

SAMPADA

by FALCA®

September 2023

One Stop Farming Solutions

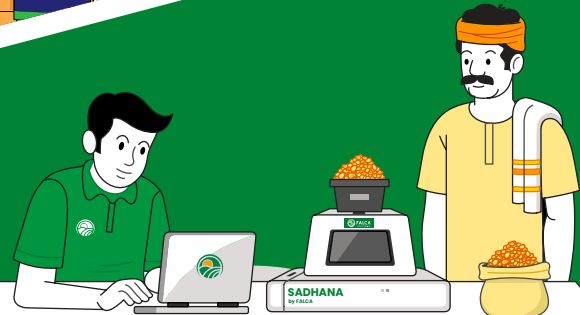
Revolutionizing
Agriculture at
Grassroot Level

The Intersection of
Engineering & Agriculture

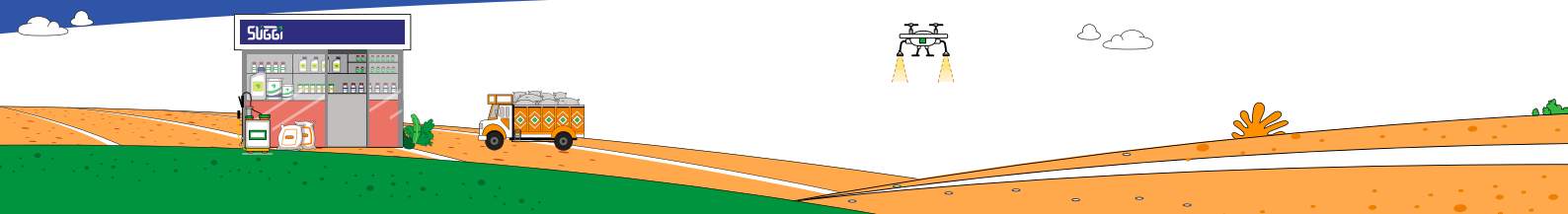


FALCA
SAMRAT
BUILDING TRUST

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Breaking Boundaries, Harvesting Success

The FALCA Agricultural Revolution

Dear Friends and Partners,

I am happy to share with you the journey and vision behind our company, Falca. Our story begins with a deep-rooted connection to farming, even in the face of my background in software engineering—an unlikely pairing, but one that has been the driving force behind our mission. Having witnessed farmers' challenges and the impact technology can have on agriculture, I embarked on my entrepreneurial journey in 2018. This led to the birth of Falca - a rural AgriTech company dedicated to providing holistic farming solutions, and committed to revolutionizing the way farmers operate.



Our mission is simple but powerful: to enhance the lives of farmers through a farmer-centric Phygital platform. We aim to bridge the gap between the physical and digital worlds, making farming more accessible, efficient, and profitable.

Over the years, Falca has grown into a one-stop AgriTech platform, offering a wide range of solutions that cater to every aspect of farming. From high-quality inputs to AI-driven advisory services and from custom machinery hiring to post-harvest storage facilities, we have left no stone unturned in our quest to support farmers.

Our rapid revenue growth by 3.5 times since our inception, expanded

presence across states, and increased numbers of Suggi and Samrat stores are testaments to our dedication.

Our commitment to enhance farming income is unwavering. We are dedicated to providing high-quality inputs, ensuring fair prices for farmers, and minimizing post-harvest losses. By March 2024, we at Falca are on a relentless mission to provide farmer-centric solutions that break boundaries and lead to bountiful harvests. We're committed to expanding our reach and impact ensuring farmers have access to our comprehensive suite of services.

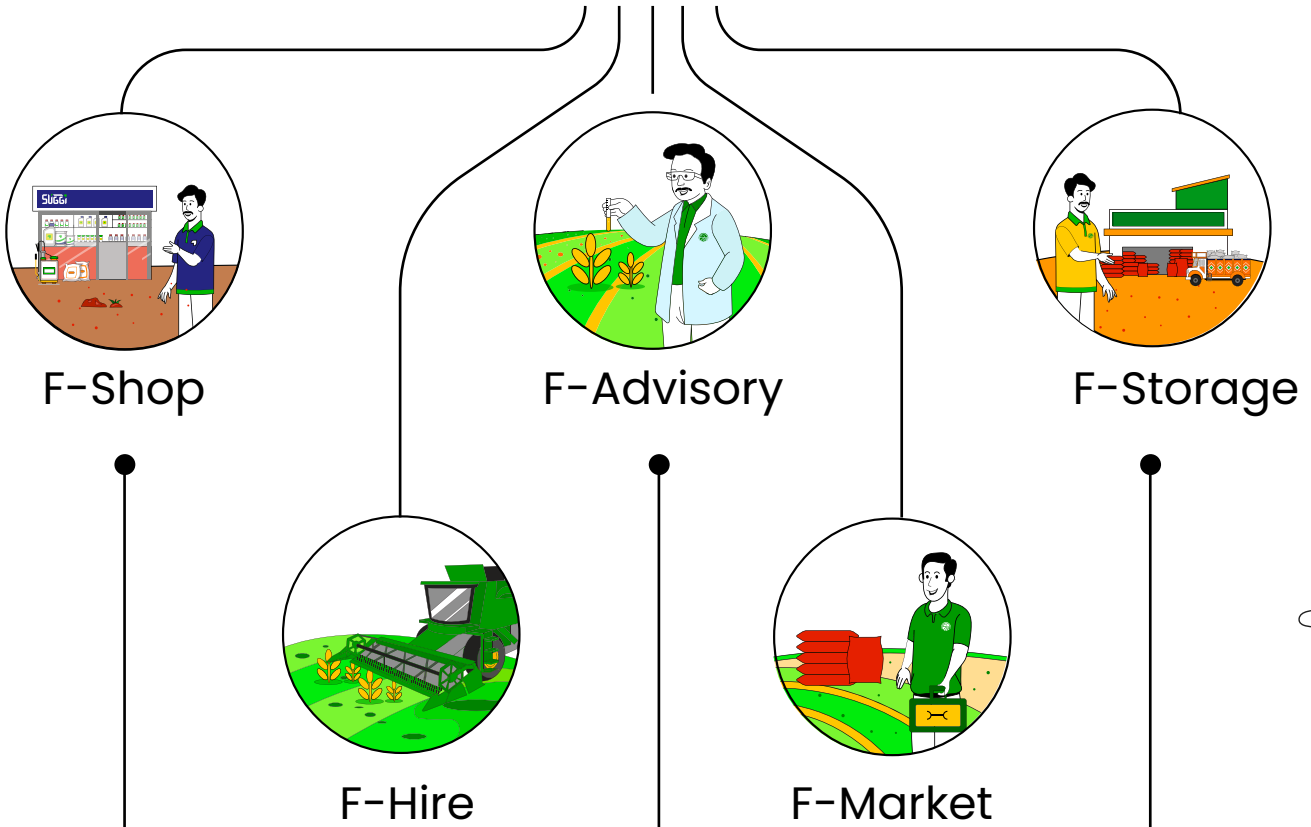
We owe our success to our beloved farmers, our dedicated team at Falca, as well as the invaluable support of our partners, and our investors - Inflection Point Ventures, Mumbai Angels, LetsVenture & other individuals. As we move forward, we remain committed to pushing the boundaries of what's possible in agriculture. We are grateful for those who have joined us on this journey, and we eagerly anticipate building new relationships and collaborations in the years ahead. Together, we are cultivating a brighter and more prosperous future for Indian agriculture.

Our mission is simple but powerful: to enhance the farmer's lifecycle through a farmer-centric phygital platform. We aim to bridge the gap between the physical and digital worlds

Santosh Danegoudar
Founder, Falca

Redefining farming with multiple offerings

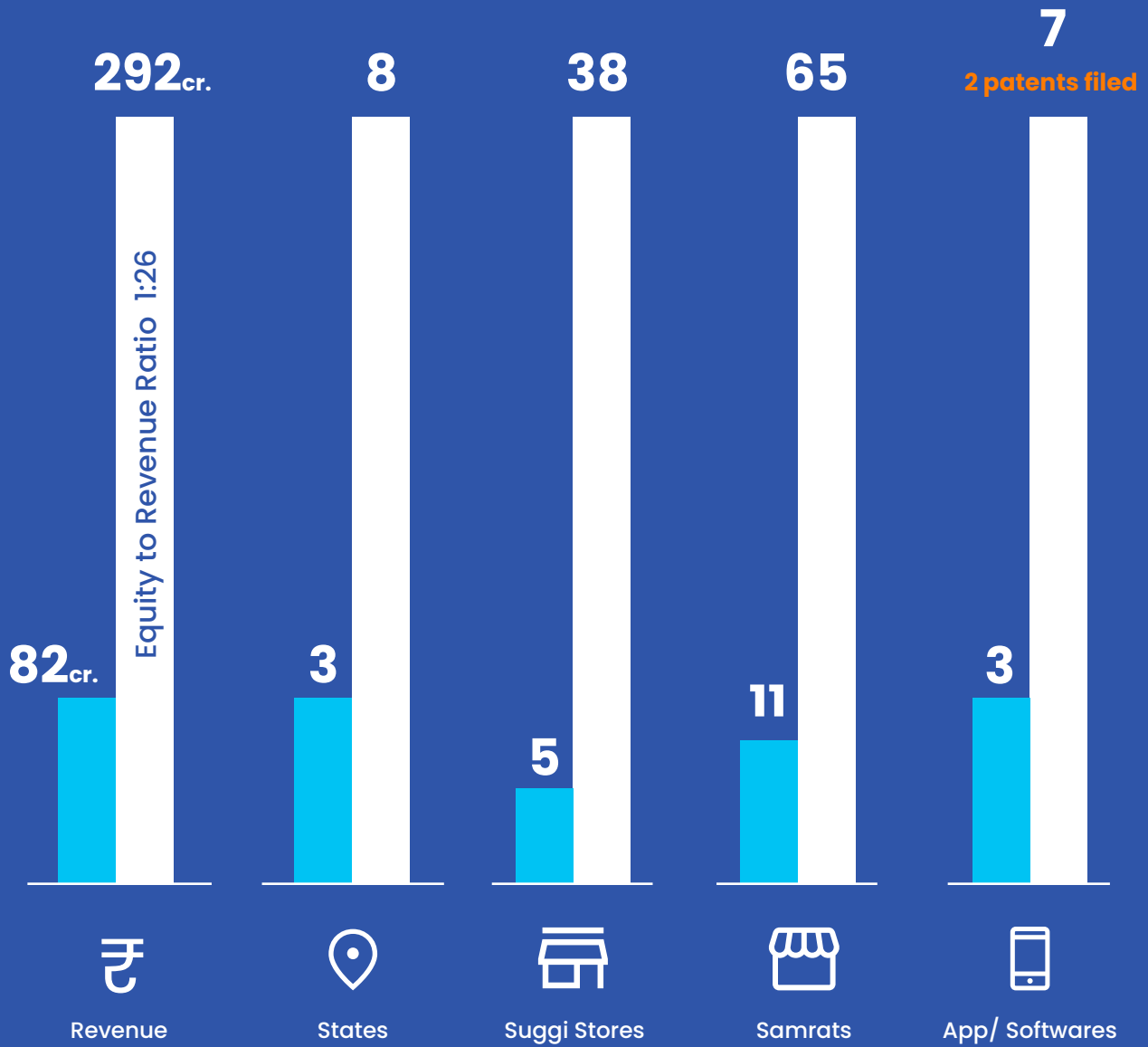
FALCA VERTICALS





FALCA TRACTION

Data behind a growing farmer-centric platform



■ Pre-Equity - 2018 to Oct 2022
■ Post-Equity - as on Aug-2023



Revolutionizing Agriculture at Grassroot Level

The FALCA SAMRAT Approach

Introduction

Agriculture is the foundation of global food production, and rural communities play a pivotal role in its success. However, these rural communities often need help with numerous challenges, including limited access to modern technologies, resources, market connectivity, and knowledge. These challenges can hinder their ability to improve productivity, increase income, and adapt to changing environmental conditions. As a result, it is crucial to support and assist rural communities at the grassroots level to ensure sustainable development and food security for the growing global population. SAMRAT centres, the Rural Service Points (RSPs) by FALCA, are within a 10-kilometer radius of the farmer's household, address the major agricultural disparities, and unlock the full potential of agriculture in remote regions. These SAMRATs function as a one-stop solution for farmers, providing them with a range of services such as market facilities, agricultural inputs, farm machinery, advisory services, and training programs. By bringing these essential resources closer to rural communities, farmers can improve their productivity, increase their income, and contribute to food security on a global scale.

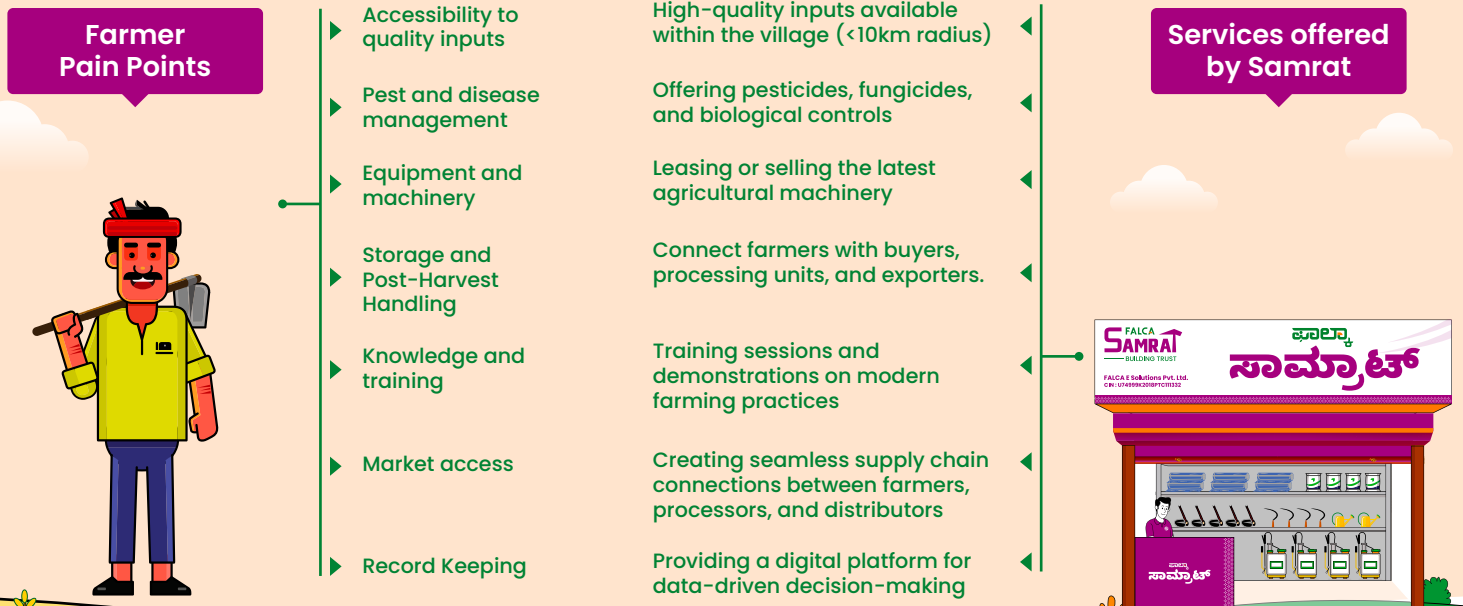
The "SAMRAT" Model

FALCA developed the "SAMRAT" model to establish and operate the RSPs in various villages across India efficiently. The "SAMRAT" model incorporates a network of trained professionals in each unit who deliver prompt agricultural services directly to farmers, ensuring accessibility and effectiveness. Additionally, the model uses technology to streamline operations and gather data, enabling FALCA to improve and expand its reach in rural areas continuously. This model focuses on ease, convenience, sustainability, and affordability, ensuring that the services provided are conveniently accessible to

For farmers, "seeing is believing" holds immense significance as they trust and believe in what they witness firsthand.

farmers of all sizes and resources. With the implementation of the "SAMRAT" model, FALCA aims to revolutionize agriculture at the grassroots level and empower farmers to prosper in their communities. This is done by understanding and addressing all the pain points of the farmer by

conducting field visits, focus group discussions, and kisan mela. For farmers, "seeing is believing" holds immense significance as they trust and believe in what they witness firsthand. Recognizing this, the SAMRAT model is designed as a Phygital model (Physical + digital). While the physical presence builds trust and provides convenient services, the digital presence enhances accessibility, facilitates seamless communication, and expands reach to a wider audience. By leveraging technology and data-driven insights, FALCA aims to create a holistic ecosystem that benefits individual farmers and contributes to agricultural development in remote regions.





The Impact

The impact of the SAMRAT on farmers has been truly transformative. One of the most significant benefits is the reduction in total money spent by farmers, as the SAMRATs ensure that all the services are provided at the farmer's doorstep; this also has brought immense relief to farmers, saving them time and effort. The availability of advisory support within a short walk from their fields empowers

farmers with timely guidance and expertise. The transparency and convenience of the RSPs' services, which are both physical and digital, further enhance the overall experience, ensuring that farmers have easy access to essential information. The reduced transaction costs also contribute to a

more inclusive agricultural ecosystem, enabling small-scale farmers with limited resources to participate in the market and compete on a level playing field with larger agrarian enterprises. Apart

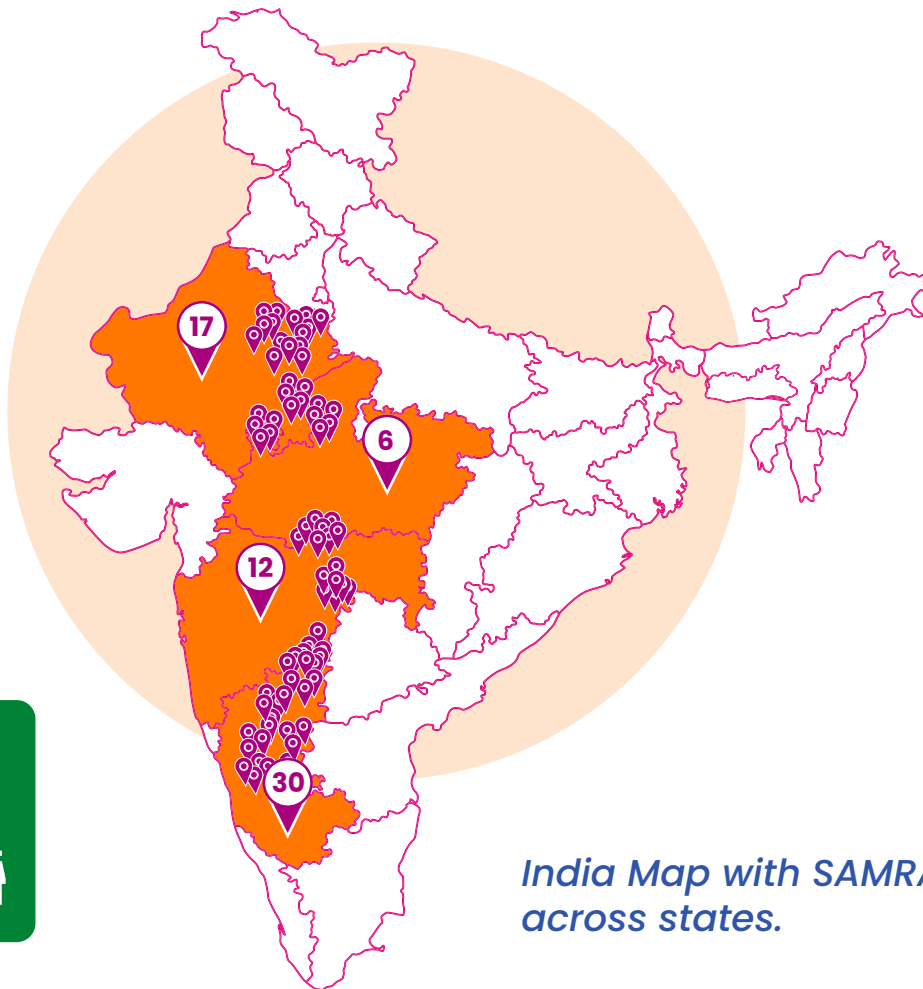
The reduced transaction costs also contribute to a more inclusive agricultural ecosystem enabling increase in farm income.

from its direct impact on farmers, the RSP facilitates rural infrastructure, employment, and the involvement of women in agricultural activities. By providing better access to markets and resources, the SAMRAT creates opportunities for rural communities to develop and thrive. This leads to increased income and employment opportunities for the local population and empowers women by involving them in decision-making processes and enhancing their skills in agricultural practices.

Success Story

A female farmer from the Haveri district of Karnataka opined: "Before FALCA's SAMRAT, we had never been to agricultural input shops as they are confined to towns and cities, which are far away. We either could not go alone, or the decision-makers in our households would not allow us. Now, with the introduction of SAMRAT within our village, farming has become easy. This has improved our productivity and given us a sense of independence and confidence in our farming abilities.

-Translated from the personal interview.



India Map with SAMRAT centres across states.

65

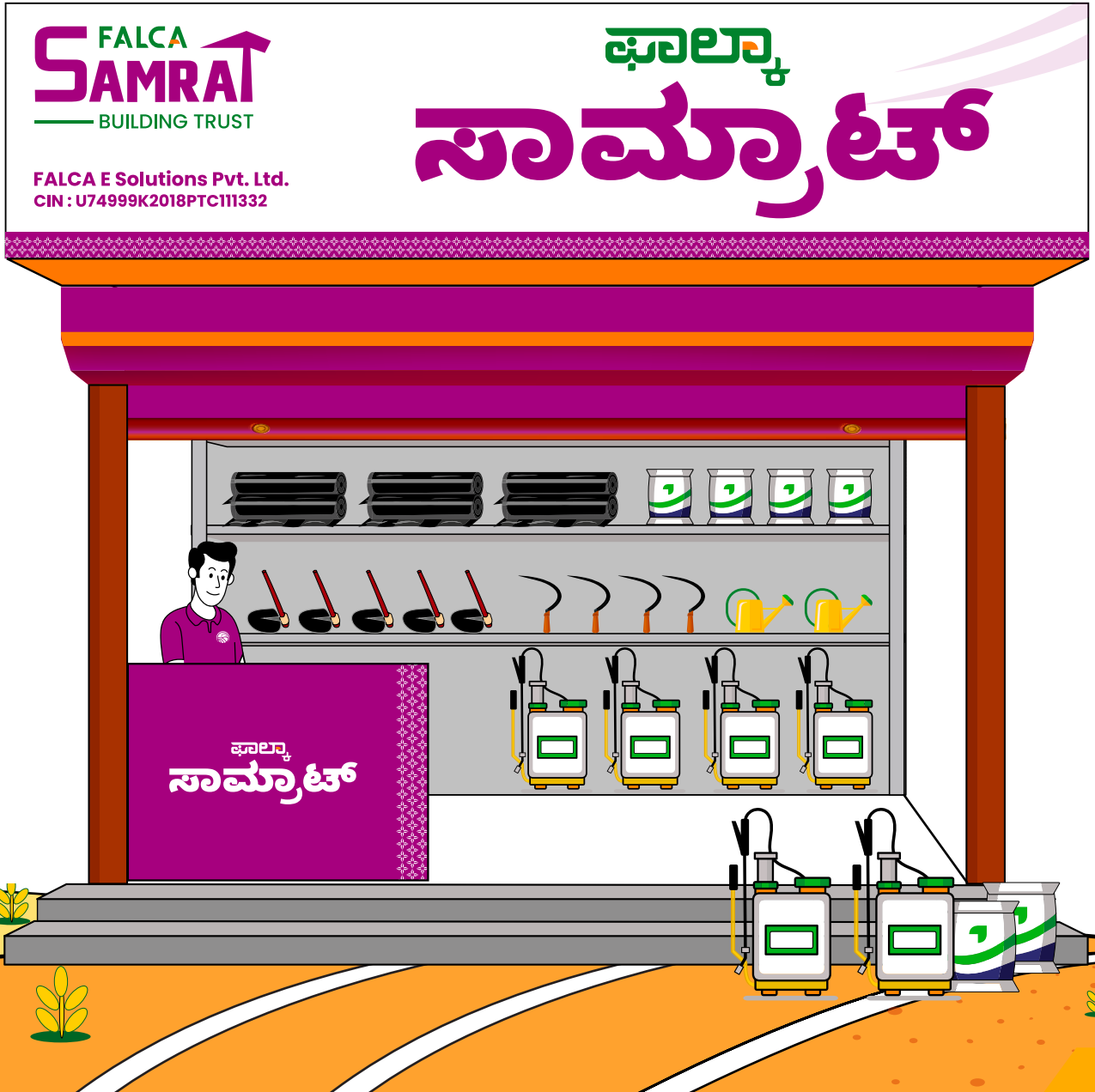
SAMRATS 



Way Forward

With the successful establishment of 65 SAMRAT centres impacting 150,000 farm households, FALCA's revolutionary approach to agriculture at the grassroots level has made a significant impact. Building on this success, FALCA will continue its expansion, aiming to reach even more remote regions and underserved communities across India. Leveraging technology and data-driven insights will remain a priority to enhance the Phygital model, making services more accessible and

efficient for farmers. Moreover, FALCA will focus on building stronger partnerships with local communities and government agencies to further develop rural infrastructure and employment opportunities by establishing new RSPs. Additionally, establishing new SAMRATs will contribute to the overall growth and development of India's agricultural sector, fostering economic stability, rural employment, and food security.





SAMRAT
New Store
Launches



Bridging the Gap Between Farmers and Modern Farming Practices

SUGGI Stores

Introduction

Farmers in India often face challenges in accessing quality agricultural inputs, knowledge, and market linkages. The lack of easy access to genuine Agri-inputs and limited advisory support hinders farmers' ability to adopt modern farming practices and achieve sustainable agricultural growth. In India, the agricultural sector is predominantly unorganized, with many small retailers selling Agri-inputs without proper quality checks. Furthermore, a concerning issue is that more than 35% of farm chemicals sold in India are spurious, leading to potential crop failures, reduced yields, and financial losses for farmers (FICCI, 2016). The main objective of establishing SUGGI stores is to address these challenges and provide smallholder farmers easy access to high-quality agricultural inputs and crop advisory services. These stores aim to bridge the gap between farmers and modern farming practices by offering quality inputs and providing advisory support tailored to their needs



The "SUGGI" Model

The SUGGI model is a structured and well-managed approach to provide farmers with easy access to genuine and high-quality agricultural inputs. Stores are strategically located in high agricultural potential areas catering to a cluster of around 30-40 villages, ensuring easy access for nearby farmers. The key pillars of the Suggi model are quality inputs, transparent pricing, suitable advisory, comprehensive product range, timely availability of required inputs, and digital integration. To ensure efficient store operations and excellent customer service, each Suggi store is staffed with a well-trained team comprising three members.

The exclusive range of products offered further reinforces Suggi's position as a reliable & trustworthy destination for farmers.

The team includes a B.Sc. agriculture graduate who manages the store, an accountant, and a customer executive. These professionals possess in depth expertise in agriculture and can provide valuable advice and guidance to farmers on various aspects of farming.

The customer executive plays a crucial role in the Suggi model by engaging directly with farmers daily. They visit farmers' fields, assess their needs, and offer personalized advice on farming practices. This hands-on approach helps farmers make informed decisions and select the right products and services to enhance their agricultural output.

In addition to sourcing quality inputs from various manufacturers across the country, Falca also offers its exclusive products, available only in Suggi stores. This exclusive range of products further reinforces Suggi's position as a reliable and trustworthy destination for farmers' pre-harvest requirements.



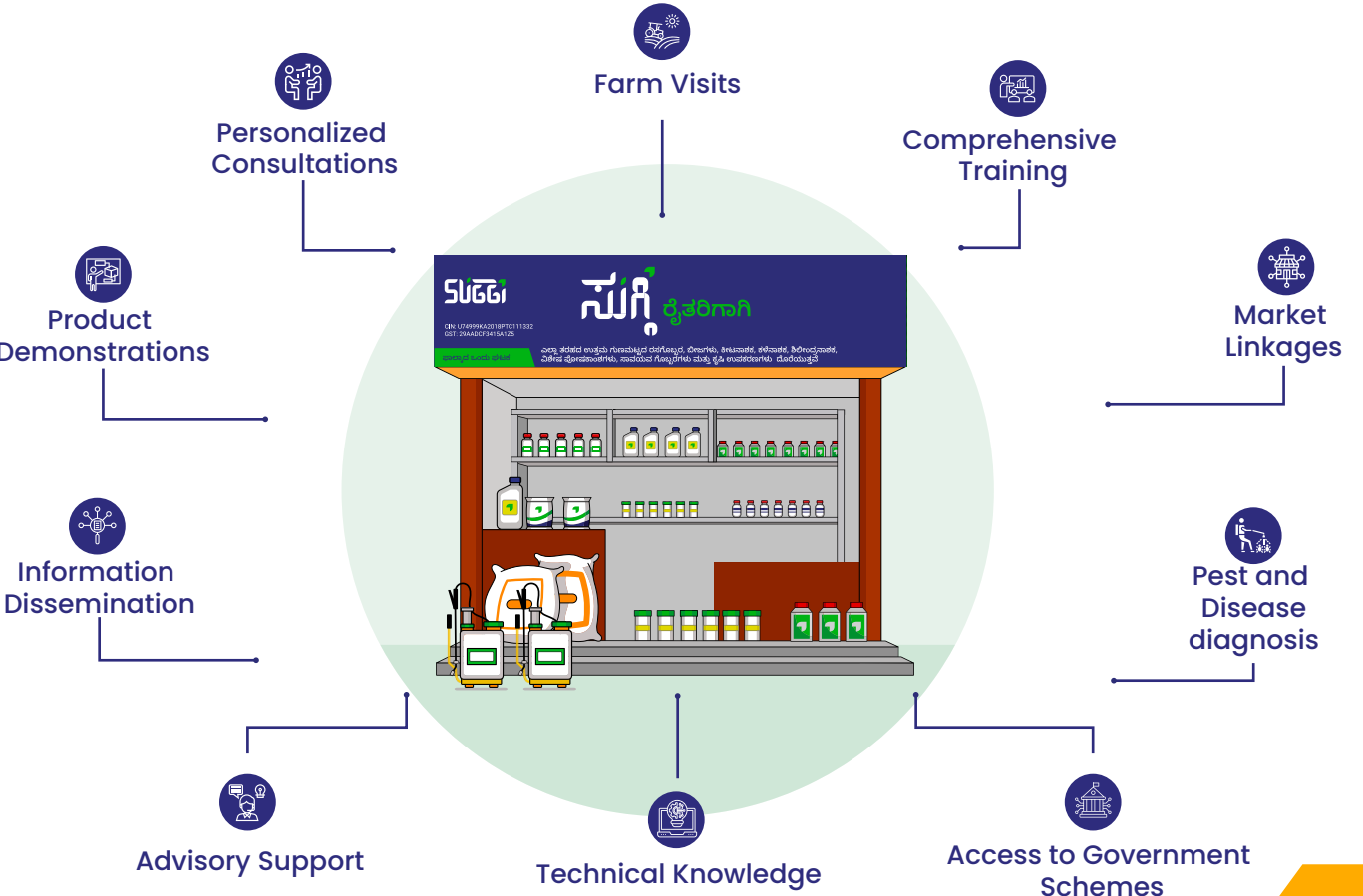
Products Offered by Suggi Store

Department Approved 1000+ SKUs



Services Offered by Suggi Store

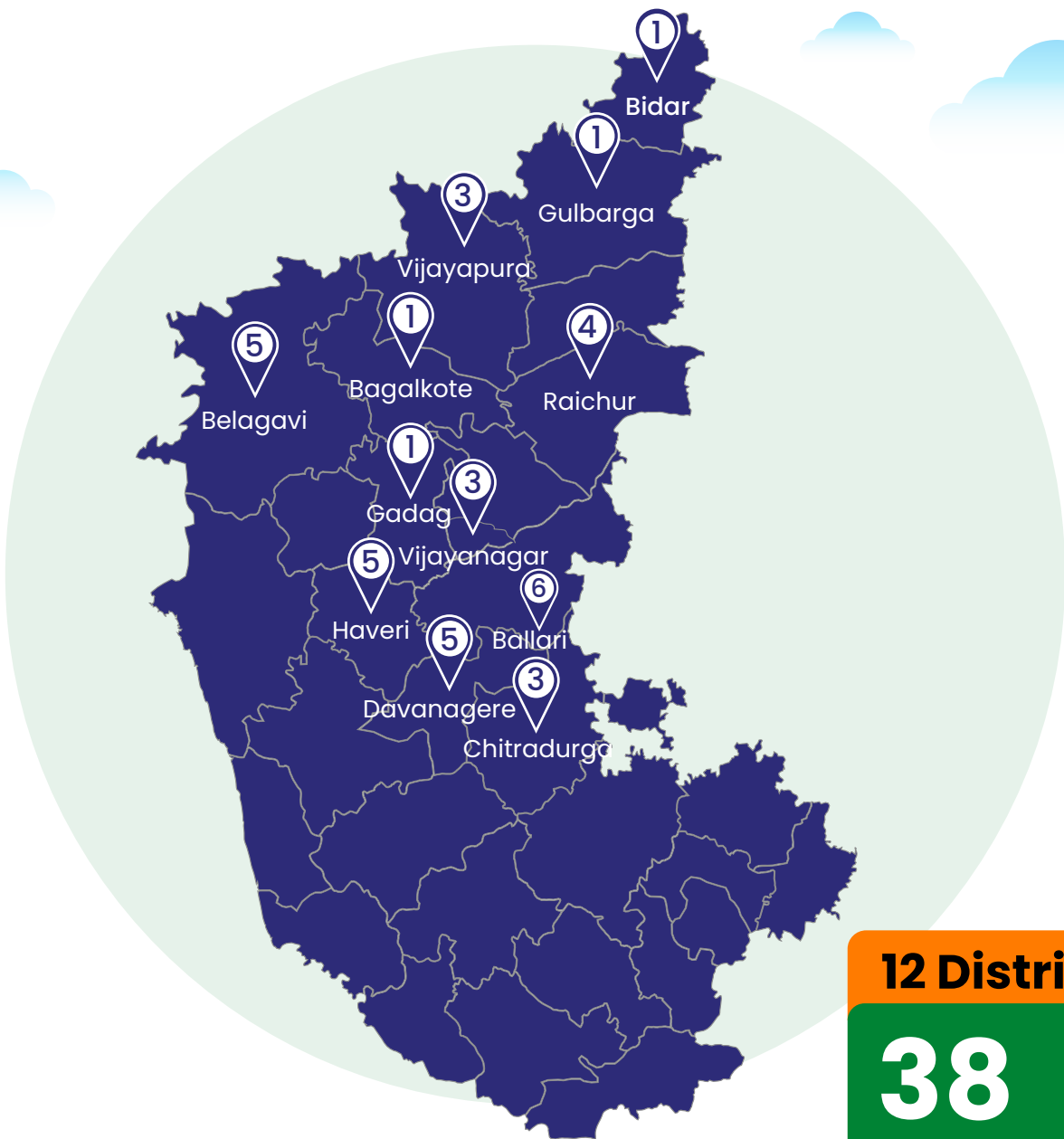
End-To-End Farming Solutions



What does SUGGI offer?

The SUGGI stores offer a wide range of quality inputs and technical knowledge related to crop production, farm machinery, and market opportunities. SUGGI deals with multiple categories of products, including seeds, fertilizers, specialty nutrients, bio-inputs, crop protection solutions, plant growth regulators, tools, and implements. Additionally, SUGGI provides vehicle insurance to ensure that farmers have comprehensive coverage for their farming equipment. Upon visiting a SUGGI store, farmers receive personalized attention as the store

staff focuses on 44 touchpoints to understand their needs and requirements. These touchpoints include personalized consultations, product demonstrations, detailed information about the features and benefits of each product, as well as guidance on the proper application and precautions for using the inputs. By providing such comprehensive support, SUGGI aims to empower farmers with the knowledge and resources they need to maximize their productivity and profitability in the agricultural industry.



12 Districts

38

STORES 

Karnataka map with Suggi locations



The Impact

Apart from the availability of holistic inputs required for crop production, FALCA offers farmers advisory services, market reach, and training programs. These services help farmers make informed decisions about their crops, understand market trends, and improve their farming techniques. In addition, it is widespread practice for farmers in developing countries like India to use more pesticides than recommended, which degrades farmers' health, the environment, and soil quality. Providing the right

kind of advisory on usage and precautions to be taken while using the inputs and a timely supply of inputs benefits the farmer economically and helps prevent soil and environmental degradation. Farmer training on modern agricultural techniques and farm machinery can further enhance their productivity and efficiency. By equipping farmers with knowledge and skills, FALCA ensures long-term environmental and economic sustainability while improving farmers' livelihoods.



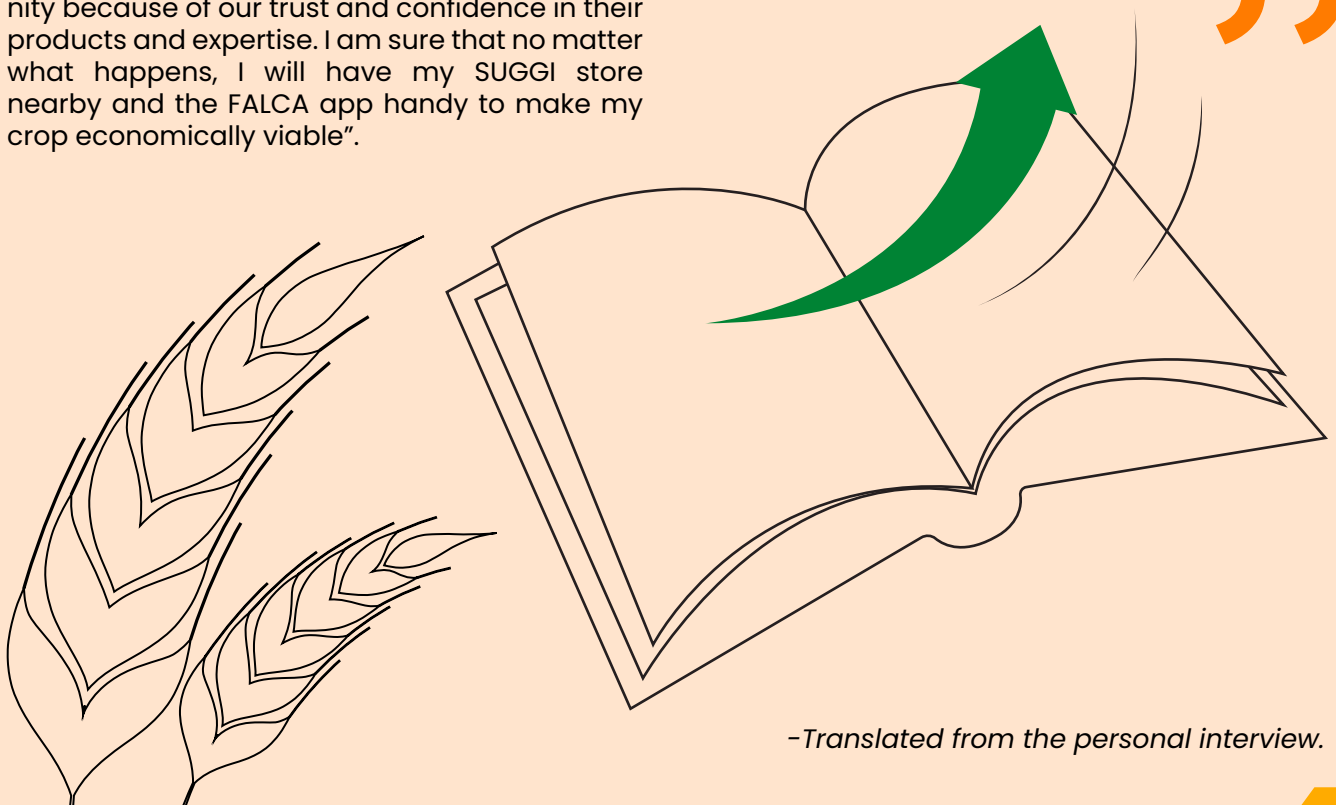
Success Stories

A farmer named Anjappa from Haveri, Karnataka, says:

"I always believed applying more fertilizer would give me more yield. SUGGI executives give a detailed explanation of the product, the right amount of usage, and precautions. In addition, I was sceptical, as none of the inputs I purchased from the local dealer would give the results promised. But after using the quality inputs available in SUGGI, I noticed a significant increase in my crop yield without spending much. It has not only saved me money but also improved the overall health of my crops. FALCA has become a household name in my community because of our trust and confidence in their products and expertise. I am sure that no matter what happens, I will have my SUGGI store nearby and the FALCA app handy to make my crop economically viable".

Another Farmer from Challakere Karnataka, Opined:

"We must endure at least two years of hardship due to debt if the inputs we purchase at the start of the season are inferior or fake. Therefore, besides a good monsoon, the quality of the inputs we purchase determines our farm's annual income. As a small farmer, I cannot afford losses, so I buy the required inputs only from FALCA".



-Translated from the personal interview.

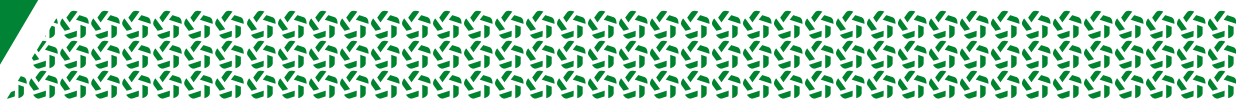


Way Forward

The SUGGI model has already proven to be a game-changer for farmers in its current geographies. It addresses their key challenges and provides easy access to quality inputs and technical support. With 38 stores currently operating in Karnataka and plans to open 100 new stores across India in the coming year, the impact of SUGGI is set to expand significantly, benefiting approximately 180,000 to 200,000 farmers. By offering personalized consultations, expert advice, and comprehensive training, SUGGI empowers farmers to make informed decisions and adopt modern farming practices. Combining high-quality inputs, advisory

services, and market reach enhances farmers' productivity and profitability and contributes to long-term environmental and economic sustainability. With its digital platform and continuous improvement updates, SUGGI sets itself apart from its competitors, providing farmers with a reliable and trustworthy source for all their farming needs. The success stories from farmers like Anjappa and others demonstrate their trust and confidence in FALCA's products and expertise. As SUGGI continues to expand its reach and influence, it is poised to revolutionize agriculture at the grassroots level, ensuring a brighter future for farmers across India.





Maski



Biligi



Manvi



Kampali



Lingsugur



Jagalur



Kolurucross



Athani



Kunduru



Bada



Challakere



Hampasagara



Kurugodu



potnal



Emmiganuru



Hamsabhavi



Sindagi



Rampura



Guttal



Hadagali



Honnamradi



Tekkalkota



Munavalli



Mallebennuru



Molakalmuru



Masur



Raibag



Moratagi



Indi



Savadatti



Crafting a Better Future for Farming in India

The Intersection of Engineering & Agriculture

*An interview session with Falca's Director of Engineering - **Shreyans Gandhi.***

Engineering and Agriculture intersect significantly in the context of modern agritech. How is this crucial for the future of farming?

Just like Farming equipment like tractors, harvesters, etc., have changed the way farming is done, tech will become the next tool that will become essential to get maximum productivity.

Technology is revolutionizing agriculture with precision tools, AI, robotics, irrigation systems, and IoT, enhancing productivity, reducing labor costs, and optimizing resources for better decision-making. These technological advancements have revolutionized the farming industry by increasing efficiency and sustainability. Farmers can now accurately analyze soil conditions, weather patterns, and crop health to make informed decisions that maximize yields and minimize environmental impact. Additionally, integrating automation and artificial intelligence has streamlined processes, allowing farmers to focus on strategic planning and innovation.

The intersection of engineering and agriculture is crucial for addressing the global challenges of feeding a growing

population while minimizing environmental harm and resource depletion.

How engineering is solving farmer's challenges?

Engineering is crucial in tackling the challenges posed by climate change for farmers. It involves the development of weather alert systems, which track weather patterns and provide early warnings about adverse climate events such as unexpected rains, thunderstorms, or dry spells, allowing farmers to take preventative measures. Engineers also play a pivotal role in creating climate-resilient crop varieties like drought-resistant and heat-tolerant crops that can thrive in changing climate conditions.

Furthermore, climate modeling tools help farmers make informed decisions on planting, irrigation, and harvest timings, optimizing yields while reducing climate-related risks. These engineering solutions empower farmers to adapt and prosper in a changing climate.



The intersection of engineering and agriculture is crucial for addressing the global challenges of feeding a growing population while minimizing environmental harm and resource depletion.



Simultaneously, addressing resource scarcity in agriculture involves providing farmers with better information to access government schemes and loans, optimizing resource use through personalized advisory services, and generating local resources when shortages occur. These strategies, facilitated by technology and increased farmer knowledge, contribute to enhanced food security and reduced resource limitations' impact on agriculture.

How are the promising technological advancements in agritech transforming the way we produce food?

Agritech is undergoing rapid advancements that are transforming the way we produce food. These innovations are driven by the need to increase food production to meet the demands of a growing global population while minimizing environmental impact.

Alongside previously mentioned advancements, several other technological innovations are shaping the future of agriculture. Vertical farming utilizes controlled indoor environments with artificial lighting and precise climate control to grow crops in stacked layers, conserving space, water, and reducing the need for pesticides. Genetic editing techniques like CRISPR-Cas9 are enhancing plant genomes for traits like disease resistance and nutritional content, creating more resilient and nutritious crops.

Artificial Intelligence (AI) analyzes vast agricultural data to offer insights into crop management, disease detection, and pest control, optimizing planting schedules and predicting yields.

Aquaculture innovations, including recirculating aquaculture systems (RAS), are improving the efficiency and sustainability of fish and seafood production. Moreover, biotechnology is contributing to alternative protein sources like lab-grown meat and plant-based proteins, offering more environmentally friendly alternatives to traditional livestock farming. These technological advancements are revolutionizing food production and its sustainability.

How can collaboration between engineers, farmers, and researchers lead to innovative solutions that address pressing challenges in agriculture?

Farmers on the front lines of agriculture often encounter challenges and inefficiencies in their daily work. Researchers and engineers can work closely with farmers to understand these

challenges and identify specific problems that must be addressed.

Farmers, engineers, and researchers can collaborate to co-design and co-develop solutions. This ensures that the solutions are practical, effective, and tailored to the specific needs of the farming community.

All solutions developed at Falca follow this approach. Taking inputs from farmers and field teams and then working on a solution, which generally involves research and engineering to come up with a final solution.

Farmers and field teams bring practical knowledge and experience, engineers bring technical expertise, and researchers contribute scientific insights. By sharing their knowledge and perspectives, they can collectively develop more innovative and effective solutions.

Agriculture varies significantly based on geography, climate, and local practices. Collaboration ensures that solutions are adapted to local conditions and are relevant to the specific challenges faced by farmers in a particular region. Engineers and researchers can work together to develop training programs that help farmers adopt and utilize new technologies effectively. This includes guiding installation, maintenance, and troubleshooting. Engineers, researchers, and farmers can collaborate on advocating for policies that support the adoption of innovative agricultural practices. This includes engaging with policymakers and stakeholders to promote sustainable and technology-driven agriculture.

Lastly, as someone deeply involved in agritech engineering, what excites you the most about the future of farming and the role technology will play in it?

Technology has touched all aspects of our lives and is an integral part of several domains. Agriculture is one of the domains where technology will be creating a huge impact. This is a revolution in itself and I am glad to be part of this revolution, actively contributing to it.

That future is not far away when farming and food production is primarily automated and farmers, instead of being the farm workers, will be food production factory owners.

A digital companion to the farmer

SHIKSHA



Introduction

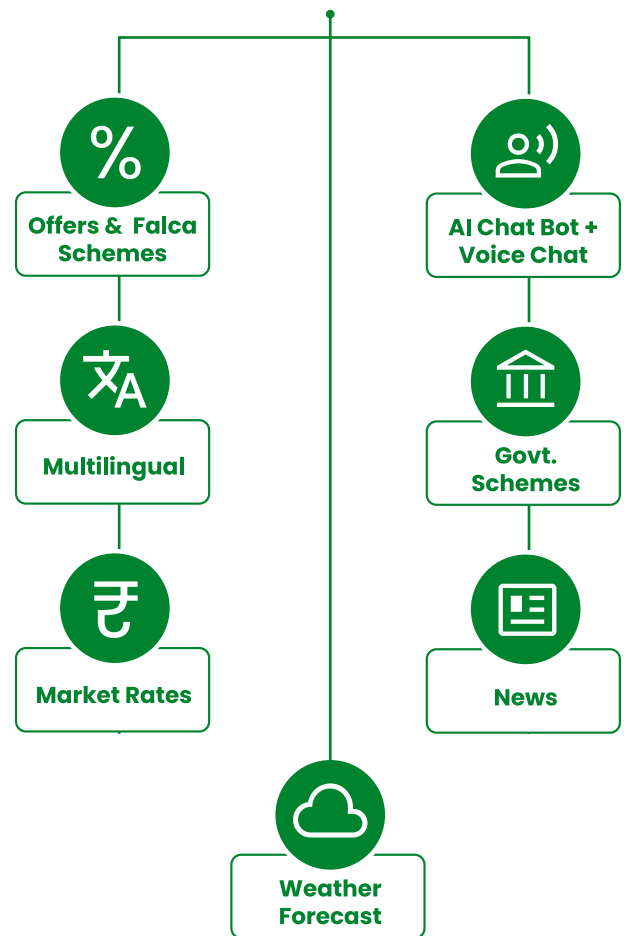
Farming is the essence of rural India; the land and the seasons determine the rhythm of life for a farmer. Yet the challenges farmers face in today's rapidly evolving world are immense and multifaceted. To address these challenges and champion the cause of our agrarian heroes, FALCA proudly presents the Shiksha Farmer Advisory App. This revolutionary platform brings farmers into a new era of prosperity, knowledge, and empowerment. The Shiksha Farmer Advisory App is an innovative and comprehensive agricultural mobile application designed to provide crucial support and information to farmers across India. The app aims to bridge the gap between traditional farming practices and modern technology by offering a one-stop platform for farmers to access technical knowledge, market news, prices, YouTube videos, Chat GPT AI assistance, and government schemes.

What does Shiksha provide?

The Shiksha offers a wide range of comprehensive agricultural services, including access to technical knowledge, agricultural news, market prices, YouTube videos, Chat GPT AI assistance, government schemes available, customer support, a WhatsApp chatbot, weather forecast notification alerts, coupons, and schemes that can be redeemed in FALCA stores (SUGGI, RSPs) to buy inputs. The use of these services by farmers is multifold. With the introduction of the language, region-specific Chat GPT AI, and real-time market price offers personalized & localized information in their language.

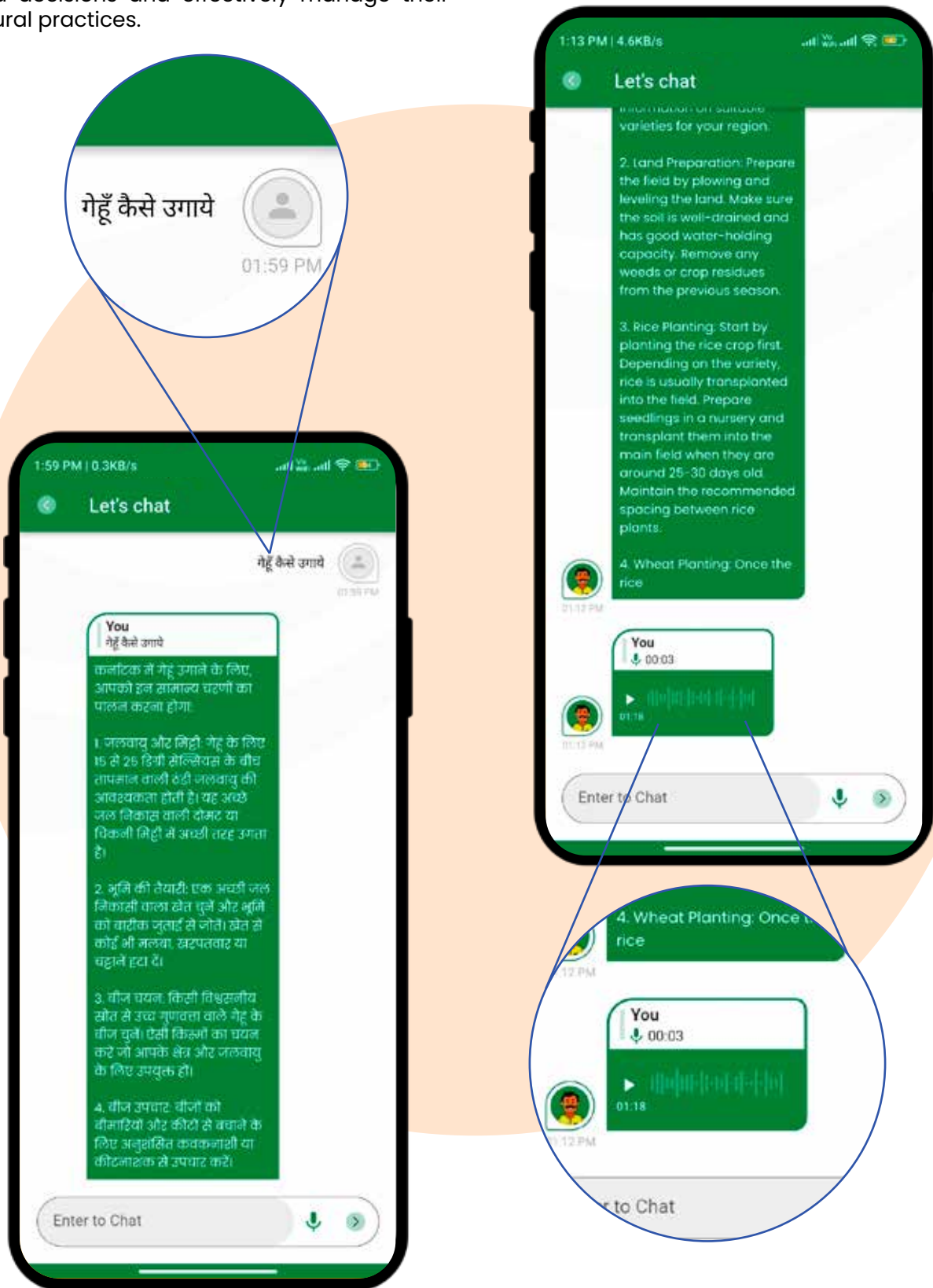
region-specific Chat GPT AI, and real-time market prices, farmers can receive personalized and localized information in their language. This can help them make informed decisions regarding crop selection, timing of planting, and selling their produce at the right time at the right place to maximize profits.

Language, region-specific Chat GPT AI, and real-time market price offers personalized & localized information in their language.



The real-time data on market prices, news, and weather forecasts are obtained by collaborating with Government websites and other reliable sources, ensuring the accuracy and reliability of the information provided to farmers. Additionally, the app also offers features such as crop management tools, pest and disease identification, and access to expert advice, empowering farmers to make informed decisions and effectively manage their agricultural practices.

This comprehensive platform can empower farmers with the necessary tools and knowledge to improve their farming practices and ultimately contribute to the overall growth and development of the agricultural sector.





The Impact

With the availability of market prices across all the APMCs, Mandi, and Falca-Market, farmers can make a more informed decision about where to sell their produce and get the best prices. This can help them maximize their profits and reduce post-harvest losses. The Shiksha app provides valuable information on crop diseases, pest control methods, and weather forecasts, enabling them to protect their crops and increase yields proactively. The app also offers YouTube videos focusing on training modules and expert advice on modern farming techniques, empowering farmers to continuously enhance their skills and stay updated with the latest advancements in agriculture. The region- and language-specific Chat GPT AI can help farmers communicate and seek personalized advice regarding their farming challenges. Whether it's discussing crop rotation strategies, irrigation tech

Shiksha App user-friendly interface makes it accessible to farmers with varying levels of technological literacy.

niques, or market trends, farmers can rely on AI to provide tailored recommendations based on their unique circumstances. This interactive feature ensures that farmers can access real-time support and guidance, fostering community and collaboration among agricultural practitioners in different regions. In addition, including more regional languages removes linguistic barriers and ensures the app's invaluable information reaches farmers from diverse linguistic backgrounds. Additionally, the app's user-friendly interface makes it accessible to farmers with varying levels of technological literacy, empowering them to harness the benefits of AI in their farming practices.

In summary, the Shiksha app has a revolutionary impact on Indian farmers. The app has elevated practices by empowering farmers with knowledge, real-time insights, and access to market prices and government schemes, enhanced their decision-making capabilities, and fostered a stronger sense of community. As technology continues to reshape the agricultural landscape, the Shiksha app stands as a beacon of positive change, improving the lives and livelihoods of farmers across the nation.



Success Stories

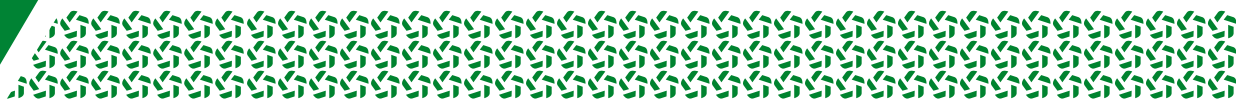


"With the introduction of the Shiksha app, I feel empowered to make informed decisions about my farming practices. The app has given me access to a wealth of information and resources, allowing me to improve my crop yields and profitability. Additionally, I have been inspired by the success stories shared by fellow farmers on the app, motivating me to strive for even greater achievements in my agricultural journey."

- Kalappa, Lingsugur

"Shiksha is a dedicated farming app for the well-being of farmers. The app is my go-to resource for weather updates, market prices, and expert advice on crop management. It has become an indispensable tool in my daily routine, ensuring that I make informed decisions and stay ahead in the ever-changing agricultural landscape. In addition, the loyalty points I receive are used to buy the required inputs. I'm happy to have access to a platform that provides valuable information and rewards my loyalty with tangible benefits."

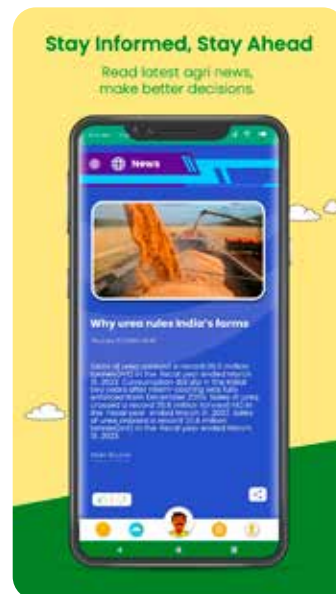
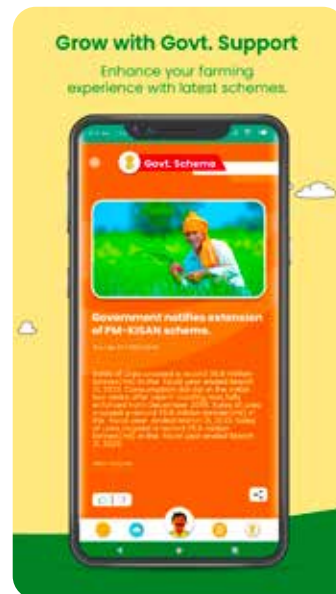
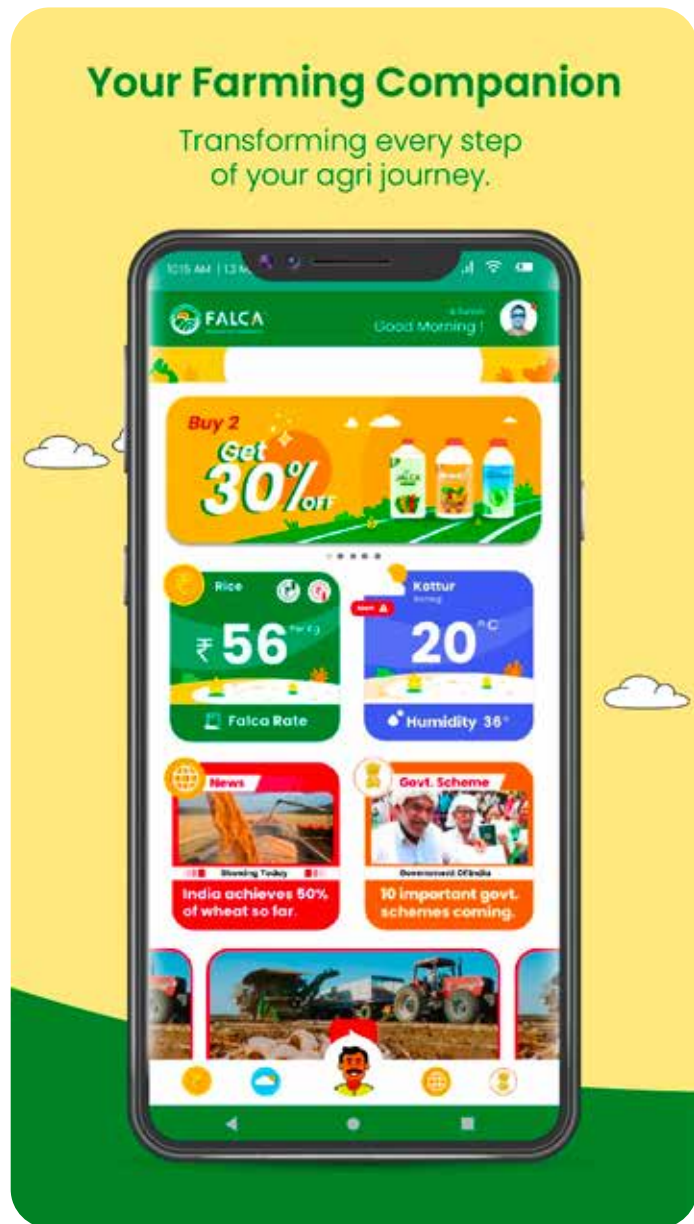
- Jayamma, Sindhanur



Way Forward

As the Shiksha app continues to impact farmers' lives profoundly, its path forward holds great promise for even more incredible transformation. This evolution encompasses refining its existing features and exploring new dimensions to amplify its impact and reach. To begin with, the app's commitment to continuous knowledge enrichment remains pivotal. By collaborating with agricultural experts, research institutions, and universities, the app can ensure that its repository of technical articles, tutorials, videos, and webinars remains a cutting-edge resource. This ongoing influx of relevant content equips farmers with the latest insights, techniques, and best practices, bolstering their ability to improve their farming practices and yields.

The Shiksha app's ongoing success hinges on its responsiveness to farmer feedback. Regular engagement with users ensures the app aligns with their evolving needs, challenges, and aspirations. The app can stay dynamic and effectively address farmers' requirements by incorporating this feedback into iterative updates. In essence, the Shiksha app's trajectory is one of continual innovation and user-centered growth. By leveraging technology, forming strategic partnerships, and fostering a deep understanding of farmers' needs, the app can redefine agriculture's future and act as a catalyst for positive change in the lives of countless farmers.



Introducing the SADHANA Device at FALCA Stores

Transforming Quality Assessment

In the ever-evolving landscape of agriculture, where precision and efficiency are paramount, quality assessment stands as a crucial pillar for success. Traditional methods of inspecting agricultural produce have long relied on manual interventions, opening doors to errors, inefficiencies, and operational costs. The need for a transformative solution has led FALCA to introduce the SADHANA Device, a pioneering technology poised to redefine quality assessment in the sector. This innovation holds the power to streamline processes, enhance accuracy, and empower farmers and stakeholders alike. By automating intricate quality evaluation procedures, the SADHANA Device offers a comprehensive approach to quality testing, addressing challenges that have persisted for years.



The heart of the SADHANA device's functionality lies in its ability to automate complex quality assessment procedures. In conventional grading methods, operations like weighing, separating defective grains, and identifying disease-infested grains are conducted manually. Such manual processes often result in increased operational costs and the risk of lot rejection. In addition, these manual processes are time-consuming and prone to human error, leading to inconsistencies in the quality assessment. By utilizing advanced algorithms and sensors, and an automated scanner device the SADHANA device accurately detects defective grains,

moisture content, disease-infested grains, and other quality parameters in a fraction of the time it takes for manual grading. This not only ensures consistent and accurate quality assessment but also increases the efficiency of the quality checking process, saving both time and money. Additionally, SADHANA provides real-time data and analysis, allowing farmers to make informed decisions about their produce, optimize their farming practices for better yields, and minimize rejection rates. With this innovative solution, FALCA aims to streamline quality assessment and improve overall efficiency in the agricultural supply chain.

SADHANA provides real-time data and analysis, allowing farmers to make informed decisions about their produce, and optimize their farming practices.



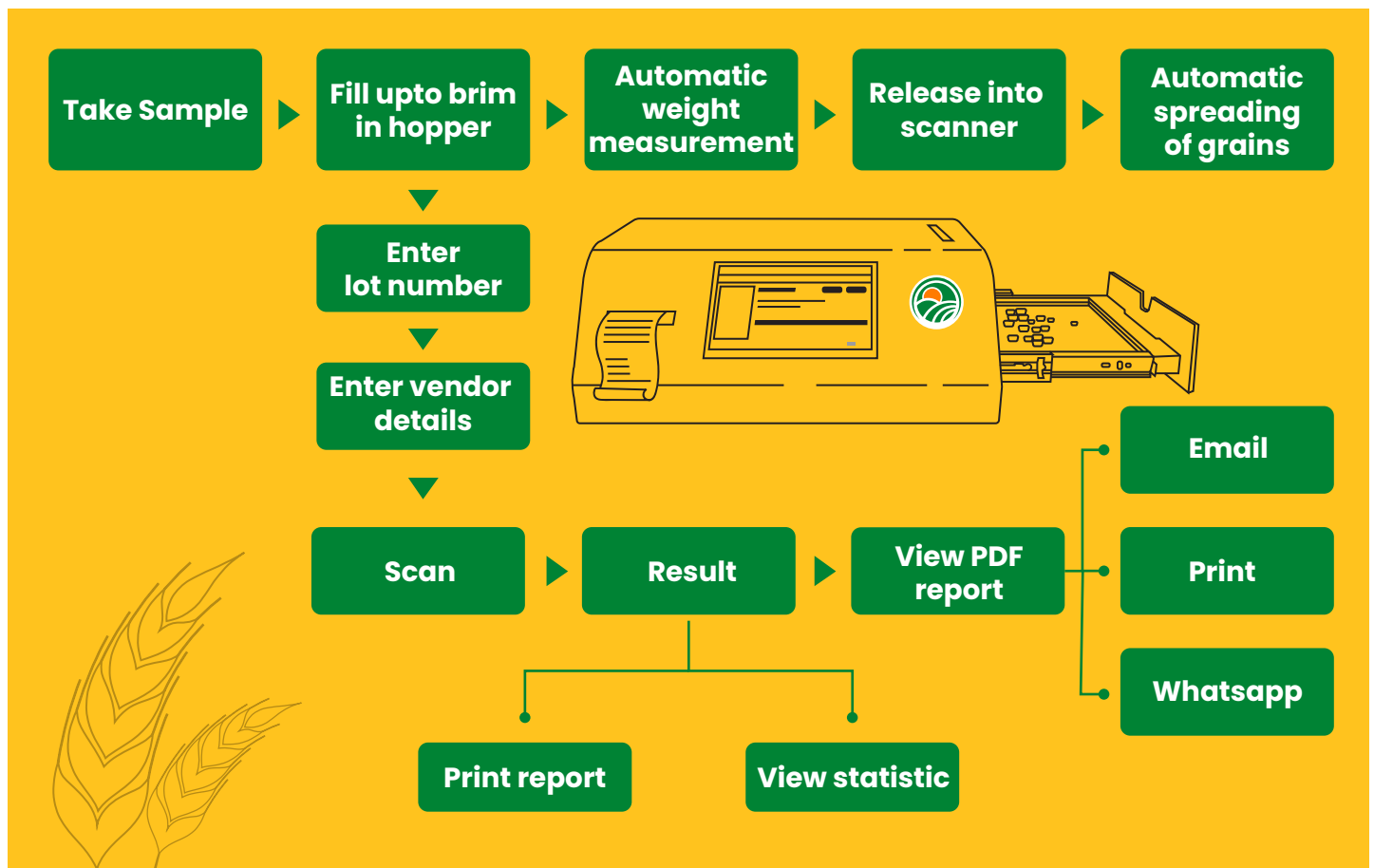
Working of SADHANA

The current SADHANA device offers a comprehensive solution for assessing maize and soybean quality, and in the near future, various other commodities will be added in a phased manner. The device uses advanced technology such as machine learning algorithms, image processing technology, AI, automation, and computer vision to analyse various parameters like size, colour, and texture of the produce, providing farmers with precise feedback on the quality of their crops.

Upon placing an approximately 100-gram seed sample into the device, it performs a sequence of operations. First, the device automatically weighs the sample, eliminating the need for manual weighing to analyse the sample. Next, machine learning algorithms and image processing technology come into play as the sample is taken to the scanning surface of the device to analyse the visual characteristics of the seeds, such as size, colour, and texture. In addition, the device measures moisture content when the sample grains are placed in it. The device identifies defective grains like underdeveloped, fungus-infested, broken grains, and foreign material through automated scanning. Additionally, the device's automation and computer vision capabilities ensure that the analysis is done quickly and efficiently, saving farmers and traders time and effort.

Further, the SADHANA device presents detailed findings in a meticulous report, offering farmers a comprehensive overview of their produce's quality. Additionally, a printed receipt of this report is provided to the farmer, facilitating record-keeping. Beyond the immediate benefits, the quality parameters assessed by the device are integrated into a centralized server. This integration generates a unique code, affording access to a treasure trove of quality assessment data specific to the given lot. This data can be accessed by farmers, processors, millers, and other stakeholders in the agricultural industry, enabling them to make informed decisions and identify the accurate produce quality they receive from the farmers. This helps improve overall transparency and trust in the supply chain and promotes fair pricing and efficient resource allocation. Additionally, integrating quality parameters into a centralized server allows for easy comparison and benchmarking across different batches of produce.

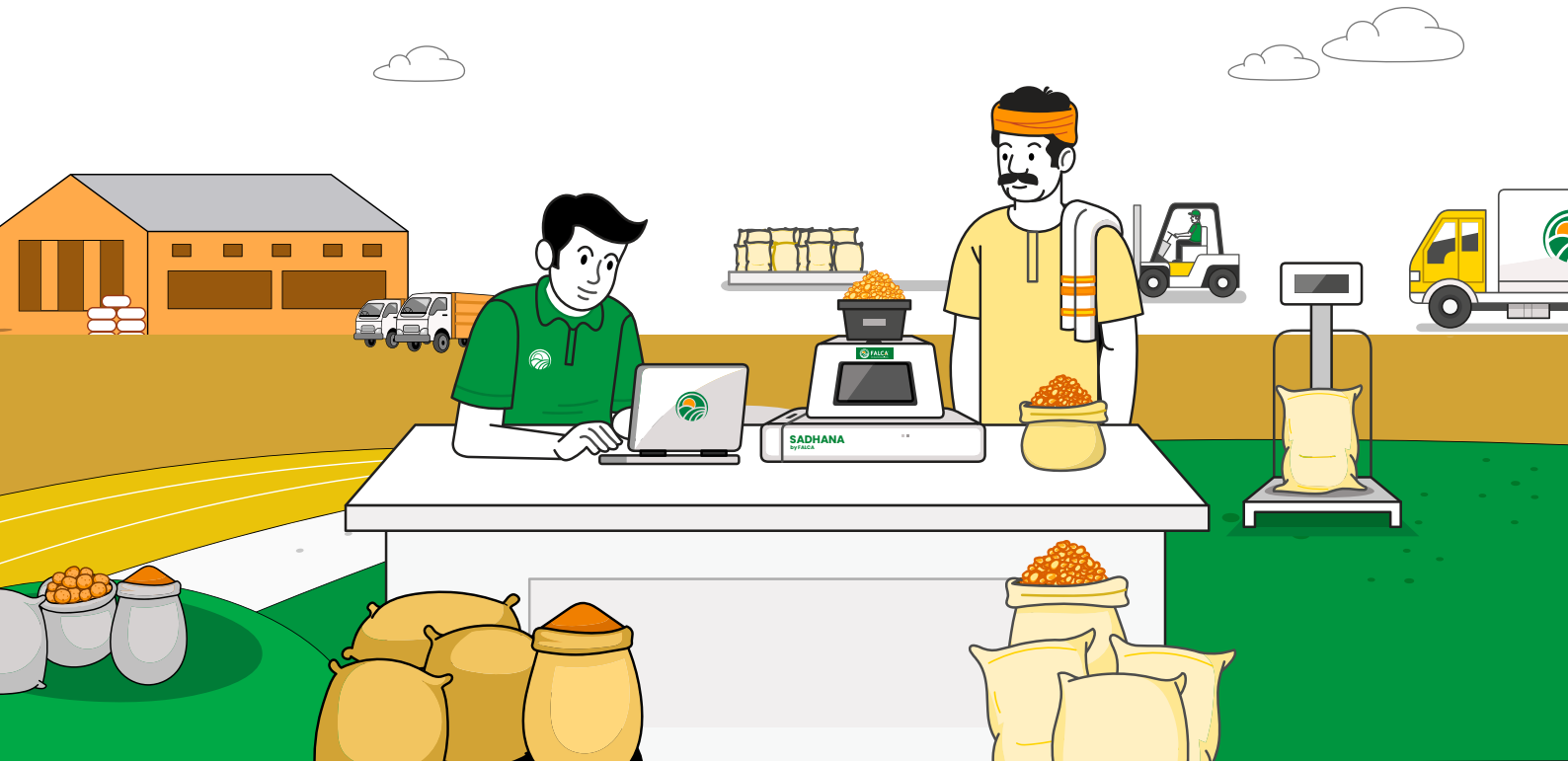
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The Impact

The introduction of the SADHANA device to FALCA centers instills significant trust among farmers and streamlines the processes. By automating traditional manual processes, the device accelerates efficiency and accuracy. This saves time and effort and reduces the risk of human error. Furthermore, the SADHANA device's integration with FALCA ERP creates a transparent and traceable supply chain, instilling trust and enabling informed decisions. Additionally, the operational costs are significantly reduced as the device eliminates the need for additional labour and streamlines inventory management. This leads to increased profitability for farmers, processors, and other stakeholders.

Further, detailed sample analysis empowers farmers to make informed decisions about their produce, such as adjusting farming practices or implementing targeted treatments to address any identified issues. Furthermore, by sharing this data with processors and industries, SADHANA fosters a collaborative environment in which the best quality commodity is received by the processor and the best price is received by the farmer. This collaboration allows for more efficient processing and production methods, reducing waste and costs for all parties involved. Enhanced profitability and improved quality of crops contribute to a more sustainable and resilient agricultural industry.



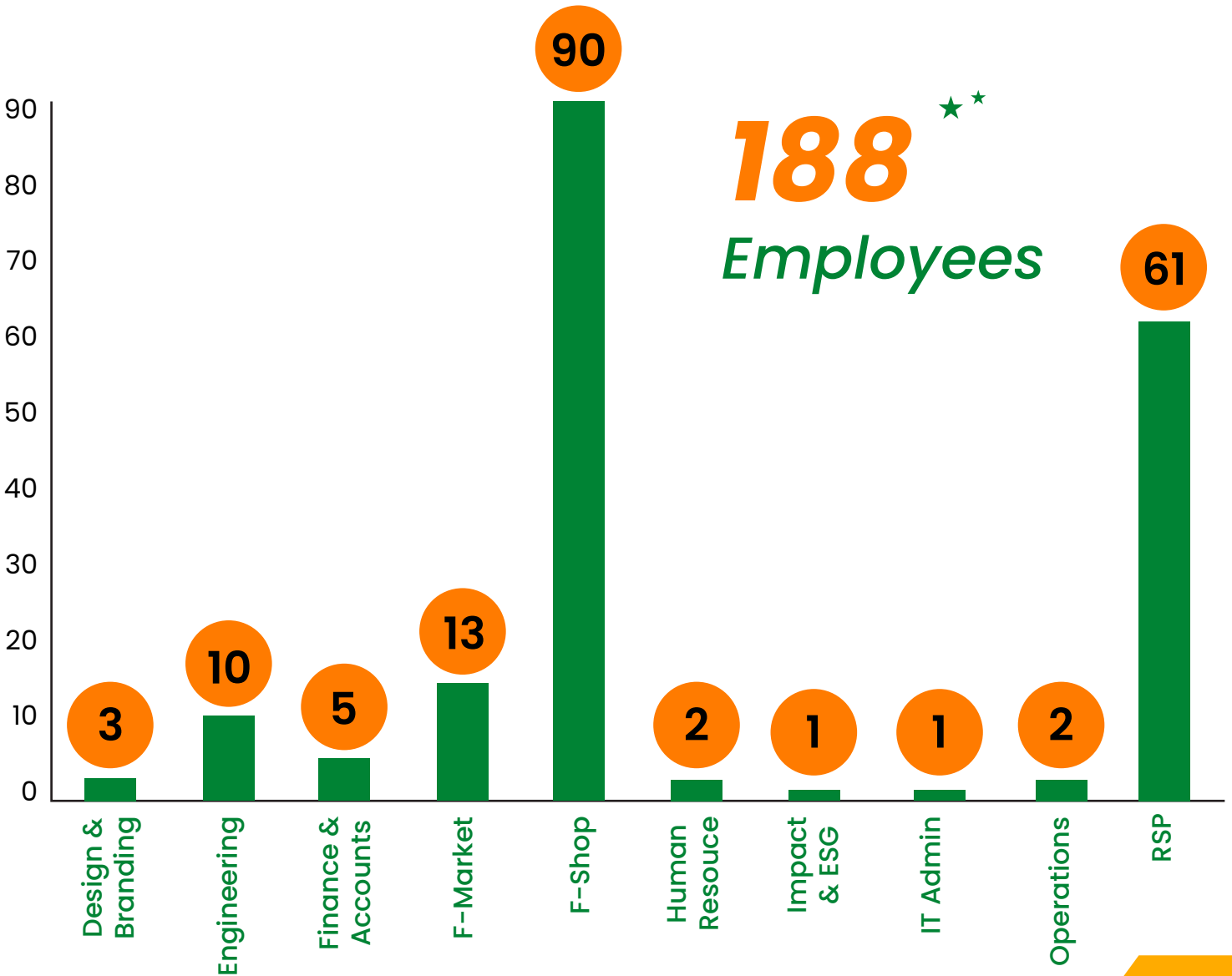
Way Forward

SADHANA aims to expand the device's compatibility to assess a wider range of crops. Additionally, as the device generates a wealth of quality assessment data, SADHANA is exploring opportunities to leverage this information for broader agricultural insights. Aggregated data could contribute to trend analysis, informing larger-scale decisions in the agricultural sector.

In the food industry, assessing the quality of agricultural grains is critical. Existing methods and

devices for automation have limitations. Some use basic image analysis, but struggle with specific defect detection and grain differentiation. Others require constant internet access or lack precision in measuring weight and moisture. SADHANA aims to overcome these limitations with its innovative approach, providing a comprehensive & precise agricultural quality assessment solution.

Employees joined from April to August



FALCA Visionaries



Santosh Danegoudar

Santosh Danegoudar (Founder & CEO): Santosh Danegoudar, the Founder and CEO of Falca, is a software engineer by profession and a passionate farmer at heart. His vision led to the creation of Falca, one of India's leading farmer platforms. He has nearly two decades of experience in software development, architecture, and cloud technologies. Santosh has previously worked with prominent companies like IP Infusion, Cisco, Alcatel-Lucent, Brocade, Hewlett Packard, and Riverstone, both in India and abroad. He holds a bachelor's degree in computer science engineering from Karnataka University.

Amaresh Devaramani

Amaresh Devaramani (Co-founder & Director – Strategy): Amaresh, a passionate agribusiness professional, holds a graduate degree in Agriculture and a postgraduate degree in Agri Business Management. He completed his post-graduation at the National Institute of Agriculture Extension Management (MANAGE) in 2017. Before joining Falca, Amaresh was part of the pioneering team at Samunnati, a leading Agri value chain finance company in India. He played a pivotal role in setting up Samunnati's Agri-Tech lending platform, Samaarambh. At Falca, Amaresh is responsible for strategy and new initiatives, including product launches, farmer engagement strategies, geography strategies, and partnerships.

Suganthan S

Suganthan S (Co-founder & Director – Finance & Investor Relations): Suganthan is a corporate finance professional with a background in commerce. He holds a commerce degree from Shriram College of Commerce and a postgraduate degree in finance from the Great Lakes Institute of Management (GLIM). Prior to his role at Falca, Suganthan was an essential part of the initial team at Samunnati. During his time there, he headed Finance and Treasury, overseeing the raising of approximately INR 1200 Crores of debt and equity and managing a portfolio worth INR 700 Crores. At Falca, Suganthan is responsible for the Finance and Accounts function, handling accounts, funding strategy, stakeholder relations, & more.

A **FALCA** Advisors

Ashish Khetan

Ashish is the Founding Partner of Benzail0 Investment Ventures Private Limited. Since January 2018, he's leading Indigram Labs Foundation as the President & CIO. He also worked as the Chief Operating Officer at the Federation of Indian FPO's & Aggregators (FIFA) from 2017 to 2018. Having served as the Managing Director of Pashupati Overseas Pvt. Ltd. further showcases his strong global business skills. Ashish's career combines strategic acumen with a solid educational foundation - MBA in Accounting & Finance from FMS and B.Com (Hons) from Ramjas College, Delhi.



Hemendra Mathur

Hemendra holds a management degree from IIM (Ahmedabad). He has 26 years of experience across agritech, venture capital, private equity, management consulting, and investment banking. He has been a mentor and guide to agritech startups in India. Currently, he is a Venture Partner with Bharat Innovation Fund. Hemendra co-founded ThinkAg, a think tank for agriculture in India. As the Chairman of the FICCI Task Force on Agri startups, he offers advisory services to Indian tech startups.



N.V. Ramana



N.V. Ramana stands out as a notable figure in the agriculture industry. He has an MBA from IIM, Ahmedabad, and a BSc in Dairy Technology from the National Dairy Research Institute. As the Group CEO of BASIX, he built and managed a team of 3000+ professionals. He was also the Managing Director of Krishna Bhima Samruddhi Local Area Bank (2002-2004). Ramana also held the esteemed position of Chairman of the Indian Society of Agribusiness Professionals. As an advisor for Samunnati and Origo commodities from their early stages, he played a pivotal role in their developmental journey. Ramana has also worked as a consultant for The World Bank.

Dr. Ravi Mittal

Dr. Ravi has a Ph.D. in Computer Science from IIT Delhi and an MTech in Computer Engineering from IIT Roorkee. He is an accomplished academic, technologist, and mentor and serves as a Visiting Professor at the Indian Institute of Technology, Mandi, India. From 2011 to 2017, he led IP Infusion Software India Limited as the founding Managing Director and engineering Head. Having served as Vice President (Engineering) at Symbian/Nokia from 2008 to 2010 highlighted his global impact. He received the esteemed "Indo-US Science and Technology fellowship" award for post-doctoral research at the University of Maryland, College Park, USA. He has worked on 30+ research papers and co-authored two books.



Muralikrishnan Gopalaratnam



Muralikrishnan Gopalaratnam is a highly accomplished finance professional and Fellow Chartered Accountant (FCA) with over two decades of experience in various leadership roles in Indian and U.S. companies. He currently serves as a Board Advisor for Tenxer Labs, Inc., and is an Angel Investor with Inflection Point Ventures. His expertise covers statutory compliance, corporate governance, and financial strategy guidance. He has received prestigious awards, including being named one of the 'Most Influential CFOs of India' by the Chartered Institute of Management Accountants, London, in 2016, and winning the 'Best CFO Services & Operating Finance Service Provider in Karnataka' award at the 2016 Business Leaders' Summit for his venture, Ujwal.

Advisor Field Visit





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