India's Vision, Andhra's Leadership — Transforming Animal Husbandry with Technology, SHG, Entrepreneurs and beyond.

India's vision of becoming a global leader in agri-livelihoods is being actively shaped by Andhra Pradesh's dynamic leadership in animal husbandry and livestock innovation. With a holistic approach combining technology, SHG empowerment, and entrepreneurial development, the state is setting national benchmarks in productivity, income enhancement, and inclusive rural transformation. By leveraging DeepTech, AI, and IoT, and integrating programs like NREGA, MSME registration, and veterinary infrastructure, Andhra is empowering 42 lakh livestock-dependent farmers, many of whom are women and first-generation entrepreneurs. Anchored in the P4 model (Public-Private-People-Policy) and supported by visionary governance, the state is building a sustainable, tech-driven ecosystem aimed at doubling farmer incomes, forging dairy income, reviving poultry and piggery sectors, and placing Andhra Pradesh at the forefront of India's animal husbandry renaissance.

> **"Indians have the highest per capita income across the global citizens of which 35% are Telugus."**

Andhra Pradesh is not just progressing—it is leading. With DeepTech, inclusive governance, and people-first policies like P4, we are transforming into a global hub for animal husbandry, livestock innovation, and agri-tech entrepreneurship. Every household, every community, every entrepreneur counts in this journey.

Andhra Pradesh is rapidly emerging and leading as the No.1 Growth Engine in India's agriculture sector, now on the path to become a global hub for animal husbandry, livestock innovation, and DeepTech integration. Through a forward-looking strategy powered by Quantum Computing, IoT, AI, and the P4 (People, Private, Public, Policy) model, the state is enabling pathways towards reshaping rural livelihoods and enabling "One Family, One Entrepreneur."

With 42 lakh farmers dependent on livestock, Andhra Pradesh is focused on veterinary services as essential public health, scaling mobile veterinary clinics and ambulances, and integrating support systems through NREGA and Dwakra communities. These communities are being transitioned into registered MSMEs, supported with marketing and business development frameworks.

A comprehensive fodder supply initiative is underway, ensuring year-round support under NREGA. Parallelly, students will engage in field internships, building the next generation of veterinary and agri-tech professionals.

Andhra's livestock vision includes:

> **"Animal husbandry as a critical and key sector of innovation for 13.5% contributing to Andhrapradesh state's GSDP with 42 Lakh farmers handholded by Ari-Tech Entrepreneurs ."**

- Reviving the poultry sector in 2–3 years using AI-driven models.
- Promoting agri-tech startups through PoC validation and entrepreneur handholding.
- Dairy as a livelihood strategy in drought-prone regions.
- A 5-year tribal piggery promotion plan and an end-to-end traceability system for global export readiness. With tier-wise cohort analysis for support:
  - **Tier-1:** 23,431 members (< ₹1 lakh revenue)
  - **Tier-2:** 46,982 members
  - **Tier-3:** 32,204 members

Combined with a 21% CAGR in dairy (2014–2019), and projected growth in horticulture (₹1.5 lakh Cr on 18 lakh ha) and agriculture (₹51,000 Cr on 50 lakh ha), Andhra Pradesh is setting the benchmark for doubling farmer incomes over the next 3–5 years.

This is not just a policy roadmap—it's a blueprint for global leadership in animal husbandry innovation.

GLOBAL FORUM FOR
SUSTAINABLE TRANSFORMATION

Building the Future – Student Internships in Animal Husbandry

HANDS-ON LEARNING | REAL-WORLD IMPACT | FUTURE-READY TALENT

Enable experiential learning through participation in livestock health monitoring, dairy operations, and agri-entrepreneurship via field-level participation in rural areas.

Pair students with native and progressive farmers, veterinary mobile clinics, and startup hubs working on AI, DeepTech, and wearable technologies for livestock. Integrate and empower various ground-level teams, Dwakra Communities with state departments, MSMEs, and GFST advisory frameworks to align learning with impact.

GFST's Centre for Excellence is currently training over 50 students from KREA University as part of a DeepTech Training Program, focused on RTGS systems and AI/ML capstone projects based on real-time scenarios. This initiative, running from April to June 2025, is supported by NorthCARD, USA as the official e-learning partner.

10 lakh sex sorted semen within 1 year as target

As we chart Andhra Pradesh's growth story, Animal Husbandry emerges as a key lever for transforming farmer incomes through innovation. Our vision is to build a Command-Control System (C2S)-based Real-Time Governance Standard (RTGS) that drives measurable, incremental income for farmers using deep tech, AI, and digital models.

We are setting an ambitious target to deploy 10 lakh doses of sex-sorted semen within the next year to accelerate breed improvement and boost dairy productivity. An action plan on activating a network of 1.5 lakh progressive agri-tech entrepreneurs, registered under MSME Udhyam, to enable on-ground governance, identify pain points, and deliver targeted support is in place. Among 42 lakh farmers, nearly 10 lakh earn less than ₹1 lakh annually. We are integrating 15 lakh farmers into Animal Husbandry pathways, with a ₹25,000 crore Credit Plan by the Department of Animal Husbandry and SERP—backing them. A targeted strategy for 4 lakh SHG farmers and a one-rupee incremental income model aims to drive scalable outcomes.

To support this, AI-based C2S will enable disease surveillance, animal health monitoring, and predictive insights. A 3–6 month apprenticeship program will be launched for students pursuing Animal Husbandry and allied sciences. Our focus is clear: technology, credit access, and structured governance to build farmer-centric prosperity. This is the next frontier for Swarna Andhra Pradesh – where innovation meets aspiration on the ground.

S P Tucker, IAS (Retd),
Vice Chairman & Director, GFST

Catalyzing Change:
GFST's Animal Husbandry Roadmap through P4 and Tech 2.0

The successful hosting of three strategic events—focused on DeepTech, Aquaculture, and the latest edition on Animal Husbandry—marks a significant step in GFST's journey as a dedicated policy and advisory body supporting inclusive and innovation-led development in Andhra Pradesh.

Animal Husbandry, contributing 13.5% to the state's GSDP and 4.5% to the national GSDP, is not just a vital economic pillar but a driver of socio-economic transformation, especially in underserved regions. As a sector with direct impact on livelihoods, it is central to our broader vision of achieving Zero Poverty through accelerated technology adoption and capacity-building. Through the P4 model (Public-Private-People-Policy), we aim to uplift BPL households, strengthen grassroots entrepreneurship, and reduce income disparities. Our strategy is focused on bridging the per capita income gap; GFST continues to work proactively with government departments, offering strategic roadmaps, policy frameworks, and actionable insights that are shaped by such impactful forums. We express our deepest gratitude to our Chief Patron whose vision, dedication, and time have been instrumental. Our sincere thanks to all stakeholders, technical partners, Government of Andhra Pradesh, the GFST team, and well-wishers for their continued support.

Cherukuri Kutumba Rao
Director, GFST

GLOBAL FORUM FOR SUSTAINABLE TRANSFORMATION

From Data to Dairy: AI's Real Impact on Animal Farming

In 2025, the animal husbandry sector worldwide is undergoing significant transformation through the integration of advanced technologies. These innovations are enhancing animal health, improving productivity, and promoting sustainability across the industry.

AI-Driven Health Monitoring: Artificial Intelligence enables real-time monitoring of livestock health, allowing for early disease detection and reducing mortality rates by up to 30%. This proactive approach also decreases antibiotic usage by approximately 20%, promoting better animal welfare and food safety. Genomic Selection and Sex-Sorted Semen: The combination of genomic selection and sex-sorted semen has been estimated to lead to a threefold increase in genetic gain and a 73% increase in the accuracy of male selection.

Blockchain-Based Traceability: Implementing blockchain technology in supply chains enhances transparency and traceability of livestock products. This ensures ethical sourcing and reduces risks associated with disease outbreaks and food safety concerns. IoT and Wearable Sensors: The use of wearable devices equipped with IoT technology allows farmers to monitor animal behavior, health, and environmental conditions in real time. This data-driven approach aids in early disease detection and efficient farm management. Digital Twin Technology: Digital twins are virtual models of livestock farms that simulate and optimize operations, including feed efficiency and waste management. This technology assists in reducing greenhouse gas emissions and enhancing sustainability in animal farming.

Shreeram Iyer
Director, Global Impact

Upcoming Events

Tourism AI Conclave
June 26-27, 2025*
Vijayawada

Logistics AI Conclave
July 24-25, 2025*
Visakhapatnam

*Note: *Subject to vary*

> "From AI-powered livestock monitoring to genomics and IoT-enabled health tracking, embedding DeepTech into Animal Husbandry to drive rural resilience and agri-bio innovation is the further step towards Swarna Andhra Pradesh."

Sanjay Gupta, IFS (Retd)
CEO, GFST

> "A shift to Prescriptive Analytics where AI integrates real-time data streams into adaptive roadmaps, anticipating global trends before they emerge. "

Sridhar Seshadri
Director, Global Foresight & Innovation

> "AI-driven impact modeling calibrates resources and measures outcomes to drive scalable sustainability and inclusive growth."

Shreeram Iyer
Director, Global Impact

Our Executive Leadership

S P Tucker, IAS (Retd),
Vice Chairman & Director

Cherukuri Kutumba Rao
Director

Sanjay Gupta, IFS (Retd)
CEO

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