moisture slowly to plant roots.

It alters the soil-water-nutrient interface in the rhizosphere, or root zone where water stress and nutrient loss usually occur. It also works as a distributed micro-reservoir in soil, storing irrigation or rainfall water and then making it available more gradually to roots, which helps stabilize moisture availability between irrigation events and during dry spells.

In agriculture, the recommended dose is about 20 kg per hectare, and in forestry or tree plantations the dose is 50-60 g per 6-month sapling, usually mixed with manure or fertilizer in the planting pit or ring zone so that swelling, moisture capture, and nutrient retention happen close to developing roots.



Figure 2: Fasal Amrit²⁵



Figure 3: Forms of Fasal Amrit in terms of Application²⁶

Business Model

Their business model revolves around input sales, advisory, distribution, scaling through institutions. They make Fasal Amrit and sell it as an organic soil conditioner to farmers, FPOs, NGOs, CSR programs, and government channels, and use demos and field support to drive adoption. They primarily work with small and marginal farmers (through farm demonstrations, trainings, workshops etc. regarding their product), institutions like FPOs, NGOs, CSR partners, and government departments, and sell their product in markets through B2B2C, B2B, B2G, and export channels. They also utilize subsidized institutional channels to speed adoption in low-income farmer groups.



Figure 4: Business Channels of the Company

²⁵ EF Polymer. (n.d.). Product. <https://www.efpolymer.com/en-us/product>

²⁶ EF Polymer. (n.d.). Product. <https://www.efpolymer.com/en-us/product>

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>15-25% increase in farmer income.</p> <p>20-30% increase in crop yield</p> <p>30-40% reduction in water use and 15-20% reduction in fertilizer use, lowering input cost per crop cycle.</p> <p>In forestry and plantation use, the product improved plant survival to 92% vs 72% in treated vs untreated plants</p>	<p>Reached 10,000 - 50,000 farmers.</p> <p>26-50% of associated farmers are smallholders.</p> <p>11-25% of associated farmers are women</p> <p>Working with FPOs, NGOs, and community institutions for faster last-mile adoption in water-stressed regions.</p>	<p>Saved over 20 billion litres of water through improved soil moisture retention.</p> <p>Reduced 40 million kg of CO2 emissions.</p> <p>Recycled 3,750 metric tons of biowaste into Fasal Amrit.</p> <p>40-50% less energy use in manufacturing and a 20-40% water-use reduction plus 15-25% fertilizer-use reduction.</p>

Operational Challenges

The company faced numerous hurdles at the initial point of its journey.

Farmer adoption was the biggest hurdle as main challenge was not product development, but convincing farmers to believe in the product. Fasal Amrit was not

seen as a normal fertilizer or chemical input, so the company had to educate farmers on what a biodegradable soil conditioner is and why it matters. Further, growth needed patience, funding, and government support. Coming from rural backgrounds, there was limited financial resources in the early stage. Moreover, scaling from lab stage to market stage was difficult: the product spent years in prototype and pilot stages before commercialization, including support from Japan and field testing in India. Finally, the product had to prove economic value, not just environmental value.

At present, keeping pricing, supply, and messaging consistent across all these channels is a major expansion challenge.

Awards and Recognitions

The company has secured global recognition across the agriculture and food systems sectors for its groundbreaking, climate-focused innovations in sustainable farming.

They were selected for the prestigious Forbes Asia 100 to Watch list, while its founder and CEO, Narayan Lal Gurjar, was honoured in the Forbes Japan 30 Under 30 (2025) list for his visionary startup leadership. They have also received prominent spots on both the Forbes Japan NEXT IMPACT STARTUPS 30 and Forbes India Top 100 Startups listings.

Domestically, they have won the Rajiv Gandhi Innovation Award for its flagship product, Fasal Amrit- a 100% organic, bio-waste-derived superabsorbent polymer that dramatically boosts moisture retention. EF Polymer further accelerated its market scale by winning the DCM Shriram AgWater Challenge, securing a prize of Rs. 2 crore to enhance water-use efficiency for smallholder farmers. They also won in the World Living

Soils Forum 2024 Pitch Competition won first place at Japan's Green Startup Pitch.

They were also named a THRIVE Top 50 AgTech innovator and THRIVE Rising Star, chosen

for Japan's elite J-Startup support ecosystem program, and received the Positive Peace at Peacetech Award (2025) for driving sustainability outcomes linked directly to conflict reduction and community resilience.

Message to the Community

"Agriculture entrepreneurship demands patience, hard work, groundwork, and the ability to handle uncertainty. Real impact comes when ideas are converted into action through constant implementation and trust-building with people. Future entrepreneurs should focus on solving real problems for society, not just building technology, because the strongest ideas come from serving people's lived needs."

- Ankit Jain
Co-founder
EF Polymer

Website of the Company: <https://www.efpolymer.com/en-us>



CULTYVATE

Farms2fork Technologies Private Limited (CultYvate)

Contact Details

+91 9449 610 610

 <https://www.cultyvate.com/>

Farms2fork Technologies Private Limited (CultYvate)

“Earn more starting this crop season”

Company Overview

CultYvate is an agri-tech platform developed by Fram2Fork Technologies Pvt. Ltd. in 2016 in Jayanagar, Bengaluru, Karnataka. The platform offers to practise precision agriculture using IoT-sensing, climate-smart decision-making and digital analytics, with a focus on making water-intensive smallholder farming more productive, sustainable, and economically resilient. The platform also provides actionable insights to optimize water and minimize chemical use.

Based in Bengaluru, Karnataka, they primarily work with high-input commodities such as paddy, sugarcane in water-stressed regions like Punjab, Karnataka, and Tamil Nadu. The company operates on a B2B2C model, partnering with agri-corporates, sugar mills, FPOs, NGOs, and government programmes to deliver its platform (service) to farmer communities.

Their flagship innovation is a patented (Patent No. 429197) IoT and AI-enabled precision irrigation and farm management platform contributing to their mission to empower small and marginal farmers through precision farming via affordable technology that optimises water and minimises chemical use in paddy and sugarcane.

Founders' Profile

Mallesh T. M. (Co-Founder and CEO)- leads the company's strategic expansion, hardware innovation, and field implementation, drawing on over 20 years of experience managing large-scale IT systems at Accenture and Wipro.

Bhavana Mallesh (Co-Founder)- oversees the digital product roadmap and software architecture, leveraging over 22 years of enterprise engineering experience to translate complex AI data into simple, user-friendly interfaces.

Sudarshan BS (Co-Founder and CTO)- comes with more than 25 years of designing highly optimised large IoT systems and is leading cultYvate's IoT and AI platform from sensor design and LoRaWAN connectivity to the AWD MRV system that underpins our Gold Standard carbon program.

Problems Addressed

It addresses a cluster of interconnected problems faced by smallholder farmers in India's water-intensive cropping systems (particularly paddy and sugarcane), which together represent millions of hectares of farmland and tens of millions of vulnerable farming households.

Flood Irrigation and Unsustainable Water Use

The vast majority of smallholder paddy and sugarcane farmers continue to rely on conventional flood irrigation because of lack of affordable alternatives. This practice consumes 2-3x more water than necessary, depletes groundwater rapidly, increases energy costs for pumping, and contributes significantly to GHG emissions.

Limited Access to Real-Time, Field-Level Data and Precision Technology

Smallholder farmers often irrigate and fertilise using guesswork and tradition. Lacking data on soil, weather, or crop needs, they over-water and over-fertilise. This negatively affects yield and increases climate risks. Historically, precision tech was too costly and complex for them to adopt.

Exclusion from Climate Finance and Carbon Credit Markets

Carbon credit programmes offer a significant supplementary income stream for farmers who adopt sustainable practices. However, participation requires Monitoring, Reporting, and Verification (MRV) data that smallholder farmers cannot generate without specialised digital tools. As a result, the climate finance market has remained inaccessible to small and marginal farmers.

Fragmented Supply Chains and Poor Agronomy Adoption

Weak linkages between farmers and institutional buyers (such as sugar mills) create uncertainty and reduce productivity. Without reliable data on farm performance and input use, buyers cannot offer premium prices for sustainable produce, and farmers lack the institutional support to adopt better agronomic practices.

Community Profile

The primary community served are the smallholder farmers in water-stressed regions growing paddy and sugarcane, who face high water costs, unreliable rainfall, soil degradation from over-irrigation, and no access to precision agriculture tools.

They also work with FPOs and cooperatives as aggregation and deployment partners within its B2B2C model, which, in turn, enable them to reach dispersed farming communities efficiently, while FPO-level deployment reduces onboarding costs and creates a shared infrastructure benefit for member farmers.

Innovation

The company utilizes portable IoT sensors and AI to automate real-time irrigation and nutrient delivery (fertigation), featuring a self-learning

system that adapts to diverse soil, crop, and weather conditions without manual recalibration.

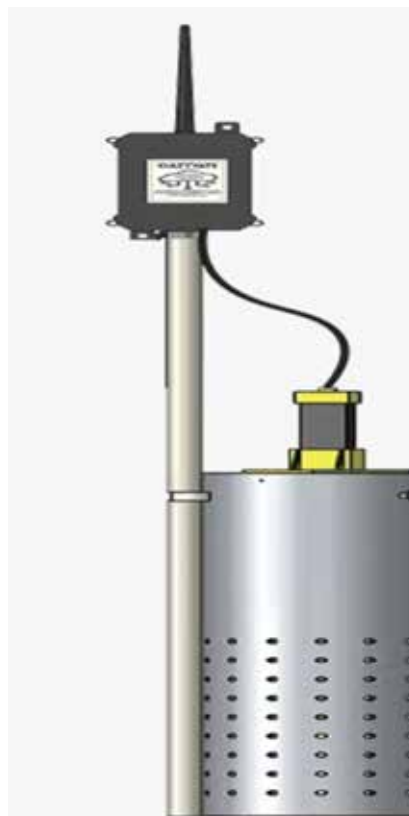


Figure 1: The IoT Sensors²⁷

This plug-and-play technology also generates field-level data essential for carbon credit and climate finance programs.

The platform is designed for accessibility, with costs as low as Rs. 200 per hectare per season for smallholder farmers. Its multilingual mobile interface ensures usability across diverse rural communities.

Business Model and Community Integration

The company's business model is built on a simple insight: smallholder farmers make expensive, inefficient decisions about water and fertiliser not because they are careless, but because they lack data, and thus their entire model is designed to provide that data affordably, act on it automatically, and monetise the resulting sustainability outcomes, sharing the benefits with farmers.

²⁷ Farms2Fork Technologies Private Limited. (n.d.). Solutions. Cultyvate. <https://www.cultyvate.com/solutions/>

How It Reaches Farmers

CultYvate does not sell directly to individual farmers. Instead, it operates on a B2B2C model, i.e.

- It partners with agri-corporates, sugar mills, FPOs, NGOs, and government programmes,
- These partners deploy the solution to their associated farmer communities and absorb or subsidise upfront hardware costs, which removes the affordability barrier for smallholders, while enabling the company to scale without farmer-by-farmer acquisition.
- Local field officers are deployed on the ground to train farmers, support adoption, and provide continuous advisory.

How It Works

The company deploys portable IoT soil moisture sensors in farmers' fields. These sensors continuously feed data on soil dryness, weather conditions, crop stage into a cloud-based AI platform.

The platform uses this data to make two decisions automatically:

- when to irrigate
- how much fertilizer to apply

Irrigation pumps are controlled remotely, and farmers receive advisories on their mobile phones in their local language. No specialist knowledge is required on the farmer's end.

The same sensor network that drives farming decisions also generates a second, equally valuable output: a verified, field-level data record of exactly how much water was saved, how much methane was reduced, and how much fertiliser was optimised.

This record meets the standards of international carbon credit programmes (MRV Monitoring, Reporting, Verification), enabling farmers to earn carbon credits an income stream that was previously entirely inaccessible to smallholders.

Community Integration

BoP communities are integrated as active participants:

Farmers contribute field-level data (through sensors on their land) and adopt practice changes (AWD irrigation, precise fertigation) that generate the sustainability outcomes the entire model is built on. In return, they receive lower input costs, higher yields, and carbon credit income.

FPOs and cooperatives act as deployment intermediaries, reducing onboarding friction and enabling cultYvate to reach dispersed communities at scale.

Local field officers from the communities themselves serve as the trust and training layer, ensuring the technology is genuinely understood and used rather than merely installed.

Revenue Model

CultYvate's revenue comes from following streams:

1. Hardware sales or leases,
2. SaaS subscriptions for the platform,
3. Share of carbon credit monetisation.

The carbon credit component is particularly important as it creates a revenue alignment between the company's commercial interest and the farmer's income, since both benefit directly when farmers adopt more sustainable practices

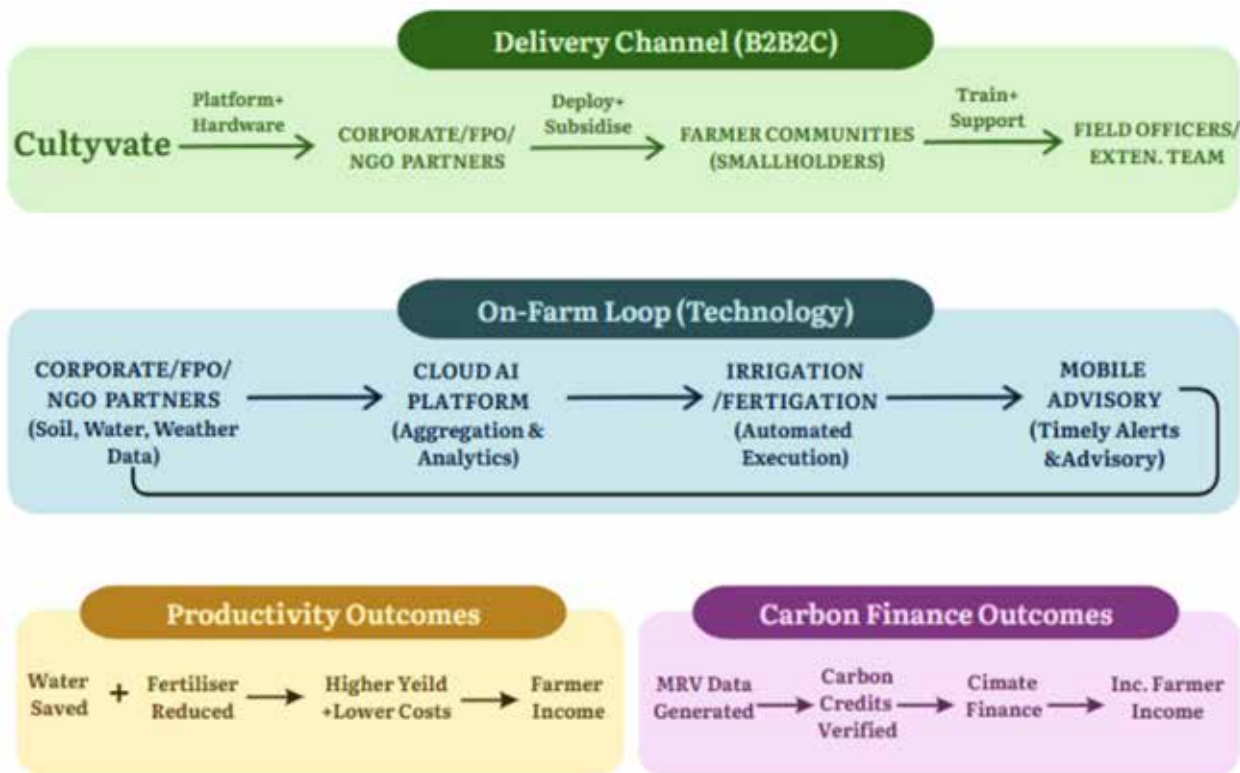


Figure 2: Business Model of the Company

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>Yield increases more than 35-60 tons per acre in sugarcane, and 8-10% in paddy</p> <p>Input cost savings of 20-30% in fertiliser and 40-50% in water</p> <p>Carbon credit participation creates a new income stream from sustainable farming practices.</p>	<p>More than 3,400 farmers onboarded with real-time precision farming advisory</p> <p>Local employment generated through deployment of field officers, including women, throughout the cultivation lifecycle.</p> <p>Reduced labour burden through automation of irrigation and fertigation</p>	<p>40-50% reduction in water use addressing acute groundwater depletion</p> <p>60% reduction in methane emissions in paddy systems through AWD adoption</p> <p>20-30% fertiliser optimisation, reducing nutrient runoff and improving long-term soil health.</p> <p>More than 3,270 MWh of electricity saved through reduced irrigation pumping energy consumption.</p> <p>Contribute to SDG 1, 2, 6, 12, and 13</p>

Key Insight: "Farmer profitability drives adoption, not technology"

"Farmers are not asking for the technology. Neither they're not interested about the water saving. It's our society and investor theme. Farmers want money in their hand. So, look at increasing the farmer profitability. Technology should not be the driver; it is an enabler. Farmer profitability should be the key driver for any Agri-business business. In case of sugar cane, farmers are paying because they are able to see more benefit right from first year."

- Mallesh T. M.
Founder and CEO
Farms2fork Technologies Private Limited (Cultivate)

Awards and Recognitions

The company has received significant recognition within the precision ag-tech and sustainable agriculture sector for its work in water conservation and resource optimization.

They were honoured with the NITI Aayog Women Transforming India Award 2021, recognizing the startup's women leadership in driving farm productivity. Additionally, they were also selected as a winner of the Government of Karnataka's #Elevate 100 initiative (2018) and have secured a patent for their innovative IoT-

enabled Alternate Wetting and Drying (AWD) solution for paddy farming.

They have also gained substantial institutional backing and validation through grants and mentoring from prominent innovation hubs and organizations, including the Central Government, Cisco, CIIE, IIM Bangalore's NSRCEL, Villgro, and the Hindustan Unilever Foundation.

They have also received the ACT Grant, Karnataka 2025 and TITAN Award 2026 for Alternate Wetting and Drying (AWD) solution for paddy farming in Punjab.

Impact Story: The Tamil Nadu Sugarcane Automation Project

The Tamilnadu Sugarcane Project addresses the critical labour shortages and highly erratic electricity supplies that frequently choke productivity for sugarcane growers. CultYvate stepped in to transition traditional farms away from manually managed fields by implementing a mobile-app-operated, fully automated smart irrigation network. This technology allows smallholders to remotely schedule water pumps and manage scattered plots spanning a 1.0 km radius without setting foot in the fields. This on-farm automation successfully slashed labor requirements by 50%, conserved 50% more water, and improved overall sugarcane yields by 40%, adding roughly ₹89,600 per acre in seasonal household income.

Note to the Community

The Tamilnadu Sugarcane Project addresses the critical labour shortages and highly erratic electricity supplies that frequently choke productivity for sugarcane growers. CultYvate stepped in to transition traditional farms away from manually managed fields by implementing a mobile-app-operated, fully automated smart irrigation network. This technology allows smallholders to remotely schedule water pumps and manage scattered plots spanning a 1.0 km radius without setting foot in the fields. This on-farm automation successfully slashed labor requirements by 50%, conserved 50% more water, and improved overall sugarcane yields by 40%, adding roughly ₹89,600 per acre in seasonal household income.

- Malleesh T. M.
Founder and CEO,
Farms2fork Technologies Private Limited (Cultyvate)

Website of the Company: <https://www.cultyvate.com/>



Humble Bee (Buzzworthy Ventures Private Limited)



Contact Details

✉ care@thehumblebee.co
🌐 <https://thehumblebee.co/>

Humble Bee (Buzzworthy Ventures Private Limited)



“Beyond sweetness: A commitment to Ethics, Empowerment and Ecosystem.”

Company Overview

Humble Bee, founded in 2023 by Monika Shukla (CEO), Vaibhav Trimukhe (COO), and Varun Kashyap (CSO), is a social enterprise working at the intersection of rural livelihoods, women’s entrepreneurship, sustainable agriculture, biodiversity conservation, and climate resilience.

The organization promotes scientific beekeeping, pollination services, and premium honey production through an integrated value chain approach.

The name ‘Humble Bee’ reflects the belief that bees, though small and often overlooked, play a vital role in supporting agriculture, biodiversity, and food security. Headquartered in Maharashtra, the organization currently operates across 10 states in India.

The enterprise draws inspiration from Amul’s cooperative structure and aims to build an “Amul for beekeeping” in India through an integrated value chain approach. The company positions itself as a livelihood-building and ecosystem-strengthening enterprise, where honey is viewed as a by-product of a broader ecological and economic intervention.

Problems Addressed

The company addresses three layers of problems faced by smallholders: economic vulnerability, market exclusion, and technological barriers:

Income Volatility and Livelihood Gaps

Smallholder women farmers, particularly in tribal and forest-fringe regions, often lack diversified, stable income streams. The company

bridges this gap by enabling beekeeping as a non-land-dependent supplementary livelihood: with just 4 hours of effort per week, women can generate four to six honey harvests annually.

Technological Exclusion and Knowledge Barriers

Rural and tribal women have historically been excluded from modern agricultural technologies due to literacy barriers, language constraints, and connectivity limitations.

To resolve this, the company’s BEEKIND platform uses AI-powered, vernacular, voice-enabled advisory available in 8 regional languages to support hive management, disease detection, and migration planning at no cost to the farmer.

Market Access and Price Exploitation

They solve the market access challenge by providing an assured buyback mechanism with fair, transparent pricing consistently the best available market rate with payments directly into women’s bank accounts.

Additionally, their traceability-first approach transforms Indian honey from a commodity into a premium, verifiable product, bypassing exploitative intermediaries and opening pathways to B2B and corporate markets.

Community Profile

Their primary community partners are women organized into cluster-based beekeeping members, anchored within existing SHG (Self Help Group) and FPO (Farmer Producer Organization) networks.

In tribal areas such as Chhattisgarh and Manipur, they focus on backyard beekeeping using native Indian bees. This requires no land

and fits naturally into the socio-cultural rhythms of rural women who are already the invisible hand in agriculture.

Impact Coverage

Social Impact	Economic Impact	Environmental Impact
<p>Engages with tribal and marginalized women in forest-fringe areas through backyard beekeeping as a non-land-dependent livelihood</p> <p>Has onboarded more than 2,800 women farmers across 10 Indian states</p> <p>Associated with more than 7,000 beehives deployed in diverse agro-ecological landscapes</p> <p>Trains and enables rural women towards apiculture and pollination stewardship, while creating a stable recurring income</p>	<p>Generated 14-15 varieties of premium, traceable monofloral and multifloral honeys never seen before in Indian markets</p> <p>Creates entrepreneurship and local employment through the BEEMITRA community cadre model.</p> <p>Enabled women to earn additional income through bee keeping.</p> <p>Creates a stable, recurring 'Honey Harvest' income stream for rural women, supplementing agricultural income</p>	<p>Restores pollinator population across agricultural and forest-fringe landscapes</p> <p>Supports local biodiversity, native flora, and soil carbon sequestration</p> <p>Promotes creation of bee migration corridors to counter habitat loss from deforestation</p> <p>Enforces pesticide-free zones around beekeeping areas through community protocols</p>

Insights from the Field: Gender Inclusion

In the company's operations, women are at the absolute centre not as beneficiaries, but as owners, operators, and decision-makers. More than 75% of all associated farmers are women. As corroborated by field operations across Chhattisgarh, Andhra Pradesh, Jharkhand, and Manipur, they have built entire beekeeping operations led completely by women, with participation in tribal and forest-fringe communities where women were previously engaged only as unpaid agricultural labour. Beekeeping requires only four hours of effort per week, fitting within the socio-cultural rhythms of rural women who are already the invisible hand in agriculture. Ownership of beehives financed through SHG credit transforms these women from dependent labourers to asset-owning micro-entrepreneurs, with payments arriving directly into their bank accounts. One income stream builds confidence, which in turn leads to another, in what Monika Shukla describes as a compounding journey of agency.

Awards and Recognitions

The company has received significant recognition within the inclusive business and agri-livelihoods sector for its work in beekeeping-led rural livelihoods and pollinator restoration.

They have also received support from major multilateral organizations, including the Gates

Foundation, Mastercard, and WWF, which have provided catalytic financial and non-financial support, validating the model's impact thesis.

Their training program is certified by the Agriculture Skill Council of India, and they work in formal collaboration with state rural livelihood missions, Departments of Horticulture, Agriculture, and Forest across 10 Indian states.

The Range of Products: A Glimpse



Vana Tulsi Honey



Acacia Honey



Ajwain (Carom) Honey



Litchi Honey



Jamun Honey

Figure 2- A Glimpse of the Company's Range of Products

Source Acknowledgement

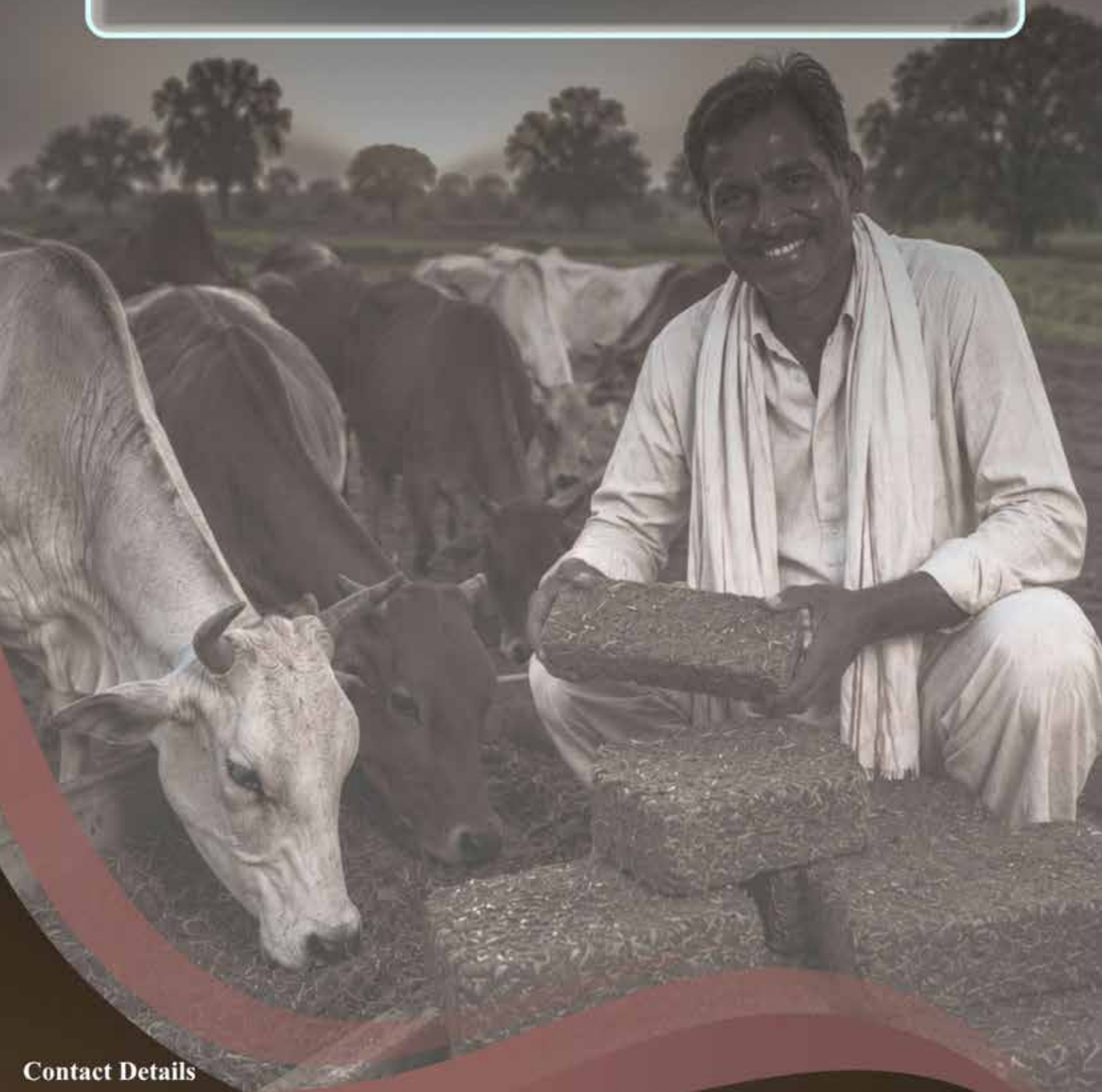
All the Images as part of 'Figure 2' have been taken from the Company's Website's 'Our Honey' Section: <https://thehumblebee.co/pages/honey-variants>

Website of the Company: <https://thehumblebee.co/>



Mercredi Solutions Pvt Ltd
CARE & GROW

Mercredi Solotions Pvt. Ltd.



Contact Details

+91 9236074222

https://www.ajmanchamber.ae/media/archives/en/1/5/profile_II TE7Ns.pdf

Mercredi Solutions Private Limited

“Innovating for Fodder Security, Livestock Productivity & Rural Prosperity”



Company Overview

Mercredi Solutions Private Limited is an Indian agri-innovation enterprise in the agri-livestock and circular economy sector, founded in 2022 by Mr. Jyoti Brahma Chakravarti, Mr. Ashutosh Kumar, and Dr. Harendra Singh.

It is headquartered in Koel, Bhojpur, Bihar, with offices in Noida and South Delhi, and works to convert crop residue into affordable, nutritious, and easy-to-store livestock feed.

Their business model is built around improving fodder security, reducing crop-residue burning, and strengthening rural livelihoods through a farm-to-feed value chain and making livestock rearing more profitable for small and marginal farmers by lowering feed costs and improving year-round access to fodder.

The company operates across multiple states, including Bihar, Uttar Pradesh, Punjab, Haryana, Rajasthan, Assam, and Meghalaya, and it has built a network spanning farmers, women-led groups, dairies, gaushalas, and institutional buyers. It is also positioned as a rural circular economy enterprise because it turns post-harvest biomass into value rather than letting it go to waste.

Problems Addressed

Mercredi addresses three linked problems as crop-residue burning, fodder scarcity and weak rural processing infrastructure:

Crop Residue Burning

Mercredi tries to convert paddy and wheat straw into compact fodder blocks, transforming agricultural residue into a valuable livestock

feed resource. This process creates an additional source of income for farmers while also reducing residue burning and the pollution associated with it.

Fodder Scarcity

They address fodder scarcity and price volatility by ensuring a year-round supply through its processing units and community fodder banks. This helps stabilize fodder availability and protects farmers from sharp seasonal price spikes, which can rise from around Rs. 3 per kg to Rs. 12 per kg.

During disaster-time livestock starvation through its emergency fodder biscuit, a field-deployable nutrition solution designed for crisis situations. A single 1 kg biscuit expands to 5 kg when mixed with water, making it a practical way to feed animals during floods or other emergencies.

Weak Rural Processing Infrastructure

They address the lack of rural processing infrastructure by setting up decentralized fodder block machines and silage units closer to farming communities. This reduce dependence on distinct processing unit, lower transport, and storage challenges.

Community Profile

Their primary stakeholders are small and marginal farmers, landless livestock owners, women-led SHGs, and gaushalas across rural India. These households typically own 1-5 livestock animals, hold limited land, and face irregular income due to seasonal agriculture and fodder price volatility. The company is also

active in climate-sensitive zones across North India and the North-East, where droughts, floods, and crop burning are persistent challenges.

Currently 40,000-2,00,000 farmers are engaged, with more than 75% being smallholders and 51-75% being women.

Innovation

The company has several innovations catering to inclusion of different segments of population:

Fodder Block Biscuit

Mercredi's flagship innovation compresses wheat straw and crop residues into compact, nutritionally balanced feed blocks using proprietary fodder block machines.

Each block is compact and easy to store that reduces volume up to 70%, transport-efficient that cuts logistics costs by 50-60%, nutritionally balanced for livestock, and cost-effective which stabilizes feed price at ₹3-4/kg

Emergency Fodder Biscuit

A 1 kg biscuit that expands to 5 kg of feed on contact with water which is developed in response to flood emergencies across various district of Bihar and Assam. One biscuit morning and evening maintains full animal nutrition during disasters.

Community Fodder Blocks

Village level repositories that aggregate processed fodder during surplus seasons and distribute it affordably during lean periods, functioning as piece stabilization and climate resilient structure.



Figures 1: Fodder Biscuit **2:** Fodder Blocks **3:** Collection of Hay **4:** Fodder Blocks **5:** Emergency Fodder Biscuit **6:** Transportation of Fodder **7:** Crop Residue **8:** Transportation

Business Model and Community Integration

The company's business model and community integration method can be understood in the following sequence:

Business Model

Their business model is a Circular Model or farm to feed:

A. Sourcing

Crop residues (paddy and wheat straw) are collected from smallholder farmers and FPOs. Farmers earn Rs. 400-1,000/ hectare from straw that would otherwise be burned, plus 30 kg of leftover grain/hectare, totalling Rs. 1,000-1,200 additional income per hectare.

B. Processing, Distribution, and Market Linkages

Processed fodder is distributed through community fodder banks, FPOs, and direct supply chains to livestock owners, dairy farmers, and gaushalas. The compact form factor enables efficient supply even to remote or disaster-affected regions.

C. Revenue Model

Revenue is generated through sale of fodder blocks, silage and emergency biscuits. Gross

revenue grew from Rs. 18L (year 1) to Rs. 32.5L (year 2) to Rs. 76.6L (year 3).

A majority of operational value flows back to farming communities as residue payments, reduced input costs, and employment at processing units.

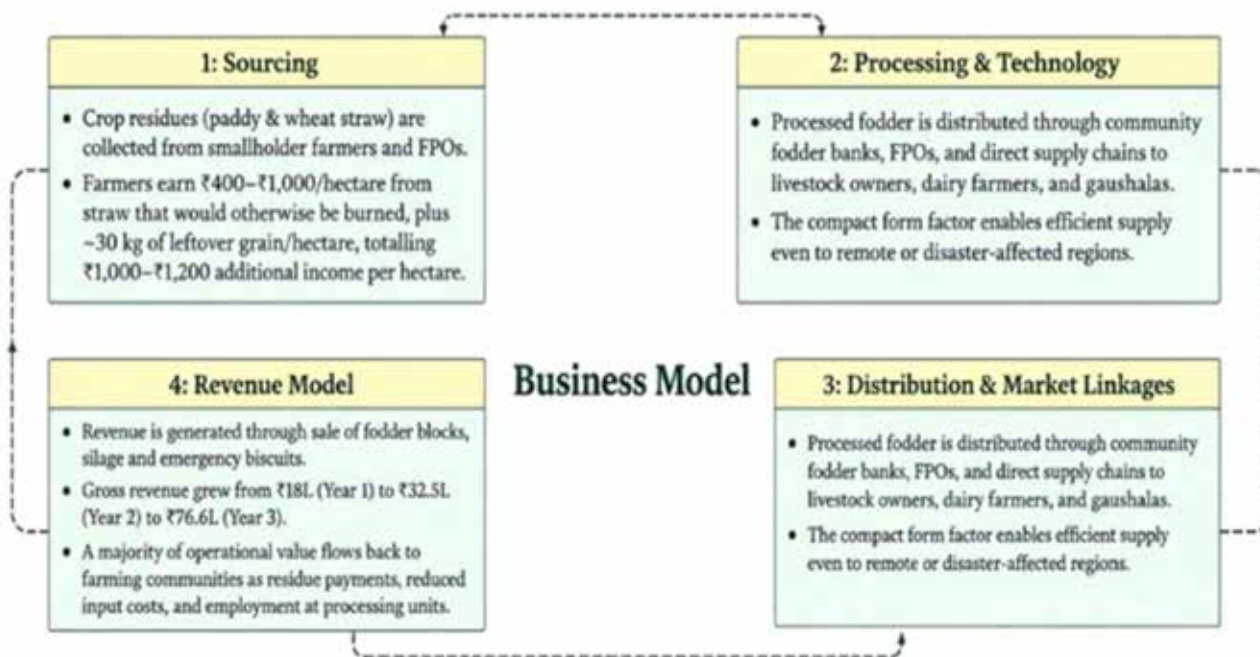


Figure 9: Business Model of the Company

Community Integration

The community is integrated at various nodes of the company's aforementioned business model:

A. Supply and Beneficiary Nodes

The raw material, including wheat straw, paddy residue, maize residue, surplus green fodder, are sourced from post-harvest systems and local landscapes, helping convert agricultural residue into useful livestock feed inputs.

Further, the supply side consists of small and marginal farmers, women farmers, youth farmers, community groups, SHGs, and local collection teams.

Finally, the end users include dairy farmers, livestock owners, goat farmers, women-led rural households, small dairy units, disaster-affected livestock, mushroom farmers, and rural communities, who benefit from affordable feed, emergency fodder support, and improved access to livestock nutrition.

B. Decentralized Processing

The processing layer is decentralized and includes residue collection, compression, natural treatment. Shelf-life extension, silage making, fodder block making, disaster block making and the use of small and large machines. The stage adds value to biomass by making it compact, durable, transportable, and suitable for year-round fodder availability.

C. Distribution nodes

The distribution network covers district-level channels, state-level networks, metro city buyers, export markets, storage hubs,

transport containers, and buy-back systems. This structure enables Mercredi Solutions to move fodder efficiently from rural collection points to wider markets while also ensuring fair value for farmer.

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
Rs. 1,500-Rs. 5,000/ acre from residue sales	More than 50,000 farmers and community members	Prevents burning of 1.5-2 lakh MT of crop residue/ year
Fodder costs cut by 30-40% Milk income up 15-25% for dairy farmers	Of them, more than 75% are smallholders	~2.5-3 lakh tonnes CO2 equivalent reduced/year
Women SHGs earn steady monthly incomes	Of the community members that the company is associated with, about 51-75% are women	Stubble burning down 40-60% in active clusters
		Nutrient recycling on more than 25,000 acres
		Transport volume cut 50-60% via compact blocks

Key Insight: Gender inclusion

Women SHGs are the primary operators of local fodder processing units across North India, earning consistent monthly income. Through Sanskriti University partnerships in Mathura, whole biomass collection operations are led by women, providing employment during the post-harvest cotton season when other livelihood options are scarce. By embedding women as entrepreneurs rather than merely as recipients, the model strengthens financial independence.

Awards and Recognitions

The company has earned extensive recognition across both government-backed and international institutions for its innovative work. On a national level, the startup has secured the prestigious NIDHI-EIR support through the KIET Technology Business Incubator, received the HDFC Parivartan

Grant, and gained backing from the RKVY program under the Ministry of Agriculture, Government of India.

The company is also successfully incubated at the IIML Enterprise Incubation Centre at IIM Lucknow.

Globally and in the media, they stand out as one of only seven startups worldwide to win the Expo City Dubai Foundation Global Inventors Programme, which awarded them a grant of AED 367,000. Additionally, the company emerged as a winner of the Indo-Israel AgriTech Co-incubation and Acceleration Program and was featured on the APEDA Bharati Business Challenge.

Note to the Community

“Sustainable work is not easy job. Many people want to move to big cities, but farmers are surviving on minimum profit and keeping the country running. Farmers work very hard, and they deserve respect. Our main theme is to make livestock profitable, especially for small marginal and women farmers, there are many things to work on and many states to cover. There is no real competition between our competitor as the need are so large. If more people come in this sector, that is better for agriculture. There is enough work for everyone..”

- Jyoti Brahma Chakravarti
Director
Mercredi Solutions Private Limited

Website of the Company:

https://www.ajmanchamber.ae/media/archives/en/1/5/profile_IITE7Ns.pdf



Raheja Solar Food Processing Pvt. Ltd.

Contact Details

+91 62326 66346

business@rsfp.in

<https://www.rsfp.in/>

Raheja Solar Food Processing Pvt. Ltd.



Company Overview

Raheja Solar Food Processing Private Limited (RSFP) is a solar technology and agri-processing company. It operates to minimise post-harvest losses and strengthen smallholder and tribal livelihoods via a decentralised food processing structure.

Founded in 2019 by Varun Raheja and Babita Raheja in Indore, Madhya Pradesh, they aim to transform surplus perishables into value-added products while making clean, affordable processing infrastructure accessible to the most vulnerable agricultural communities. They have deployed over 1,000 solar dryers across 23 states in India and supporting more than 50,000 farmers.

They combine solar drying technology with capacity building, digital market access through their RSFP app, which enables farmers to make income out of produce that was otherwise getting wasted and being environmentally harmful. Their D2C brand 'Barefruits' converts semi-processed produce into packaged goods ready for premium domestic and export markets leading to higher price realisation.

Problems Addressed

RSFP addresses structural challenges in India's post-harvest management ecosystem. The company focuses on four interconnected problems:

Post-Harvest Losses due to Lack of Infrastructure

Small and marginal farmers, who lack access to cold storage or processing facilities are forced to sell their surplus produce at throw-away prices during peak harvest seasons. Conventional drying and processing technologies are expensive to install and operate for them.

Farmers Limited to Low-Value Products

Even when farmers do attempt value addition, they typically produce only semi-processed goods and remain unaware of high-value potential of fully processed, branded products.

Market Linkage Gap for Value-Added Produce

Farmers and FPOs who manage to process their produce often struggle to find reliable buyers, leaving them with unsold goods and discouraging them from adopting new processing methods. At the same time, available digital tools do not help because they are too complicated.

Exclusion of Women and Tribal Communities from Economic Roles

Women and tribal communities in rural India remain outside formal agri-processing value chains. Without targeted, affordable, and trainable technology, they have limited means to generate income from agriculture beyond primary production.

Community Profile

RSFP's primary target group comprises smallholder and marginal farmers who face post-harvest losses and lack access to processing infrastructure. They grow a wide variety of perishables brinjal, ladyfinger, tomatoes, grapes, moringa, spices, herbs etc. They train SHG women in value addition, branding, and business management, enabling them to transition from agricultural labour to micro-entrepreneurship within the solar drying value chain. Finally, partnership with FPOs, cooperatives, and tribal institutions acts as aggregation and deployment points.

- Smallholder farmers 38%
- Tribal communities 20%
- SHG women 18%
- FPOs / cooperatives 14%
- Other farmers 10%



Figure 1: Pictorial diagram of communities served²⁸

Innovation

RSFP’s flagship innovation is its solar dryer, developed over 8 years for rural and tribal deployment conditions. A critical differentiator is that all dryers are fully foldable and portable, enabling easy transport to remote areas. The design itself keeps logistics costs significantly low while deployment. They are also electricity-free, zero-fuel, and require minimal technical expertise to operate. They work for a wide range of produce: fruits, vegetables, spices, herbs, pulses, moringa, flowers, fish, and dairy.

These solar dryers come in 3 sizes:

I. Agraj Solar Dryer

A large-scale drying solution for agribusinesses and bulk processing, with capacity of up to 1,000 kg. It features a three-tier tunnel design, advanced temperature regulation, and a weather-resistant enclosed system that enables safe, large-volume solar drying. The price ranges from Rs. 1.7-3.5 lakh, depending on the model.



Figure 2: Agraj Solar Dryer

II. Samagra Solar Dryer

Built for farmer groups and medium-scale processing, Samagra supports 40-100 kg capacity depending on crop type. It comes in four modular sizes, offers active and passive drying, and provides hygienic enclosed drying with minimal maintenance. The price ranges from Rs. 44,000-1.35 lakh, depending on the model.



Figure 3: Samagra Solar Dryer

III. Sahaj Solar Dryer

A compact, low-cost solar dryer designed for small farmers and household-level processing. It has a 20 kg capacity and features a DIY

²⁸ Derived from the information provided in the website <https://www.rsfp.in/>

portable design, forced air convection (12V fan), and an enclosed chamber that preserves produce hygienically while retaining taste and nutrients. The price ranges from Rs. 17,000-26,000, depending on the model.



Figure 4: Sahaj Solar Dryer

Their solar dryers are IoT-enabled, providing quality monitoring and operational data to ensure consistent output and digital application enables producers to directly connect with verified buyers.

Through their Barefruits D2C brand, they convert semi-processed products into fully finished, packaged goods ready for premium domestic and export markets. It offers a range of naturally solar-dried fruits, vegetables, herbs, and snacks, including dried mango, banana, tomato, moringa, and spice-based products.

Figures 2, 3 and 4 have been taken from the company's (Raheja Solar Food Processing Pvt. Ltd.) [website https://www.rsfp.in/](https://www.rsfp.in/)

Business Model and Community Integration

The Company's business model and community integration can be understood in the following sequence:

Business Model

Their business model is built to resolve three primary barriers faced by smallholders, i.e. lack

of affordable processing infrastructure, lack of skills to convert raw produce into market-ready products, lack of reliable buyers even when they do.

A. Sourcing

They sources surplus perishable produce from smallholder farmers and rural communities that would otherwise be sold at distress prices post-harvest. This surplus serves as input for the value-addition and drying processes.

B. Operations and Technology

They manufacture solar dryers and sells them directly as well as through partnerships with FPOs, SHGs, NGOs, and government subsidy schemes. They also provide training, operational support, and technical updates to ensure sustained and efficient use of the dryers. The IoT-enabled monitoring helps track parameters such as temperature, humidity, drying duration, and batch output, allowing operators to maintain consistent drying quality. The data also supports traceability and buyer assurance, important for premium domestic and export markets where product quality and process transparency influence pricing and market access.

C. Market Linkages

Their distribution model operates on two tracks. The RSFP digital app connects individual producers and SHG groups directly to verified buyers in domestic markets. 'Barefruits' D2C brand takes fully processed, packaged dried produce to premium domestic retail and export markets.

D. Revenue Model

Their primary revenue comes from the sale and leasing of solar dryers to individual farmers, SHGs, FPOs, and institutions. Secondary revenue is generated through the 'Barefruits' brand as distributor of premium dried products.

Community Integration

BoP communities are integrated as active participants:

Smallholder and tribal farmers provide the surplus produce and operate the dryers to produce shelf-stable goods. Their role shifts from distress sellers to processors in value chain.

SHG women are trained as processing micro-entrepreneurs. The training programme covers the full chain: drying operations, quality control, packaging, branding, and business

management. This creates an independent livelihood within the agricultural ecosystem for women who previously had no formal economic role in it.

FPOs and cooperatives operate the larger Agraj-scale dryers, acting as community-level processing hubs that aggregate produce from multiple smallholders and supply to bulk buyers or the Barefruits brand.

The RSFP app and Barefruits brand close the loop by ensuring that what the community produces has a buyer and a fair price.

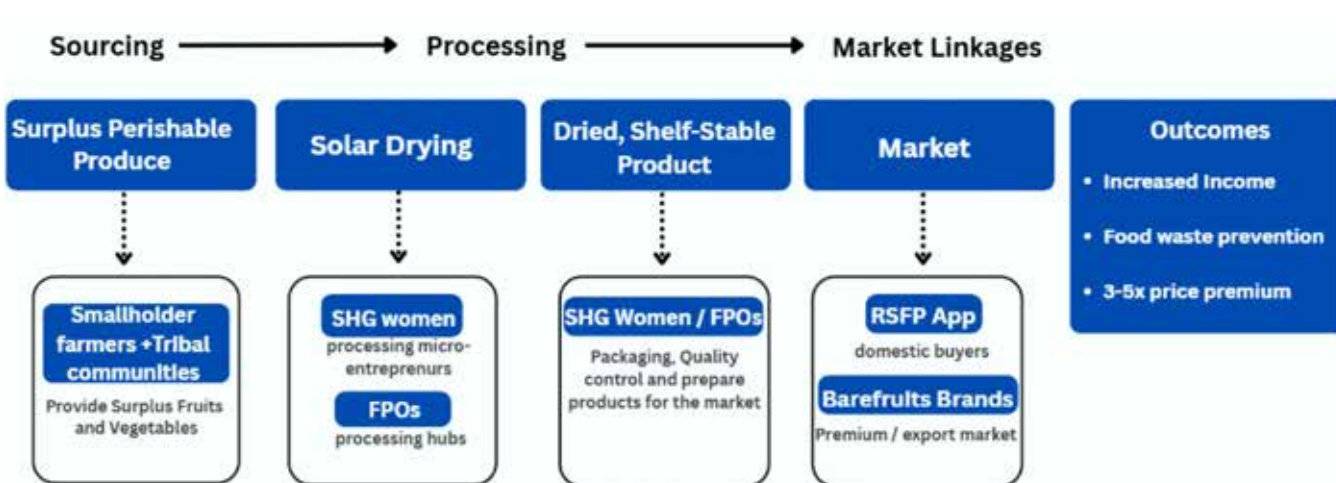


Figure 5: Business Model and community Integration of the Company

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
Household income increased ~30%	More than 4,000 women gaining skills in processing, value addition, branding and enterprise management.	More than 26,850 MT of carbon footprint saved
Barefruits unlocks 3-5x higher income	Remote geographies have access to food preservation and income-generation technology	More than 12,000 MT of food waste prevented, reducing methane emissions
Women (as micro-entrepreneurs) gain stable livelihood in agricultural value chain.	Improved food security through off-season storage	Renewable solar energy adoption
Grape farmers and tribal communities in Odisha earn additional income		Crop diversification encouraged

Operational Challenges

The company identified the farmer's adoption of technology as a major operational challenge because the benefits were not immediately visible. Building trust and encouraging participation took time.

Another challenge was market access. Along with processing products, they also had to arrange buy-back options and connect farmers with selling opportunities. This was necessary to ensure farmers could generate income from their produce.

Finally, there is also the component of government support and subsidies and their importance. Farmers often depended on

subsidies to access the technology, making external support important for operations and wider adoption.

Awards and Recognitions

They highlight recognitions from organisations such as UNEP, Startup India, MSME, ISO, and Forbes, reflecting its growing visibility and credibility within the agricultural innovation ecosystem.

In addition, they have secured validation through partnerships and collaborations with Villgro, Social Alpha, ICRISAT, DBS Foundation, CEEW, Miller Center, TechnoServe, BigHaat, and Catalyst Impact.

Impact Story: Solar Drying for Tomato Farmers in Uttar Pradesh

In Hamirpur district, Uttar Pradesh, tomato farmers often faced severe price crashes, forcing them to sell produce below cost or leave it to compost in the fields. RSFP addressed this challenge by introducing solar dryers that allowed farmers to preserve tomatoes during periods of low demand and sell them later as value-added dried products. After piloting the technology, farmer Laxmi Rajpoot and her family reported strong results, citing easy operation, zero maintenance, and recovery of investment within a year. The family earned an additional ₹25,000 in profit from produce that would otherwise have been wasted and expanded use of the dryer to other crops such as onions and chilies. By converting surplus produce into shelf-stable products, RSFP reduced post-harvest losses, improved farmer incomes, and created a more reliable pathway to market.

Note to the Community

"Farmers, tribal communities, and local groups RSFP works with share a deep connection with nature. Their way of living is rooted in taking only what is needed, returning value to the environment, and ensuring nothing goes to waste. He emphasized that when this traditional wisdom is combined with the right technology, it creates meaningful and sustainable impact."

- Parmeet Singh Wadhwa
General Manager
Raheja Solar Food Processing

Website of the Company: <https://www.rsfp.in/>

RAM RAHIM PRAGATI PRODUCER COMPANY LIMITED



Company Overview

Ram Rahim Pragati Producer Company Limited (RRPPCL) is a women-led Farmer Producer Organization established in 2012 in Madhya Pradesh and formed through the collective efforts of tribal women farmers, member shareholders, and community institutions.

It works to improve the livelihoods of small and marginal farmers through sustainable agriculture, collective farming, and direct market access. The organization was formed to address challenges such as unfair pricing, dependence on middlemen, lack of bargaining power, and poor market access faced by tribal farmers. They support farmers through aggregation, processing, packaging, seed supply, cattle feed, and SHG-based grocery businesses while also promoting Non-Pesticide Management (NPM) farming practices.

Today, the company works with more than 5,950 women farmers connected through around 390 Self-Help Groups (SHGs). It has also built partnerships with organizations like ITC, Reliance, Safe Harvest, Bharat Rohan, and Adani Wilmar to provide better income opportunities and sustainable rural livelihoods.

Apart from improving farmer incomes, RRPPCL has also created strong social and environmental impact in rural communities. The organization empowers women by making them shareholders and decision-makers within the company, increasing their confidence, leadership, and financial independence. Through sustainable farming methods, waste utilization, and reduced chemical usage, RRPPCL promotes soil health, biodiversity conservation, and long-term environmental sustainability while building a more inclusive rural economy.

Founders' Profile

Animesh Mondal (CEO)- He has played a key role in establishing RRPPCL as a women-led Farmer Producer Organization focused on empowering tribal women farmers. With support from Samaj Pragati Sahayog (SPS) and SHGs, he helped build an inclusive agricultural model based on Non-Pesticide Management (NPM), collective farming, and direct market linkage while promoting sustainable rural livelihoods and women empowerment.

Problems Addressed

The company addresses multiple challenges faced by small and marginal tribal women farmers in rural agricultural systems, particularly related to market access, livelihood security, and sustainable farming practices.

Lack of Fair Market Access and Bargaining Power

Smallholder farmers often faced exploitation due to dependence on middlemen, unfair weighing systems, and low bargaining power in local mandis. Farmers also had to travel long distances to sell their produce, increasing transportation costs and reducing profits. RRPPCL addressed this issue by building a collective aggregation and direct market linkage model, connecting farmers with institutional buyers such as ITC, Reliance, Safe Harvest, Bharat Rohan, and Adani Wilmar.

Limited Livelihood Opportunities for Women

Women in tribal communities traditionally had limited participation in economic decision-

making and lacked stable income opportunities beyond farming. RRPPCL created women-led livelihood opportunities through SHG-based grocery businesses, packaging work, value-addition activities, and rural employment generation, improving financial independence and community participation.

Environment Degradation and Chemical-Based Farming

The organization also addresses the growing environmental impact of chemical-intensive agriculture. Through its Non-Pesticide Management (NPM) approach, RRPPCL promotes sustainable farming methods that improve soil health, reduce chemical usage, conserve biodiversity, and strengthen climate resilience among farming communities. Farmers are encouraged to use natural alternatives such as bathua seed paste and sour buttermilk (chass) for pest management, along with Jeevamrit, vermicompost, and natural manure to enhance soil fertility and crop health. These practices reduce dependence on synthetic fertilizers and pesticides while promoting long-term agricultural sustainability and ecological balance.

Community-Profile

The company works with more than 5,950 small and marginal farmers, over 100% of whom are women and over 75% belong to the smallholder farmer category. The organization primarily engages with tribal farming communities in the Bagli region of Dewas district, Madhya Pradesh, while extending its operations across Maharashtra, Telangana, Rajasthan, Bihar, and Mumbai. Organized through 390 Self-Help Groups (SHGs), these communities largely depend on agriculture and livestock for their livelihoods and often face challenges related to market access, financial inclusion, and climate-resilient farming practices.

Farmer Composition

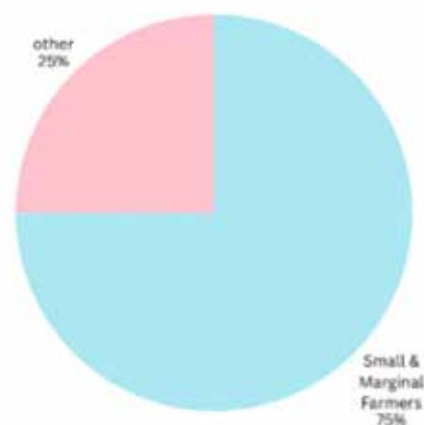


Figure 1: Pie Chart showing Farmers' Composition

Innovation

Their primary innovation lies in their community-driven Non-Pesticide Management (NPM) model combined with decentralized procurement and direct market linkage systems. The organization enables tribal women farmers to adopt sustainable chemical-free farming practices while reducing transportation burdens through village-level aggregation and procurement. RRPPCL further strengthens this model through value-addition activities such as cleaning, grading, packaging, and processing, creating better income opportunities and improving market access for smallholder farmers.

Business Model and Community Integration

RRPPCL's business model and community integration can be understood in the following sequence:

Business Model

The company's business model is centred around integrating tribal women farmers into every stage of the agricultural value chain through sustainable farming, collective ownership,

value addition, and direct market linkage. They operate as a women-led Farmer Producer Organization (FPO) that combines agricultural production with rural livelihood generation and community-based entrepreneurship.

A. Sourcing and Aggregation

It procures agricultural commodities such as chana, toor, urad, maize, wheat, mustard, fennel, chia seeds, and red chilli directly from small and marginal tribal women farmers through decentralized village-level procurement systems. This reduces transportation burdens and dependence on middlemen while ensuring transparent weighing and fair pricing.

B. Sustainable Agriculture and Input Support

The organization promotes Non-Pesticide Management (NPM) farming practices to encourage low-cost and environmentally sustainable agriculture. It also supplies quality seeds for Rabi and Kharif seasons and provides training, advisory support, and capacity-building programs to farmers.

C. Processing and Value Addition

After aggregation, the company undertakes cleaning, grading, dal processing, packaging, and storage activities to improve product quality and market value. The organization also follows waste-utilization practices where by-products are reused as compost or cattle feed, promoting near-zero waste operations.

D. Women-Led Livelihood Generation

It integrates rural women into packaging work, grocery businesses, and local entrepreneurship activities through Self-Help Groups (SHGs). Packaging and job-work partnerships with organizations such as Bharat Rohan create alternative livelihood opportunities and additional household income for women farmers.

E. Market Linkage and Distribution

The organization directly connects farmers with institutional buyers including ITC, Reliance, Bharat Rohan, Safe Harvest, and Adani Wilmar, helping farmers access structured markets and better price realization.

F. Revenue Model

It generates revenue primarily through the aggregation and sale of agricultural commodities such as chana, toor, urad, maize, wheat, mustard, fennel, chia seeds, and red chilli sourced from over 5,950 farmers. The organization also undertakes packaging contracts that create livelihood opportunities, with 11 women members collectively earning around Rs. 85,000 through packaging activities. Together, these diversified activities create a sustainable revenue model while strengthening rural livelihoods and market participation. Additional income is generated through dal processing, flour production, cleaning, grading, packaging services, seed supply, agricultural inputs, and SHG-based grocery distribution.

Community Integration

It integrates Bottom of the Pyramid (BOP) communities, particularly tribal women farmers, into its business operations through a community-driven and inclusive approach.

A. Economic Inclusion

It improves livelihood opportunities by integrating women farmers into aggregation, processing, packaging, grocery businesses, and value-addition activities, creating additional household income sources beyond farming.

B. Market Access and Collective Ownership

The organization connects smallholder farmers directly with institutional buyers, reducing

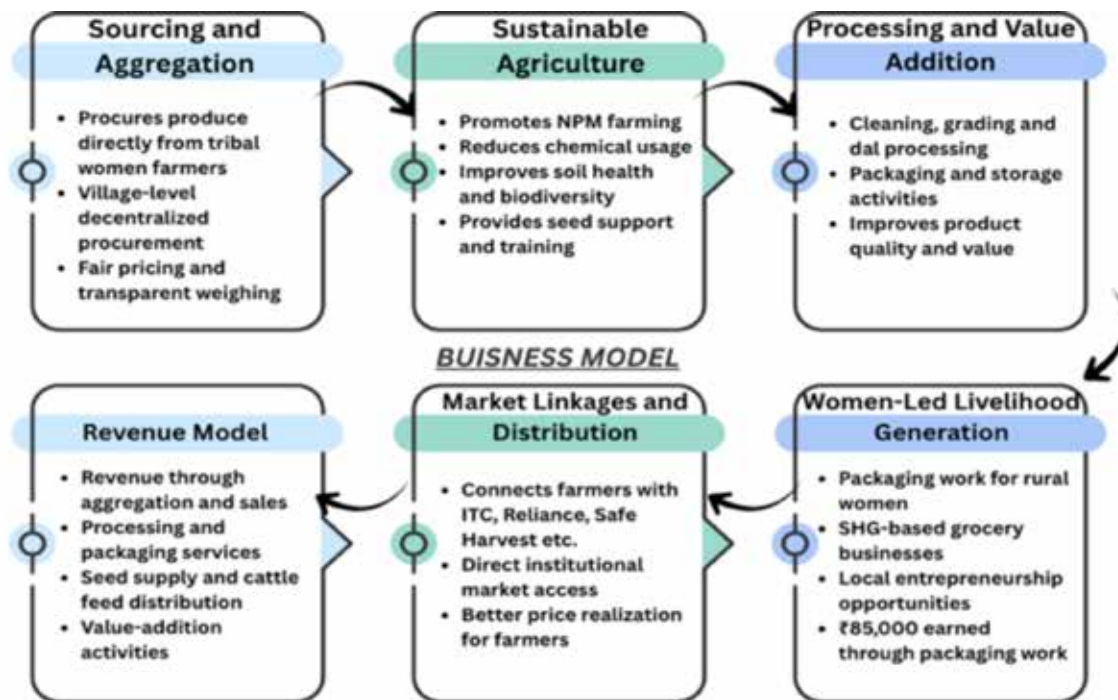


Figure 2: Business Model of the Company

dependence on middlemen and improving bargaining power through collective ownership and aggregation systems.

C. Capacity Building and Knowledge Inclusion

It equips farmers with agricultural knowledge through training, advisory support, and awareness programmes. These initiatives help farmers adopt improved farming practices,

strengthen decision-making capabilities, and enhance long-term livelihood resilience.

D. Women Empowerment and Community Participation

It actively promotes women-led participation in decision-making, rural entrepreneurship, and community businesses, strengthening financial independence and social inclusion within tribal rural communities.

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
Improves farmer income through direct market linkage	Works with more than 5,950 tribal women farmers	Promotes Non-Pesticide Management (NPM) farming
Reduces dependence on middlemen and unfair pricing	Strengthens women-led decision making and collective ownership	Reduces chemical pesticide and fertilizer usage
Creates alternative livelihood opportunities for rural women	Enhances financial independence and rural participation of women	Improves soil health and biodiversity conservation
Women members earned Rs. 85,000 through packaging work	Provides training, capacity building, and livelihood support	Encourages composting and waste utilization practices
Promotes local entrepreneurship through SHG businesses	Promotes inclusive community-driven rural development	Supports sustainable and climate-resilient agriculture

Operational Challenges

One of the company's major operational challenges is the limited market availability and premium pricing for Non-Pesticide Management (NPM) produce despite the adoption of sustainable farming practices.

The organization also faces challenges related to decentralized procurement, transportation, and lack of storage infrastructure, which increase operational costs and affect efficiency.

Additionally, building awareness and long-term participation among farmers regarding collective ownership and FPO systems remains an ongoing-challenge.

Awards and Recognitions

The Company has won a wide range of awards and recognitions. Chinta bai Tregam BOD of the company won the WWSF Prize for women creativity in rural life in 2016.

It has also won the best FPO award at the National level by Outlook magazine in 2020, best FPO award of the year large category by ACCESS in 2021, Udyogini Impact Award 2026, and ITC Best Women Enterprise Award by ITC Choupal Sagar.

Note to the Community

“Farmers should avoid excessive chemical and pesticide usage and focus on protecting soil health through sustainable farming practices. Agriculture should not only focus on short-term production but also on long-term environmental sustainability. Farmers should understand their strengths, conduct proper research, and build businesses with a clear social purpose. Collective farming, community participation, and sustainable agriculture are the pathways towards true rural progress and empowerment.”

- Animesh Mondal
CEO
Ram Rahim Pragati Producer Company Limited (RRPPCL)

Website of the Company: <https://ram-rahim.vercel.app/>



Rang De P2P Financial Services Ltd.



Contact Details

+91 8042756643

support@rangde.in

<https://rangde.in/>

Rang De P2P Financial Services Ltd.



"Fuel India's Future, One Loan at a Time"

Company Overview

Rang De P2P Financial Services Ltd. is India's first and pioneering social peer-to-peer (P2P) lending platform. Founded in 2008 by Mr. Ramakrishna NK (Co-founder and CEO) and Mrs. Smita Ramakrishna (Co-founder and Chief Impact Officer), and headquartered in Bengaluru, Karnataka, Rang De operates at the intersection of fintech and grassroots development.

It is an RBI-regulated NBFC-P2P platform that connects individual 'social investors' with underserved borrowers like smallholder farmers, women entrepreneurs, artisans, and nano-enterprises, enabling affordable, transparent, and impact-driven lending. Social investors can begin with as little as Rs. 500, making social impact accessible to every Indian citizen.

Starting as a non-profit in 2008, the platform transitioned into a regulated NBFC-P2P entity in 2019 following the RBI's P2P lending regulations of 2017. Since its regulated relaunch, it has disbursed over Rs. 110 crores to more than 30,000 borrowers, with more than 11,500 social investors across more than 26 countries. Cumulatively, across both its non-profit and regulated phases, the platform has disbursed over Rs. 180 crores.

The platform currently operates across 28 States and 4 UTs, covering over 1,800 pin codes in India, working with more than 160 vetted grassroots partner organisations like CSOs, FPOs, and NGOs, that source, onboard, and support borrowers on the ground.

Problems Addressed

It addresses three critical, interlinked challenges that exclude India's rural and low-income communities from formal financial systems:

Exclusion from Formal Credit

Only 12.8% of India's eligible population has access to formal credit. Smallholder farmers and rural producers lack collateral, credit histories, and regular income documentation, forcing reliance on informal moneylenders at exploitative interest rates, which restricts their productivity and traps them in cycles of debt.

Lack of Financial Agency

Borrowers are typically passive recipients of financial products designed without their needs in mind. The platform's model is built around three 'A's which is Affordability, Access, and Agency that empowers communities to make informed decisions about credit on their own terms.

Ecosystem Gaps Beyond Credit

Access to credit alone is insufficient without complementary support. Their partner-led model integrates financial literacy, enterprise development, and market linkages which ensures capital translates into sustainable, dignified livelihoods.

Community Profile

Their primary community consists of low-income and underserved households across rural India: smallholder and marginal farmers, women-led households, artisans, and nano-entrepreneurs operating in informal or semi-formal settings.

A significant proportion of borrowers among those 70% are women, and approximately 60% are first-time formal borrowers with no prior credit score. These communities are engaged across over 13 sectors, including agriculture, allied activities (dairy, poultry, fisheries), rural livelihoods, and micro-enterprises.

Their more than 160 grassroots partners like CSOs, FPOs, and NGOs serve as the community interface. They source and onboard borrowers, provide financial literacy and enterprise development support, and facilitate market access. Notable partners include Manjari Foundation (Rajasthan), Mithun Rural Development Foundation (Nagaland), Jeevika (Bihar), and others spread across 28 states.

Innovation

Its primary innovation is its RBI-regulated NBFC-P2P technology platform, the only one of its kind in the world as a regulated social peer-to-peer investment platform. Its architecture is designed to serve communities that traditional financial institutions systematically exclude, and it operates on the principle of disintermediation: removing the traditional bank layer to enable direct, peer-to-peer credit flows.

Beyond the core platform, it has developed three operational innovations in response to RBI's evolving T+1 regulations (effective August 2024):

T+1 Credit Disbursal

All capital in escrow must be disbursed to borrowers within 24 hours of receipt, ensuring timely access to credit for time-sensitive livelihood needs.

Commit Now, Invest Later

It pools investor commitments from across the month and converts them into actual investments on designated dates (1st and 15th of each month), sending payment links with a 24-hour expiry to more than 11,000 investors simultaneously including those in more than 26 countries.

Capital is then deployed to borrowers on the following day, completing the full cycle within T+1.

Curated Borrower Pools

Thematic investment pools (women, agriculture, specific geographies) allow social investors to align capital with causes they care about, combining impact intent with responsible lending.

Its underwriting combines field-level verification through partner scorecards (assessing 'Critical to Success Interventions' or CSI index) with digital workflows, enabling responsible lending to borrowers with no prior credit history.

Business Model and Community Integration

Its business model can be understood through its core operating components and the BoP (Base of Pyramid) integration embedded at each stage:

A. Partner-Led Sourcing and Onboarding

It works with more than 160 vetted grassroots organisations like CSOs, Farmer Producer Organisations (FPOs), Self-Help Groups (SHGs) and NGOs, that identify and onboard borrowers at the community level.

Partners conduct field-level verification, assess borrower readiness, and support enterprise incubation, ensuring that credit reaches those who need it most.

B. Technology Platform and Underwriting

The multi-tenant digital platform handles the full credit lifecycle like its origination through a partner loan app, KYC and documentation, AI-supported credit decisioning using both digital workflows and partner-level scorecards, risk rating, editorial review, and publishing borrower profiles for social investors. The platform generates Key Fact Sheets (KFS) and requires explicit consent from both borrowers and investors before any transaction, ensuring full transparency.

RBI compliance is maintained through annual Information Security audits (including VAPT assessments), and all credit bureau reporting is automated even every loan disbursed creates a formal credit score for the borrower for the first time.



Figure 1: Overview of Investor's profile

C. Social Investor Engagement

Individual investors invest on the platform starting from Rs. 100, selecting borrower profiles or thematic pools. They monitor performance through a personal dashboard showing

repayment status, social impact metrics, and financial returns.

Its investor community spans India and more than 26 countries, including diaspora investors and HNIs/family offices engaging in strategic philanthropy

D. Capacity Building and Market Linkages

Beyond credit, Rang De's ecosystem approach ensures capital translates into livelihoods.

Partners provide financial literacy training, enterprise development support, and market access, helping borrowers move from subsistence to market-oriented production.

This is further reinforced through partnerships with organisations like Social Alpha, Villgro (Powering Livelihoods programme), La Caxia Foundation, and government programmes like Jeevika (Bihar SRLM).

E. Revenue Model

As an NBFC-P2P, Rang De earns a platform fee / interest spread on loans facilitated through the platform. Its asset-light, technology-driven structure keeps operational costs low while enabling scaling across geographies and sectors. Gross revenue data is confidential under NDA, but the platform has deployed Rs. 20.8 crore in FY 2025-26 alone.

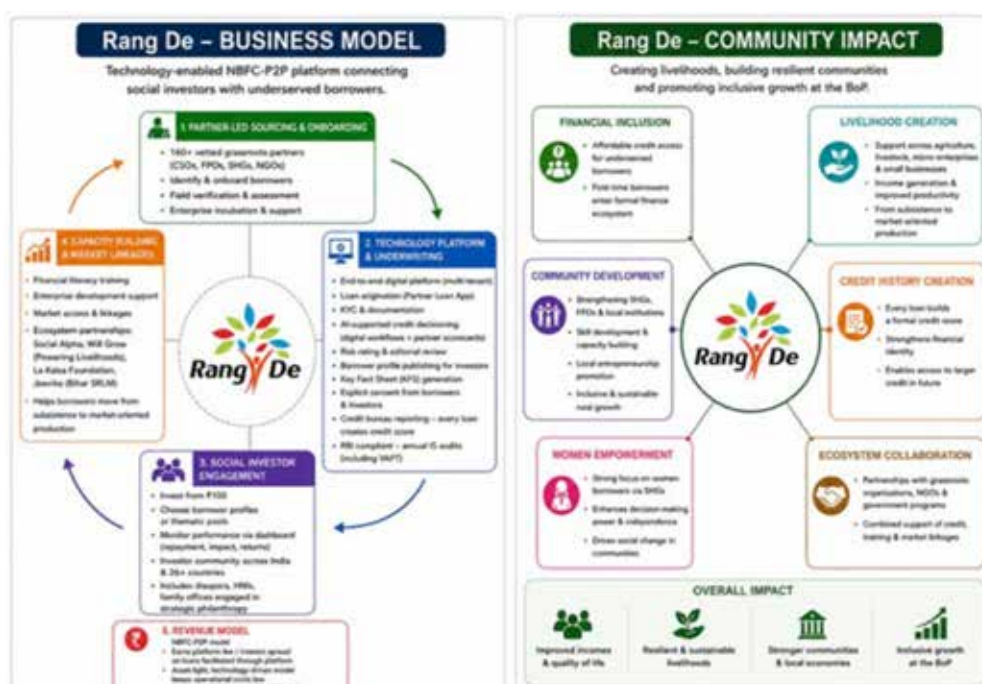


Figure 2: Diagrammatic Illustration of Business Model and Community impact of Rang De

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>100% of surveyed borrowers reported income increases after accessing credit</p> <p>87.5% saw monthly income rise of over Rs. 2,000; 46% reported increases above Rs. 10,000</p> <p>75% of borrowers created employment for others in their communities</p> <p>Rs. 20.8 crore in affordable credit deployed to farmers, women, artisans, and youth in FY 2025-26</p> <p>Enables entrepreneurial activity and diversified income (dairy, poultry, processing)</p>	<p>More than 30,000 individual households funded under the regulated NBFC-P2P platform</p> <p>More than 70% borrowers are women; 60% are first-time formal credit users; 71% of borrowers reported improved ability to manage household expenses; 50% gained confidence in making independent financial decisions</p> <p>Builds credit scores for previously unscored borrowers, enabling future formal finance access</p> <p>Operates across 28 States, 4 UTs, and covering more than 1,800 pin codes</p>	<p>Rs. 1.85 crore disbursed in Climate-Smart Agriculture (CSA)-aligned loans in FY 2025-26</p> <p>454 farmers supported in adopting climate-resilient livelihoods- 45.5% of CSA lending in organic farming (reducing chemical inputs), 14.7% in solar-powered livelihoods (lower carbon footprint, improved water access), and 26.5% in goatery and low-impact livestock (diversified, resilient incomes)</p> <p>Won DRE Summit Award for distributed rural renewable energy</p>

Operational Challenges

Their primary operational challenges are structural and regulatory in nature:

T+1 Regulatory Compliance at Scale

The RBI's T+1 mandate requires the platform to disburse all capital from its escrow within 24 hours, sometime creates operational complexity when managing more than 11,000 investors globally making investments on different days. Rang De's 'Commit Now, Invest Later' model was specifically engineered to resolve this.

Thin Credit Data for First-Time Borrowers

60-65% of borrowers have no prior credit score. It addresses this through its proprietary partner-level and borrower-level scorecards, anchored in the CSI (Critical to Success Interventions) index, which assesses the quality of partner support rather than relying solely on individual financial data.

Capital Supply vs. Demand

The demand for credit from underserved communities far exceeds the current capital supply from social investors. Rang De is actively working to scale its investor base, targeting 200,000 social investors through diaspora engagement, HNI/family office outreach, and integration with SRLM/NRLM frameworks.

Awards and Recognitions

It has received significant recognition across the social finance, fintech, and development sectors since its founding in 2008.

The platform's early honours include the 2011 Manthan South Asia Award and the 2013 Bangalore Heroes Award, alongside the landmark election of co-founder Ramakrishna NK as an Ashoka Fellow in 2012, which formally recognized Rang De as a systems-changing social innovation.

It also won the 2014 Bihar Innovation Forum Award, with both Ramakrishna and co-founder Smita Ram named as finalists for the Social Entrepreneur of the Year India Award in 2018.

Backed by ongoing financial inclusion support from the World Bank Development Marketplace (DM), the platform's recent distributed rural renewable energy financing in Bihar- specifically its Solar Didi initiative- won the prestigious 2026 DRE Summit Award in the Financial Institution Category.

Its Solar Didi initiative was featured nationally by the Hon'ble Prime Minister of India on the 125th episode of Mann ki Baat, which was closely followed by an invitation to a special

session with the Prime Minister on "Digital India: Reaching the Last Mile."

Beyond widespread media coverage from prominent national and international publications like YourStory and The Economic Times via the ETRise Dialogues, Its leadership actively shapes national financial policy; the co-founders have been featured speakers at the Annual Conference of Regional Heads of the RBI's Financial Inclusion and Development Department, while CEO Smita Ramakrishna has served as one of the key Panelists at the RBI seminar focused on the "Evolution of the Microfinance Sector: Reflections and the Road Ahead."

Impact Story: Haunton and Paifa; Banana Fibre Enterprise, Nagaland

Haunton and Paifa, smallholder banana farmers from Mon District, Nagaland, a region where banks routinely deny loans due to deep-seated stereotypes about northeastern communities had an innovative idea to establish banana fibre extraction units to produce a sustainable raw material for handicrafts and furniture. Without access to electricity or formal credit, this dream was out of reach.

Through Mithun Rural Development Foundation, Rang De facilitated a loan funded by 26 social investors. The banana fibre extraction units were set up, powered by microgrids. Women from local SHGs joined to craft handicrafts from the fibre. The enterprise grew and eventually received an export order for banana fibre supply. Northeast Development Financial Institution then offered them substantial capital on favourable terms, officially recognising Haunton and Paifa as creditworthy entrepreneurs.

Note to the Community

"The name Rang De beautifully brings together both the Indias i.e. the India and the Bharat. What are people doing through social investing? They are adding colour to people's lives. But more than that, Rang De is about building a movement of Indians for India. Because anybody with 500 rupees in their pocket can become a social investor. You don't need to be a wealthy philanthropist. Even an ordinary citizen can participate. That's why it's a movement for India, by India. Stay true to your purpose and mission. That's the single biggest factor why Rang De is still around. Despite changes in structure, regulation and everything in between, the one thing that has remained constant is our vision. If you know why you are doing what you do, everything else will fall into place."

- Smita Ramakrishna
Co-founder and CEO

Website of the Company: <https://rangde.in/>



ScaNxt

WHERE AGRICULTURE MEETS TECHNOLOGY

ScaNxt Scientific Technologies Pvt. Ltd.

- ✓ Portable and Handheld
- ✓ No Chemicals Required
- ✓ Fast, Real-time In-field Measurements
- ✓ Low power consumption
- ✓ Accurate and stable results
- ✓ Highly affordable even one of the highest yielding country

Contact Details

+91 7300707088
contact@scanxt.com
<https://scanxt.com/>

Company Overview

ScaNxt Scientific Technologies Pvt Ltd, founded by Rajat Vardhan, who serves as the Founder and CEO, is a deep-tech startup dedicated to transforming agriculture through an integrated precision ecosystem.

Established in 2024 and headquartered in Noida, Uttar Pradesh, the company utilizes AI/ML, GIS, and IoT-based solutions to deliver affordable and climate-smart technologies.

Currently operating across 25 Indian states and 7 countries, ScaNxt focuses on making critical agricultural data- such as soil health and pest activity- accessible to the world's most underserved farmers to build a self-sustaining, climate-resilient farming ecosystem.

Problems Addressed

The company directly addresses three critical layers of agricultural challenges:

Soil Degradation and “Blind Fertilization”

Smallholder farmers frequently lack access to affordable, timely soil diagnostics. This data void, compounded by a lack of agronomic knowledge in local languages, forces farmers into “blind fertilization”- a practice the founder equates to taking a blanket dose of antibiotics without a proper blood test. This indiscriminate application creates toxic fertilizer pockets that halt water percolation and decimate vital microbial populations within the soil. As a result, the ability of plant tissues to absorb nutrients is severely impaired. On a macro scale, this practice has birthed hazardous toxic zones in regions like Punjab, Haryana, and Assam, leading to tragic human health crises (such as the “cancer train” connecting Punjab to Rajasthan) and heavily increasing the nation's

reliance on imported fertilizers. At the micro level, it traps farmers in a cycle of debt and drains critically low groundwater reserves.

Pest-Induced Crop Losses

Traditional pest management relies on manual, visual detection, which almost always occurs too late to prevent systemic damage. This late detection routinely causes devastating yield losses ranging from 20-40%. To salvage their crops, farmers are driven to use excessive, unscientific pesticide sprays. This reactionary spraying not only drains their financial resources but also leaves dangerous chemical residues on the food supply, destroys beneficial insect biodiversity, and further degrades the agricultural ecosystem.

Post-Harvest Wastage and Market Gluts

Inadequate drying and storage infrastructure results in a staggering 25-30% loss of harvested crops. Smallholders cultivating highly perishable fruits and vegetables are incredibly vulnerable to market gluts; when markets are flooded, prices plummet, and farmers cannot secure a fair return. Consequently, slightly lower-grade produce (C and D grades) is frequently thrown away directly on the farm because transporting it is not economically viable. This massive value-chain leakage disproportionately impacts the livelihood opportunities of rural women and micro-entrepreneurs who rely on post-harvest processing for income.

Community Profile

It targets three distinct vulnerable segments within the rural ecosystem:

Smallholder Farmers: Making up more than 75% of the company's base of more than 50,000 community members, these individuals are

highly vulnerable to declining yields and debt cycles caused by traditional farming methods.

At-Risk Rural Youth: Unemployed youth prone to forced urban migration, whom the company trains to become high-tech climate-smart service providers.

Rural Women: Making up 26-50% of associated members, they are actively engaged to undertake localized value addition to prevent post-harvest losses.

Innovation

Its integrated deep-tech ecosystem operates through three primary, patented or patent-pending innovations:

BhuParikshak Smart Soil Testing Device

A portable, chemical-free system leveraging Near-Infrared (NIR) spectroscopy and AI algorithms to analyse six key soil parameters (NPK, organic carbon, CEC, clay content) in mere minutes. It provides instant, AI-driven fertilizer recommendations via a mobile app.

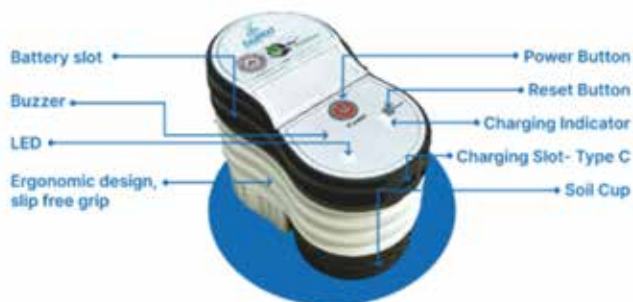


Figure 1: BhuParikshak Smart Soil Testing Device²⁹

AI-Based Pest Detection Station

A solar-powered IoT device featuring AI-enabled cameras, UV light, and pheromone traps. It detects pests in real-time, correlates findings with local weather data to establish economic threshold levels and pushes predictive alerts to reduce pesticide misuse.



Figure 2: AI-powered smart pest detection system³⁰

Smart Solar Dryer

A hybrid, energy-efficient drying solution ensuring uniform and hygienic drying of produce. This extends the shelf life of perishable goods by up to six months and increases their market value by 3x-5x, preventing distress sales during market gluts.

Business Model and Community Integration

Both their Business Model and integration with the community can be simplified and understood in the following sequence:

Business Model

The company's business model primarily functions along the following components:

A. Operations and Technology

The company's operational model is built around farmer integration and technological inclusion through a "boots-on-the-ground" strategy.

Unlike traditional agribusinesses that source physical crops, they source their deep-tech R&D and hardware engineering capabilities through its institutional incubation at IIT Kanpur, alongside collaborative partnerships

²⁹ ScaNxt. (n.d.). About Bhu-Parikshak. <https://scanxt.com/bhu-parikshak/>

³⁰ ScaNxt. (n.d.). Pest Detection System- Frequently Asked Questions (FAQ). <https://scanxt.com/pds/>

with IIT Delhi, IIT Tirupati, and IIT Ropar. At the grassroots level, the company “sources” its real-time agronomic data by deploying these patented devices directly to the farms.

It deploys its BhuParikshak and AI-Pest stations to VLEs who provide instant “Naked Earth” testing directly on farms. Alongside technological integration, the company provides agronomic advisory services that support farmers in shifting to regenerative systems, thereby reducing fertilizer and water usage by 15-30%.

The company deploys Smart Solar Dryers to prevent 25-30% post-harvest wastage and converts perishable crops into high-value commodities.

B. Market Linkages

Its distribution model is centred on connecting smallholder farmers to larger institutional markets. By measuring and quantifying farm-level data through their API platforms, the company connects its hardware and services to B2B buyers, NGOs, and governments, while simultaneously enabling the sale of solar-dried produce to premium markets.

C. Revenue Model

The company’s primary revenue model is built on a B2B hardware-as-a-product and software-as-a-service framework, complemented by a decentralized, community-driven micro-service economy. Corporate revenue is predominantly generated by selling their deep-tech hardware (BhuParikshak devices, Pest Detection Stations, and Smart Solar Dryers) directly to B2B partners, which include the agricultural input and output sectors, CSR programs, NGOs, research institutions, and state governments.

To safeguard smallholder farmers from prohibitive capital expenditures, the revenue model shifts to a pay-per-use micro-service structure at the grassroots level. Rather than purchasing the equipment, farmers pay highly affordable fees for the diagnostic tests- ranging from an introductory package of just Rs. 50 per month for pest monitoring, up to Rs. 500 for comprehensive services.

Crucially, this service fee flows directly to the local Village Level Entrepreneurs (VLEs) who operate the devices, generating a self-sustaining rural economy and dignified livelihoods. Concurrently, the advisory and processing capabilities provided translate into significant economic returns for the farmers themselves. By investing just Rs. 400-500 per acre in these diagnostic services, farmers have reported gross income increases of up to Rs. 10,000 per acre. Furthermore, the Smart Solar Dryer empowers farmers to command a 3x-10x higher market value for their produce by converting perishable C and D grade yields into shelf-stable commodities.

Community Inclusion

It integrates the Bop (Bottom of the Pyramid) as core economic partners alongside a four-pronged approach:

A. Technological Inclusion

It eliminates the heavy capital expenditure typically required for deep-tech by operating on a pay-per-use micro-service model. Farmers can access AI-driven pest monitoring and rapid soil testing for highly affordable fees, ranging from just Rs. 50 to Rs. 500 per service. This pricing structure ensures that smallholder farmers- who make up more than 75% of the company’s more than 50,000 associated community members- can access precision agriculture without financial strain.

B. Economic Empowerment

The operational ecosystem is driven by Village Level Entrepreneurs (VLEs), who are local rural youth provided with high-tech training to become climate-smart service providers.

By operating devices like the BhuParikshak, these youth generate sustainable, service-based livelihoods, keeping talent and income within the village rather than migrating for unskilled labour.

The Smart Solar Dryer specifically empowers women and micro-enterprises by enabling hygienic post-harvest processing, which

increases the market value of dried produce by 3x-5x, compared to fresh sales.

C. Data-driven Agronomic Advisory

It directly addresses the debt cycles caused by “blind fertilization” by utilizing “Naked Earth” soil sampling.

By replacing guesswork with surgical precision, farmers can reduce their agricultural input costs by 10-15%.

Predictive alerts and advisory are delivered directly via the Agrolens and BhuParikshak

apps, minimizing unnecessary expenditure on pesticides and fertilizers.

D. Environmental and Livelihood Resilience

Targeted initiatives, such as Project SUGAM, focus on highly vulnerable clusters facing critical issues like severely depleted groundwater and traditional farming debt traps. By optimizing input usage based on localized data, smallholders reduce their consumption of water, fertilizers, and pesticides by 15-30%, successfully bridging the gap between ecological conservation and farm profitability.

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>Creates entrepreneurship opportunities and a steady service-based income for rural youth by enabling them to operate deep-tech diagnostic devices as Village Level Entrepreneurs (VLEs).</p> <p>Enabled an average 12-13% yield improvement experienced by farmers.</p> <p>Achieved an income improvement of Rs. 10,000 to Rs. 16,000 per hectare for farmers, as validated by independent ICAR-NIAP reports.</p> <p>Generates higher income opportunities by using Smart Solar Dryers to convert perishable crops into shelf-stable commodities, which fetch 3x to 10x higher market value compared to fresh produce.</p>	<p>Engages heavily with vulnerable smallholders, who constitute more than 75% of the farmers associated with the company.</p> <p>Has positively impacted and reached over 71,000 farmer beneficiaries to date.</p> <p>Associated with a total of more than 50,000 farmers and community members currently.</p> <p>Generated over 600 local employment and livelihood opportunities, actively preventing the distress migration of rural youth by providing them with a dignified technical identity.</p>	<p>Enabled a 25-40% reduction in pesticide use through real-time pest detection and targeted, predictive spray recommendations.</p> <p>Contributed to a 15-30% reduction in fertilizer and water usage by replacing “blind fertilization” with precise, chemical-free soil diagnostics.</p> <p>Lowered carbon emissions and mitigated climate impact by reducing irrigation frequency, which directly decreases the energy consumed for water pumping.</p> <p>Diverted reliance away from fossil fuels by utilizing solar-powered IoT devices for both pest monitoring and post-harvest drying.</p>

Operational Challenges

While ScaNxt operates a highly scalable decentralized model, scaling deep-tech agricultural solutions presents specific systemic barriers, primarily concerning ecosystem

cohesion, technical manpower, and trust-building:

Firstly, unlike software-only platforms, developing and scaling physical deep-tech hardware, IoT sensors, and AI models demands

significantly larger R&D budgets to execute effectively.

Further, there is a critical lack of a cohesive ecosystem where national institutions, startups, SMEs, and the broader industry can seamlessly collaborate. For example, despite India housing 244 central laboratories conducting cutting-edge research, the startup ecosystem remains largely disconnected from them, limiting the rapid translation of research into scalable products.

Moreover, taking hardware to the last mile requires professionals trained to deploy and service these technologies. There is an urgent need to strengthen rural educational infrastructure- specifically the ITI (Industrial Training Institute) ecosystem- to graduate industry-ready technical personnel who can manage these IoT devices on the ground.

Finally, the largest propeller for agricultural ecosystems is the government, yet accelerating adoption requires rejuvenating the government's agricultural extension worker network. Because rural communities rely on seeing results before believing in them, massive mobilization is required to conduct physical technology demonstrations at the district, block, and village levels to build trust among both farmers and extension workers.

Awards and Recognitions

While operating as a young deep-tech enterprise, ScaNxt has rapidly gained significant credibility and recognition within the precision agriculture sector through its robust intellectual property and partnerships with India's premier research institutions:

The company was successfully incubated at IIT Kanpur and maintains active, high-level collaborations with IIT Delhi, IIT Tirupati, and IIT Ropar.

ScaNxt's technological impact has been independently validated by ICAR-NIAP (Indian Council of Agricultural Research), which officially reported the company's ability to increase farmer gross incomes by up to Rs. 10,000 per acre.

On National Technology Day, ScaNxt signed a high-importance agreement with CSIR-CMERI. Through this recognition, ScaNxt is entrusted with commercializing India's first indigenous, AI-powered electric tractor.

The company has been recognized globally for its rapid innovation cycle, securing core patents for its BhuParikshak and Pest Detection Station technologies in under 12 to 19 months following rigorous global gap analyses.

ScaNxt has gained immense trust from large-scale B2B players and NGOs, leading to mega-scale deployment partnerships, including ongoing projects with WWF in Gujarat (impacting 2,500 farmers) and major sugar mills in Western UP (targeting 33,000 farmers).

Note to the Community

"They must experience AI in their farms. They must experiment. They must trust the Indian startups. And I would urge government and industry that they should start deploying AI-powered solutions at scale, because only when everyone starts contributing towards it, contributing by purchasing, contributing by using it, the system will get smarter. And the smarter system will give smarter results, and it will gain a lot of trust. And it will also ensure that our country get empowered and become stronger."

- Rajat Vardhan, Founder and CEO



Sickle Innovations Pvt. Ltd.

Contact Details

✉ info@sickle.in

🌐 <https://scanxt.com/>

Company Overview

Sickle Innovation is an agri-technology enterprise founded by Nitin Gupta that specialises in the design, manufacture, and deployment of precision farming tools and AI-powered post-harvest solutions for smallholder horticulture farmers across India.

The company builds affordable, indigenised hardware and software solutions targeting the unique challenges of fragmented, labour-intensive, and terrain-constrained horticulture belts.

The company operates primarily in Himachal Pradesh's apple-growing belts and is actively expanding to Kashmir, Meghalaya, and other horticulture-intensive states. It distributes through a dealer network as well as online platforms, including Amazon, and has remained bootstrapped and profitable since its inception without external capital.

Problems Addressed

The company addresses the following problems in Indian smallholder horticulture.

Post-harvest Losses

Post-harvest losses remain a major inefficiency in horticulture, with 30-40% of fruits wasted in India due to manual grading, poor handling, and limited storage.

A key challenge identified is the high dependence of farmers on imported and big corporate-owned infrastructure for primary processing (grading and sorting), forcing them to sell their raw produce in mixed, ungraded lots, leaving them with no say in price.

For example: an apple with a tiny spot missed manually will fetch 1/3rd the price of the good quality one. If such defected apple is found in

good quality box during auction, traders will reduce the price of the whole box.

Non-uniform Grading

Non-uniform grading and grading on outdated mechanical machines suppresses farmgate prices by creating inconsistency and causing mechanical damage during handling and touching. Grading technologies do exist earlier but they've always been out of reach for small farmers. Either too complex or too expensive.

This is where the problem lies not in the technology itself, but in who gets to use it.

These all challenges are addressed through compact, affordable and easy to operate grading machines designed for farm level use with low power requirements, enabling farmers to make informed decisions at processing time.

Community Profile

Sickle Innovation's primary communities are smallholder horticulture farmers in mountain terrain belts, principally in Himachal Pradesh's apple-growing districts, with expansion into Meghalaya and Jammu and Kashmir. Farmers typically operate fragmented landholdings in areas where terrain difficulties compound challenges of access, labour availability, and timely market linkage.

The company's secondary community comprises village-level entrepreneurs (VLEs) who purchase Sickle's grading machines to operate as local service businesses, providing grading-as-a-service to surrounding farmers who cannot justify individual machine ownership.

Women in farming communities particularly benefit from Sickle's ergonomically designed weeding tools, which eliminate stoop labour disproportionately performed by women.

Innovation

Sickle Innovation's core innovation lies in indigenising and miniaturising precision agricultural technology for smallholder scale. Its optical AI grading machines replace expensive imported systems with affordable, microcontroller-based machines that can be owned and operated at the individual farm or village level.

AI-based defect detection- developed entirely in-house- enables identification of surface injuries, rust, and colour defects that rule-based automation cannot capture, achieving 100% accuracy in colour grading.

Sickle holds 11 patents including a granted patent for cotton harvesting and an international patent application for its apple harvester- a product with no comparable equivalent in global markets.



Figure 1: Seed Potato Optical Grader³¹



Figure 2: Single Lane Grader- Pomegranate³²

Business Model and Community Integration

Sickle Innovation's business model and community integration can be understood in the following sequence:

Business Model

The company's business model is centred around two parallel business units - a tools and harvesting devices division and a dedicated grading-sorting division- both designed and manufactured entirely in-house to pass cost benefits directly to farmers.

A. Product Portfolio and Manufacturing

Sickle manufactures its entire product range in-house. Their key products are- AI-Powered Optical Grading and Sorting Machine, Fruit Harvesting Devices (apple harvester - international patent), Solar Insect Traps (UV light-based, chemical-free), Weeding Tools (stoop-labour elimination). Mobile Trailer Grading Units (for FPO farm-level use), Cotton Harvester (patented- India's last fully manual crop), Orchard Monorail Transport System

B. Distribution and Farmer Access

For tools, distribution flows through a dealer network that handles farmer education, demonstrations, and feedback collection. For grading machines, the company works directly with individual farmers and FPOs, assisting with subsidy applications and bank financing. The village entrepreneur model extends effective reach to farmers who cannot invest in equipment independently.

C. Market Linkages

Sickle's machines create direct market linkage by attracting buyers to grading machine locations. Verified grade reports are used as transparent negotiation instruments at auction. For export-oriented FPOs, Sickle's mobile trailer

³¹ Sickle Innovations Private Limited. (n.d.). Optical Grader- Marsh Harrier. <https://www.marshharrier.in/product/optical-grader/>

³² Sickle Innovations Private Limited. (n.d.). Single Lane Grader- Pomegranate. <https://www.marshharrier.in/product/single-lane-grader-pomegranate/>

grading units enable farm-level sorting, quality separation, and export-grade pack preparation.

D. Revenue Model

Revenue is generated through direct sale of agri-tools and grading machines to farmers, village entrepreneurs, FPOs, and traders. The company has remained bootstrapped and

profitable since inception, funding research, product development, and expansion entirely from operational revenues without raising external equity.

This self-sustaining model has allowed Sickle to avoid the price undercutting behaviour of venture-backed competitors and maintain product integrity and farmer trust.

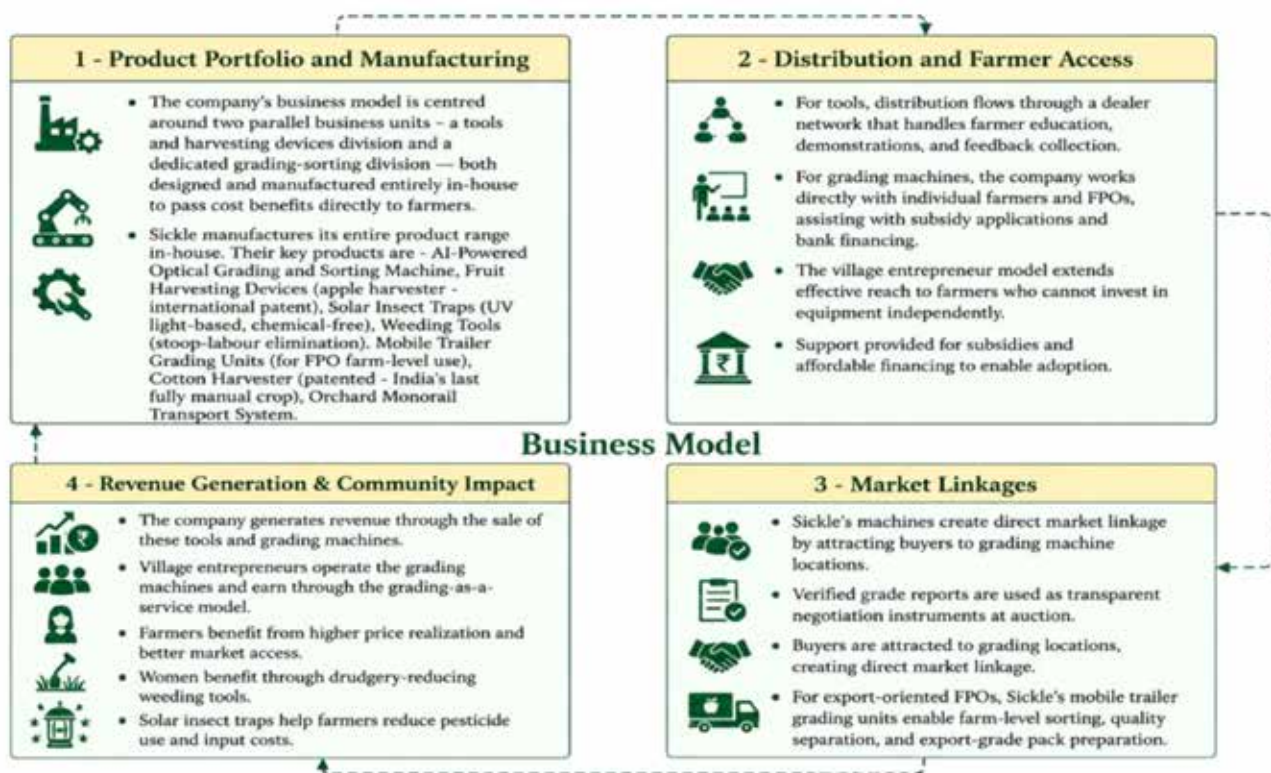


Figure 3: Business Model of the Company

Community Integration

Sickle Innovation integrates smallholder farmers, village entrepreneurs, women farmers, and FPOs as both participants and primary beneficiaries.

A. Technology Deployment and Field Feedback

Sickle's dealer network provides continuous long-term field feedback on product performance and emerging farmer needs, enabling rapid product iteration that online channels alone cannot provide.

B. Economic Inclusion through Subsidy and Credit

The company actively helps farmers access central government capital subsidies and subsidised bank credit, enabling farmers to recover machine investment within a single growing season from increased price realisation

C. Pest Management and Chemical-Free Farming

Solar insect traps distributed through CSR partnerships trap insects using UV light, providing dual benefits: direct pest control

without pesticides and real-time population monitoring for data-driven spray decisions. Trapped insects are also used as poultry feed, completing a circular resource loop.

D. Women’s Labour Relief and Livelihood Support

Ergonomically designed weeding tools eliminate physically demanding stoop labour traditionally performed by women farmers, directly addressing drudgery burden across horticultural communities.

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
Farmer price realisation improved through verified grading	Smallholder horticulture farmers across mountain belts	Solar insect traps eliminate pesticide dependency
Machines accessible via 35% government subsidy	Village-level entrepreneurs empowered as service providers	Chemical-free pest monitoring through UV light traps
Village entrepreneurs earn income from grading services	Women farmers relieved of stoop labour drudgery	Trapped insects reused as poultry feed- circular loop
Bootstrapped model avoids undercutting farmer trust	Export market access enabled for FPOs	Reduced post-harvest produce losses through better grading
International revenue from Amazon sales globally	Unskilled workers able to perform precision operations	Climate-appropriate tools for mountain terrain farming

Horticulture crops have narrow, non-negotiable harvest windows. All product testing, validation, installation, and sales for grading machines must occur within a single short season, making research and development cycles longer and errors more costly.

The company manages this by concentrating operations geographically in early stages before expanding.

Venture-backed competitors have used external capital to undercut market prices, creating unfair competitive pressure.

Sickle’s response has been to maintain strict profitability discipline and rely on in-house manufacturing cost advantages. An early attempt to supply saffron drying equipment to Kashmir resulted in non-payment, leading to a policy of entering new geographies only through trusted local representatives.

Awards and Recognitions

Sickle Innovation has secured significant recognition within India’s agri-technology ecosystem.

They received the award for the Best Use of AI in Agriculture from the Hindustan Times Mint in 2024, and also have 11 granted and pending patents, featured by an international patent application for their Apple Harvester technology.

They also have project support and distribution partnerships with major organizations, including the Tata Group foundations, the HCL Foundation, and the Cine Foundation.

Beyond the domestic market, the company has successfully expanded its commercial footprint globally, leveraging Amazon to secure international sales and deliver products directly to customers in the US and Australia.

Impact Story: Khasi Mandarin- From Mountain Orchard to Export Market

The Gabil Rongmill Integrated Village Cooperative Society in Meghalaya grows Khasi Mandarin oranges- a premium citrus variety with export potential. But without farm-level grading capability, the cooperative could not consistently achieve the quality separation required for international buyers. Transport to distant centralised grading facilities added cost, time, and spoilage risk in a perishable crop.

Sickle Innovation deployed mobile trailer grading units- tractor-towed machines that bring optical AI grading directly to the orchard. For the first time, the cooperative could sort produce at farm level, produce export-grade packs, and present machine-verified grade reports to international buyers. The result was direct access to export markets that had previously been out of reach for a mountain-terrain cooperative with no centralised processing infrastructure.

Message to the Community

“Build for desirability first- if the farmer does not want it, viability and feasibility do not matter. The breakthrough in agriculture is rarely a new invention. It is making the right existing technology small enough, cheap enough, and simple enough that the person who needs it most can finally use it.”

- Nitin Gupta
Founder and CEO
Sickle Innovations

Website of the Company: <https://sickle.in/>



Varaha ClimateAg Pvt. Ltd.

Contact Details

+91 8011303269

info@varahaag.com

<https://www.varaha.earth/>

Varaha ClimateAg Private Limited



“Empowering smallholder farmers to remove carbon from the atmosphere”

Company Overview

Varaha ClimateAg Private Limited is a climate-tech enterprise operating as a platform designed to help smallholder farmers adopt sustainable agricultural practices, thus reducing greenhouse gas emissions, restoring soil health, and generating high-quality carbon credits.

Founded in 2022 by Madhur Jain (Co-founder and CEO), Ankita Garg (Co-founder and COO), and Vishal Kuchanur (Co-founder and CTO), and based in Gurugram, Haryana, the company works with commodities such as Rice, Corn, and Cotton across India (Maharashtra, Gujarat, Rajasthan, Karnataka, Telangana, Madhya Pradesh, and Punjab), Nepal, Bangladesh, and Cote de Ivoire (the company has a signed VIPP [Varaha Industrial Partners Program] in this region).

They develop nature-based carbon removal projects, facilitating high-integrity carbon removal across four key verticals: Regenerative Agriculture, Biochar, Agroforestry, and Enhanced Rock Weathering.

Through their climate-tech, keeping the community at the centre, they also play a crucial role in the fintech sector: through their digital Monitoring, Reporting, and Verification (MRV) technology, they verify and quantify sequestration, thus structuring the process into tradable carbon credits, provide market linkages, and thus generate an alternate ‘Climate Crop’ revenue stream for the smallholders.

Due to this, they don’t only reduce the farmers’ dependence on chemical fertilizers, but also economically incentivize the adoption of good agricultural practices, thus turning environmental

stewardship into a tangible financial asset empowering over 150,000 households.

Problems Addressed

The company addresses three layers of problems faced by smallholders: economic vulnerability, ecological degradation, and technical exclusion:

Financial Barriers and Income Volatility

Smallholders often lack the capital to adopt sustainable practices. They bridge this gap by monetizing their ecosystem services: by channelling a majority of carbon revenue directly back to farmers, they provide a recurring ‘climate crop’ income that reduces dependence on high-cost chemical inputs and mitigates the risk of crop failure.

Technological Exclusion

Small-scale farms are traditionally excluded from global markets due to the prohibitive cost of high-integrity verification. In order to resolve this, their Digital MRV platform uses remote sensing and machine learning, thus providing the scientific rigor required to certify sequestration at no cost to the farmer.

Market Access and Waste Management

They solve the market access challenge as well by connecting remote rural communities to global voluntary carbon markets.

Additionally, their Biochar vertical transforms the problem of agricultural waste burning which is a major source of air pollution and emissions into a high-value commodity.

Community Profile

Varaha focuses its engagement on smallholder farming households and marginalized pastoralist communities in the global south, particularly across India, Southeast Asia, and East Africa.

Their primary partners are small-scale producers of staples like rice, wheat, and corn, who are increasingly threatened by soil degradation and climate-induced yield volatility.

In their Biochar Vertical, they also engage with women, tribals, and landless groups, providing them with new employment opportunities centred on biomass management.

Innovation

Aligning with the above problems, the company's primary innovation is its Digital MRV platform, named KALKI, an AI-driven tech stack specifically designed to check, verify, and quantify sequestration (the process of capturing and storing atmospheric carbon dioxide [CO₂] to reduce the amount of Greenhouse Gases) through remote sensing, computer vision, and machine learning, thus dismantling the barriers that have historically excluded smallholders from global carbon markets.



Figure 1: The Digital MRV Platform³³

Business Model and Community Integration

Both their business model and integration with the community can be simplified and understood in the following sequence:

Verticals

Varaha functions along four key verticals:

Regenerative Agriculture

This vertical trains smallholder farmers to switch from traditional flooded fields to methods like Direct Seeded Rice (DSR) and to chop crop residue back into the soil instead of burning it. This drastically lower Methane emissions and trap carbon naturally back into the soil as an organic matter.

Biochar

This vertical is focused on collecting agricultural waste, (like cotton stalks) and invasive species (Prosopis juliflora), and processing it in high-temperature reactors, through a process called Gasification. This creates create Biochar, a stable, charcoal-like substance, given back to the farmers. When mixed back into fields, it locks carbon away for hundreds of years, while acting as a sponge to improve soil moisture and fertilizer efficiency.

Agroforestry

This vertical integrates native, commercially valuable trees like Mango and Cashew into existing farmlands to create a permanent green cover. As the trees grow, they pull carbon dioxide directly out of the air to build biomass.

Enhanced Rock Weathering (ERW)

This vertical accelerates the earth's natural geological cycle by spreading finely crushed basalt rock onto farming fields. When rainwater

³³Varaha ClimateAg Private Limited. (n.d.). Our tech. Varaha. <https://www.varaha.earth/our-tech>

reacts with the crushed rock, it chemically traps atmospheric CO₂ into stable minerals, permanently storing the carbon for thousands of years as it safely washes into groundwater. Under this vertical, they primarily work with the Cotton farmers of Madhya Pradesh.

Business Model

The company's business model can be understood along the four aforementioned verticals and aspects of community integration:

A. Sourcing

They source from the community primarily through their Biochar Vertical, where agricultural residues such as cotton stalks and invasive biomass like Prosopis Juliflora are collected by the local communities and processed through gasification to produce Biochar.

B. Operations and Technology

As part of their operations, they provide agronomic advisory services that support farmers in shifting from high-emission

agricultural practices to regenerative systems, thereby reducing dependence on chemical fertilizers and improving soil health and climate resilience, spread crushed Basalt into fields to trap CO₂, integrate native commercial trees like Mango and Cashew into existing farmlands to create a permanent green coverage, and have a Circular Waste-to-Wealth (Circular W2W) approach in which agricultural waste and invasive species are converted into Biochar and returned to farms as a soil amendment, and deploy their Digital MRV to quantify carbon sequestration across their projects.

C. Market Linkages

They enable carbon credits generated through sequestration across regenerative agriculture, agroforestry, biochar, and ERW projects to enter international climate markets.

D. Revenue Sharing

Finally, a majority of the revenue derived from these operations flows directly back to farmers as an additional 'climate crop' income stream.

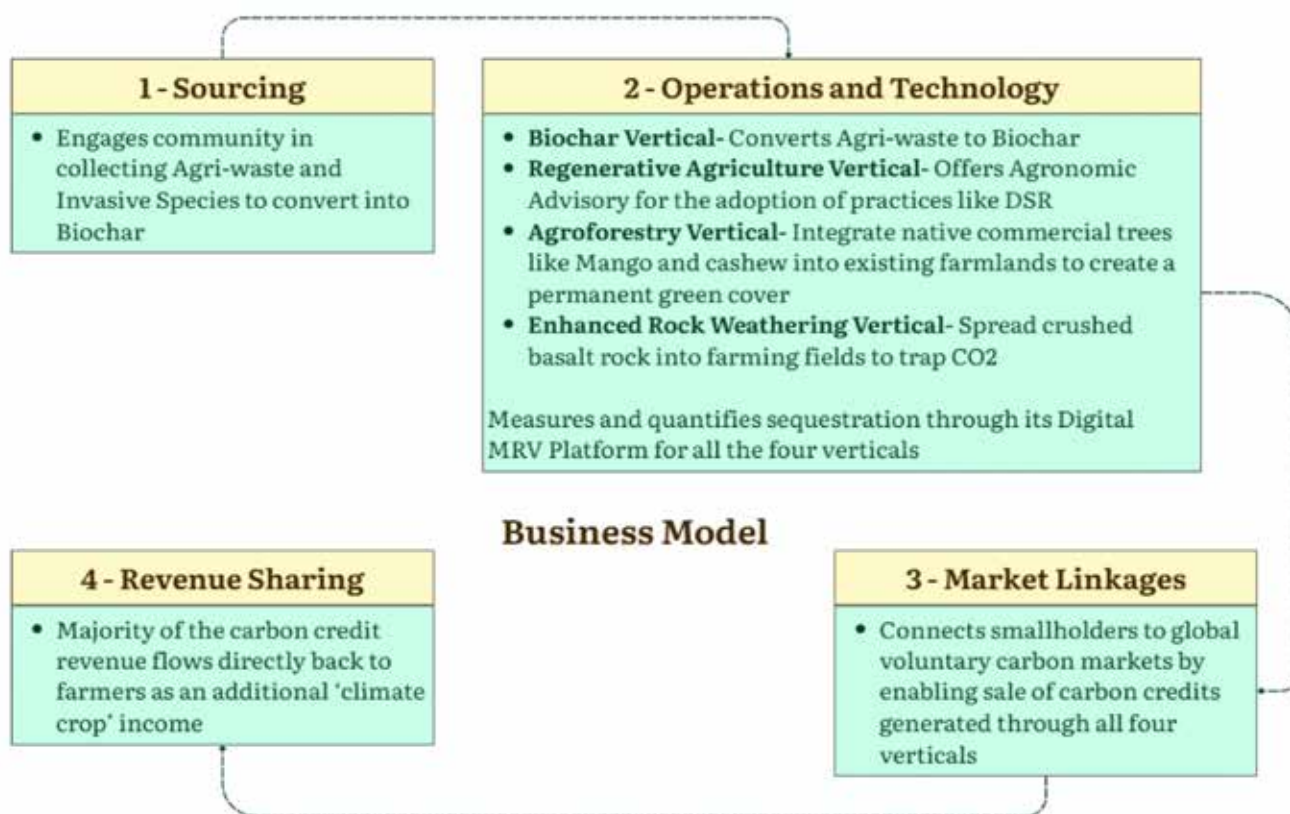


Figure 2: Business Model of the Company

Community Integration

Across the four aforementioned verticals, the company integrates the community as core economic partners alongside a four-pronged approach:

A. Technological Inclusion

They include the smallholders by providing their Digital MRV platform, thus enabling not only quantification of sequestration, but also technological inclusion.

B. Market Linkages and Economic Inclusion

By quantifying carbon sequestration, they also connect these farmers to global voluntary carbon markets, thus both ensuring market linkages for the smallholders and that majority

of the credit revenue flows directly back to them as an alternative 'climate crop' income.

C. Agronomic Advisory

They also provide technical advisory to transition farmers from high-emission practices to regenerative agriculture, thus reducing their reliance on expensive chemical fertilizers and improving long-term soil health and climate resilience.

D. Circular Waste-to-Wealth (Circular W2W)

In their Biochar vertical, they also engage communities in collecting agricultural residues and invasive species (*Prosopis Juliflora*) that are usually burned, and convert it into Biochar through gasification, that is returned to farmers as a soil amendment, thus creating a self-sustaining circular economy.

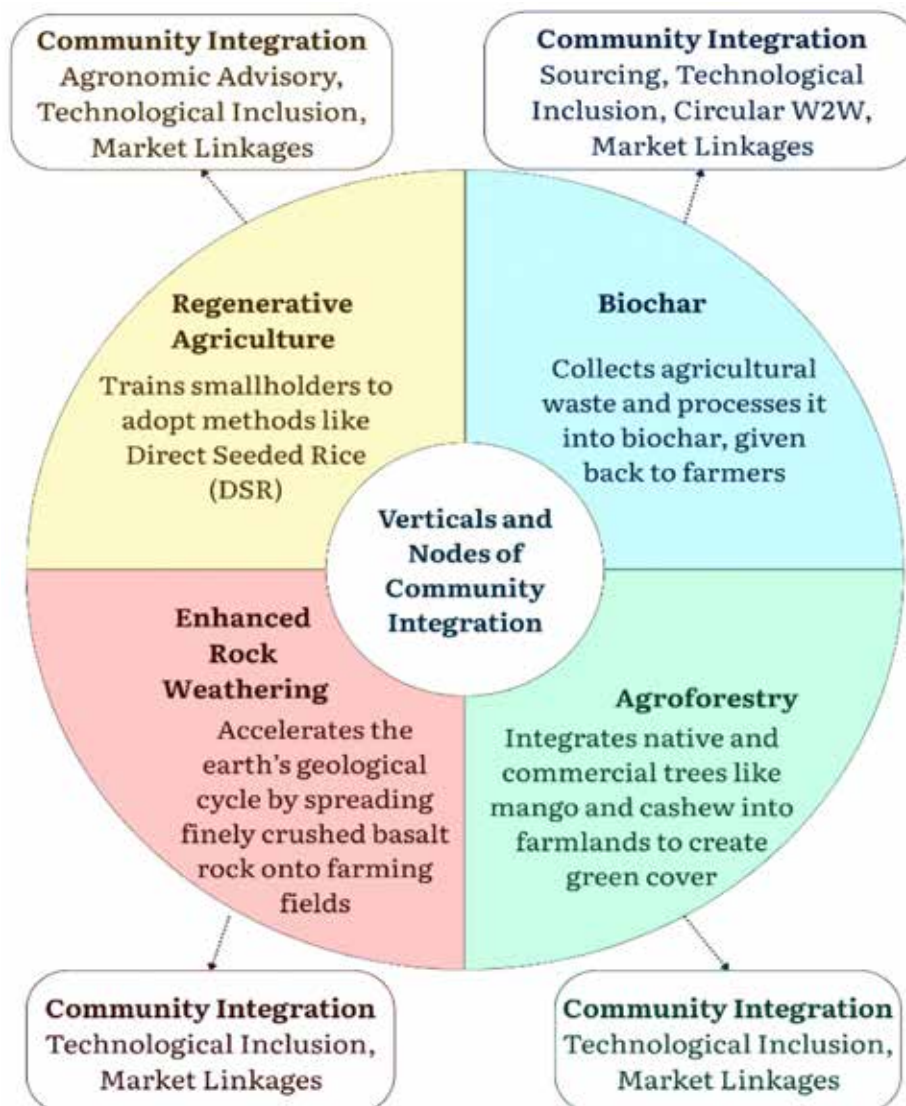


Figure 3: Verticals and Nodes of Community Integration

All these four verticals show both their connection with the community and the scale of their work.

Impact Coverage

Economic Impact	Social Impact	Environmental Impact
<p>Creates entrepreneurship opportunities for farmers by enabling them to sell carbon credits, besides their regular produce</p> <p>Creates a permanent second 'climate crop' revenue stream for them</p>	<p>Engages with tribals and landless groups as part of their Biochar Vertical</p> <p>Has onboarded more than 1,99,000 farms across India, Southeast Asia, and East Africa</p> <p>Associated with more than 50,000 farmers, with more than 75% of them being smallholders</p> <p>Trains and enables them towards climate stewardship, while also incentivizing the same</p>	<p>Sequestered over 20,00,000 tonnes of CO2 through their various verticals</p> <p>Planted 25,000 acres of trees across India, Nepal, and Bangladesh</p> <p>Transitioned more than 3,99,000 hectares of farmland to regenerative practices</p> <p>Diverted thousands of tonnes of agricultural waste to Biochar formation</p>

Gender Inclusion: Insights from the Field

In the company's operations, women are primarily involved in the process of Biomass collection. As also corroborated by one of their field operations in Maharashtra, they have an entire operation of Biomass-sourcing completely led by women, which saw a local participation of more than 200 women. After the Cotton harvesting and picking season, when the women are looking for employment, they approach the company, with results into a symbiotic relationship, where women get employment and the company gets an important component of their operations done through their engagement.

Operational Challenges

The key operational challenge that the company faces doesn't emanate from carbon credits not being a well-known concept in India, i.e. they don't have to work on trying to convince the smallholders to adopt this system, since the farmers are already convinced due to economic incentivization (in the form of both free Biochar and an alternative 'Climate Crop' revenue stream).

The only operational constraint they face is in the terms of the market: there is a need for a 10x, 20x, or 30x market expansion so that their operations can be expanded.

Awards and Recognitions

The company has received significant recognition within the climate-tech and agricultural decarbonization sector for its work in carbon removal and regenerative agriculture. They were recognized as a winner of the Outcomes Accelerator Cohort 2 (2023), while their co-founder and CEO, Madhur Jain, received the Henry Arnhold Fellowship 2023 from the Mulago Foundation and was invited as a speaker at the Milken Institute Global Conference 2024³⁴.

They have also received substantial media recognition from major global business and

³⁴ Research and Innovation Circle of Hyderabad (RICH). (2024). Agri-tech startup compendium: Pioneering the future of agriculture. Government of Telangana. <https://rich.telangana.gov.in/assets/pdfs/Reports/Agri-startups-compendium.pdf>.

climate publications including The Economic Times, TechCrunch, Carbon Herald, Trellis, Bloomberg etc³⁵. They are also widely recognized as one of Asia's leading carbon removal project

developers and have gained credibility through partnerships and carbon offtake agreements with major global firms such as Google, Microsoft, Lufthansa, and Swiss Re³⁶.

Impact Story: The Banni Grasslands Initiative

The Banni Grasslands Initiative focuses on restoring the ecologically fragile Banni grasslands in Gujarat through community-led biochar production, tackling the spread of the invasive Prosopis Juliflora by converting the Biomass into Biochar. Besides removing the invasive species, the initiative has also created livelihood opportunities for the local pastoral communities of Western India. By training them to harvest invasive species, and converting the same into biochar, the company has created over 450 full-time jobs, particularly for women and marginalized farmers. This initiative not only restores native biodiversity but provides these families with a stable livelihood independent of traditional crop cycles, while also contributing to biodiversity conservation in one of India's most significant grassland ecosystems.

Message to the Community

"We have been fortunate enough to figure out some ideal biomasses and communities wherein mobilization has been really successful so far. To be honest, we talking about climate sitting in an AC office is very easy, but if you come to our operation sites, you see how these people working at 46-47 degrees to collect Biomass to operate these machines in a no-shade area in a farm. They are the people who will get impacted the most if anything goes wrong with climate in the near future, and the irony is that they are also at the forefront of safeguarding it with very little benefits. However, with whatever limited knowledge, access, or exposure, they have been able to understand the importance of the practices they carry out along with us to improve the soil health, which is so powerful to see. We are very thankful for them to be able to come together and partner with us to sequester carbon."

- Kaushal Bisht
Director- Partnerships and Strategic Alliances
Varaha ClimateAg Private Limited

Website of the Company: <https://www.varaha.earth/>

³⁵ Varaha ClimateAg Pvt. Ltd. (n.d.). Varaha. <https://www.varaha.earth/>.

³⁶ Varaha ClimateAg Pvt. Ltd. (n.d.). Varaha. <https://www.varaha.earth/>.

A GLIMPSE OF COMMUNITY INTEGRATION



COLLECTIVE IMPACT OF SELECTED 15 ENTERPRISES

Transforming Rural Economies Through Inclusive Enterprise

While each enterprise featured in this compendium addresses a unique challenge, together they represent something much larger—a growing movement of businesses redefining how economic growth can be created and shared. Across regenerative agriculture, food systems, aquaculture, biotechnology, natural products, climate-smart enterprises, and rural services, these businesses have demonstrated that inclusion can be commercially viable, environmentally responsible, and socially transformative.

Collectively, the fifteen enterprises have reached thousands of farmers, women, tribal households, producer groups, producer organizations, and rural entrepreneurs across multiple states. More importantly, they have created pathways through which communities participate not merely as beneficiaries, but as producers, entrepreneurs, suppliers, and service providers. The aggregated impact presented below provides a snapshot of the scale, diversity, and significance of these enterprises.

Aggregate Outreach, Economic, Social and Environmental Impact

Dimension	Indicator	Cumulative Impact Across Enterprises *
Geographic Reach	Indian States Covered	15+
	Countries Reached Through Exports	15+
	Indian Districts Covered	50+
Community Outreach	Farmers Reached Directly	2,25,000+
	Tribal Farmers & Households Engaged	10,000+
	Women Reached	50,000+
	Villages Covered	7,000+
	FPOs/FPCs Supported	300+
	SHGs Engaged	500+ (estimated minimum based on case evidence)
Economic Impact	Increase in Farmer Income	15%–75% across different models
	Additional Credit Enabled	₹200+ Crore
	Market Linkages Facilitated	₹90+ Crore
	Crop Yield Improvement	8%–60%
	Input Cost Reduction	10%–50%
	Women Livelihood Opportunities Created	Thousands
	Community Enterprises Created/Supported	Hundreds
Social Impact	Farmers Trained and Capacity Built	30,000+
	Customized Advisories Delivered	600,000+
	Women in Leadership Roles	Across FPOs, SHGs and Enterprises
	Digital Inclusion Enabled	100,000+ Farmers
	Community Institutions Strengthened	300+ FPOs/FPCs and SHGs
Environmental Impact	Land Under Sustainable/ Climate-Smart/ Regenerative Agriculture	84,000+ Acres
	Water Saved	420+ Billion Litres
	CO ₂ Emissions Reduced/Avoided	96,000+ MT CO ₂ e
	Farmers Adopting Climate-Smart Practices	50,000+
	Bio-Waste Recycled	3,750+ MT
	Biogas Units Established	200
	Renewable Energy Installations	Multiple Solar-Powered Systems

* Based on quantitative data reported by the enterprises profiled in this compendium. Figures represent consolidated minimum values and will increase as additional enterprise data is aggregated and have been derived from the figures reported by enterprises.

What these Numbers Indicate

Area	Key Finding
Scale	Given the average age and maturity of the enterprises, collective reach of 2.25 lakh farmers augurs well for meaningful scale-up efforts inclusive businesses.
Inclusion	Women, beekeepers, dairy farmers, tribal communities, tenant farmers, and smallholders are consistently integrated into production, processing, advisory, and enterprise roles.
Income Enhancement	Most enterprises report income improvements ranging from 15% to 75%, primarily through productivity gains, value addition, reduction of post-harvest losses, disaster response, and market access.
Technology Adoption	AI & ML IoT, mobile platforms, remote sensing, and digital advisory systems to tide over climate adversities are increasingly becoming mainstream tools for inclusion.
Climate Impact	More than 84,000 acres are already under climate-smart interventions, with substantial water and carbon savings.
Institution Building	FPOs, SHGs, cooperatives, and community enterprises remain the dominant vehicles for scaling inclusion.

Viewed individually, each enterprise represents an innovative solution to a local challenge. Viewed collectively, they represent something far more significant: a new generation of businesses proving that inclusive growth can be commercially viable, environmentally sustainable, and socially transformative. Together, these fifteen enterprises illustrate how technology, finance, markets, and community participation can converge to create resilient rural economies- one where prosperity is not concentrated at the top of the value chain pyramid but shared across it.

Collective Impact at a Glance

2,25,000+ Farmers Reached | 50,000+ Women Engaged | 300+ FPOs Strengthened | ₹200+ Crore Credit Enabled | ₹90+ Crore Market Linkages Facilitated | 420+ Billion Litres Water Saved | 96,000+ MT CO2 Reduced | 84,000+ Acres Under Climate-Smart Agriculture

FUTURE OF INCLUSIVE BUSINESS

Emerging Trends Shaping the Next Generation of Inclusive Growth

Inclusive Business is entering a new phase of evolution. While the first generation of models focused primarily on market access and livelihood enhancement, the next generation is getting shaped by technology, sustainability, climate resilience, and data-driven ecosystems. For India, where robust agriculture & allied sectors and vibrant rural livelihoods remain central to economic and social development, these trends present an unprecedented opportunity to deepen inclusion while improving productivity, augmenting resilience, and building competitiveness. The enterprises featured in this compendium offer an early glimpse into this future.

Artificial Intelligence (AI) in Agriculture

Artificial Intelligence (AI) is rapidly transforming how agricultural systems function. From predictive weather analytics and crop advisory services to pest surveillance, precision farming, and yield forecasting, AI has the potential to make information and decision-making tools accessible to even smallest producers. For Inclusive Businesses, AI can significantly reduce information asymmetries, improve resource efficiency, and enable customized solutions for farmers operating in diverse agro-climatic conditions. The challenge ahead will be ensuring that these technologies remain accessible, affordable, and relevant to underserved communities.

Climate Finance

As climate risks increasingly affect agricultural productivity and rural livelihoods, climate finance is emerging as a critical enabler of inclusive growth. Businesses that help farmers adopt climate-resilient practices, regenerative production systems, renewable energy solutions, and sustainable resource management approaches are likely to attract new forms of capital from public, private, and blended finance sources. For Inclusive Businesses, climate finance represents an opportunity to align livelihood enhancement with environmental stewardship while unlocking judicious use of resources for scale and innovation.

Carbon Markets

Carbon markets are creating new opportunities for rural communities to participate in the emerging green economy. By promoting regenerative agriculture, agroforestry, soil carbon enhancement, ecosystem restoration, and climate-smart farming practices, enterprises can help producers generate environmental value alongside agricultural output. While the market continues to evolve, carbon-linked business models have the potential to create additional income streams for farmers while contributing to national and global climate mitigation and adaptation goals.

Digital Platforms

Digital platforms are fundamentally changing how producers access information, services, finance, inputs, and markets. The growing convergence of mobile technologies, digital payments, e-commerce, remote advisory services, and digital public infrastructure is reducing transaction costs and expanding market opportunities for rural communities. For Inclusive Businesses, digital platforms offer a scalable mechanism to reach dispersed populations, strengthen value chains, and improve transparency across ecosystems.

Traceability and Responsible Supply Chains

Consumers, investors, and regulators are increasingly demanding greater transparency regarding the origin and quality of products. Traceability systems are becoming an important differentiator for enterprises operating within agriculture and food systems. Technologies such as blockchain, digital records, geospatial monitoring, and supply-chain analytics are enabling businesses to demonstrate compliance, focus on maintaining quality, sustainability, and responsible sourcing practices. For smallholders and producer organizations, participation in traceable supply chains can unlock access to premium markets and strengthen long-term commercial relationships.

Sustainable Agriculture

The future of agriculture will depend not only on producing more, but on producing sustainably. Regenerative agriculture is gaining momentum as an approach that seeks to improve soil health, enhance biodiversity, strengthen water systems, increase climate resilience, and restore ecological balance while maintaining economic viability. Inclusive Businesses are increasingly integrating regenerative practices into their sourcing, advisory, and value-chain strategies. By linking ecological restoration with market incentives, these models create opportunities for both environmental and economic gains.

Looking Ahead

The future of Inclusive Business will be defined by enterprises' ability to not only innovate but weave the innovation for inclusion. Artificial intelligence, climate finance, carbon markets, digital platforms, traceability systems, and regenerative agriculture are not simply technological or environmental trends/fads. They represent new pathways through which businesses can create opportunities, strengthen resilience, and expand participation in economic growth.

For Ecociate and the Inclusive Business Ecosystem Network (IBEN), the future lies in building enterprises and ecosystems where technology, finance, markets, and sustainability work together to create shared value.

The enterprises featured in this compendium demonstrate that this future is already taking shape. Their experiences offer a powerful reminder that the most successful businesses of tomorrow will be those that not only generate economic value, but also enable people, communities, and ecosystems to thrive alongside them.

The future of Inclusive Business lies at the intersection of technology, sustainability, and participation- where communities are not merely part of markets, but active contributors to shaping them.

CONCLUSION

The fifteen enterprises featured in this compendium demonstrate that Inclusive Business is no longer an emerging concept- it is an increasingly important pathway for addressing some of the most pressing challenges facing agriculture, rural livelihoods, and sustainable development. While the enterprises differ in scale, geography, business model, and sectoral focus, they share a common conviction: that low-income communities are not merely beneficiaries of development, but active participants in creating economic value.

Collectively, these enterprises illustrate how technology, finance, and markets can be leveraged to unlock opportunities for smallholder farmers, tribal communities, women entrepreneurs, rural youth, and producer organizations. They show that commercial success and development impact are not competing objectives, but mutually reinforcing outcomes when inclusion is embedded within the core of a business model.

The lessons emerging from these enterprises are particularly relevant at a time when rural economies face growing pressures from climate change, resource constraints, market volatility, and evolving consumer expectations. Building resilience will require more than productivity gains alone. It will require stronger institutions, equitable market systems, sustainable production practices, innovative financing mechanisms, and business models that create shared value across communities and ecosystems.

For policymakers, investors, corporates, development organizations, and entrepreneurs, the message is clear: the future of rural development lies in creating ecosystems where economic growth is accompanied by meaningful participation and opportunity. Inclusive Businesses offer a practical framework for achieving this vision by connecting communities to innovation, finance, markets, and long-term prosperity.

As India continues its journey towards becoming a more inclusive, sustainable, and resilient economy, the experiences documented in this compendium provide both inspiration and evidence. They demonstrate that when businesses invest in people, communities, and ecosystems, they not only strengthen livelihoods but also build stronger markets and more sustainable enterprises.

The future of development will not be defined solely by how much growth is created, but by who participates in that growth and who benefits from it. Inclusive Business offers a pathway towards that future—one where prosperity is shared, resilience is strengthened, and development becomes truly inclusive.

Closing Reflection

The true measure of an inclusive economy is not how many people are reached, but how many people are empowered to participate, contribute, and thrive. The enterprises featured in this compendium remind us that when markets become inclusive, growth becomes more resilient, development becomes more sustainable, and prosperity becomes more widely shared."

INCLUSIVE BUSINESS FELLOWS AND FIRST AUTHORS OF COMPENDIUM

The third cohort of IBFL Fellows made significant contributions to the Inclusive Business Awards process by developing profiles of the shortlisted companies. Their efforts included reviewing company applications, conducting virtual discussions with each company, undertaking secondary research and validation, and drafting the final compendium of company profiles.

We extend our sincere appreciation to the entire cohort for their dedication, professionalism, and hard work. Their commitment not only strengthened the quality of the assessment process but also contributed significantly to documenting and showcasing the inspiring journeys and impact of these inclusive businesses.

Here is a brief profile of the team



Aditya Mukherjee

Indian Institute of Forest Management



Aishwarya R

Ambedkar University, Delhi



Aishwariya Mohanty

Indian Institute of Forest Management



Himanshu Singh

Indian Institute of Forest Management



Joyshree Mukherjee

XIM University



Mariya Zubair

XIM University



Sushree Sangita Sahoo

XIM University



Tarushi Narang

SIBM Noida



KEY MESSAGE

"The future of development lies not in treating communities as beneficiaries, but in enabling them to become co-creators of economic value. The enterprises featured in this compendium demonstrate that when markets become inclusive, growth becomes sustainable, resilience becomes possible, and prosperity becomes shared."

ecociate



Contact us:

A-226, Sector-69, Noida, U.P.
 email: admin@ecociate.com
www.ecociateconsultants.com
www.iben.in