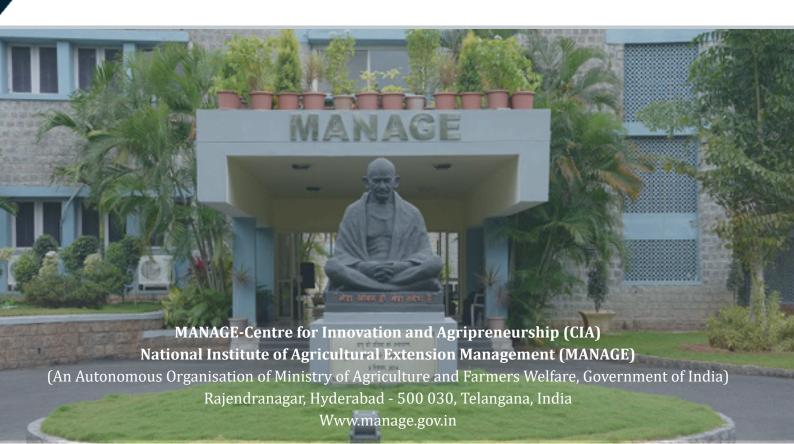


MANAGE Agri-Eureka 2025

National-level Agri Innovation and Business Plan Challenge



# **Innovation Dairy**







#### **About the Publication**

Agri-Startups innovations highlighted in this publication, participated in the MANAGE Agri-Eureka 2025, a National-level Agri Innovation and Business Plan Challenge conducted at MANAGE, Hyderabad, under the RKVY-RAFTAAR scheme of the Ministry of Agriculture and Farmers' Welfare (MoA & FW), Government of India.

#### **Published by**

Dr. Saravanan Raj Director (Agricultural Extension), MANAGE & Chief Executive Officer (CEO), MANAGE–CIA

#### **Designed & Edited by**

Mr. Arvind Singh Rao, Intern, RKVY-RAFTAAR, MANAGE-CIA Ms. Maithri K., Intern, RKVY-RAFTAAR, MANAGE-CIA

#### **Editorial Team Members**

Dr. Saravanan Raj, Director (Agricultural Extension), MANAGE & CEO, MANAGE-CIA

Ms. V. Usha Shre, Manager, RKVY-RAFTAAR, MANAGE-CIA

Mr. Saurabh Kumar, Business Executive, RKVY-RAFTAAR, MANAGE-CIA

Mr. Arvind Singh Rao, Intern, RKVY-RAFTAAR, MANAGE-CIA

Ms. Maithri K., Intern, RKVY-RAFTAAR, MANAGE-CIA

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**Dr. Saravanan Raj**Director (Agricultural Extension), MANAGE & Chief Executive Officer, MANAGE – (CIA)

In India's fragmented and largely unorganized agriculture sector, innovation continues to be a transformative force. With rapid technological advancements and policy support, agri-tech startups are playing a pivotal role in reshaping rural economies and making farming more efficient, resilient, and sustainable.

The persistent gaps in market linkages, access to services, and robust networks remain significant challenges. However, incubators and accelerators have emerged as critical enablers, bridging these gaps by nurturing talent, providing structured funding, fostering digital adoption, and encouraging climate-smart practices. At MANAGE, we identify and nurture potentially disruptive ideas from aspiring agripreneurs and support them in building scalable, sustainable business models.

MANAGE Agri-Eureka provide a platform to aspiring agripreneurship, students and innovative agri-startups to present their innovative startup idea. We also recommend winners and innovative startups idea for funding through our cohort programs in RKVY-RAFTAAR scheme of Department of Agriculture and Farmers Welfare (DoA & FW), Ministry of Agriculture and Farmers Welfare (MoA & FW), Government of India (GoI).

This Innovation dairy is a tribute to the spirit of innovation and resilience demonstrated by participants of MANAGE Agri-Eureka 2025. It highlights their innovations that showcase how young agripreneurs are making a measurable impact, reviving rural livelihoods, enhancing value chains, and contributing to a future-ready Indian agriculture.

(Dr. Saravanan Raj)







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## Palar Bio Plus



## Founder- Dr. Raghupathi Matheyarasu



#### Meet the Innovator

In the world of agriculture, where soil health is quietly suffering under the weight of chemical dependency, one agripreneurs dared to challenge the status quo. Dr. Raghupathi Matheyarasu, a visionary with a Ph.D. in Soil and Environment from the University of South Australia, looked beyond conventional practices to envision a solution that could bridge tradition with innovation. His brainchild — Palar Bio Plus — is not just a company, but a soil-first movement redefining the way farmers perceive bio-inputs

## Understanding the Root of the **Problem**

The story began when Dr. Raghupathi closely observed the deteriorating condition of Indian soils. Problems such as declining soil fertility, loss of microbial biomass carbon (MBC), rampant burning of organic waste, and the overuse of synthetic fertilizers were not just harming the soil but also fueling climate change. What disturbed him more was a behavioral gap — farmers, though aware of bio-fertilizers and compost, were reluctant to use them. Why? The answer lay in familiarity. Farmers preferred chemical fertilizers mainly because of their physical form neat, easy-to-handle powders and granules.



### **Innovative Solution by Palar Bio Plus**

Dr. Raghupathi recognized this psychological and logistical barrier and decided to flip the script. He developed an innovative line of granular bio-stimulants and bio-inoculants that looked exactly like conventional chemical fertilizers but acted as nature's best allies. These bio-granules are packed with beneficial microbes and organic nutrients that enhance soil microbial biomass, restore soil health, and improve nutrient availability — all while leaving zero negative impacts on the environment.

His startup Palar Bio Plus was one of the standout innovations featured at MANAGE Agri-Eureka 2025, where it drew attention for its farmer-centric design and sustainability-driven mission. Unlike traditional bio-products that often come in liquid or compost form, these granules are easy to transport, store, and apply using existing fertilizer equipment — making adoption frictionless for farmers.

By blending scientific insight with practical innovation, Dr. Raghupathi Matheyarasu has not only given farmers a sustainable alternative but also sparked a shift in how we think about feeding the land. Palar Bio Plus is not just reviving soil — it's reviving hope for a greener, more balanced agricultural future.

## Sea Eden Pvt. Ltd.



#### Founder- Mr. Sai Vishnu K.

Are you a farmer struggling with poor seed germination, dwindling crop yields, and rising soil salinity? Does your farmland suffer from the dual curse of extreme heat and high salinity, making cultivation nearly impossible? If you've been searching for an affordable, sustainable solution, your wait might just be over.

# Understanding the Root of the Problem

It all began when Sai Vishnu visited rural farming communities in Southern India and witnessed the growing despair among farmers. Their lands, once fertile, were turning barren due to rising soil salinity and prolonged heat waves—a direct impact of climate change. These conditions not only reduced seed germination but also crippled crop productivity, putting both livelihoods and food security at risk.

Most devastating of all, farmers lacked access to affordable and effective microbial solutions that could help plants survive such hostile conditions. Sai Vishnu saw this critical gap as an opportunity to apply his academic knowledge for real-world impact—and that's when Sea Eden Pvt. Ltd. was born.



#### Meet the Innovator

Meet Mr. Sai Vishnu K., the Co-founder and CEO of Sea Eden Pvt. Ltd., an agritech startup based in Madurai, Tamil Nadu. A passionate innovator and a postgraduate student pursuing M.Sc. in Applied Microbiology, Sai Vishnu specializes in microbial seed treatments and biofilm characterization—skills that have become the backbone of his entrepreneurial journey.

## A Scientific Breakthrough for Farmers

Through relentless research and field testing, the startup developed an innovative triad of microbial products tailored for saline soils:

- Salt-Tolerant Biofertilizers
- Heat-Tolerant Bacteria-Coated Seeds
- Foliar Spray with Heat-Tolerant Bacteria

These indigenous microbial formulations are not only scientifically proven but also economically and

accessible, making them a practical solution for small and marginal farmers.



At Agri Eureka 2025, Sai Vishnu's work stood out as a shining example of how youth-driven, research-based innovation can empower farmers and restore degraded lands. Sea Eden Pvt. Ltd. isn't just a startup—it's a movement toward sustainable agriculture under the toughest conditions.

## **Cane Aid Bandages**



Founder- Mr. Sathish Kumar, Ms. Hema Surthi, and Ms. Athulya Binu

In a world where even, the tiniest wound often means a cluttered shelf of healing medicines, ointments, antiseptic creams, and chemical-laden lotions, a trio of passionate innovators dared to ask a simple yet profound question— "Why not heal naturally and sustainably?"

## One Problem, Two Sides: Health Risks & Waste Crisis

The journey of Cane Aid began with a close observation of two persistent problems. First, the over-reliance on synthetic and chemical-based wound care products, which often come with side effects, high costs, and contribute to environmental waste. Second, the team noticed a growing pile of agricultural waste, particularly sugarcane bagasse, a fibrous residue left after extracting juice from sugarcane, and Tridax procumbens, a medicinal herb often neglected despite its known wound healing properties.

# Healing with Nature: The Birth of Cane Aid Bandages

Determined to address both healthcare inefficiencies and agro-waste concerns, the trio developed an innovative solution—eco-



#### **Meet the Innovator**

Meet Mr. Sathish Kumar, Ms. Hema Surthi, and Ms. Athulya Binu, the dynamic team from Coimbatore, Tamil Nadu, who are redefining wound care through their startup, "Cane Aid Bandages." These promising young minds participated in MANAGE Agri Eureka 2025, bringing forward a solution that blends modern innovation with nature's healing touch.

friendly, chemical-free bandages made from sugarcane bagasse, enhanced with Tridax procumbens and aloe vera. These plant-based ingredients are rich in antiseptic, anti-inflammatory, and wound-healing properties, offering a natural alternative to traditional cotton bandages and synthetic first-aid products.

The result? A breathable, biodegradable, and powerful bandage that heals small wounds effectively without the need for additional creams or medicines. These bandages are not only gentle on the skin but also gentle on the planet, making them a sustainable innovation in both healthcare and waste management.

With "Cane Aid Bandages," Sathish, Hema, and Athulya are proving that sometimes, the best solutions grow right from the soil—and that healing can be simple, sustainable, and rooted in nature.



## **Greeny Urban Technologies**



#### Founder- Ms. Bandita Deka

Have you ever imagined that your clothes could be made from the leftover husk of Areca nuts—the same nut commonly chewed across India? Most people discard the outer part of Areca (betel) nut as agricultural waste. But what if this "waste" could be turned into wealth?

# The Untapped Potential and the Processing Challenge

During her research, she observed a widespread issue in Assam and Northeast India—tons of Areca nut husk generated every year, with over 80% of it either burned or dumped, leading to environmental harm and missed economic opportunities for local farmers.

While the world is increasingly shifting towards biodegradable and eco-friendly alternatives to synthetic fibers and plastics, Bandita saw untapped potential in the humble Areca husk. She discovered that Areca nut husk contains strong, biodegradable fiber—a resource that could revolutionize the natural fiber industry. But there was a major roadblock: manual extraction of fiber from Areca husk was extremely difficult and time-



### **Meet the Innovator**

Ms. Bandita Deka, an innovative mind from Nalbari, Assam, and a proud participant of Agri Eureka 2025. Holding a Master's degree in Rural Development from IGNOU, Bandita's vision was shaped by her deep connection to rural livelihoods and sustainability.

consuming, and there was no existing machine in the market capable of processing it efficiently.

#### From Husk to Harvest: A Machine with a Mission

Instead of accepting this as a limitation, Bandita saw it as a challenge worth solving. With passion and perseverance, she began designing a solution—what emerged was a first-of-its-kind innovation: the "Dual-Fiber Extractor Machine." This machine is capable of efficiently extracting fibers from Areca nut husk, and uniquely separates both fine and coarse fibers, making them suitable for different commercial uses—ranging from biodegradable textiles to eco-packaging materials.

Bandita's innovation is not just a machine—it's a mission to create circular rural economies, reduce agricultural waste, and open up new income streams for thousands of Areca nut farmers in the Northeast. Through her invention, she has proven that sometimes, the future of sustainable fashion could lie in what we once called waste.







## **COCONANA CUPS**



## Founder- Ms. Vidhyaa Lakshmi Viswanathan

Have you ever imagined sipping your morning tea from a cup that doesn't need to be thrown away, but instead, can be planted to grow into a tree? Or one that turns into organic manure, nourishing the soil rather than polluting it?

# Understanding the Root of the Problem

The journey began with a simple yet powerful observation: every day, millions of plastic and paper cups are used and discarded, often littering the environment. These disposable items, though small in size, have a massive impact. Plastic doesn't degrade for centuries, and even paper cups are lined with plastic, making them non-compostable. Studies have shown that microplastics leaching from such materials may contribute to serious health issues like cancer and infertility. Despite eco-friendly increasing awareness. alternatives remain limited and inaccessible to the masses.

# Offer Innovative solution through Coconana Cups



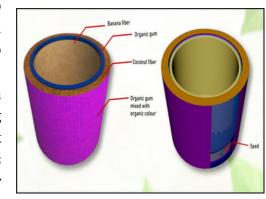
### **Meet the Innovator**

What sounds like a fantasy is becoming a reality, thanks to the innovation and passion of a young entrepreneur—Ms. Vidhyaa Lakshmi Viswanathan, a B.Sc. (Hons.) student in Food Science and Nutrition at Amrita Vishwa Vidyapeetham, Ettimadai, Coimbatore.

Refusing to accept this as the norm, Vidhyaa decided to tackle this environmental menace in her own innovative way. She realized that cups are universally used, inexpensive, and disposable—making them the ideal product to reinvent. Drawing inspiration from nature and her academic background, she looked towards agricultural waste for answers. That's when the idea of "Coconana Cups" was born.

Coconana Cups are biodegradable cups crafted from banana pseudostems and coconut fiber, both of which are often discarded after harvest. But the real magic lies in their dual-purpose design. Each cup is embedded with seeds—after use, the cup can be planted to grow into a plant or broken down to serve as organic manure. It's not just a cup; it's a zero-waste, life-giving product that contributes to reforestation, soil health, and sustainable living.

This solution not only utilizes agro-waste effectively but also encourages a circular economy model. With every Coconana Cup, users don't just enjoy a drink—they contribute to reducing waste, restoring greenery, and protecting the planet. Through her participation in **Agri Eureka 2025**, Vidhyaa Lakshmi Viswanathan is setting an example of how young minds with strong will and simple ideas can spark transformational change. Her innovation is a sip towards sustainability—a small cup that holds the promise of a greener future.



## AgriYogi: Tradition.Tech.Tattva



#### Founder- Mr. Gudavalli Akhil

In a world where consumers are increasingly health-conscious and demand for organic produce is skyrocketing, many Indian farmers are eager to shift to organic farming. However, the lack of timely and reliable information on compost readiness, biostimulant application, and biofertilizer effectiveness continues to hold them back. Amid this pressing challenge, a passionate innovator is lighting the way forward.

# Unrealized Opportunities and the Roadblocks

While visiting farms across India, Akhil observed a critical gap: although farmers were enthusiastic about adopting organic practices, they lacked real-time insights on when compost was ready for use, how effective their biofertilizers were, or which biostimulants would benefit their crops most. Without scientific guidance, many farmers remained skeptical or misinformed, resulting in poor adoption of organic techniques and inconsistent yields.

# **Empowering Organic Agriculture Through Innovation**

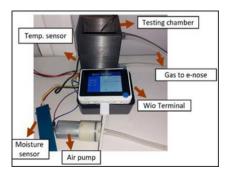
Determined to bridge this knowledge gap,

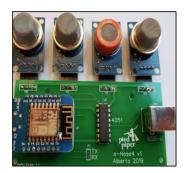
Akhil founded AgriYogi, a Hyderabad-based agritech startup. His breakthrough innovation? A smart, multi-layered diagnostic device—India's first affordable field tool designed specifically for organic farmers. The device acts like a lab-in-a-pocket, providing real-time insights into:

- Compost Maturity with the help of gas sensors that track microbial activity.
- Biofertilizer Effectiveness using enzyme activity strips as proof of microbe action.
- Biostimulant Recommendations with NIR-based plant/soil response analysis to determine crop health and nutrient impact.

This compact tool empowers farmers with scientific data directly from their field—no need for lab testing, no dependence on guesswork. With affordability and user-friendliness at its core, the device is set to revolutionize how Indian farmers approach organic farming.

Akhil's AgriYogi doesn't just offer a product—it offers confidence, clarity, and a pathway to sustainable farming. As he continues refining the prototype with farmer feedback, the future of organic agriculture in India looks a lot more promising.







### Meet the Innovator

Meet Mr. Gudavalli Akhil, founder of AgriYogi and a participant of Agri Eureka 2025. With an academic background in M.Sc. Embedded Systems and Technical Informatics (ETIT) from KIT, Germany, Akhil returned to India with a vision—leveraging technology to make organic farming simpler, smarter, and more sustainable.

## **Techtogreen Drone & Robotics**

Founder- Mr. Pranab Das

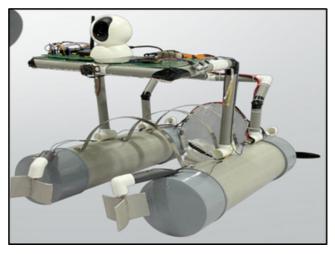


### **Understanding the Root of the Problem**

During field visits and interactions with fish farmers, Parnab and Ameetha were shocked by the extent of problems plaguing aquaculture operations. Floating waste, invasive plants like algae, water lilies, and hyacinth were degrading water quality. Manual cleaning was laborious, time-consuming, and inefficient. Fish suffered from stress, disease outbreaks, and high mortality due to poor water conditions. Further complications included uneven feed distribution, inconsistent medicine spraying, and the lack of automation or a centralized system to monitor vital water parameters.

## **Robotic and AI Based Innovative Solutions**

To address these pressing issues, Parnab and Ameetha developed an innovative solution: the "Autonomous Robot for Aquaculture & Aqua Pollution Control." This cutting-edge robot is designed to operate autonomously in water bodies and perform multiple essential functions. It is equipped with AI and ML capabilities to track and collect floating waste even in shallow waters. It can automatically detect and collect algae, navigate based on real-time angle and distance calculations, and has a dynamic waste storage system with flexible compartment separation. The robot uses precise GPS-based mapping for efficient navigation with built-in obstacle avoidance and is fully controllable via a mobile app. One of its standout features is its advanced mechanism that distinguishes detection between trash and living organisms, ensuring minimal disruption to aquatic life.





### Meet the Innovator

In the heart of innovation at Agri Eureka 2025, two young computer science students—Mr. Parnab Das (Founder) and Ms. Ameetha (Cofounder)—are making waves in the world of aquaculture. As the brains behind Techtogreen Drone & Robotics Pvt. Ltd., this dynamic duo has taken a deep dive into the challenges faced by aqua farmers and emerged with a gamechanging solution.

Additionally, the robot provides a visual map of water quality parameters and uses predictive analytics to forecast potential fish diseases. It also autonomously sprays fish food and medicines evenly across the farm and offers 24/7 surveillance powered by solar energy.

This invention isn't just a cleaning device—it's an integrated aqua-farm management system. Designed with sustainability and scalability in mind, it offers a practical, efficient, and intelligent alternative to traditional, labor-heavy aquaculture maintenance

## **OURA SKYE: The Primal Glow**



Founder- Ms. Rakshitha VL and Ms. Ajolin Scudder W

## The Gap in the Market: Expensive Chemicals vs. Affordable Nature

This trio of budding agripreneurs realized that in a country like India, where skincare is both a cultural priority and a growing market, something essential was missing—an organic, affordable, and effective solution. They saw how people, in desperation, turned to expensive chemical-laden products that either offered temporary relief or led to long-term side effects. The deeper they explored, the clearer it became: despite a crowded market, there was a huge gap in chemical-free, plant-based skincare—especially moisturizers.

# **OURA SKYE - A Natural Moisturizer Rooted in Science and Sustainability**

With their agricultural knowledge and passion for sustainability, they developed a plant-powered, hydrating moisturizer that harnesses the natural goodness of banana flower and corn silk extracts. Both ingredients, traditionally known for their healing and antioxidant properties, come together in a formula that hydrates, soothes, and nourishes the skin—without a single drop of synthetic chemical.





## **Meet the Innovator**

the bustling corridors of Kumaraguru Institute of Agriculture, Erode, Tamil Nadu, three passionate B.Sc. (Agriculture) students-Ms. Rakshitha V L (Founder), Mr. Ajolin Scudder W (Cofounder), and Ms. Salai Swarna Varshitha (Cofounder)—were united bv common observation: people everywhere, especially during the scorching summer months, were constantly battling skin issues. The market overflowed with flashy skincare products, yet consumers continued to suffer. Why? Because behind the promises of glowing skin were hidden chemicals that not only failed to solve the problem but often worsened it, draining wallets and damaging skin.

This isn't just a moisturizer—it's a mission. A mission to restore confidence, protect skin, and prove that nature has always been the best healer. Through their participation in Agri Eureka 2025, these three young visionaries are not only redefining skincare but also showing the world what the next generation of agripreneurs can achieve when innovation meets empathy.

## **ByAgritech**

## **ByAgritech**

### Founder- Mr. Yarravarapu Bharat

Are you a fruit or vegetable grower struggling to get fair prices? Are you a supplier forced to sell your produce to local vendors due to a lack of access to bigger markets? Do your fruits and vegetables spoil before they reach consumers, leading to significant post-harvest losses?

# Uncovering the Root Cause of Spoilage

Despite the hard work, most growers were forced to sell their produce quickly to local vendors at lower prices, simply because their produce could not survive the long journey to bigger markets. The lack of cold storage and preservation solutions meant a large portion of fresh produce perished within days. During his research, Bharat discovered that the primary cause of spoilage lies in the moisture and respiration rate of fruits and vegetables, both influenced by the condition of their outer skin. He noticed a gap in the Indian market—there was no cost-effective, edible coating product available that could naturally extend the shelf life of fresh produce.

# ByAgritech: A Natural Solution for a Fresh Future

This realization led to the birth of ByAgritech,

an innovative startup focused on developing natural edible coating solutions for post-harvest preservation. Bharat experimented with various natural materials and introduced a novel idea—Neem Gum—a natural, plant-based biopolymer that had never been explored for food coating applications in India. Through extensive trials on produce like guava, oranges, and tomatoes, Bharat found that Neem Gum, when applied in different concentrations, significantly increased the shelf life of these items without altering their taste or appearance.

ByAgritech's edible coating solution is affordable, chemical-free, and easy to apply—making it a game-changer for small and marginal farmers who lack access to cold chains. Bharat's innovation not only helps reduce food waste but also empowers growers to reach distant markets and fetch better prices.





### **Meet the Innovator**

Here is our Agri Eureka 2025 innovative participant, Mr. Yarravarapu Bharat — a young and passionate agripreneur on a mission to solve these pressing problems. Mr. Bharat, a B.Tech graduate from RVR & JC College of Engineering, Guntur, comes from an agricultural background and has hands-on experience in farming. Witnessing firsthand how farmers and suppliers suffer from the short shelf life of fruits and vegetables, he was determined to find a sustainable solution.



## **MAVERICKS**

#### Founder- Ms. Theviksha V.



Are you troubled by the rapid spread of dangerous weeds like Congress Grass (Parthenium)? Are these invasive plants affecting your crop yield, livestock health, or causing allergic reactions among people around you? If yes, then you're not alone—and help is on the way.

## The Silent Invader: A Growing Menace

Parthenium is more than just a weed—it's a threat. It invades croplands, suppresses native flora, causes severe health issues like skin allergies and respiratory problems in humans, and even leads to livestock poisoning. For farmers, this translates to significant yield loss, increased labor, and ineffective results even after using chemical herbicides. Ms. Theviksha observed this crisis firsthand in rural fields, where Parthenium continued to thrive despite repeated chemical treatments, often leaving behind more harm than good.

# Turning Agro-Waste into a Green Weapon

Instead of resorting to chemicals, Theviksha turned to nature for answers. After extensive research and trials, she developed an eco-



## **Meet the Innovator**

Ms. Theviksha A is an emerging innovator and passionate problem-solver. She is on a mission to transform how Indian agriculture tackles one of its most notorious enemies—Parthenium hysterophorus, commonly known as Congress Grass. As a participant of Agri Eureka 2025, her startup MAVERICKS is making waves with a fresh, nature-powered solution to an old, stubborn problem.

friendly bioherbicide made from sugarcane bagasse, a commonly discarded agricultural by-product. This chemical-free, biodegradable, and non-toxic formulation is proving to be a game-changer.



With MAVERICKS, Ms. Theviksha A. isn't just offering a product—she's building a movement. One that empowers farmers, protects biodiversity, and proves that sometimes, the best solutions come from what we already have—agro-waste, local knowledge, and a will to innovate.

What sets MAVERICKS' bioherbicide apart? It doesn't just kill the Congress Grass—it eliminates its trace seeds, preventing regrowth in treated areas. The product is cost-effective, safe for humans, animals, and soil, and aligns with the sustainable farming movement sweeping across India.



## **PestiScaned**

## **PestiScaned**

#### **Founder-** Mr. M. Nanda Kishore and Mr. A. Harshith

Are you an organic farmer, exporter, or a fresh produce aggregator? Are you facing rejections of your consignments in global markets due to pesticide residues, even after following the best practices? Are you worried about the lack of routine, affordable, and fast testing methods for detecting harmful chemical residues in your fruits and vegetables?

# The Problem: Invisible Pesticides, Visible Repercussions

They noticed that while organic farming continues to grow, the current certification process heavily relies on field inspections, with minimal routine product testing — unless a red flag is raised. Export houses often face rejections due to pesticide residue, including the presence of banned or overused chemicals. Additionally, conventional pesticide residue testing methods are not only time-consuming and expensive, but also require destructive lab sampling.

## The Breakthrough Solution: Non-Invasive Pesticide Detection Tool

In response to these challenges, the duo developed PestiScaned — a portable, non-invasive pre-screening device that leverages FTIR-PAS (Fourier Transform Infrared Photo Acoustic Spectroscopy) technology coupled with Artificial Intelligence.



### Meet the Innovator

Meet the bright minds behind PestiScaned - Mr. M. Nanda Kishore (Founder) and Mr. A. Harshith (Cofounder), two passionate students from KL University, Vijayawada. As part of their academic journey and entrepreneurial curiosity, they closely studied the challenges of the organic and fresh produce market, especially the hidden barriers that come with food safety and global export standards. What started as a classroom problem soon became a mission — to ensure every fruit and vegetable tells a clean, safe story.

This rapid detection tool is capable of identifying pesticide residues in fruits and vegetables on the spot, making it an ideal pre-check solution before sending samples for expensive laboratory analysis. With this, exporters and farmers can take informed decisions within minutes, thereby reducing losses due to rejected consignments and ensuring better compliance with food safety regulations.



The core innovation lies in the unique combination of technologies. The FTIR-PAS module uses infrared light to generate acoustic signals that reflect molecular absorption patterns. These signals undergo pre-processing to reduce noise and enhance clarity. Finally, AI-driven algorithms analyse the refined data to extract features and accurately identify pesticide presence. The result is a fast, reliable, and affordable screening tool that doesn't destroy the sample and empowers users with real-time insights.

## **BIOSIP POUCHES**



#### Founder- Ms. Anusha S. and Ms. Dhasima Harini C.

Do you ever feel disturbed by the growing mountain of plastic around you? Especially those shiny milk pouches or grocery wrappers that look harmless but live in landfills for centuries? These plastics silently pile up in our environment—clogging drains, polluting rivers, harming wildlife, and even making their way into the food chain as microplastics. What's worse, most of them are used just once and thrown away, yet they continue to exist for hundreds of years. It's a silent crisis happening all around us, yet we often overlook it in our daily routines.

# The Problem: Plastic - A Persistent Polluter

Anusha and Dhasima noticed that the massive contribution of plastic packaging, especially non-recyclable varieties, single-use, environmental pollution and climate change. Among all the sources, they found that milk pouches—ubiquitous in every Indian household—were silently causing long-term damage. These pouches are typically made of multilayer plastic, which cannot be easily recycled or broken down, leading to severe soil and water pollution. Alarming data revealed that approximately 26,000 tonnes of used milk pouches are dumped into the soil every day in India, contributing heavily to land and marine pollution. Despite this growing issue, there was a stark lack of sustainable alternatives in the packaging industry, especially for liquid food products like milk.

## The Innovative Solution: BIOSIO POUCHES

Motivated to solve this real-world challenge, Anusha and Harini developed an innovative, eco-conscious solution-



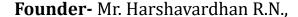


### Meet the Innovator

In the heart of Tamil Nadu, two young minds—Ms. Anusha S. (Founder) and Ms. Dhasima Harini C. (Cofounder) of BIOSIO POUCHES, are passionate student innovators pursuing B.Sc. Agriculture at Kumaraguru Institute of Agriculture, Erode (Tamil Nadu) participated in our Agri Eureka 2025. With their academic background rooted in sustainability and environmental awareness, both were deeply disturbed by the growing menace of plastic pollution. Their vision took shape when they began to observe how significantly packaging waste was impacting the planet, especially in the form of non-biodegradable plastics used in daily essentials like milk pouches.

biodegradable thermoplastic starch-based pouches. Designed specifically for milk packaging, these pouches look and feel like regular plastic but are made entirely from biodegradable materials derived from agricultural and food waste. The pouches naturally degrade within 3 to 6 months, leaving no harmful residue behind. Their creation is backed by a solid understanding of polymer science, biodegradable material technology, and plastic processing techniques. BIOSIO POUCHES are a revolutionary step toward reducing plastic waste in a critical sector and offer a scalable, affordable, and sustainable alternative that aligns perfectly with the vision of a plastic-free future.

## **Peanya**





Do you crave the creamy goodness of milk, yogurt, or ghee — but your body says no? Are you one of the many turning away from animal dairy due to lactose intolerance, vegan lifestyle, or health concerns? Tired of the same old soy, almond, or oat-based alternatives that cost a bomb and leave your taste buds unimpressed? Ever wondered if there's a better, more local, and nutritious plant-

based option waiting to be discovered?

## The Dairy Dilemma: Understanding the Problem

India is currently facing a significant dairy demand-supply gap of 20-30 million tonnes, which continues to rise annually. Alongside this, the increase in adulterated dairy products has contributed to widespread lifestyle disorders. Alarmingly, nearly 30% of Indians are lactose intolerant, yet the availability of suitable alternatives remains limited. Most plant-based options available today—such as almond, soy, or oat milk—are largely imported, making them expensive and less aligned with Indian agricultural systems. Despite India being the second-largest producer of peanuts, this protein-rich crop has been largely ignored in the plant-based innovation space. Mr. Harshavardhan saw this contradiction as a call to action.

## The Peanya Solution: A Peanut-Based Plant Dairy Revolution

To address the rising demand for dairy alternatives and health concerns, issues.





### **Meet the Innovator**

Mr. Harshavardhan R.N., the innovative founder of Sarsha Imex Private Limited, based in Bengaluru, Karnataka, is transforming the Indian plant-based food industry. His company has long been engaged in the manufacturing and export of a wide variety of agri-products such as groundnuts, millets, dry fruits, spices, cereals, and more. Driven by the need for sustainable and locally adaptable food solutions, he launched a new plant-based dairy brand called "Peanya", India's first peanut-based dairy ecosystem, aiming to address health, environmental, and economic challenges through innovation rooted in India's own resources.

He launched Peanya—India's first peanut-based plant dairy ecosystem. Peanya offers a wide range of products including milk, yogurt, lassi, paneer, tofu, and ghee, all made from peanuts. It also produces vegan meat, whey drinks, mayonnaise, protein powder, cookies, and snacks as byproducts. Sourced directly from local farmers and FPOs under the ODOP initiative, Peanya promotes rural employment, especially for women and farming families. All products are clean-label, made without preservatives or additives, and processed in solar based powered,

eco-friendly facilities. Fully lab-tested for safety and nutrition, Peanya is a scalable, sustainable, and affordable solution to global plant-based nutrition—rooted in India and built for the future.

## Geneglow

## Geneglow<sup>TM</sup>

### Founder- Ms. S. Sadhana and Ms. R. Priyanga

Are you a farmer struggling with sudden crop losses due to hidden diseases? Have you ever wished you could detect plant diseases before the symptoms even appear? Imagine if early warning signs could help you act in time—saving not just your crop, but your livelihood. Don't let late detection be the reason for your loss. Step into the future of farming with smarter, faster, and earlier disease alerts—because your crops deserve a fighting chance from day one.

## Problem: When the Signs Come Too Late

Farmers across India are facing devastating crop losses, not because of lack of care—but because plant diseases, especially viruses, strike without warning. These pathogens often show visible symptoms only when it's too late. Current solutions like PCR or ELISA tests are not only expensive and time-consuming but also inaccessible to small and marginal farmers. Globally, plant viruses cause over \$60 billion in annual agricultural losses, making them a stealthy threat to food security.

## The Geneglow Solution: A Bacteria as Virus Detective

Sadhana and Priyanga's breakthrough are a Synthetic Microbial Biosensor Spray that acts as an early virus detection tool for crops. They engineered beneficial bacteria like Pseudomonas fluorescens to detect viral RNA or proteins using advanced molecular tools such as CRISPR/Cas systems or aptamers. When these bacteria encounter a plant virus, they produce a visible signalfluorescent pigmented—that or farmers can see with the naked eye or under UV light within 24-48 hours.



#### Meet the Innovator

Meet two passionate and Innovative participants of Agri Eureka 2025—Ms. S. Sadhana (Founder) and Ms. R. Priyanga (Co-founder)—joined hands to tackle an invisible crisis haunting our farmers. With deep roots in plant biotechnology and a heart for grassroots farming communities, they launched Geneglow, a startup that merges synthetic biology with practical farming needs. Their mission? To stop plant viruses before they silently destroy livelihoods.





This allows for quick, on-field action without the need for lab tests, enabling farmers to respond in time and prevent massive crop losses.

With Geneglow, plant viruses don't stand a chance. This innovation brings cutting-edge science straight to the field—turning plants into early warning systems and giving farmers a tool to fight back before it's too late.

## **Algora Sips**

### Founder- Ms. Amisha Nanda & Mr. Abhishek Panda



Are you someone who relies on energy drinks to power through your day — but feel let down by the high price, that same-old synthetic taste, or a label that promises more than it delivers?

### The Energy Drink Dilemma

While exploring beverage trends consumer concerns, the founders identified several persistent issues plaguing the energy drink market: a growing trust deficit due to health misleading claims and hidden ingredients, a saturated market lacking genuine innovation or differentiation, high price tags making products inaccessible to many, and widespread environmental neglect from energy drinks with a heavy carbon footprint. They realized that consumers today seek more than just a temporary energy boost — they crave a beverage that offers trust, transparency, sustainability, and real functional value in every sip.

## Algora's Algae-Powered Solution

After months of research and experimentation, Amisha and Abhishek

discovered an unexpected yet powerful solution in algae, nature's superfood, leading to the creation of India's first algae-based ready-to-drink (RTD) energy beverage — a drink that not only energizes but also promotes healing and sustainability. Algae proved to be a game-changer: it's sustainable, requiring minimal water and absorbing carbon dioxide; a plant-based source of Omega-3 (EPA/DHA) with zero fish dependency; and scientifically backed for both preventive and therapeutic health benefits. Their product offers dual functionality, catering to both instant energy needs and long-term wellness. What sets Algora Sips apart is its clean-label transparency, scientific innovation, cost-efficiency, and planet-friendly approach, making it not just a beverage but a bold, sustainable movement in the functional drinks industry.



### **Meet the Innovator**

Meet our innovative participant of Agri Eureka 2025, Ms. Amisha Nanda and Mr. Abhishek Panda, two passionate B.Sc. Agriculture students from Institute of Agricultural Sciences (IAS), Siksha 'O' Anusandhan University, Bhubaneswar, Odisha. Fuelled by a desire to transform the functional beverage space, this dynamic duo co-founded "Algora Sips" — India's first algae-based ready-to-drink (RTD) energy beverage!



Algora Sips is not just India's first algae drink — it's a statement. A fresh, futuristic, and fearless answer to a stagnant market. Thanks to the visionary minds of Amisha and Abhishek, the energy drink you've been waiting for is finally here — and it's green, clean, and full of purpose!

## **AgriSys**

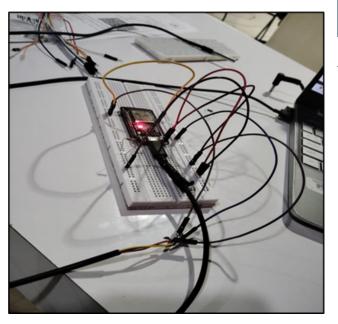
## **AgriSys**

#### Founder- Mr. Siva V. & Ms. Yukthika S.S.

Are you a livestock farmer? Do your animals often fall sick? Have you ever wished you could detect symptoms earlier to protect them from disease? If you're searching for a smart, affordable solution to monitor your cattle's health in real time, AgriSys has the answer—bringing innovation straight to your farm with intelligent, AI-powered wearable technology.

#### The Silent Crisis in Cattle Health

While interacting with dairy farmers during a college field project, Siva and Yukthika discovered a recurring struggle: farmers were often helpless when their animals fell ill, simply because symptoms went unnoticed until it was too late. Manual observation, the traditional method used, fails to detect early signs like reduced chewing, rising body temperature, or stress. These subtle behavioural cues, when ignored, lead to treatment, decreased production, higher medical costs, and in worst cases, loss of valuable livestock. They also observed a unique insight: a change in chewing habits is often an early indicator of illness in cattle—a pattern largely overlooked.





#### Meet the Innovator

In the heart of Tamil Nadu, two brilliant minds—Mr. Siva V. (Founder) and Ms. Yukthika S.S. (Co-founder) —engineering students at Chennai Institute of Technology, came together with a shared passion: revolutionizing livestock healthcare for small and mid-scale farmers. As participants of Agri Eureka 2025, they represent the spirit of young agritech innovation with their startup AgriSys.

#### A Neckband That Thinks Like a Vet

Determined to turn this insight into impact, the duo developed AgriSys's flagship innovation—an Alpowered wearable neckband for cattle. This smart device, part of their ABAHD Kit (Agri-Based Animal Health Detection Kit), tracks jaw movement using VL53L0X, and monitors ear temperature and humidity using DHT22 and a thermistor. All data is analyzed by a reinforcement learning model (Q3) trained to understand the individual behavior of each animal. When the system detects potential health issues or stress, alerts are sent directly to the

farmers in their local language, through voice messages and mobile notifications—bridging the gap between tech and accessibility.

## Pashusanjeevani Services



### Founder- Ms. Poonam Tagale & Mr. Devanand

Are you a livestock farmer? Are your animals often falling sick? Do you find yourself waiting endlessly for a veterinary doctor who either doesn't show up or arrives too late? And even when help comes, do you end up paying high consultation fees and overpriced medicines? If your answer is yes, then your story is shared by thousands of livestock owners across rural India—until innovation knocked at the barn door.

#### The Pain in the Paddock

In rural India, livestock plays a vital role in farmers' livelihoods—but timely veterinary care remains a distant dream. Ms. Tagale identified this glaring gap when she saw firsthand how farmers were struggling with delayed or no access to veterinary services, artificial insemination (AI), and essential animal health products. This unavailability led to preventable animal deaths, reduced productivity, and financial stress for already burdened farmers. The need for affordable, accessible, and on-time veterinary services was clear—but solutions were missing.

### The Digital Dose of Innovation

That's when Ms. Tagale joined hands with Dr. Devanand to create Pashusanjeevani Services, an integrated digital solution tailored for rural livestock owners. They launched a mobile app called "e-Pashusanjeevani", which brings veterinary consultation, AI services, and doorstep delivery of animal healthcare products to farmers' fingertips. Through teleconsultation, a dedicated call center, and WhatsApp support, the platform ensures timely veterinary advice and treatment at an affordable cost. Their innovative model not only enhances animal health and productivity but also uplifts the economic well-being of rural farming communities.

More than just a startup, it's a transformative leap in rural animal healthcare—driven by empathy, grounded in real-world experience, and enabled by digital innovation. Pashusanjeevani is bridging the gap between



#### Meet the Innovator

Meet the visionary duo behind this game-changing solution—Ms. Poonam Tagale, Founder & Director of Pashusanjeevani Services (OPC) Private Limited, and Dr. Devanand, Technical Advisor. Ms. Tagale is a rural entrepreneur with a bold mission to digitize livestock healthcare in India. With a deep understanding of grassroots challenges, she brings passion and purpose to the venture. Dr. Devanand, a seasoned veterinary doctor with over 10 years of field experience, complements the vision with practical insights and medical expertise. Together, they are reimagining animal healthcare for rural communities.



livestock farmers and timely, affordable veterinary care, right at their doorstep.

## **AeroNets**

### Founder- Mr. Logesh M. and Mr. Aswin S.



Are you a farmer? Did you insure your crops with a private agency? And when disaster struck—floods, droughts, pests—did you file for your insurance claim? Did you wait weeks, maybe months, only to receive either a delayed or disappointingly low settlement? Have you ever thought, "If only I had proof of the real damage, maybe I would've received what I truly deserved for my crops?" If yes, you're not alone—and this question sparked a revolutionary idea.

## The Ground Reality: A Delayed Crisis

India's crop insurance system has long been plagued by slow, manual, and inconsistent damage assessment methods. After a natural disaster or pest outbreak, it often takes weeks or even months for a field officer to manually assess damage. This delay in claims processing pushes already vulnerable farmers further into debt and despair. On the other side, insurance companies face mounting penalties—up to 12% annually—for every delayed settlement. The missing link? A scalable, accurate, and real-time damage assessment system.

# The Skybound Solution: Drones, Data, and Disruption

That's where Aeronets comes in—soaring above conventional methods with cuttingedge innovation. Their solution? Deploying autonomous drones fitted with multispectral and thermal sensors to survey damaged fields immediately after an event. The captured imagery is processed by AI models to quantify the damage and assess the yield impact, eliminating the need for manual field surveys. With 5G connectivity, the results are streamed in real time to a cloud platform, which generates GIS-based damage maps and detailed reports viewable on a user-friendly dashboard. This end-to-end system accelerates insurance claims with precision, ensuring that both farmers and insurance companies get what they need—fair, fast, and factual data.



#### **Meet the Innovator**

Meet the brilliant minds behind Aeronets, a promising startup showcased at Agri Eureka 2025. The founder, Mr. Logesh M., brings his expertise as a former Junior R&D Engineer at Protowiz. He is joined by Mr. Aswin S., Cofounder, who worked as an AI Engineer at Pydelta, and Mr. Hemanth Prasaath K., the Technical Assistant with a background in software development at Protowiz. Together, their vision is not just technical—it's transformational for Indian agriculture.



Aeronets is not just a startup, but a lifeline for farmers—a technology-driven bridge between loss and justice. Aeronets is redefining crop insurance by making every claim faster, fairer, and backed by undeniable proof from the sky.

## **Ventas Biosolutions**



### Founder- Mr. Nagarjuna Reddy Senege

Are you a greenhouse or hydroponic farmer struggling with root rot or wilting despite using fungicides? Diseases like Pythium and Fusarium silently damage your crops, reducing yield and increasing costs. What if your plants had stronger natural defenses and effective protection from the start? Our Chlorine Dioxide and Mono Silicic Acid combo ensures healthier roots, disease prevention, and resilient growth.

# The Hidden Challenge: Disease in Controlled Environments

In greenhouse and hydroponic farming designed for precision and efficiency-plant diseases remain an unpredictable adversary. Fungal pathogens like Pythium, Phytophthora, and Fusarium wreak havoc silently. They lead foliar diseases. root rot. deficiencies, and weakened plant immunity. Farmers face not only decreased yields and crop quality but also rising costs from repeated fungicide use and system disruptions. The core challenge: How do you build sustainable disease prevention into the very roots of your system?

## A Synergistic Solution Rooted in Science

Ventas Biosolutions LLP offers a cutting-edge solution—a scientifically crafted combination of Chlorine Dioxide (ClO<sub>2</sub>) and Mono Silicic Acid. Chlorine Dioxide delivers broadfungicidal action, spectrum neutralizing harmful pathogens in the water and root zone, while Mono Silicic Acid works within the plant to strengthen cell walls and activate its natural defense mechanisms. The result? Healthier roots, stronger plants, fewer disease outbreaks, and enhanced yield-all without relying solely on chemical fungicides. This synergy creates a sustainable, proactive shield for plants in high-value farming systems like greenhouses and vertical farms.



### **Meet the Innovator**

At the helm of this agricultural innovation is Mr. Nagarjuna Reddy Senege, Founder of Ventas Biosolutions LLP and a proud participant of Agri Eureka 2025. With an M.Sc. in Biochemistry and over 16 years of experience in the pharmaceutical industry, he brings a unique scientific perspective to agriculture. His deep understanding of biochemical processes and pathogen control laid the foundation for developing a solution that addresses plant health at the molecular level.



As agriculture evolves, so must our approach to crop protection. Ventas Biosolutions LLP is not just offering a product—it's enabling a future where farmers grow more with less stress. Healthier plants begin at the root, and innovation begins with bold ideas like this.

## **Releaf Foods**



#### Founder- Mr. V. Pardha Veera Venkat & Ms. P. Geetha Madhuri

Are you someone who loves candies bursting with flavor? Have you ever tasted banana fruit candies? Now, imagine a candy not made from fruit, but from something you'd never expect—the banana pseudo-stem! Sounds strange? Not for the innovative minds behind Releaf Foods, where waste turns into wellness and taste.

## The Bittersweet Problem: Waste, Health & the Environment

In India, around 60% of banana plants, mainly pseudo-stems, are discarded the agricultural waste after harvesting. This improper disposal contributes to environmental degradation and greenhouse gas emissions. Simultaneously, the market is saturated with refined sugar candies, despite the growing health concerns like diabetes. With lifestyle diseases on the rise, there's a pressing need for healthier, sustainable food options. This situation calls for innovative solutions that not only address waste management but also promote nutritious, eco-friendly alternatives to conventional sugary treats.

## The Sweet Solution: Waste to Wellness

To address these interconnected challenges. Releaf Foods introduced an innovative solution by transforming banana pseudostems—often discarded as waste-into flavored candies. fortified. This unique approach not only minimizes agricultural waste but also promotes health through a fiber-rich, natural alternative to refined sugar treats. The startup's model supports ecofriendly food processing, making it a sustainable and scalable solution. With cost-



### **Meet the Innovator**

Mr. V. Pardha Veera Venkat (Founder) and Ms. P. Geetha Madhuri (Co-founder), both B. Tech Agricultural Engineering students from Aditya University, are the visionaries driving this startup. As participants of Agri Eureka 2025, they're on a mission to prove that innovation in agriculture isn't just about big machines or drones—it can be as small and sweet as a candy. What makes them stand out? Their ability to see value where others see waste.





effective raw materials and high-value output, their candies cater to health-conscious consumers while positively impacting the environment. Beyond just a tasty treat, this venture contributes to rural income generation and community empowerment, creating a sweet change for both people and the planet.

Releaf Foods is more than just a startup—it's a vision to turn waste into wellness, empower rural communities, and offer healthier alternatives. With innovation and sustainability at its core, it truly represents the future of responsible food innovation.

## **AgriNexa**



## Founder- Mr. Rakesh C. and Mr. Prem Shankar Singh

Are you a farmer tired of uneven seed distribution during sowing? Do you find yourself constantly thinning out crops or battling excessive weeds? Are fertilizer costs eating into your profits, and yet you still struggle with poor yield? You're not alone—and finally, there's a solution. Imagine a field where seeds are perfectly spaced, weeds are minimized, fertilizers are used efficiently, and your time and labor are saved. This is no longer a distant dream—it's the future being sown today by AgriNexa.

## **Identifying the Ground Reality**

While observing the field-level challenges Rakesh and faced bv farmers. discovered three persistent issues: seed wastage due to uneven sowing, uncontrolled weed growth, and excessive use of fertilizers. These problems not only reduce productivity but also increase input costs, especially hurting small and marginal farmers. Moreover, they realized that no affordable, accessible technology currently addressed these issues, and stubble burning of paddy straw continued to worsen environmental concerns.

# A Revolutionary Solution - The Biodegradable Seed Sheet

Their startup, AgriNexa, emerged as a gamechanger. The duo developed an innovative Biodegradable Seed Sheet embedded with pre-spaced seeds. This eco-friendly sheet ensures uniform germination, drastically reduces seed wastage, and minimizes weed growth by restricting open spaces. What's more, it saves labor and time, and is ideal for hybrid seed sowing. With an integrated QR code, farmers can directly connect with AgriNexa for support and updates. The solution promotes intercropping, enables precision farming for even the smallest landholders, and transforms stubble and biomass waste into opportunity rather than a problem.



#### **Meet the Innovator**

Meet the young changemakers of Agri Eureka 2025: Mr. Rakesh C. (Founder) and Mr. Prem Shankar Singh (Co-founder), both budding entrepreneurs and students of Agri Business Management at Dr. Rajendra Prasad Central Agricultural University, Samastipur, Bihar. With roots in rural India and hearts aligned with the struggles of small and marginal farmers, their journey began with a simple yet powerful question—why should technology only benefit large-scale agriculture?



AgriNexa isn't just a startup—it's a seed of change rooted in innovation and empathy. With their biodegradable seed sheets, Rakesh and Prem are empowering farmers to farm smarter, reduce costs, and embrace a more sustainable agricultural future.

## **Thomas Biotech & Cytobacts Centre**



#### Founder- Dr. Pious Thomas

Are you a jam, ketchup, or fruit concentrate lover? Are you tired of the same old tomato-based ketchup, strawberry jam, and lemon concentrates? Are you craving something new, healthy, and exciting in this space? Have you ever imagined that these everyday products could actually be made from papaya?

#### The Problem Few Talk About

India stands as the largest producer of papaya, contributing 5.4 million tonnes and accounting for 30% of the global area under papaya cultivation. Yet, papaya remains underutilized in the processing industry, with most fruits sold fresh and perishing quickly. At the same time, the Indian market is witnessing a surge in demand for processed fruit products like jams, ketchups, and concentrates. However, traditional sources like tomatoes, strawberries, and lemons are facing supply bottlenecks, leading to market gaps.

# The Papaya-Based Product Innovations

Seeing both the problem of papaya surplus and the growing gap in processed product supply, Dr. Pious Thomas took the initiative to carry out in-house research and development











#### **Meet the Innovator**

Dr. Pious Thomas, Founder & CEO of Thomas Biotech & Cytobacts Centre For Biosciences (OPC) Pvt. Ltd., is a pioneer in the field of horticulture with a Ph.D. and Post-Doctoral Fellowship in Horticulture, enriched by 30 years of research and 5 years of industrial experience. A keen observer and problem-solver, Dr. Thomas combined his deep-rooted academic knowledge with a passion to uplift fruit farmers through innovation and entrepreneurship.

focused on papaya-based value addition. This led to the successful transformation of this underutilized tropical fruit into a range of innovative, healthy, and eco-friendly processed products. His startup introduced three distinct papaya-based offerings: Papaya Ketchup, Papaya Fruit Concentrate, and Papaya Honey Jam. Among these, the flagship product —Papaya Ketchup—was launched under the unique brand name "Thom's Papchup," presenting a tasty and nutritious alternative to conventional tomato ketchup. Through these innovations, Dr. Thomas is not only creating new market opportunities for papaya but also empowering farmers, minimizing fruit wastage, and diversifying India's processed food landscape. With the rising consumer interest in functional and exotic food products, "Thom's Papchup" is well on its way to becoming a household favourite, redefining how we experience ketchup with a tropical twist.







# MANAGE-Centre for Innovation and Agripreneurship (CIA) National Institute of Agricultural Extension Management (MANAGE)

(An Autonomous Organisation of Ministry of Agriculture and Farmers Welfare, Government of India)
Rajendranagar, Hyderabad - 500 030, Telangana, India
www.manage.gov.in