

NEXT-GEN ANIMAL HUSBANDRY

STRATEGIC FRAMEWORK FOR ANDHRA PRADESH 2025-30

A VISION FOR INCLUSIVE, SUSTAINABLE, AND TECH-DRIVEN GROWTH IN LIVESTOCK SECTOR OF ANDHRA PRADESH



PREFACE



Andhra Pradesh is paving the way for a livestock-driven economic resurgence, with the sector positioned to achieve a 20% growth in the next five years, cementing its role as a key pillar of the state's Gross State Domestic Product (GSDP). This rapid expansion is fuelled by strategic investments, scientific advancements, and a robust policy framework aimed at enhancing productivity and sustainability.

Currently, the livestock sector contributes 11.55% to Andhra Pradesh's GSDP, with dairy and poultry farming leading the charge. The state is a front-runner in milk production, yielding approximately 147 Lakh metric tons annually, while its poultry industry continues to thrive, producing a staggering 3079 crore eggs per year accounting for more than 20% of India's total output. These numbers reflect not just the scale of production, but also the transformative impact of modernized farming techniques and government-backed initiatives.

This document serves as an insightful roadmap for stakeholders, farmers, policymakers, and investors who are keen to tap into the sector's vast potential. It delves into the innovative approaches that are reshaping livestock development, from precision breeding and sustainable fodder practices, to digital integration and market expansion.

As Andhra Pradesh embraces this era of agricultural excellence, the livestock industry is set to drive rural empowerment, enhance food security, and position the state as a national leader in Animal Husbandry. **The next five years mark a defining moment, where ambition meets execution, and progress paves the way for prosperity.**



STRATEGIC FRAMEWORK

FOR ANIMAL HUSBANDRY TRANSFORMATION IN ANDHRA PRADESH



Andhra Pradesh is set to redefine rural prosperity through a high-impact, technology-driven livestock revolution. This comprehensive policy accelerates enterprise development, breed innovation, financial inclusion, fodder security, and modernized livestock governance powering a sustainable rural transformation.

Key Pillars of Transformation:

- Capacity Building & Enterprise Development – Strengthening FPOs, SHGs, and MSMEs to create self-sustaining agri-business ecosystems.
- Real-Time Governance & Credit Facilitation – Driving data-backed decisions, empowering 25 lakh livestock SHG Women into lakhpati didis, enabling Rs.15,000 crore investments, and empowering one lakh new entrepreneurs.
- Genetic & Breed Enhancement – Deploying Sex-Sorted Semen (SSS) and IVF technology to revolutionize dairy productivity.
- Fodder Security & Nutrition – Expanding high-yielding crops, silage units, and feed optimization to ensure continuous livestock sustenance.
- Small Ruminant, Poultry and Piggery Sector Modernization – Implementing targeted growth models, optimizing market access, and boosting GDP contribution to Rs.12,500 crores annually.
- Advanced Market Linkages & Value Chain Expansion – Establishing traceable supply chains, export-ready systems, and digitized trade networks.
- One Health & Climate Resilience – Instituting cross-sectoral biosecurity strategies, fostering integrated disease prevention and climate-adaptive livestock practices.

Roadmap to Impact:

- 2025: Launch pilots, infrastructure development and initial credit infusion.
- 2026–27: Digital transformation, disease control expansion and market optimization.
- 2028–30: Full-scale implementation Andhra Pradesh emerges as India's leading livestock powerhouse.





The Vision Ahead:

With a bold, structured, and tech-enabled execution plan, Andhra Pradesh will unlock 20% livestock sector growth, empowering ~40 lakhs of rural families, and positioning itself as India's premier agro-livestock economy, an unrivalled force in sustainable rural wealth creation.

Circular economy: A Vision for the Future

The circular economy represents a radical departure from the traditional linear model characterized by the "take, make, dispose" mentality. Instead, it advocates for a regenerative system where resources are valued, waste is minimized, and closed-loop processes are established. Particularly in livestock management, this means rethinking how we produce, consume, and recycle. For instance, the utilization of livestock waste as a resource for energy production and soil enhancement can significantly reduce the environmental footprint of farming practices while creating new economic opportunities for farmers.

The intersection of circular economy principles and livestock farming offers a transformative pathway to sustainable livelihoods, environmental resilience, and food security. By embracing innovation, fostering community empowerment, and creating market opportunities, we can reshape the future of animal husbandry in a way that prioritizes both economic viability and ecological health. The journey toward a circular economy in livestock is not merely an environmental imperative; it is a chance to build thriving, sustainable communities that can withstand the challenges of a rapidly changing world. As we forge this path, we must remember that every step taken towards sustainability is a step towards a more equitable and flourishing future for all.

Livestock play a multifaceted role in agricultural ecosystems, serving not only as sources of food and income but also as integral components of nutrient cycling. By adopting circular economy practices, farmers can optimize the use of resources in livestock production. For example, integrating livestock with crop production allows for the recycling of nutrients; animal manure can fertilize crops, while crop residues can serve as livestock feed. This symbiotic relationship fosters a more sustainable agricultural system, reduces reliance on chemical fertilizers, and enhances biodiversity within farming landscapes.



ACKNOWLEDGEMENT



We extend our sincere gratitude to all individuals, organizations, and agencies whose support and expertise have been instrumental in the development of this strategy document on “Next-Gen Animal Husbandry”.

Special thanks to the Global Forum for Sustainable Transformation (GFST), an apolitical and not-for-profit think tank and the Department of Animal Husbandry, Andhra Pradesh, for their guidance and continuous encouragement. We are grateful to the farmers, SHG members, and livestock entrepreneurs who shared their valuable insights and experiences, inspiring practical and community-centric approaches.

We also acknowledge the contributions of researchers, veterinary professionals, and development partners who provided technical inputs, which have enriched the content and ensured its relevance to the local context.

Our appreciation extends to the field extension workers, trainers, and government officials committed to promoting sustainable livestock practices and rural livelihoods. Their dedication to empowering smallholders is the cornerstone of this initiative.

Finally, we thank all stakeholders involved in policy formulation, funding agencies, and development organizations whose collective efforts aim to transform livestock rearing into a resilient and profitable livelihood option for rural communities.

Together, we aspire that this strategy document serves as a comprehensive guide to enable farmers, entrepreneurs, and development practitioners to foster sustainable, inclusive, and profitable livestock-based livelihoods in Andhra Pradesh and beyond.





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1

ORGANISATIONAL DEVELOPMENT AND CAPACITY BUILDING

STRENGTHENING THE BACKBONE

Transformative Approaches to Organisational Development and
Capacity Building in Livestock Communities





ORGANISATIONAL DEVELOPMENT AND CAPACITY BUILDING: “STRENGTHENING THE BACKBONE”

INTRODUCTION

The Animal Husbandry Department of Andhra Pradesh aims to strengthen the livestock sector through organizational development, capacity building, technology adoption, and strategic partnerships. Key strategies include empowering Farmer Producer Organizations (FPOs) and Self-Help Groups (SHGs), enhancing veterinary services, and developing infrastructure like AI centres and fodder banks. Training programs will equip farmers with technical, entrepreneurial, and digital skills, while data-driven decision-making and IoT applications will boost productivity. A structured livestock training policy, certification programs, and multi-sector collaborations will ensure continuous learning. With effective monitoring and innovation, this framework promotes sustainable growth, improved productivity, and enhanced rural livelihoods.

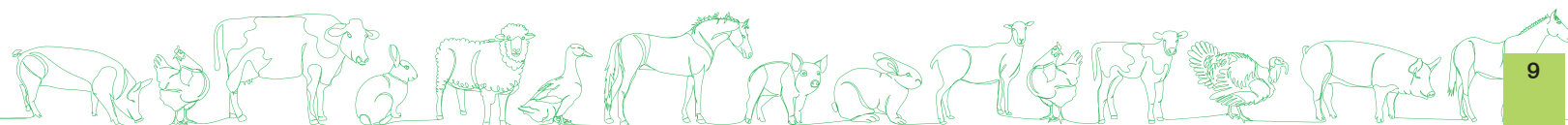
This framework outlines a holistic roadmap to transform the livestock sector into a resilient, inclusive, and environmentally sustainable engine of rural prosperity.

THIS STRATEGY ADDRESSES

- Dairy, Meat and Poultry Sectors
- Production, Processing, Value Addition, and Marketing
- Farmer & Entrepreneur Empowerment (including youth and women)
- Skill and capacity building of AH functionaries
- Technological Adoption and Data-driven Decision Making
- Environmental & Climate Resilience

AIM

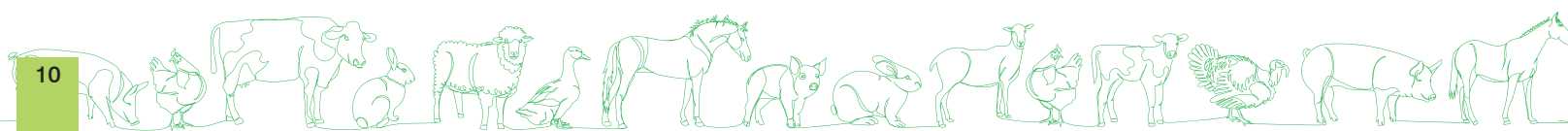
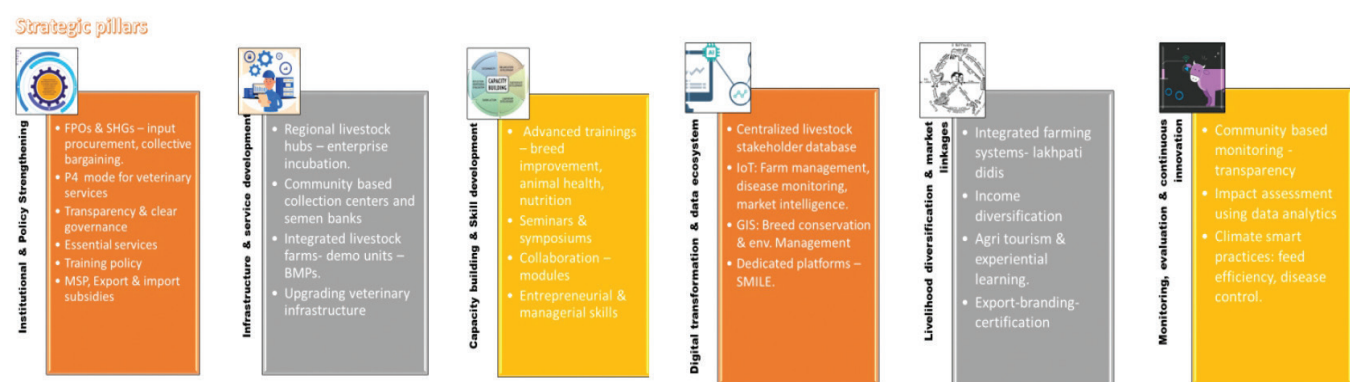
To catalyse at least 15-20% annual growth in livestock productivity and income, ensuring sustainable livelihoods, climate resilience, and inclusive development through strategic interventions, institutional reforms, and technological advancements.



OBJECTIVES

- Strengthen local institutions and Farmer Producer Organizations (FPO) for collective bargaining and market access.
- Promote recent advances in breed improvement, preventive health care and management.
- Skill enhancement of field functionaries of AH department.
- Expand market linkages, value addition, and export opportunities.
- Foster youth and SHG women entrepreneurship, digital literacy, and innovative farming models.
- Drive climate-smart, environmentally sustainable livestock practices.
- Establish a data-driven ecosystem for informed policymaking and sector monitoring.

STRATEGIC PILLARS & INITIATIVES



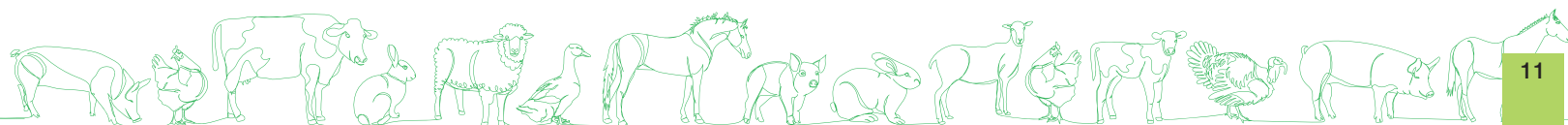


1 INSTITUTIONAL & POLICY STRENGTHENING

- Empower Farmer Producer Organizations (FPOs), SHGs, and Cooperatives to act as primary nodes for credit procurement, collective bargaining, and direct-market linkages.
- Develop clear governance frameworks within these bodies to ensure transparency and accountability.
- Develop comprehensive training policy to all stakeholders in the department.
- Facilitate seamless linkages with government schemes like NLM, PMEGP, RKVY, NABARD, NDDB.
- Foster Public-Private-People Partnerships (P4) for infrastructure, veterinary services, and market development.
- Declare veterinary services as essential services to ensure unhindered access, especially during emergencies.
- Consider deploying the services of Animal Husbandry Assistants only to Animal Husbandry department activities.
- Design and implement MSP policies for milk, meat, and eggs to stabilize incomes.
- Consider to leverage export and import subsidies on livestock feed, equipment and ancillaries.

2 INFRASTRUCTURE & SERVICE DEVELOPMENT

- Establish regional livestock hubs for organic farming, breed improvement, and enterprise incubation.
- Create community-based semen banks, AI centers, fodder banks, and decentralized collection points for milk/meat.
- Develop integrated livestock parks/farms and demonstration units showcasing best practices.
- Upgrade veterinary infrastructure to the current standards of the industry.



3 CAPACITY BUILDING & SKILL DEVELOPMENT

- Conduct advanced training on breed improvement, biosecurity, fodder cultivation, and value addition.
- Conduct regular symposiums and seminars on latest advances and field applications in veterinary science.
- Foster entrepreneurial and managerial skills business planning, financial literacy, digital marketing.
- Establish dedicated training centers in collaboration with veterinary universities; develop online/offline modules.
- Foster youth and women engagement through fellowships, incubation centers, and skill grants.
- Promote success stories via field demonstrations, live exhibitions, and peer learning.

4 DIGITAL TRANSFORMATION & DATA ECOSYSTEM

- Create a centralized livestock stakeholder database for real-time information sharing.
- Deploy IoT, mobile apps, and digital platforms for farm management, disease monitoring, and market intelligence.
- Leverage GIS and bioinformatics tools for breed conservation and environmental management.
- Launch dedicated platforms (e.g., SMILE) for training schedules, best practices, and stakeholder communication.





5 LIVELIHOOD DIVERSIFICATION & MARKET LINKAGES

- Promote integrated farming systems combining livestock, fodder, and organic composting especially focussing on empowering 20 lakh SHG women in to integrated livestock farming to make them lakhpatis.
- Encourage backyard poultry, small ruminants, and mini-dairies as income diversification models.
- Foster agri-tourism and experiential learning initiatives to create additional income streams.
- Enhance export capabilities through branding, quality certification, and market access facilitation.

6 MONITORING, EVALUATION & CONTINUOUS INNOVATION

- Establish community-based monitoring groups for feedback and transparency.
- Conduct regular impact assessments using data analytics.
- Foster research and pilot projects in climate-smart practices, feed efficiency, disease control, and genetic improvement.
- Implement adaptive management based on stakeholder feedback and technological advancements.

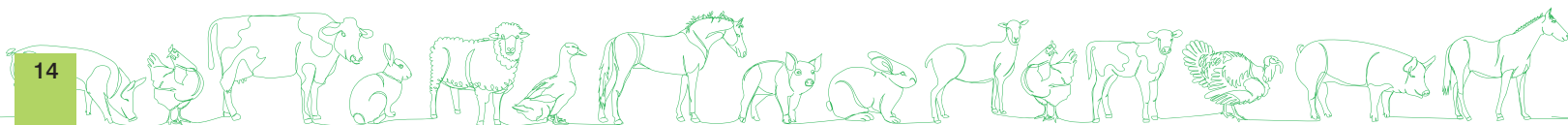


IMPLEMENTATION ROADMAP & PHASES

Phase	Timeline	Key Activities	Expected Outcomes
Phase 1	0-6 months	Policy reforms, institutional setup, stakeholder engagement	Foundation for reforms, institutional buy-in
Phase 2	6-18 months	Infrastructure deployment, pilot projects, capacity building	Demonstration of best practices, early results
Phase 3	18-36 months	Scaling successful models, digital platform rollout, market linkages	Sector-wide productivity boost, income growth
Phase 4	36+ months	Consolidation, innovation adoption, policy refinement	Sustained double-digit growth, sector resilience

WAY FORWARD

- Establish a dedicated Livestock Sector Monitoring Cell for strategic oversight and adaptive management.
- Mobilize resources through government schemes, private sector investments, international aid, and CSR.
- Foster innovation ecosystems via collaborations with research institutions, startups, and tech firms.
- Prioritize inclusive growth empowering smallholders, youth, and women.
- Leverage data analytics for targeted interventions and policy refinement.
- Ensure continuous stakeholder engagement and feedback loops.
- Embed climate-resilient practices and sustainable resource management.





ORGANISATIONAL DEVELOPMENT AND CAPACITY BUILDING: “STRENGTHENING THE BACKBONE”

CONCLUSION

Transforming Andhra Pradesh's livestock sector into a robust engine of rural prosperity demands a concerted, strategic effort embracing institutional reforms, technological adoption, market linkages, and sustainable practices. This integrated framework aims to unlock the sector's vast potential, delivering double-digit growth, enhanced livelihoods, and environmental sustainability building resilient rural communities for generations to come.

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2

ARTIFICIAL INTELLIGENCE & REALTIME GOVERNANCE

SMART FARMING

HARNESSING ARTIFICIAL INTELLIGENCE FOR
SUSTAINABLE LIVESTOCK MANAGEMENT





ARTIFICIAL INTELLIGENCE: “SMART FARMING”

BACKGROUND

The livestock industry is a cornerstone of Andhra Pradesh's rural economy, providing critical employment, nutrition, and export opportunities. However, the sector faces pressing challenges: disease outbreaks, labor shortages, resource inefficiencies, and market volatility. To unlock its full potential, there is a compelling need to adopt a transformative approach leveraging the latest technological innovations to drive productivity, ensure sustainability, and elevate farmer incomes.

Globally, countries are harnessing innovations such as AI, IoT, blockchain, robotics, and data analytics to achieve double-digit growth rates while maintaining ecological and economic sustainability. Andhra Pradesh has a unique opportunity to position itself as a frontrunner in this digital livestock revolution, creating scalable models that can be replicated nationwide and beyond.

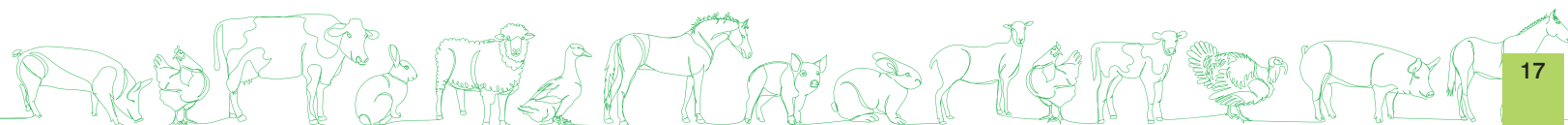
SCOPE

This strategic initiative covers the integration of advanced digital tools across poultry, dairy, and small ruminant sectors, with a focus on:

- Real-time monitoring and predictive analytics for enhanced productivity.
- Disease prevention and rapid diagnostics.
- Transparent, traceable supply chains leveraging blockchain.
- Automation and robotics for labor efficiency.
- Capacity building through immersive AR/VR training modules.
- Strengthening rural digital infrastructure via 5G and edge computing.
- Fostering a collaborative ecosystem through PPPs, research, and private sector engagement.

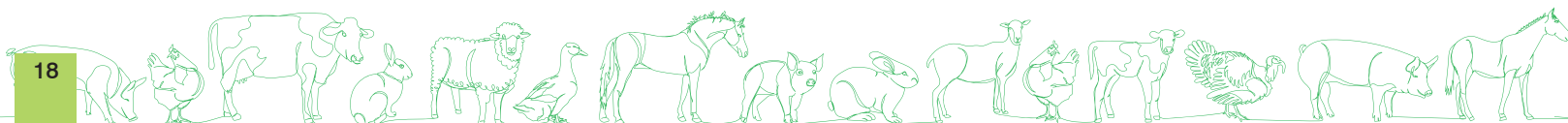
AIM

To catalyze a transformative leap in Andhra Pradesh's livestock sector, achieving sustained double-digit growth, fostering sustainable income streams, and positioning the state as a global leader in smart, resilient, and environmentally responsible animal husbandry.



OBJECTIVES

- **Boost Productivity:** Achieve a minimum of 20% increase in yields, efficiency, and resource utilization within three years through AI, IoT, and automation.
- **Strengthen Disease Management:** Reduce disease-related mortality and outbreaks by 30% via rapid diagnostics and AI-driven early warning systems.
- **Enhance Traceability & Transparency:** Implement blockchain-enabled supply chains to increase consumer confidence, reduce fraud, and access high-value markets.
- **Promote Sustainability:** Reduce water, feed, and energy wastage by 15% through precision farming and resource-efficient technologies.
- **Develop a Skilled Workforce:** Use AR/VR and digital platforms to upskill farmers, technicians, and veterinarians, reducing operational errors and training costs.
- **Build a Collaborative Ecosystem:** Foster public-private partnerships, research collaborations, and innovation hubs to sustain technological advancement and infrastructure development.





ARTIFICIAL INTELLIGENCE FOR LIVESTOCK/POULTRY

VETERINARY MEDICINE APPLICATIONS

- Diagnostics & Clinical Support: Image interpretation, remote monitoring, personalized protocols.
- Predictive Analytics: Early detection systems, viral host prediction, surgery complication forecasting.
- Workflow Automation: Appointment scheduling, inventory management, telemedicine triage.
- Research & Development: Drug development simulations, data synthesis from records.
- Education: Virtual tutors, in-clinic scenario simulations, AR for surgery training.

ANIMAL HUSBANDRY APPLICATIONS

- Disease Detection & Growth Evaluation using AI.
- Behavior Recognition and Individual Identification of livestock.
- Use of Deep Learning, Artificial Neural Networks, and Machine Vision.
- Environment Management and Machine Learning for herd optimization.



1 DIGITAL INFRASTRUCTURE & SMART FARMING TECHNOLOGIES

- IoT & Sensors: Deploy environmental sensors to monitor barn conditions, water quality, and animal health metrics, enabling data-driven management.
- AI & Machine Learning: Develop predictive models for disease detection, behavioral analysis, and productivity optimization, leveraging cloud and edge computing.
- Rapid Diagnostics & Biosensors: Establish portable biosensor kits for immediate pathogen detection, reducing outbreak response time.
- Latest innovations: Focus laid on advancements such as Acoustic Pulse Therapy (APT) to mitigate AMR, Thermal Imaging for rapid detection and surveillance of diseases, etc
- Blockchain: Create transparent, tamper-proof records of feed, vaccines, and product origin for traceability and quality assurance.
- Robotics & Automation: Deploy autonomous cleaning, feeding, and egg collection robots to address labor shortages, improve hygiene, and scale operations.
- AR/VR Training Modules: Use immersive technology to deliver biosecurity protocols, animal husbandry best practices, and emergency response training.
- Innovating Animal Husbandry: WhatsApp-Based Government Initiative - WhatsApp Livestock Services is a government-aligned, zero-cost digital platform that empowers rural livestock farmers with veterinary services, market access, and scheme awareness through WhatsApp.

2 DATA ECOSYSTEM & DECISION SUPPORT

- Integrate all data streams into centralized platforms with intuitive dashboards accessible via mobile apps, providing actionable insights for farmers and veterinarians.
- Enable predictive alerts and real-time decision support to optimize farm operations and disease management.



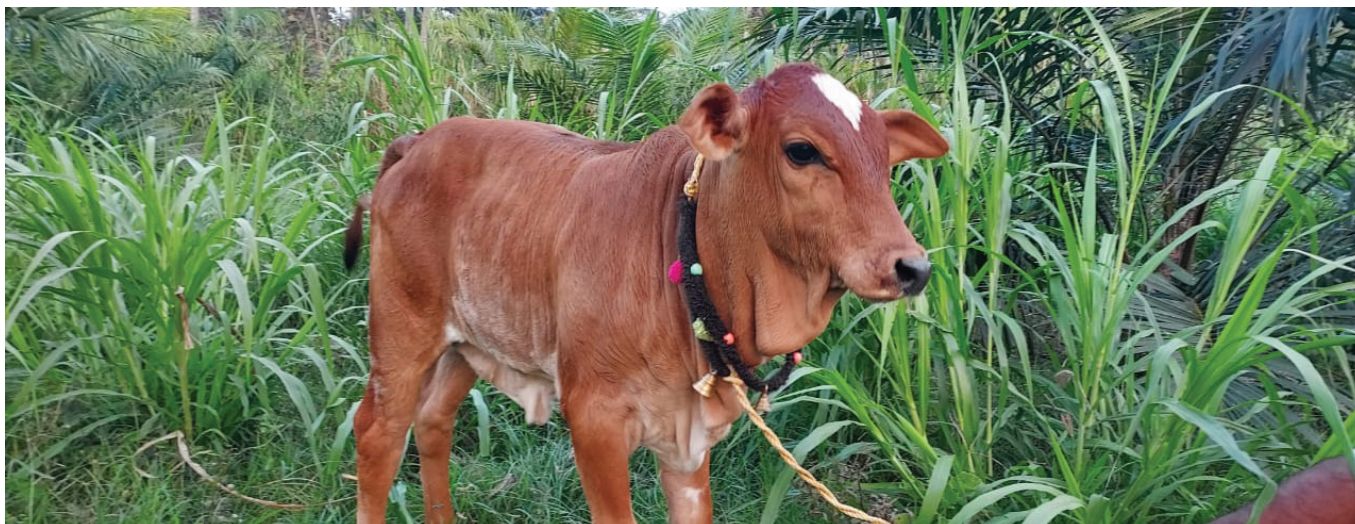


3 POLICY FRAMEWORK & INCENTIVES

- Implement supportive policies, subsidies, and low-interest credit schemes to encourage technology adoption.
- Strengthen biosecurity, data privacy, and quality standards to foster a trusted digital ecosystem.

4 CAPACITY BUILDING & STAKEHOLDER ENGAGEMENT

- Conduct statewide training programs using AR/VR, online modules, and field demonstrations to promote technology literacy.
- Foster multi-stakeholder alliances among government agencies, research institutions, private enterprises, and financial institutions to drive innovation and investment.



ROADMAP & MILESTONES

Phase	Timeline	Key Activities	Expected Outcomes
Foundation (0-12 months)	Year 1	Infrastructure setup, pilot projects, stakeholder engagement	Demonstrable proof of concept; digital ecosystem established
Scaling & Optimization (13-36 months)	Years 2-3	Expand IoT, AI, blockchain deployment; capacity building	Early productivity gains; reduction in disease outbreaks
Full Deployment & Impact (37-60 months)	Years 4-5	Nationwide scale-up, policy reinforcement, continuous innovation	Double-digit growth; sustainable, resilient income streams

WAY FORWARD

To realize this ambitious vision, the following strategic actions are essential:

- **Policy Enablement & Incentives:** Formulate policies to incentivize investments, facilitate digital adoption, and protect data privacy.
- **Innovative Ecosystems:** Establish innovation hubs, R&D centers, and incubation programs to foster continuous technological breakthroughs.
- **Digital Connectivity & Infrastructure:** Accelerate 5G rollout and edge computing deployment in rural areas to ensure seamless data flow.
- **Market & Export Facilitation:** Leverage traceability and quality assurance systems to access high-value markets and premium exports.
- **Monitoring & Feedback:** Implement KPIs and adaptive management systems to ensure continuous improvement and scalability.





ARTIFICIAL INTELLIGENCE: "SMART FARMING"

CONCLUSION

Harnessing the power of advanced technologies and AI can propel Andhra Pradesh's livestock industry into a new era of exponential growth, sustainability, and global competitiveness aligning with innovation with inclusive growth, environmental sustainability, and farmer prosperity, transforming challenges into opportunities for resilient and prosperous animal husbandry.

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3

LIVESTOCK CREDIT PLAN

FINANCING THE FUTURE

INNOVATIVE CREDIT SOLUTIONS FOR
SUSTAINABLE LIVESTOCK DEVELOPMENT





LIVESTOCK CREDIT PLAN: “FINANCING THE FUTURE”

BACKGROUND & RATIONALE

The Livestock sector contributes significantly to nutritional security, rural employment, and the state's agricultural GDP, with an inherent potential to drive inclusive and sustainable economic growth. Despite the high demand for milk, meat, and eggs, the livestock sector faces systemic bottlenecks primarily the lack of access to affordable, structured, and innovative institutional credit. Small and marginal farmers, women-led SHGs, tribal communities, and start-ups often find themselves excluded from formal financial mechanisms due to limited collateral, lack of credit history, and inadequate financial literacy. This constrains their ability to invest in modern infrastructure, adopt new technologies, and upscale their activities.

Furthermore, the sector's growth is impeded by outdated practices, limited value addition, inadequate market linkages, and climate vulnerabilities. Indigenous breeds with high resilience and productivity are underutilized, and the potential of integrated livestock-farm systems remains largely untapped.

In this context, a comprehensive Livestock Sector Credit Plan is vital to catalyze double-digit annual growth, foster innovation, and ensure inclusivity. The plan aims to bridge the financing gap through need-based, technology-enabled, and scheme-converged financial solutions that empower smallholders, women, tribal communities, and entrepreneurs ultimately transforming Andhra Pradesh into a model of sustainable, inclusive, and high-growth animal husbandry.

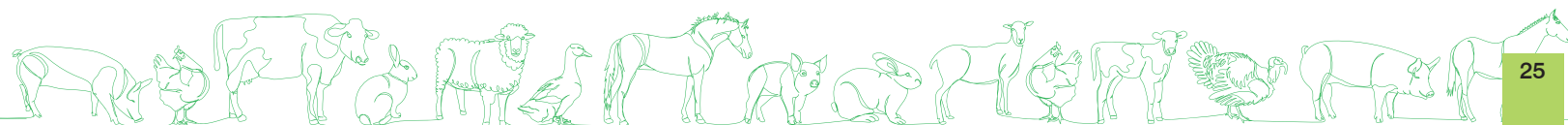
VISION & OBJECTIVES

Vision:

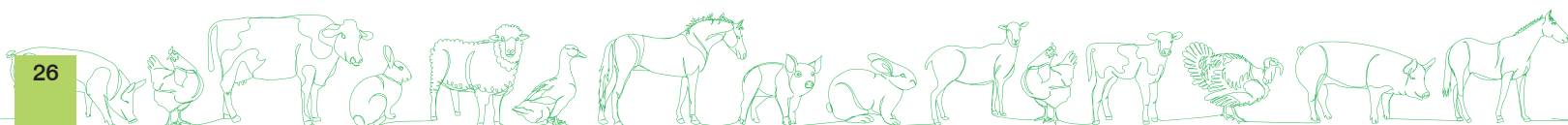
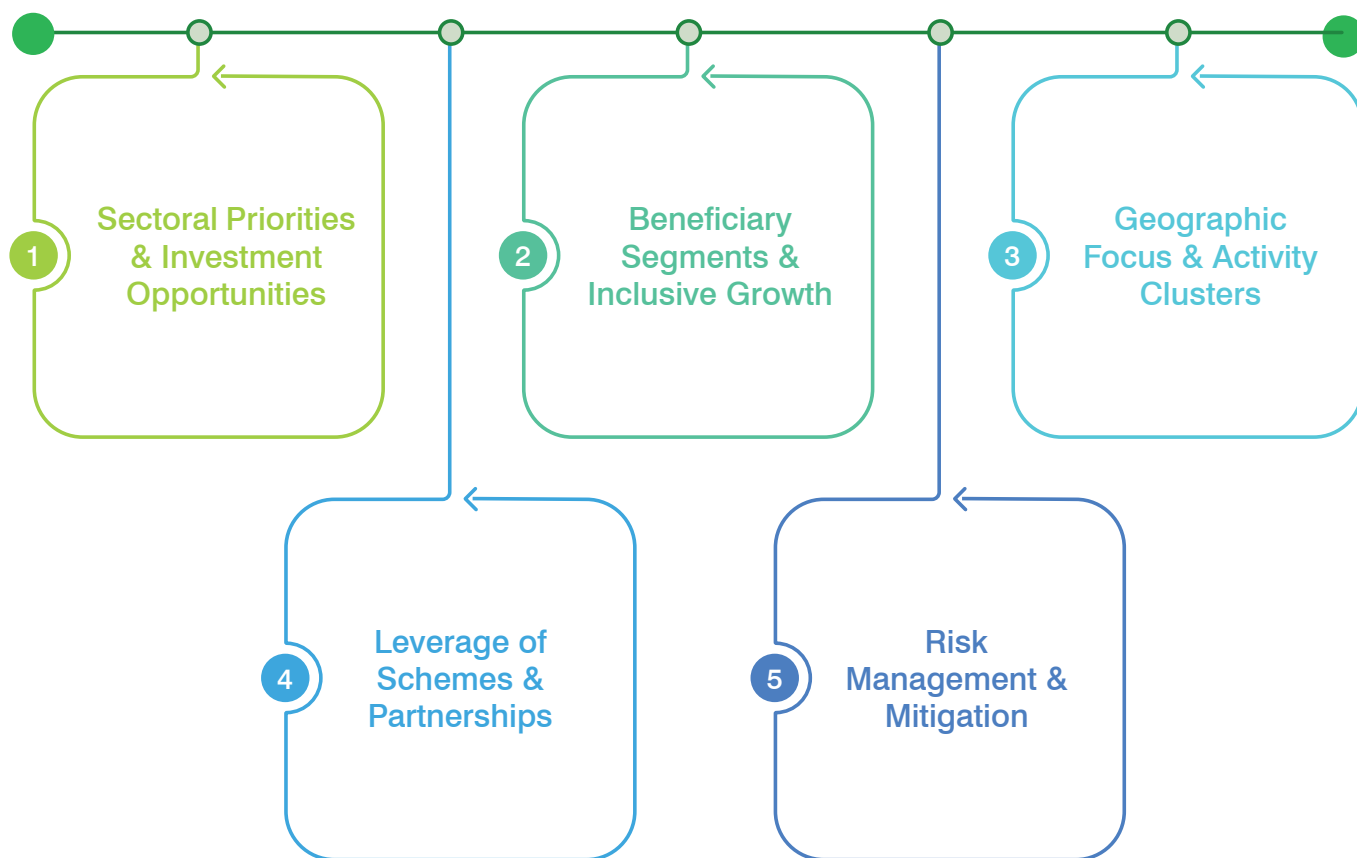
To position Andhra Pradesh as a leading livestock hub through innovative, inclusive, and environmentally sustainable financial solutions that foster rapid growth, diversification, and export readiness.

Key Objectives

- Empower 1 lakh new livestock entrepreneurs with targeted credit support.
- Enhance livelihoods of 25 lakh women SHG members/women farmers through livestock financing.
- Mobilize Rs.15,000 crore over five years to fund scalable livestock initiatives.
- Introduce next-generation solutions for credit facilitation by leveraging technology with real-time dashboards for Credit plan monitoring, evaluation, and adaptive management.
- Foster public-private partnerships and convergence with Government (national/state) schemes to maximize impact.



STRATEGIC FOCUS AREAS





1

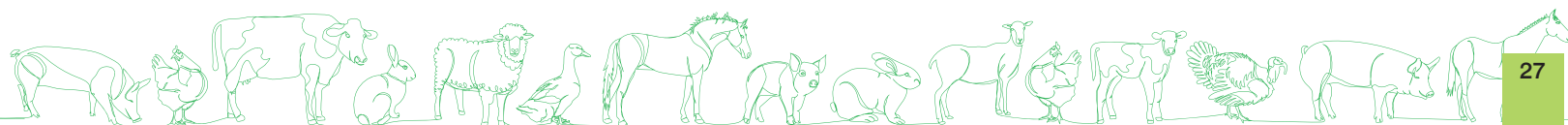
SECTORAL PRIORITIES & INVESTMENT OPPORTUNITIES

- Dairy: Introduction of High Yield Buffaloes, crossbred cows, chilling infrastructure, value-added dairy products, Milk Parlours and innovative dairy start-ups.
- Meat & Egg Processing: Startups in milk powder, egg powder, and processed meat.
- Small Ruminants: Breeding farms, feed banks, and goat milk, milk processing, marketing outlets (NCR-Meat-hengicherla model).
- Poultry & Hatcheries: Desi backyard poultry, commercial broiler/layer units, and integrated hatchery projects.
- Swine: Breed enhancement and tribal livelihood programs, encouraging commercial units, and pork processing units.
- Feed & Fodder: Silage, hay processing, concentrate feed units, TMR units, and mineral supplement manufacturing.
- Biogas & Waste Management: Dung-to-energy plants, vermicomposting, and slurry management.
- Integrated Livestock Systems: Holistic models that combine multiple activities for resilience and profitability.

2

BENEFICIARY SEGMENTS & INCLUSIVE GROWTH

- Dairy: Induction of two animal Units –Buffaloes & Cows, Calf & Heifer Rearing- Cows & Buffaloes, Value addition, Milk Parlours, Innovative Dairy start –ups
- Back yard Poultry Units
- Small Ruminants: Sheep & Goat Units, Goat cheese, Marketing Outlet-NRC-Meat-Chengicherla Model
- Piggery: Pig Rearing & Piglet fattening Units, Encouraging commercial units and Pork processing units
- Feed & Fodder: Straw Bale making, Silage, Hay processing, Concentrate feed units, TMR units, Mineral supplement manufacturing.
- Integrated Livestock Systems & Biogas / Waste Management -Dung-to-energy plants, Vermicomposting and slurry management.
- Meat & Egg Processing: Startups in milk powder, egg powder and processed meat.
- Women-led SHGs under SERP.
- Small and marginal farmers.
- Tribal communities and indigenous breed custodians.
- MSMEs and startups in the livestock ecosystem.
- FPOs and cooperative societies.



3 GEOGRAPHIC FOCUS & ACTIVITY CLUSTERS

- Dairy: Chittoor, Krishna, Guntur, and East/West Godavari.
- Poultry: Srikakulam, Vizianagaram, and Vizag.
- Small Ruminants & Sheep: Prakasam, Anantapur, and NE districts.
- Pig Farming: Tribal belts like Araku Valley.
- Feed & Veterinary: Guntur, Krishna, and Nellore.

GEOGRAPHIC FOCUS & ACTIVITY CLUSTERS					
District/Zone	Dairy	Sheep	Poultry	Piggery	Others- Fodder & Feed
Zone 1 North costal					
Zone 2 E/W Godavari & Krishna					
Zone 3 Guntur/Ongole/Nellore					
Zone 4 Rayalaseema					

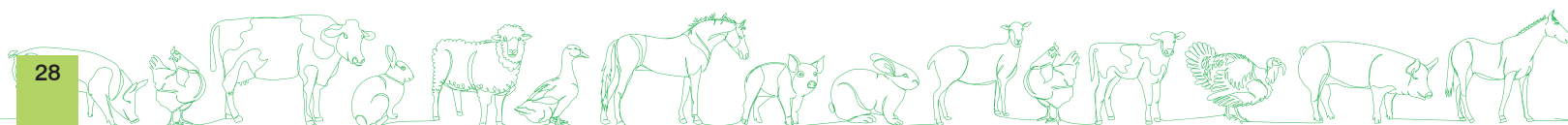
Red colour indicates potential activities in various zones

4 LEVERAGE OF SCHEMES & PARTNERSHIPS

- Individual Farmer Support: Kisan Credit Card with subvention, Mini-Gokulam, PM-FME for value addition.
- Entrepreneurial Incentives: NABARD schemes, NABARD's Dairy and Breeding schemes, and NLM subsidies, RGM-IVF, elite bull production, native breed conservation.
- Innovative Funding: AHIDF interest subventions, credit guarantees, and MSME support.
- CSR & Private Sector: Collaborations with foundations/trusts like Tata Trusts, Gates Foundation and, corporate/private sector & industry players to unlock additional funding and technical support.
- Schemes supporting Animal Husbandry sector: Animal Husbandry Infrastructure Development Fund (AHIDF), Special Refinance Scheme for Animal Husbandry Infrastructure Development (SRS for AHIDF), Agri Clinic and Agribusiness Centers Scheme (ACABC Scheme), Agricultural Marketing Infrastructure (AMI) sub- scheme of Integrated Scheme for Agricultural Marketing (ISAM), Special Refinance scheme for financing under Agri. Infra Fund (AIF), Credit Facility to Federations (CFF): Rural Infrastructure Development Fund (RIDF) Food Processing Fund.

5 RISK MANAGEMENT & MITIGATION

- Livestock Insurance: Subsidized schemes with leading insurers.
- Credit Guarantees: Via CGTMSE and AHIDF.
- Lending Models: Promotion of SHG and Joint Liability Group (JLG) models to de-risk investments.
- Continuous Monitoring: Asset geo-tagging, MIS dashboards, and third-party validation.





6 SCHEMES-LINKAGES

Individual Farmer-Oriented:

- Pasu Kisan Credit Card – PKCC
- MGNREGS-Gokulam – 90% subsidy on cattle shelters for SC/ST/women groups.
- SERP – Bank linkages
- CSR Convergence – With Tata Trust, Gates Foundation, Granite ,Cement Industries etc.
- Support through commercial poultry industry, i.e: Integration Models – Suguna, VHL & Sneha,

Entrepreneur-Oriented:

- Rashtriya Gokul Mission – IVF, elite bull production, native breed conservation.
- PM-FME/AP Food Processing Policy – Support for livestock value-addition units.
- AHIDF – Infra development fund with interest subvention, credit guarantee, and capital support.
- NABARD – Schemes for dairy, breeding, and feed infrastructure.
- NLM – Up to 50% subsidy on desi poultry and small ruminant farms.
- PMEGY – Projects up to Rs.20 lakh, with 25–35% subsidy (tribal/women focus).

IMPLEMENTATION & GOVERNANCE

- District Livestock Credit Committees (DLCCs): Chaired by District Collectors for localized oversight.
- Bank MoUs: Simplifying loan processing and disbursement.
- Awareness & Training: Campaigns through SERP, DRDAs, and veterinary institutions.
- Convergence Platforms: Integration with PMMSY, RIDF, and other schemes for resource optimization.

LUCRATIVE INVESTMENT & PARTNERSHIP OPPORTUNITIES

- High-Impact Startups: Dairy processing units, bioenergy plants, and feed manufacturing.
- Technology Adoption: Digital platforms for credit facilitation, farm management, and market linkages.
- Private Sector Engagement: Contract farming, integrated supply chains, and farm service companies.
- Sustainable & Climate-Resilient Models: Focus on indigenous breeds, eco-friendly waste management, and renewable energy.



ROADMAP & PHASED APPROACH

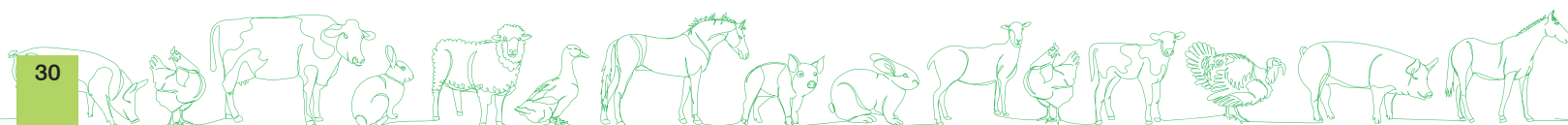
Phase	Timeline	Key Activities	Expected Outcomes
Year 1	Foundation	Set up DLCCs, launch digital portals, awareness drives	Streamlined processes, initial disbursements
Year 2	Scaling	Expand outreach, pilot innovative schemes, technology adoption	Increased entrepreneurs, productivity gains
Year 3	Deepening	Strengthen value chains, promote climate resilience	Market linkages, sector resilience
Year 4	Consolidation	Impact evaluation, scheme refinement	Income stabilization, diversification
Year 5	Transformation	Institutionalize best practices, sector leadership	Double-digit growth, exports, branding

STRATEGIC PRIORITIES

- Dash Board Monitoring using Technology & Data: Embrace digital finance, Blockchain, and Data analytics.
- Policy Support: Tax incentives, Interest Subvention, Subsidies and Export Facilitation.
- Inclusive & Green Growth: Focus on tribal, women, Indigenous breeds, and ecofriendly practices.
- Market & Industry Engagement: Foster Private Sector Partnerships with farmers for Up-scaling

PROPOSED INVESTMENT & SUPPORT PLAN

Activity	Unit Cost (Rs)	Proposed Number of Beneficiaries	Expected Outcomes
Dairy Units (1 Animal) (SHGs)	1,00,000	5,00,000	Lakhpathi Didis
Female calf rearing	1,00,000	2,00,000	Lakhpathi Didis
Rural Backyard Poultry	45,000	4,00,000	Lakhpathi Didis
Broiler Unit – Integration Model	2,50,000	2,00,000	
Fodder Production	Convergence with MGNREGS	3 ,00,000 acres/ farmers	Lakhpathi Didis
Sheep Goat Rearing	1,00,000	6,00,000	
Ram Lamb Fattening	1,00,000	1,00,000	
Pig Rearing Units	1,00,000	1,00,000	
Vermicompost & Biogas Plant	50,000	1,00,000	
Commercial calf rearing	5,00,000	20,000	E D P – 1 Lakh units
Commercial Dairy Units	8,00,000	20,000	
Commercial Poultry Farms	70,00,000	20,000	
Commercial Broiler Units	17,00,000	20,000	
Feed& Fodder interventions	1,00,00,000	20,000	





LIVESTOCK CREDIT PLAN: “FINANCING THE FUTURE”

GLC-GROUND LEVEL CREDIT FOR ANIMAL HUSBANDRY IN AP. (RS.CRORE) (NABARD)

Activity	ACP Annual Credit Plan 2022-23 Achievement	PLP- Potential Linked Credit Plan 2023-24 projections	ACP 2023-24 achievement	PLP 2024-25 projections	ACP 2024-25 Achievement	PLP 2025-26 projections	2025-26 projections (Revised)	PLP 2026-27 projections	PLP 2027-28 projections	PLP 2028-29 projections
Dairy	11953	10605	3929	13575	5714	17268	7500	8625	9919	11407
Poultry	880	2407	1200	3041	948	4370	4500	5175	5951	6844
Sheep	-	-	-	-	-	-	1500	1725	1984	2281
Piggery	-	-	-	-	-	-	750	863	992	1141
Others	-	-	-	-	-	-	750	863	992	1141
Total	12832	13012	5129	16616	6662	21638	15000	17250	19838	22813

Activity wise projections were made for each district & available with NABARD

WAY FORWARD & STRATEGIC PRIORITIES

- Policy Support: Tax incentives, interest subsidies, and export facilitation.
- Technology & Data: Embrace digital finance, blockchain, and data analytics.
- Inclusive & Green Growth: Focus on tribal, women, indigenous breeds, and eco-friendly practices.
- Market & Industry Engagement: Foster private sector partnerships for scale, quality, and branding.

CONCLUSION

This integrated Livestock Sector Credit Plan aims to propel Andhra Pradesh's animal husbandry into a new era of rapid, inclusive, and sustainable growth. By mobilizing Rs.15,000 crore through innovative financing, technology, and strategic convergence, the state can achieve double-digit annual growth, create millions of new livelihoods, and establish a globally competitive livestock ecosystem.

Together, let's build a livestock economy that is profitable, inclusive, and future-ready!

Contributed by:

Dr. S. Venkat Rao,

Additional Director (Planning), Animal Husbandry & Team.



4

ENTREPRENEURSHIP DEVELOPMENT

FROM FARM TO FORTUNE

NURTURING ENTREPRENEURSHIP IN SUSTAINABLE
LIVESTOCK VENTURES





ENTREPRENEURSHIP DEVELOPMENT: “FROM FARM TO FORTUNE”

INTRODUCTION

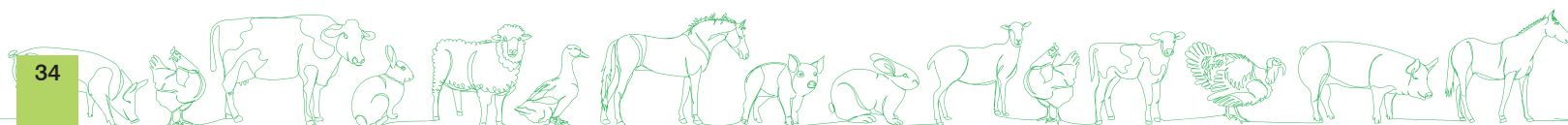
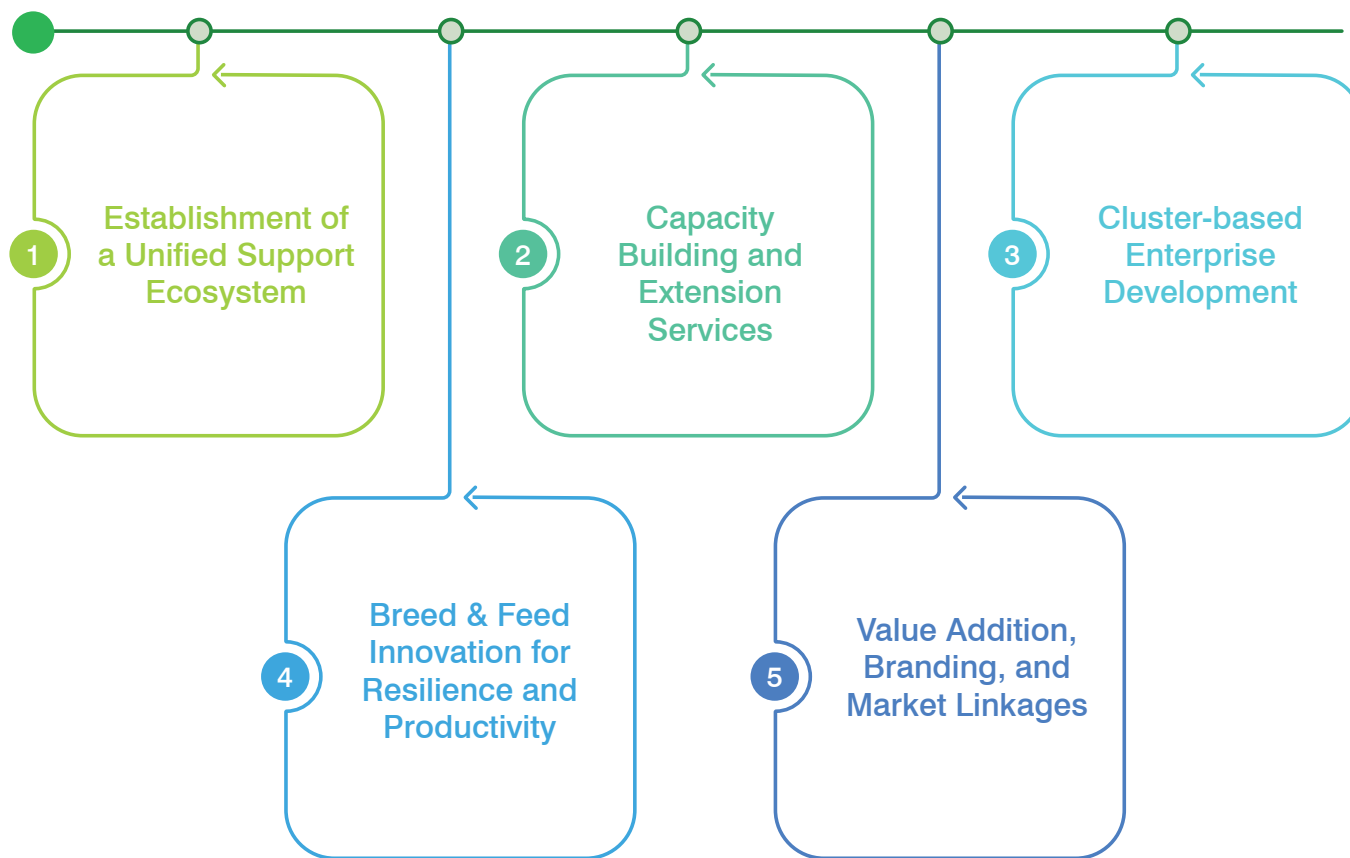
In the rapidly evolving landscape of rural livelihoods, Andhra Pradesh stands at a pivotal juncture where livestock farming can be harnessed as a powerful driver of economic growth, social inclusion, and nutritional security. Despite the rich tradition and vast potential of the livestock sector, smallholder farmers and marginalized communities often face challenges such as resource constraints, limited access to modern technology, and fragmented market linkages.

To unlock the full potential of this sector, a strategic, integrated approach is essential - one that combines innovative breeding, sustainable practices, entrepreneurial support, and robust institutional frameworks. This strategy aims to catalyze a transformation from subsistence animal rearing to vibrant, market-oriented livestock enterprises capable of delivering double-digit growth annually. By fostering scalable models in dairy, goat, sheep, and piggery farming, Andhra Pradesh can create a resilient ecosystem that ensures sustainable incomes, improved nutrition, and inclusive rural development.

This comprehensive framework underscores the importance of leveraging government schemes, private sector partnerships, digital tools, and community-led initiatives to build a future where livestock entrepreneurship becomes a cornerstone of Andhra Pradesh's rural economy.



CORE REINFORCED PROPOSALS





1 ESTABLISHMENT OF A UNIFIED SUPPORT ECOSYSTEM

- Single Window System: Single Window System (for 5000 entrepreneurs and 15000 SHGs.) for input supply, veterinary services. Financial schemes and market access reducing bureaucratic hurdles and ensuring timely support. Establishment of EDP cell for 2000 entrepreneurs & 5000 SHGs every year. JLG concept may be adopted for entrepreneurs
- Funding of Animal Husbandry start-ups: Allocation of funds for supporting and establishment of Livestock sector start-ups, i.e., Innovation centers for value addition products shall be established, at all veterinary colleges/ livestock farms in the state
- Credit Requirement: Requirement of 2,675 crores to provide credit facility for 5000 entrepreneurs and 15000 SHGs, towards development of dairy plant, establishment of feed plants, and promoting value addition products.
- Scheme Integration & Digital Enablement: Scheme Integration & Digital Enablement Maximize benefits from government schemes (central and state) including solar subsidies, insurance, and veterinary support, through digital portals and mobile apps. Real time capturing through mobile/ system based APPs for effective monitoring.
- Private Sector & Public Partnership: Foster collaborations with private firms for feed manufacturing, veterinary supplies, and marketing, ensuring quality and competitiveness.

2 CAPACITY BUILDING AND EXTENSION SERVICES

- Conduct intensive training programs focusing on modern animal husbandry, reproductive health, disease management, and value addition.
- Empowerment, employment and entrepreneurship through livestock: to facilitate and empower 20 lakh SHG women into lakhpathis through integrated livestock farming, employ youth in to dairying and encourage entrepreneurship in dairying.
- Organize reproductive health camps, vaccination drives, and nutritional workshops, especially targeting women and marginalized groups.
- Leverage digital tools and mobile veterinary units to extend extension reach.



3 CLUSTER-BASED ENTERPRISE DEVELOPMENT

- Form village-level clusters (5–6 dairy farmers, 3–4 shepherds) for collective procurement, shared infrastructure, and collective marketing.
- Strengthen SHGs, FPOs, and cooperatives to facilitate access to credit, technology, and market linkages.
- Promote peer learning and mentorship within clusters to accelerate adoption of best practices.

4 BREED & FEED INNOVATION FOR RESILIENCE AND PRODUCTIVITY

- Promote drought-resistant, high-reproductive breeds such as Osmanabadi goats, local sheep breeds, and improved pig breeds.
- Support the manufacturing and distribution of low-cost, nutrient-rich feed and fodder, including silvipasture and agro-forestry systems.
- Encourage organic manure and compost production for sustainable farm inputs.

5 VALUE ADDITION, BRANDING, AND MARKET LINKAGES

- Develop diversified value-added products like milk soaps, organic fertilizers, and processed meat.
- Facilitate digital marketing platforms, rural e-marketplaces, and branding initiatives for premium pricing.
- Encourage participation in regional, national, and export markets to expand reach.

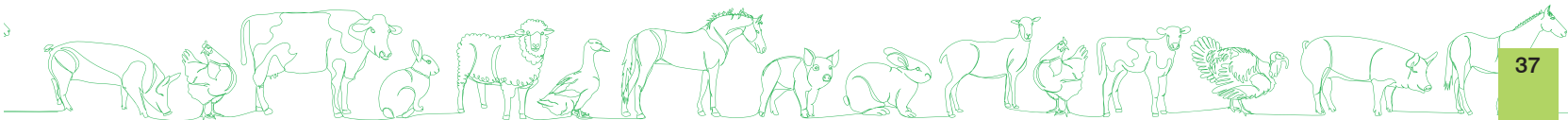




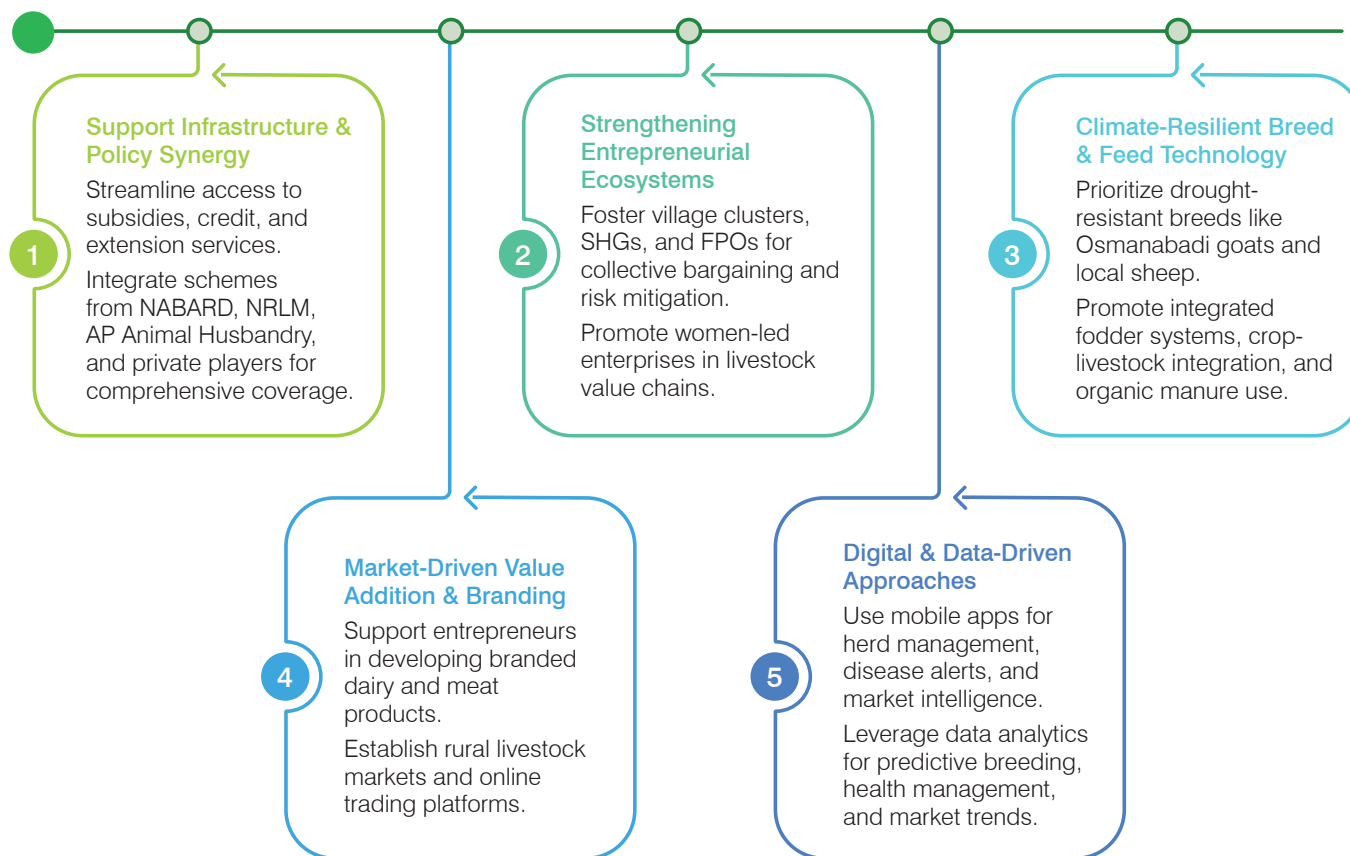
ENTREPRENEURSHIP DEVELOPMENT: “FROM FARM TO FORTUNE”

IMPLEMENTATION
ROADMAP

Phase	Timeline	Key Activities	Expected Results
Foundation (0-6 months)	Infrastructure setup, stakeholder engagement	Establish Single Window; initiate training; baseline surveys	Increased awareness, initial enterprise formation
Pilot & Demonstration (6 -18 months)	Launch pilot clusters, breed improvement, fodder cultivation	Demonstration farms, value-added units, market linkages	Early successes, data for scaling
Scale-Up (1.5-3 years)	Broader outreach, institutional strengthening	Expand enterprise units, digital integration, branding	Double-digit growth, diversified income streams
Sustainable Growth & Innovation (3+ years)	Policy refinement, export exploration	Market expansion, technology adoption, sustainability practices	Resilient, globally competitive livestock sector



STRATEGIC FOCUS AREAS





MILKING MACHINES: ENHANCING DAIRY PRODUCTIVITY THROUGH TECHNOLOGY

INTRODUCTION

The introduction of milking machines within the dairy sector of Andhra Pradesh can significantly enhance the efficiency and productivity of milk production. This draft outlines a plan to provide milking machines on a subsidy basis to SHG women, thereby empowering them to support local dairy farmers while improving their own economic status. SERP and AHD will play crucial roles in facilitating this initiative. The economic benefits extend beyond individual earnings, contributing to the broader dairy sector's growth.



OBJECTIVES

The primary objectives include:

- To outline a strategic plan for distributing milking machines to SHG women.
- To define the roles of SERP and AHD in ensuring the successful implementation of this initiative.
- To analyze the economic impact on individuals and the dairy sector, including increased production efficiency and reduced labor costs.

IMPLEMENTATION PLAN

Provision of Subsidies

Develop a comprehensive subsidy framework through SERP to make milking machines affordable for SHG women, enabling them to rent out these machines to local dairy farmers at reasonable rates. This lowers the entry barrier for women and enhances their earning potential.

Rental Pricing Strategy

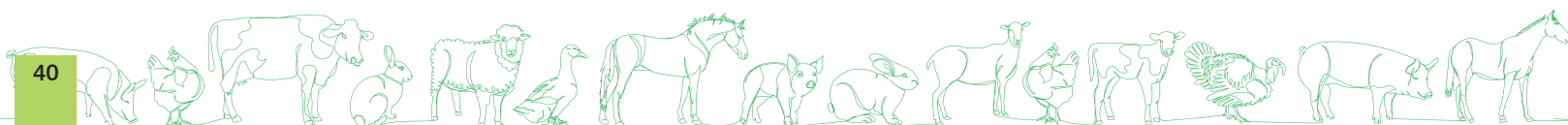
Engage with farmers, facilitated by AHD, to establish fair rental charges for the use of milking machines, ensuring that pricing is competitive yet sustainable for both SHG women and farmers.

Market Research

Conduct discussions with farmers, aided by AHD, to determine fair and competitive rental charges for milking machines, ensuring accessibility for all. A well-structured pricing strategy can lead to improved farmer profitability and affordability.

Training Program

Organize training sessions through SERP and AHD to ensure that SHG women are well-equipped to operate and maintain milking machines effectively, leading to increased productivity and milk quality.





ENTREPRENEURSHIP DEVELOPMENT: “FROM FARM TO FORTUNE”

Economic Indicators

Individual Impact : Increased income for SHG women through rental fees from milking machines, leading to improved financial stability and empowerment.

Societal Impact : Enhanced dairy productivity and efficiency, resulting in higher milk yields for farmers, contributing to the overall growth and sustainability of the dairy sector.

Role of Convergence Departments

SERP : Provide financial assistance and training for SHG women to maximize the utility of milking machines.

AHD : Offer technical guidance and support in the use of milking machines, ensuring optimal productivity for local dairy farmers.

CONCLUSION

The provision of milking machines to SHG women will significantly enhance productivity in the dairy sector while providing women with a sustainable source of livelihood. By leveraging the support of SERP and AHD, we can create a robust framework that benefits both women and local farmers, ultimately driving economic growth in the region.



CHAFF CUTTERS: STREAMLINING DAIRYING WITH EFFICIENT EQUIPMENT

Chaff cutters are essential tools for modern dairying, enabling farmers to efficiently process fodder for livestock. This draft outlines a strategic plan to provide chaff cutters to SHG women on a subsidy basis, empowering them to contribute effectively to the local dairy economy. SERP and AHD will serve as key partners in this initiative. The economic implications of this initiative extend to improved livelihoods for women and enhanced productivity for farmers.

OBJECTIVES

The primary objectives include:

- To establish a framework for distributing chaff cutters to SHG women.
- To define the roles of SERP and AHD in supporting this initiative.
- To assess the economic impact on individuals and the dairy sector, including cost savings and productivity improvements.

IMPLEMENTATION PLAN

Subsidy Framework

Formulate a subsidy mechanism through SERP to make chaff cutters affordable for SHG women, allowing them to rent out these machines to dairy farmers. This initiative can enhance women's earning potential and contribute to household income.

Rental Pricing Strategy

Engage with farmers, facilitated by AHD, to establish fair rental charges for the use of chaff cutters, ensuring that pricing is competitive yet sustainable for both SHG women and farmers.





ENTREPRENEURSHIP DEVELOPMENT: “FROM FARM TO FORTUNE”

Training and Support

Provide comprehensive training through SERP and AHD on the operation and maintenance of chaff cutters to ensure that SHG women can effectively serve the needs of local dairy farmers, leading to improved efficiency in fodder processing.

Economic Indicators

Individual Impact : Increased income for SHG women through the rental of chaff cutters, leading to enhanced financial security and empowerment.

Societal Impact : Cost savings for farmers due to efficient fodder processing, resulting in improved livestock health and productivity, which contributes to the overall economic stability of the dairy sector.

Role of Convergence Departments

SERP : Offer training and financial support to SHG women for acquiring and using chaff cutters.

AHD : Provide technical support and promote the health and productivity of livestock through efficient fodder processing.

CONCLUSION

The provision of chaff cutters to SHG women stands to significantly enhance the efficiency of dairy farming in Andhra Pradesh. By empowering women and fostering collaboration with SERP and AHD, we can create a sustainable and productive dairy ecosystem that benefits the entire community, driving economic prosperity for individuals and society as a whole.



CALF REARING FOR SELF-HELP GROUP WOMEN

Calf rearing is a vital component of livestock development, offering women in self-help groups (SHGs) an opportunity to enhance household income, improve nutrition, and empower themselves economically. Proper rearing practices ensure healthy calves, leading to sustainable dairy and meat production.

Benefits of Calf Rearing

- Income generation through sale of calves and milk
- Improved nutritional status for families
- Women's economic empowerment and skill development
- Contribution to rural livelihoods and poverty reduction

Key Practices

- Selection of Calves: Opt for healthy, disease-free calves, preferably from reputable sources.
- Feeding: Provide colostrum within the first 2 hours; feed adequately with quality milk or milk substitutes, and introduce roughage and concentrates gradually.
- Housing: Ensure clean, dry, well-ventilated, and predator-proof shelter.
- Health Care: Regular vaccination, deworming, and hygiene practices prevent diseases.
- Water: Always provide fresh and clean drinking water.
- Record Keeping: Maintain records of births, vaccinations, feeding, and health status for effective management.

Recommended Unit Size

Small-scale: 2-5 calves (suitable for individual SHG members or small groups).

Medium-scale: 10-20 calves (for larger groups or cooperative setups).

Challenges & Solutions

Lack of awareness: Conduct regular training sessions.

Limited resources: Promote collective purchasing and shared resources within SHGs.

Disease management: Collaborate with veterinary services for timely interventions.





ENTREPRENEURSHIP DEVELOPMENT: "FROM FARM TO FORTUNE"

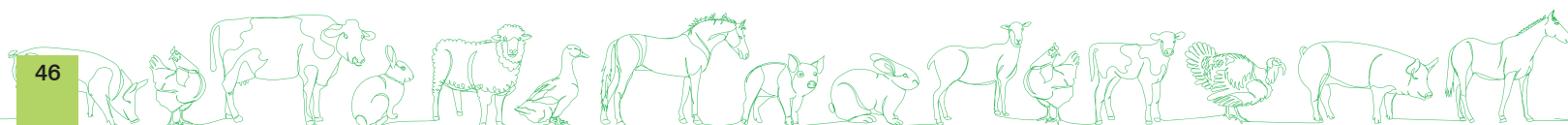


CONCLUSION

Calf rearing is a practical livelihood activity for women in self-help groups. With proper knowledge, training, and community support, women can significantly improve their economic status and contribute to rural development.

WAY FORWARD

- Policy Advocacy: Foster supportive policies for credit, insurance, and market development.
- Technology & Innovation: Promote IoT, AI, and mobile platforms for herd health, breeding, and market linkages.
- Financial Inclusion: Ensure affordable credit, insurance, and savings schemes tailored for smallholders and entrepreneurs.
- Research & Development: Collaborate with research institutions for breed improvement, feed innovation, and disease control.
- Environmental & Climate Resilience: Implement water conservation, renewable energy solutions, and eco-friendly waste management.
- Expected Outcomes
- Double-Digit Growth: Year-on-year escalation in livestock productivity, enterprise numbers, and income.
- Enhanced Livelihoods: Increased household incomes, especially among women and marginalized groups.
- Nutritional Security: Improved access to quality milk, meat, and organic products.
- Resilient Rural Economy: Sustainable practices that adapt to climate variability and resource constraints.
- Market Competitiveness: Strong branding, diversified products, and expanded markets.





ENTREPRENEURSHIP DEVELOPMENT: “FROM FARM TO FORTUNE”

CONCLUSION

This strategic framework provides a comprehensive pathway for transforming state's livestock sector into a vibrant, entrepreneurial hub that ensures sustainable income, inclusive growth, and resilience. By reinforcing support systems, leveraging technology, and fostering innovation, the state can realize its vision of double-digit growth and enhanced rural prosperity.

Contributed by:

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5

PIONEERING ANDHRA PRADESH'S DAIRY SECTOR WITH SEX-SORTED SEMEN

THE GAME-CHANGER TECHNOLOGY

RESHAPING ANDHRA PRADESH'S LIVELIHOOD LANDSCAPE





BACKGROUND

The Sex-Sorted Semen (SSS) Program in Andhra Pradesh aims to enhance the dairy sector by ensuring 90% female calf births, leading to genetic improvement, higher milk production, and increased farmer income. With over 40 lakh artificial inseminations annually, the government plans a phased expansion to maximize economic benefits and transform the state's dairy industry sustainably.

The dairy sector in Andhra Pradesh stands at a pivotal juncture, with a burgeoning population of over 40 lakh artificial inseminations annually using conventional semen. Despite notable progress, stagnation in genetic improvement and milk productivity constrains the sector's growth potential. The advent of Sex-Sorted Semen (SSS) technology offers an unprecedented opportunity to revolutionize dairy breeding by enhancing female calf births, accelerating genetic gains, and ensuring sustainable income streams for farmers. The technology's potential to increase female births to 90%, coupled with strategic scaling, can catalyze double-digit annual growth, aligning with the state's vision of a resilient, modern dairy economy.

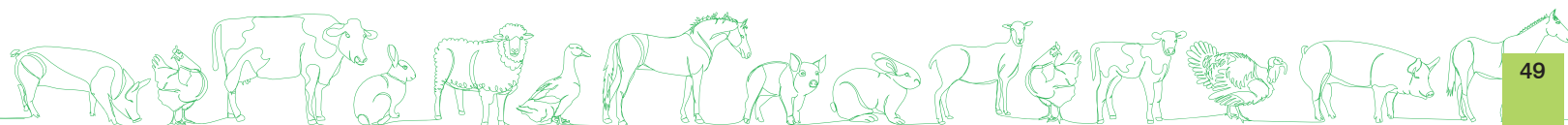
SCOPE

This initiative encompasses:

- Statewide deployment of sex-sorted semen across all eligible bovine populations.
- Development of robust semen production and distribution infrastructure.
- Capacity building of AI technicians and farmers.
- Digital integration for data-driven breeding decisions.
- Ensuring sustainability through self-reliant production and strategic partnerships.

AIM

To establish Andhra Pradesh as a leading dairy state through innovative breed improvement, leveraging sex-sorted semen technology to achieve double-digit growth in milk production, sustainable income for farmers, and long-term genetic enhancement.



OBJECTIVES

- Achieve 90% female calf births via sex-sorted semen by 2030.
- Increase annual milk yield per animal by 20-30% within five years.
- Generate a cumulative 59.4 lakh female calves by 2030, creating a sustainable breeding stock.
- Facilitate 5 million inseminations by 2030, with phased expansion.
- Develop self-sufficient, state-level SSS production units.
- Integrate digital breeding management tools for real-time monitoring and genetic tracking.
- Promote inclusive growth by engaging smallholder and marginalized farmers.

PROPOSALS

1. Infrastructure Development

- Establish state-of-the-art semen production units with capacity for local SSS manufacturing.
- Strengthen existing AI centers with cold chain logistics and quality assurance systems.
- Develop breed-specific clusters in priority zones for targeted breeding.

2. Production & Supply Chain

- Collaborate with NDDB and private partners for bulk procurement, production and distribution.
- Subsidize SSS doses to incentivize adoption, with a focus on breeds like Gir, Sahiwal, Jersey, HF, Murrah, and crossbreeds.
- Implement a transparent supply chain, ensuring timely availability and quality.

3. Capacity Building & Farmer Engagement

- Conduct intensive training programs for AI technicians on SSS handling, digital tools, and herd management.
- Launch awareness campaigns highlighting benefits, success stories, and best practices.
- Facilitate farmer registration, incentivize early adoption, and promote herd management practices.



PIONEERING ANDHRA PRADESH'S DAIRY SECTOR WITH SEX-SORTED SEMEN

THE GAME-CHANGER TECHNOLOGY

4. Digital & Data Management

- Integrate breeding data with Bharath Pasudhan app and other digital platforms.
- Promote pedigree recording, milk yield tracking, and genetic profiling.
- Use real-time data for decision-making, monitoring progress, and genetic evaluation.

5. Policy & Financial Incentives

- Implement a subsidy model of Rs.150 per dose, with additional financial incentives for early adopters.
- Develop a revolving fund to support smallholders and cooperatives.
- Encourage private sector participation through public-private partnerships.

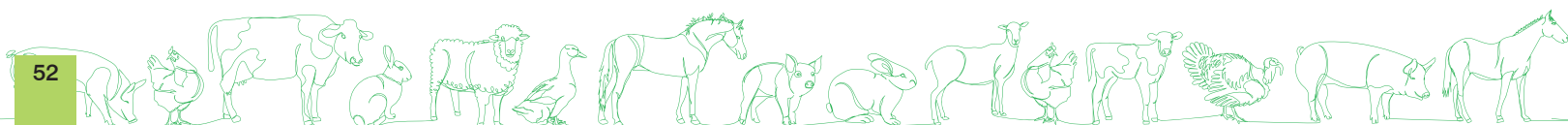
STRATEGIC INTERVENTIONS

- Local semen production: Reduce dependency and costs.
- Breed-specific clusters: Focused breeding for high-yield breeds.
- Farmer-centric approaches: Incentivize adoption, demonstrate economic benefits.
- Digital tools: Leverage AI-based data analytics for breeding decisions.



Plan of Action for supply of SSS Semen and its impact on Dairy Farming							
SUPPLY PLAN							
Year	No.of Doses required	Purchase from NDDB-NDS	In-house Production	Funds required for purchase @ Rs.300 per dose	Purchase of Semen sorting units for own Production	Farmers Contribution	Funds Required from Government
2025-26	10 lakh	10 lakh	—	30 crores	15*1.25= 18.75 crores	15 crores	33.75 crores
2026-27	20 lakh	10 lakh	10 lakh	30 crores	30*1.25= 37.5 crores	30 crores	37.5 crores
2027-28	40 lakh	10 lakh	30 lakh	30 crores	—	60 crores	15 crores
2028-29	45 lakh	—	45 lakh	—	—	67.5 crores	—
2029-30	50 lakh	—	50 lakh	--	--	75 crores	--

IMPACT ON GROSS STATE DOMESTIC PRODUCT							
Year	No. of doses utilized	No.of calves Produced	No.of Female Calves Produced	No.of New female calves added by SSS	Worth of milch animals added after 3 years @75000/ animal	Worth of milk added per annum @10 lit/day animal for 300 days	Percentage of growth over traditional semen
2025-26	10 lakh	4 lakh	3.6 lakh	1.6 lakh	1200 crores	2688 crores	17%
2026-27	20 lakh	8 lakh	7.2 lakh	3.2 lakh	2400 crores	5376 crores	35%
2027-28	40 lakh	16 lakh	14.4 lakh	6.4 lakh	4800 crores	10752 crores	71%
2028-29	45 lakh	18 lakh	16.2 lakh	7.2 lakh	5400 crores	12096 crores	80%
2029-30	50 lakh	20 lakh	18 lakh	8 lakh	6000 crores	13440 crores	88%





WAY FORWARD

- Policy & Institutional Support: Strengthen governance, streamline approvals, and facilitate private sector participation.
- Partnerships: Collaborate with research institutions (NDRI, ICAR, NDDB), development agencies, and private innovators.
- Innovation & R&D: Invest in continuous improvement of SSS technology, breed-specific research, and digital solutions.
- Monitoring & Evaluation: Regular assessments to optimize strategies, ensure quality, and track progress towards targets.
- Farmer-Centric Models: Develop community-based breeding schemes, ensuring inclusivity and livelihood sustainability.
- Financial Sustainability: Transition towards a cost-recovery model post initial subsidy phase, ensuring long-term viability.

CONCLUSION

Harnessing sex-sorted semen technology offers a transformative pathway to achieve double-digit growth rates, sustainable income, and breed improvement in Andhra Pradesh's dairy sector. Strategic infrastructure development, capacity building, digital integration, and policy support are crucial to unlocking this potential. With committed leadership, stakeholder collaboration, and innovative approaches, Andhra Pradesh can emerge as a pioneering dairy economy driven by genetic excellence and sustainable livelihoods.

Contributed by:

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6

FEED AND FODDER

NOURISHING THE FUTURE

SUSTAINABLE FEED AND FODDER SOLUTIONS
FOR LIVESTOCK SUSTAINABILITY





BACKGROUND & INTRODUCTION

The Fodder Development Plan in Andhra Pradesh aims to enhance livestock nutrition by expanding dual-purpose and high-yielding fodder crops, strengthening feed and fodder supply chains, and promoting sustainable cultivation practices. Key measures include fodder banks, silage storage units, crop residue management, and training programs for stakeholders. The plan integrates MGNREGS, private-sector participation, and a fodder security policy to ensure long-term availability, resilience, and economic benefits for rural livestock farmers, contributing to sustainable agricultural development.

The convergence of climate-smart agriculture, precision farming, biotechnology, and digital innovations offers unprecedented opportunities to upscale fodder production, improve quality, and optimize resource utilization. By integrating these advances, Andhra Pradesh can not only meet the increasing demand for livestock feed but also create a robust ecosystem that ensures long-term income security for farmers and entrepreneurs.

SCOPE

This strategy encompasses the entire feed and fodder value chain from crop diversification and innovative cultivation to storage, processing, and distribution leveraging latest scientific and technological breakthroughs. It targets:

- Expansion of dual-purpose and perennial fodder crops
- Adoption of precision agriculture and remote sensing
- Development of high-yielding, climate-resilient fodder varieties
- Establishment of modern silage, TMR, and feed processing units
- Strengthening supply chains through digital platforms and P4 Models
- Capacity building and stakeholder engagement for sustainable practices

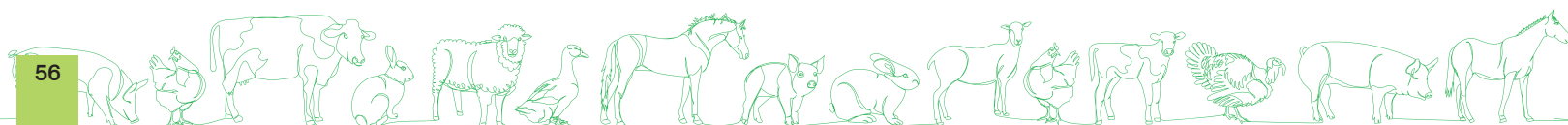
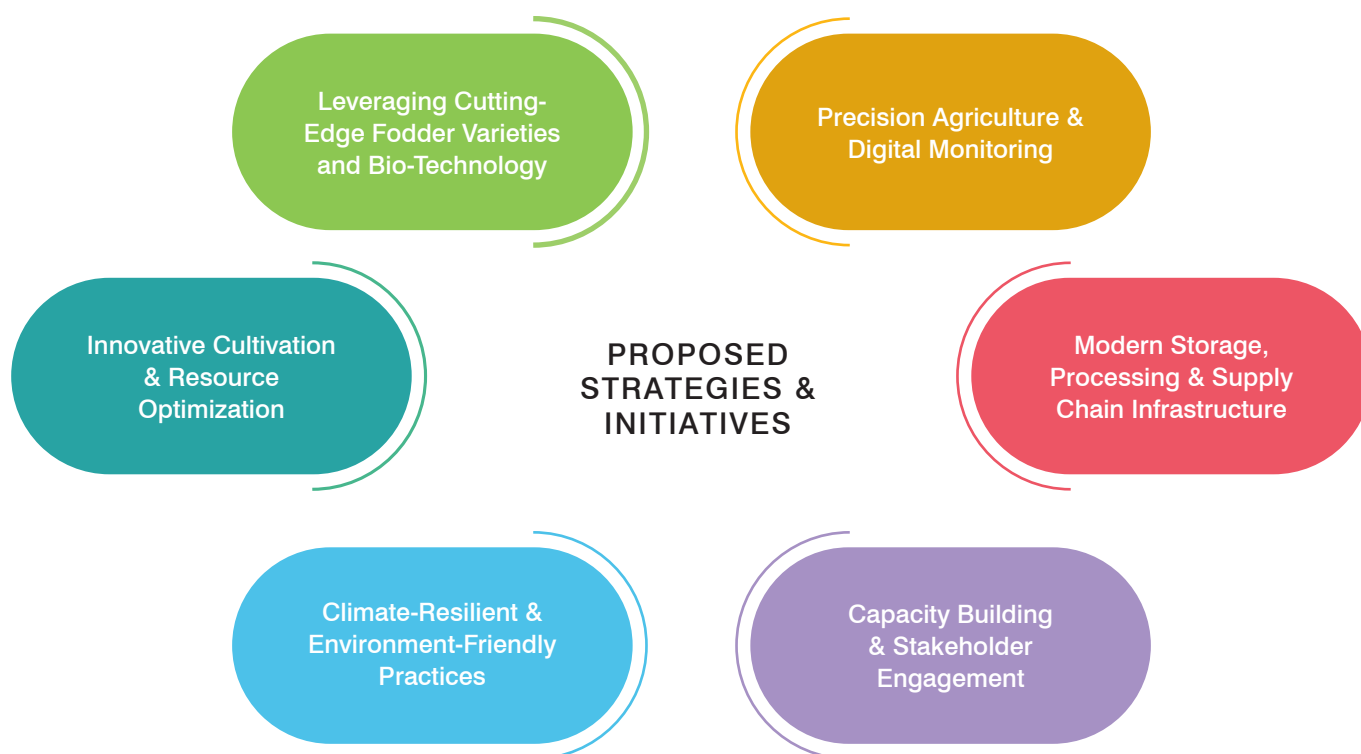
AIM

To catalyze a transformative shift in fodder development that ensures double-digit growth, sustainable income, and resilient livestock productivity in Andhra Pradesh by 2047.



OBJECTIVES

- Promote adoption of latest dual-purpose and high-yielding fodder varieties.
- Expand cultivation of perennial and seasonal fodder crops through precision and smart agriculture.
- Establish integrated fodder banks, silage units and TMR units
- Harness biotechnology and digital tools for optimized fodder production and management.
- Strengthen supply chains through innovative P4 models, subsidies, and capacity building.
- Foster climate-smart, resource-efficient practices via crop residue management and environmental sustainability.





1 LEVERAGING CUTTING-EDGE FODDER VARIETIES AND BIO-TECHNOLOGY

- Promote genetically improved dual-purpose legumes and non-legumes (Cowpea, Lucerne, Horse Gram, Napier, Maize, Jowar) developed through biotech research for higher yield, digestibility, and pest resistance.
- Introduce climate-resilient, high-yielding varieties in collaboration with IGFRI, ICRISAT, and State Agricultural Universities.
- Establish perennial fodder nurseries using tissue culture technology for year-round availability.

2 PRECISION AGRICULTURE & DIGITAL MONITORING

- Implement real-time district-wise resource forecasting through remote sensing, GIS, and IoT-based soil moisture and weather sensors.
- Utilize drones and satellite imagery for crop health monitoring, pest detection, and yield estimation.
- Deploy digital advisory platforms for farmers offering tailored guidance on sowing, fertilization, irrigation, and harvest timings.

3 INNOVATIVE CULTIVATION & RESOURCE OPTIMIZATION

- Promote precision irrigation techniques such as drip and sprinkler systems to optimize water use.
- Introduce hydroponic and aquaponic fodder cultivation (e.g., Azolla, Hydroponic fodder systems) for urban and resource-constrained settings.
- Encourage cultivation of dual-purpose crops like Sweet Potato, which provide both fodder and tubers, with high protein content.



4 MODERN STORAGE, PROCESSING & SUPPLY CHAIN INFRASTRUCTURE

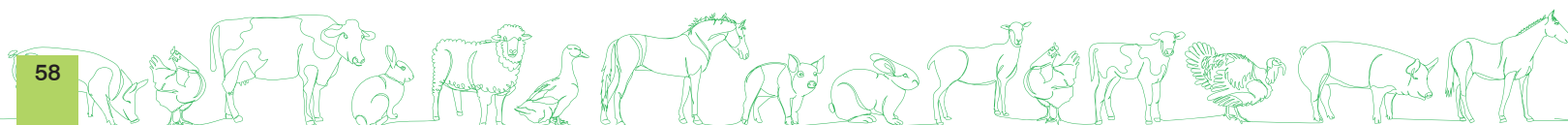
- Establish fodder banks and silage units equipped with advanced fermentation and preservation technologies.
- Promote contract farming and P4 models to ensure steady supply of certified seeds, silage, and TMR.
- Support private sector investment in silage, pellet, and feed manufacturing units, incentivized through subsidies and ease of regulatory procedures.

5 CLIMATE-RESILIENT & ENVIRONMENT-FRIENDLY PRACTICES

- Implement crop residue management using balers, enzyme treatments, and enrichment techniques to reduce wastage.
- Promote agroforestry and silvi-pasture systems for sustainable fodder production.
- Develop fodder seed balls and waste land afforestation schemes with drought-resistant varieties like Stylo Hamata, Subabul, and Sesbania.

6 CAPACITY BUILDING & STAKEHOLDER ENGAGEMENT

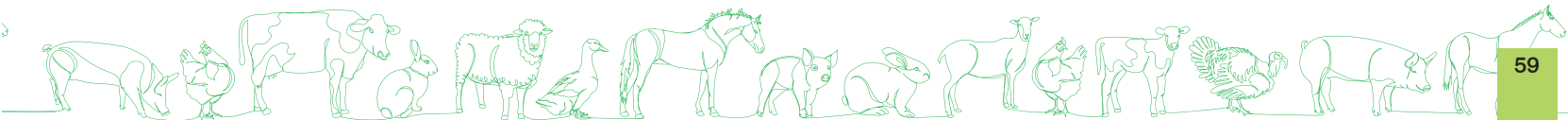
- Conduct training programs on advanced fodder cultivation, conservation, and feeding strategies.
- Use digital platforms for knowledge dissemination, success stories, and best practices.
- Foster public-private partnerships involving high-net-worth individuals, NGOs, FPOs, and SHGs for integrated development.





EXECUTION ROADMAP &
WAY FORWARD

Phase	Timeline	Key Activities	Expected Outcomes
Foundation	Year 1-2	Establish fodder nurseries, pilot biotech varieties, digital platforms, and infrastructure	Baseline enhancement, stakeholder sensitization
Expansion	Year 3-5	Scale up high-yield varieties, precision farming, silage units, and PPP projects	Increased fodder yield, resource efficiency, and employment
Consolidation	Year 6-10	Full-fledged integration, climate-smart practices, supply chain stabilization	Sustainable, scalable model with double-digit growth
Innovation & Sustainability	Year 11-20	Continuous R&D, biotech innovations, smart monitoring, and policy refinement	Resilient, future-ready fodder ecosystem, ensuring long-term income security



FODDER CULTIVATION: EMPOWERING WOMEN THROUGH SUSTAINABLE PRACTICES

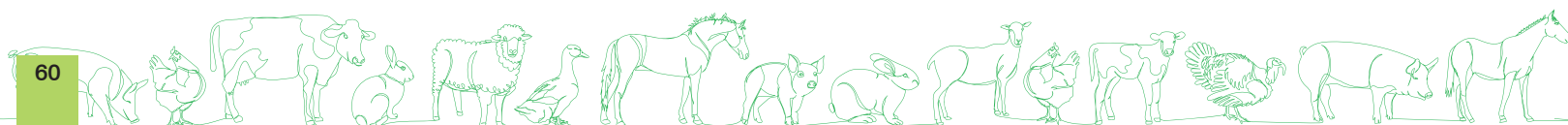
INTRODUCTION

The cultivation of fodder presents a significant opportunity for women in Self Help Groups (SHGs) in Andhra Pradesh. This initiative aims to engage these women in sustainable farming practices, thereby contributing to the economic empowerment of SHG members while supporting local farmers in the dairy sector. With a target of cultivating three lakh acres of green fodder, we can sustain up to 48 lakh milch animals (16 milch animals per acre), creating a symbiotic relationship between women and local animal husbandry. This initiative not only bolsters individual incomes but also enhances community resilience and food security.

OBJECTIVES

The primary objectives are:

- To outline the framework for establishing fodder cultivation programs involving SHG women.
- To highlight the role of SERP (Society for Elimination of Rural Poverty), DWMA (District Watershed Management Agency), and AHD (Animal Husbandry Department) as line and convergence departments for successful implementation.
- To measure the economic impact on both individuals and society through increased income, job creation, and enhanced livestock productivity.





IMPLEMENTATION PLAN

Training and Capacity Building

Organize workshops through SERP and AHD to educate SHG women on best practices in fodder cultivation, including soil preparation, seed selection, and organic farming techniques. Enhanced skills can lead to increased yield, thereby boosting individual incomes.

Land Preparation and Cultivation

Identify suitable lands for fodder cultivation with the assistance of DWMA, ensuring accessibility for SHG women. Implement effective planting and maintenance practices to ensure high yield. Improved land use contributes to the economic development of the community.

Establishing Supply Chains

Collaborate with local farmers and stakeholders, facilitated by SERP and AHD, to create a network for supplying cultivated fodder. This will ensure consistent demand, enhancing food security for livestock and providing a steady income for women. Increased fodder production can lower feed costs for farmers, positively impacting their overall profitability.

Economic Indicators

Individual Impact: Increased income levels for SHG women participating in fodder cultivation, leading to improved household living standards and greater financial independence.

Societal Impact: Enhanced agricultural productivity resulting from increased fodder availability, leading to a more resilient local economy and improved food security for the community.

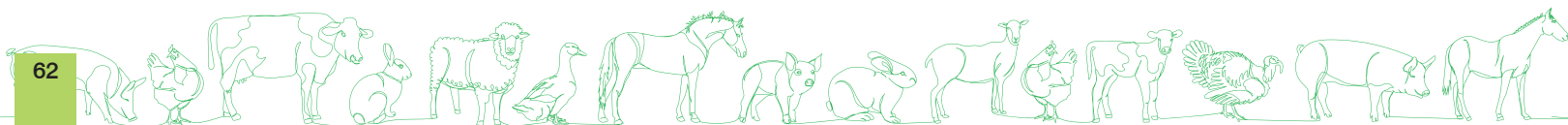
This comprehensive analysis highlights the essential components required for profitable and sustainable dairy farming. Central to this is the understanding that land, breed selection, management practices, feed formulation, health care, and infrastructure investment are pivotal. The core table compares the economics of two dairy management systems:



Parameter	System 1 (Without Green Fodder)	System 2 (With Green Fodder)
Cost of conc Feed (30 per kg)	30*4=120	30*3=90
Cost of Dry fodder (8 per kg)	10*8=80	5*8=40
Cost of Green fodder (2 per kg)	--	26*2=52
Feed Cost per Animal (per day)	200	182
Milk Production (liters/day)	5.5	7
Daily Revenue (per animal)	308	392
Net Profit (per day)	108	210
Profit Margin (%)	35%	54%
Milk Sale Price (per liter)	56	56

KEY TAKEAWAYS

- Efficient feed management can significantly reduce costs and enhance milk yield.
- Adopting green fodder cultivation increases profitability by improving feed quality.
- Maintaining good animal health and reproductive management is crucial for consistent production.
- Investing in infrastructure and breed improvement yields higher returns and sustainability.
- Proper feed management can reduce feed costs by 10-20% while boosting milk yield.
- Ensuring high-quality, hygienic feed prevents metabolic disorders and improves overall animal health.
- Proper feeding can increase daily milk yield by 20–30%, translating into an income of Rs.150–Rs.200 per animal per day.
- Well-managed animals can produce between 5,000 to 6,000 liters of milk per lactation, generating a monthly income of Rs.20,000–Rs.25,000 per animal.
- Proper feeding and health management can increase milk yield by 25–30%, boosting income further.
- Promote Usage of Concentrate feeds consists By Pass fat & By pass Protein increases Animal Health status and Milk Production and Fat percentage.





FEED AND FODDER

SUSTAINABLE FEED AND FODDER SOLUTIONS FOR LIVESTOCK SUSTAINABILITY

- Promote Community Fodder development through FPOs, SHGs, JLGs and NGOs etc.
- Promote Fodder Cultivation in Barren lands with Spineless Cactus and Seed less Subabul varieties like NARI-Nirbeeja, Phaltan and Sesbania.
- Year-round 100% green Fodder availability through Sustainable Practices with Zero nutritional deficiencies in Livestock feeding Practices.
- Digitally Monitored Feed, Fodder and fodder Seed Supply Chain to ensure timely access and quality.
- Doubling Farmer income through integrated Livestock systems.
- AI – Driven feed Formulation apps – to support Real Time Ration balancing using with local ingredients.

By balancing feed costs, improving herd management, and adopting modern practices, farmers can increase daily income per animal from around Rs.150–Rs.200 to over Rs.300, ensuring economic stability and growth.

ROLE OF CONVERGENCE DEPARTMENTS

SERP: Offer training programs and financial assistance to empower SHG women in fodder cultivation.

DWMA: Assist in identifying suitable land and implementing sustainable land management practices.

AHD: Provide technical support and promote the health and productivity of livestock through improved fodder quality.

WAY FORWARD

- Policy Support & Fodder Security Framework: Enact a comprehensive fodder security policy with subsidies, incentives, and regulatory reforms.
- Technology Adoption & R&D: Invest in biotech, precision agriculture, and digital tools to keep pace with global innovations.
- Strengthening Ecosystem & Partnerships: Foster collaborations among government, private sector, research institutions, and farmers.
- Monitoring & Evaluation: Establish a robust MIS system for real-time tracking, feedback, and course correction.
- Sustainable Development & Climate Resilience: Integrate climate adaptation strategies for long-term viability.



CONCLUSION

Transforming Andhra Pradesh's feed and fodder landscape through innovative, technology-enabled strategies holds the key to unlocking double-digit growth, ensuring sustainable livelihoods, and elevating the livestock sector to new heights. By embracing scientific advances, fostering partnerships, and committing to resource-efficient practices, Andhra Pradesh can set a benchmark in livestock productivity, income security, and environmental sustainability, paving the way for a prosperous future.

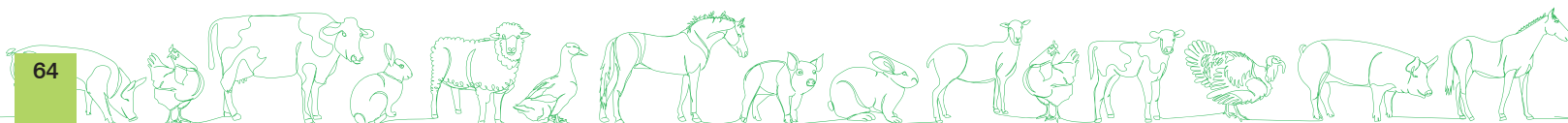
The integration of SHG women into the fodder cultivation sector represents a vital step towards economic empowerment and sustainable animal husbandry practices in Andhra Pradesh. By fostering collaboration with research institutions, Agri tech startups, farming communities and AHD, we can create a holistic approach that benefits both women and the local dairy economy, ultimately leading to poverty alleviation and enhanced community welfare.

Let's cultivate innovation, harness technology, and grow together for a resilient, prosperous Andhra Pradesh!

Contributed by:

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Joint Director (AH), NTR District & Team.





FEED AND FODDER

SUSTAINABLE FEED AND FODDER SOLUTIONS FOR LIVESTOCK SUSTAINABILITY



7

SMALL RUMINANT DEVELOPMENT

SMALL BUT MIGHTY

UNLOCKING THE POTENTIAL OF SMALL RUMINANTS FOR
SUSTAINABLE LIVESTOCK DEVELOPMENT



INTRODUCTION: IGNITING A NEW ERA IN SHEEP & GOAT HUSBANDRY

The Small Ruminant Sector Development Plan in Andhra Pradesh aims to modernize sheep and goat farming through five targeted models. By empowering women, shepherds, new entrants, and commercial investors, the plan enhances market access, financial inclusion, and productivity. A phased five-year strategy with the five proposed models, focuses on infrastructure, digital platforms, and value chain integration, driving sectoral growth and rural livelihoods.

Imagine a transformative sheep and goat industry driven by genomics, digital intelligence, and climate-smart practices one that empowers women, engages youth, and creates export-ready products. This blueprint charts a strategic path to achieve that vision, turning Andhra Pradesh into a benchmark for modern, profitable, and resilient small ruminant farming.

SCOPE

- Genetic enhancement through advanced breeding techniques
- Transforming traditional sheep husbandry into commercial enterprise
- Market linkage and value chain strengthening
- Women and marginalized community empowerment
- Adoption of digital, AI, IoT, and blockchain technologies
- Climate-smart and sustainable practices

AIM

To catalyze a high-velocity growth trajectory in the small ruminant sector targeting at least 15-20% annual expansion by integrating innovation, inclusivity, and sustainability, thereby transforming rural livelihoods and positioning Andhra Pradesh as a premier hub for modern sheep and goat husbandry.

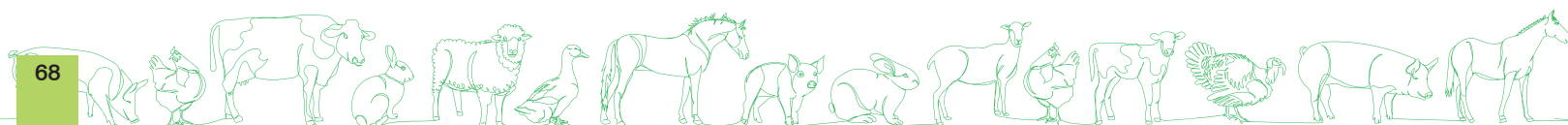


CORE OBJECTIVES

- Capacity Building: Provide comprehensive training on modern management, nutrition, and biosecurity.
- Market & Value Chain Development: Establish traceable, branded products with direct market linkages.
- Inclusive Growth: Empower women, youth, and marginalized groups through targeted interventions and financial schemes.
- Sustainable & Climate-Resilient Practices: Promote eco-friendly grazing, feed optimization, and waste recycling.
- Technology Integration: Leverage AI, IoT, and digital platforms for herd management, disease control, and market access.

INNOVATIVE BREED DEVELOPMENT & MODERN MANAGEMENT STRATEGIES

- Crossbreeding: Combine native resilience with exotic/indigenous high-performance breeds to achieve rapid productivity enhancements.
- Artificial Insemination: Scale AI to disseminate superior genetics swiftly across farms, reducing generation intervals.
- Mobile & Web Platforms: Develop user-friendly apps providing breed advice, health alerts, market prices, and extension services, especially targeting women and youth.
- Blockchain & Traceability: Ensure product traceability from farm to fork, building consumer trust and unlocking export potential.
- Data Analytics: Use big data analytics for predictive insights on market trends, disease outbreaks, and feed optimization.



PRACTICAL, SCALABLE DEVELOPMENT MODELS

MODEL 1: EMPOWERING WOMEN IN REMOTE AREAS (RS.50,000 MICRO-CREDIT)

A small-scale (5 to 10 animals) operation with minimal investment, suitable for the rural women with an opportunity to boost their incomes.

- Challenges: Limited access to capital, infrastructure, veterinary services, and market linkages.
- Strategies: Micro-credit support, building basic infrastructure via MGNREGS, digital extension, and collective marketing through SHGs.
- Outcome: Empower 1 lakh women, boost household incomes by ₹25,000-30,000 annually, and improve nutrition.

MODEL 2: PERI-URBAN FATTENING FOR QUICK RETURNS

- Addresses the needs of those having access to basic resources near the outskirts of towns, and also for the enterprising to scale up from the small scale to much bigger operations (50 to 100 animals)
- Challenges: Knowledge gaps, market access, cash flow management.
- Strategies: Short-term fattening cycles using high-nutrition feeds, contractual agreements with processors,
- Outcome: Generate Rs.200,000-3,00,000 annually per unit, strengthen supply chains, and foster entrepreneurial leadership.

MODEL 3: SEMI-INTENSIVE FARMING FOR TRADITIONAL SHEPHERDS

- Encourage the traditional shepherd to undertake commercial farming (150 to 200 animals) taking advantage of their traditional knowledge base and experiences.
- Challenges: Dependence on extensive grazing and reluctance to adopt commercial farming methods..
- Strategies: Adoption of semi-intensive practices, collective marketing, mobile veterinary services.
- Outcome: 40-50% productivity increase, reduced mortality, and enhanced market access.

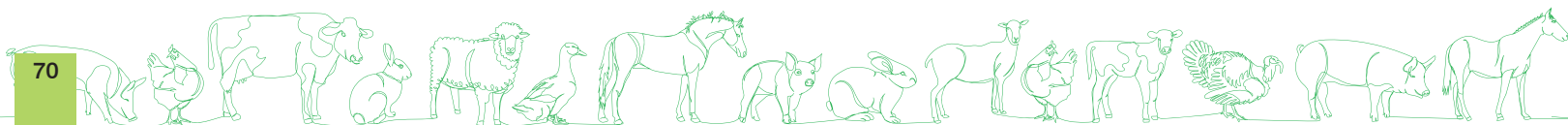


MODEL 4: NEW ENTRANTS & NON-TRADITIONAL FARMERS (NLM/SELF-FUNDED)

- Aspirations of the new age entrepreneur can be fulfilled while promoting breed development and generate rural employment. (100 plus 5 to 500 plus 25 breeding operations)
- Challenges: Capital, technical knowledge, market volatility.
- Strategies: Financial assistance, digital farmer-connect platforms, mentorship, and technical training.
- Outcome: Annual farm returns of Rs.5-6 lakh, rural entrepreneurship, modernization of practices.

MODEL 5: INNOVATION-DRIVEN ENTREPRENEURS (TECH & BREED INVESTMENT)

- The ambitions of the Tech-savvy modern-day entrepreneur can benefit the sector in introducing modern technologies of small ruminant farming.
- Challenges: High capital, infrastructure, scaling constraints.
- Strategies: Adoption of AI, IoT, blockchain; government incentives; partnerships with research and industry.
- Outcome: 20-40% ROI within 2-3 years, export-ready, high-performance farms, and traceable products.





EXECUTION
ROADMAP & PHASED
IMPLEMENTATION

	2025-26	2026-27	2027-28	2028-29	2029-2030	Expected outcome
Model 1	50,000	75,000	1,00,000	1,25,000	1,50,000	Saturates at 5 lakh women farmers by 2030
Model 2	5,000	10,000	15,000	20,000	25,000	Steady growth by leveraging peri-urban market access
Model 3	5,000	10,000	15,000	20,000	25,000	Transitions traditional farming into a commercial operation
Model 4	500	1000	1,500	2,000	3,000	Attracts educated youth and new entrants
Model 5	50	100	200	300	500	Technology advancement through innovation driven enterprises

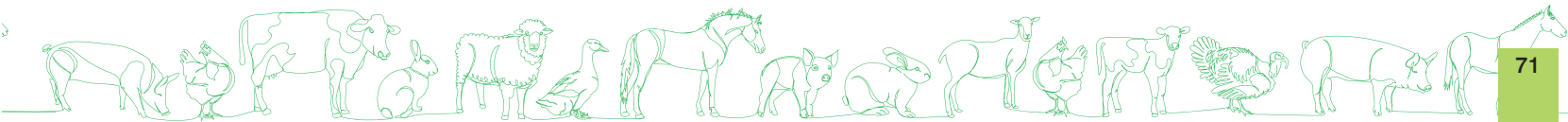
WAY FORWARD &
POLICY SUPPORT

- Financial Incentives: Facilitate access to credit, subsidies, and grants for genetic, technological, and infrastructure upgrades.
- Capacity Building & Extension: Continuous training, demonstration farms, and digital extension.
- Market & Export Development: Establish branding, quality standards, and export pathways.
- Inclusive Policies: Special schemes for women, youth, and marginalized communities.
- Research & Innovation: Collaborations with ICAR, biotech firms, Universities and industry for ongoing R&D.

CONCLUSION:
PIONEERING A
PROSPEROUS FUTURE
IN SMALL RUMINANTS

Small ruminants in Andhra Pradesh hold the promise of transforming rural livelihoods through modern breeding, smart technology, and inclusive growth. By embracing innovation and sustainability, we can unlock unprecedented double-digit growth annually while empowering five lakh families. Together, let's forge a resilient, high-value, and export-ready sheep and goat industry that sets new benchmarks for India and the world.

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8

POULTRY DEVELOPMENT

CLUCKING TOWARDS SUSTAINABILITY

INNOVATIVE PRACTICES IN POULTRY
DEVELOPMENT FOR A SECURE FUTURE





BACKGROUND / INTRODUCTION

The poultry sector in Andhra Pradesh (AP) stands as a powerhouse of rural employment, food security, and economic growth, contributing approximately Rs 10,000 crore to the GSDP which is about 20% of the livestock sector's output. With over 8.46 crore commercial poultry (layers & broilers) and a significant backyard poultry base, AP accounts for one-fifth of India's egg production and major share of the country's broiler meat. The industry has achieved remarkable self-sufficiency, boasting one of the highest growth rates globally, yet it faces critical challenges that threaten to impede its trajectory.

The Poultry Sector Development Policy in Andhra Pradesh aims to boost local consumption, expand exports, ensure financial stability, and improve disease prevention. Key interventions include feed price optimization, infrastructure development, regulatory streamlining, and rural employment promotion. A phased implementation roadmap ensures sustainable growth, resilience, and profitability in the poultry industry.

In a rapidly evolving global poultry landscape, leveraging the latest advances in technology, scientific management, and strategic policy interventions is vital to propel AP's poultry industry into a new era of double-digit growth. This growth must be sustainable, inclusive, and resilient against disruptions like disease outbreaks and market volatility.

SCOPE

- Enhance poultry productivity through technological innovation.
- Strengthen disease prevention and biosecurity measures.
- Improve feed efficiency and ingredient availability.
- Expand domestic and export markets for eggs and poultry meat.
- Promote value addition and product diversification.
- Ensure environmental sustainability and social inclusiveness.
- Establish AP as a leading poultry hub with global standards.

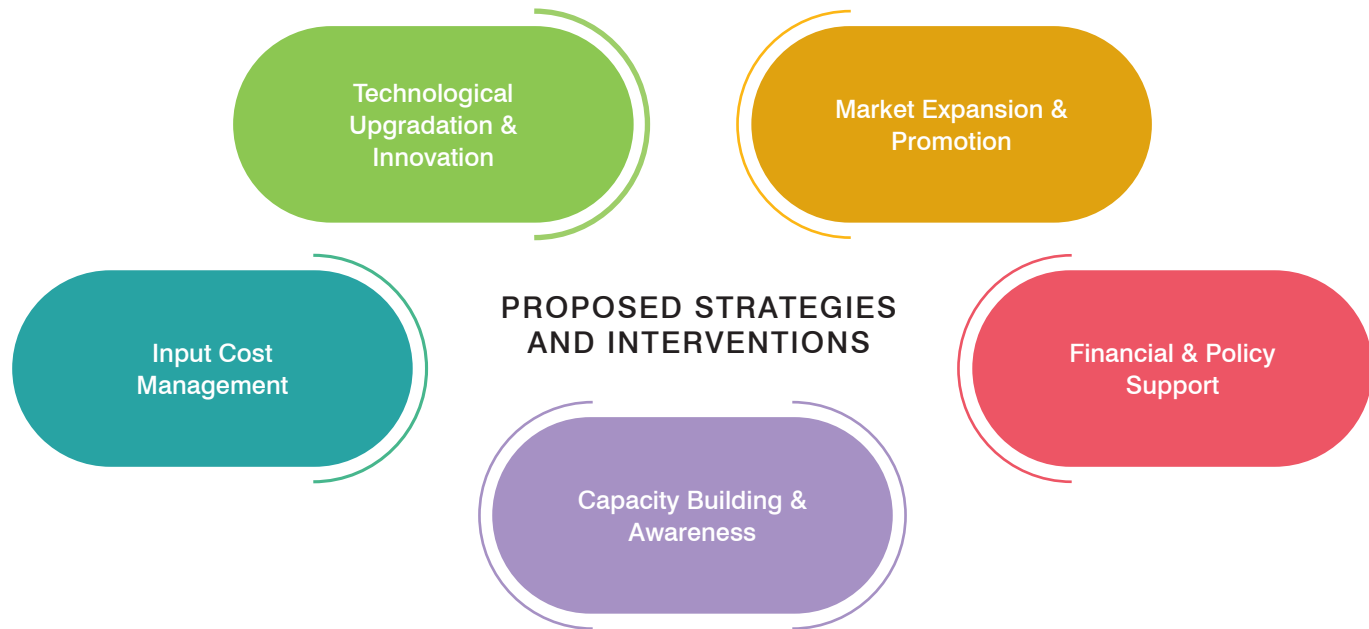


AIM To catalyze a sustainable, double-digit annual growth in Andhra Pradesh's poultry industry, ensuring rural livelihoods, food security, and economic resilience through the adoption of cutting-edge technologies and strategic policy measures.

OBJECTIVES

- Accelerate productivity of broilers and layers via modern genetic, nutritional, and health management practices.
- Expand market outreach domestically and internationally for eggs and poultry meat.
- Mitigate disease risks through advanced diagnostics, vaccination, and biosecurity.
- Reduce input costs by ensuring affordable feed ingredients and efficient supply chains.
- Promote value addition through organic, health-focused, and branded poultry products.
- Enhance farmer resilience with financial support, insurance, and capacity-building.
- Streamline regulatory processes to foster ease of business and new unit establishment.





1. TECHNOLOGICAL UPGRADATION & INNOVATION

- **Genetic Improvement:** Adopt high-performance, disease-resistant broiler and layer breeds through collaboration with research institutions and biotech firms.
- **Smart Farming:** Deploy IoT-enabled climate control, automation in feeding, lighting, and water management to optimize growth cycles and reduce wastage.
- **Precision Nutrition:** Utilize AI-driven feed formulation tools to tailor diets, improving feed conversion ratios and reducing costs.
- **Disease Diagnostics & Vaccination:** Establish ultra-modern, PPP-managed diagnostic labs at strategic locations for rapid detection and response; promote vaccine use for H5N1 HPAI with government support.
- **Biosecurity & Farm Management:** Implement digital monitoring systems for biosecurity compliance, traceability, and real-time disease alerts.
- **Promotion of EC Sheds:** Promotion of environment controlled sheds. Litter can be used for power generation.



2. MARKET EXPANSION & PROMOTION

- Egg and Meat Marketing: Develop integrated marketing platforms leveraging digital channels, Farmer Producer Organizations (FPOs), and rural retail chains.
- Value Addition: Promote organic, omega-rich, and health-specific eggs; introduce branded, packaged chicken meat in urban markets.
- Export Facilitation: Establish protocols for export, including zoning, compartmentalization, and quality assurance, to tap into global markets.

3. INPUT COST MANAGEMENT

- Feed Security: Duty-free import of maize, rice, and soy; utilize surplus rice and broken rice from civil supplies at subsidized prices.
- GST Exemption & GM Crops: Facilitate the use of GM maize and soy for poultry feed, ensuring availability and affordability.
- Supply Chain Optimization: Strengthen cold chain logistics and warehousing for feed and poultry products.
- Circular Economy Generation: Circular economy generation by use of eco-friendly feed ingredients like insect meal, algae, etc.

4. FINANCIAL & POLICY SUPPORT

- Interest Subvention & Loan Rescheduling: Provide interest subvention on all poultry loans for consolidation and growth in the sector, and provide moratorium and conversion of loans
- Insurance & Risk Mitigation: Develop affordable insurance schemes covering Disease outbreaks
- Ease of Permissions: Simplify approvals for new units, removing urban development authority bottlenecks, empowering local panchayats, cultivation of GM Maize and Soy to bring down import of the same. Lands in which poultry farms are constructed under NALA act, to be removed and treated as agriculture land for future process.



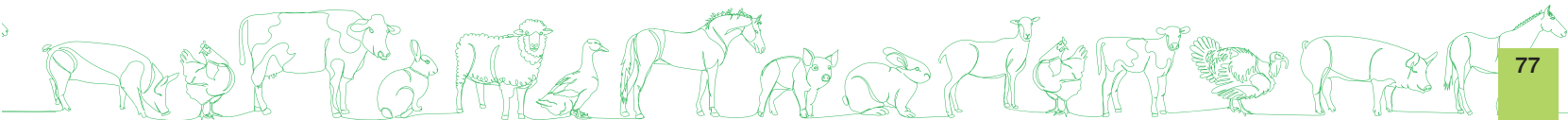


5. CAPACITY BUILDING & AWARENESS

- Training & Extension: Conduct regular workshops on vaccination, biosecurity, farm management, and marketing.
- Digital Platforms: Use mobile apps and online portals for farmer advisories, disease alerts, and market information.
- Public Awareness: Campaigns promoting egg and chicken consumption, emphasizing health benefits and safety standards.

EXECUTION ROADMAP

Phase	Timeline	Key Activities	Outcomes
Short-term (0-1 year)	Immediate	Establish diagnostic labs, initiate vaccination programs, provide financial relief, promote awareness	Disease control, farmer support, initial market stimulation
Medium-term (1-3 years)	Expansion	Scale genetic improvements, upgrade supply chains, launch branded products, facilitate exports	Increased productivity, market penetration, value addition
Long-term (3-5 years)	Consolidation	Institutionalize best practices, expand export markets, develop sustainable feed and waste management systems	Double-digit growth, global recognition, sustainable rural livelihoods



WAY FORWARD

- Innovation Ecosystem: Foster partnerships between government, academia, industry, and startups to develop and deploy poultry-specific innovations.
- Data-Driven Decision Making: Establish a comprehensive data platform for real-time monitoring of industry health, disease outbreaks, and market trends.
- Sustainability & Environment: Promote eco-friendly waste management, water conservation, and renewable energy use in poultry farms.
- Policy Continuity & Adaptation: Regular review of policies, incentives, and regulations to adapt to emerging challenges and opportunities.
- Inclusive Growth: Focus on small and marginal farmers by providing affordable access to technology, credit, and training.
- Poultry health insurance: insurance against poultry diseases would render a relief to poultry farmers at times of disease crisis and epidemics.

CONCLUSION

AP's poultry industry is poised for transformative growth that can deliver sustainable double-digit annual expansion, rural employment, and food security. By harnessing the latest advances in genetics, digital technology, disease management, and value-added products, AP can set a benchmark as a global poultry hub. Strategic policy support, innovative interventions, and inclusive growth will be the pillars of this journey towards a resilient, prosperous, and sustainable poultry industry.

Let's elevate Andhra Pradesh's poultry sector to new heights where science, innovation, and inclusive policies converge for a brighter, healthier, and wealthier future!

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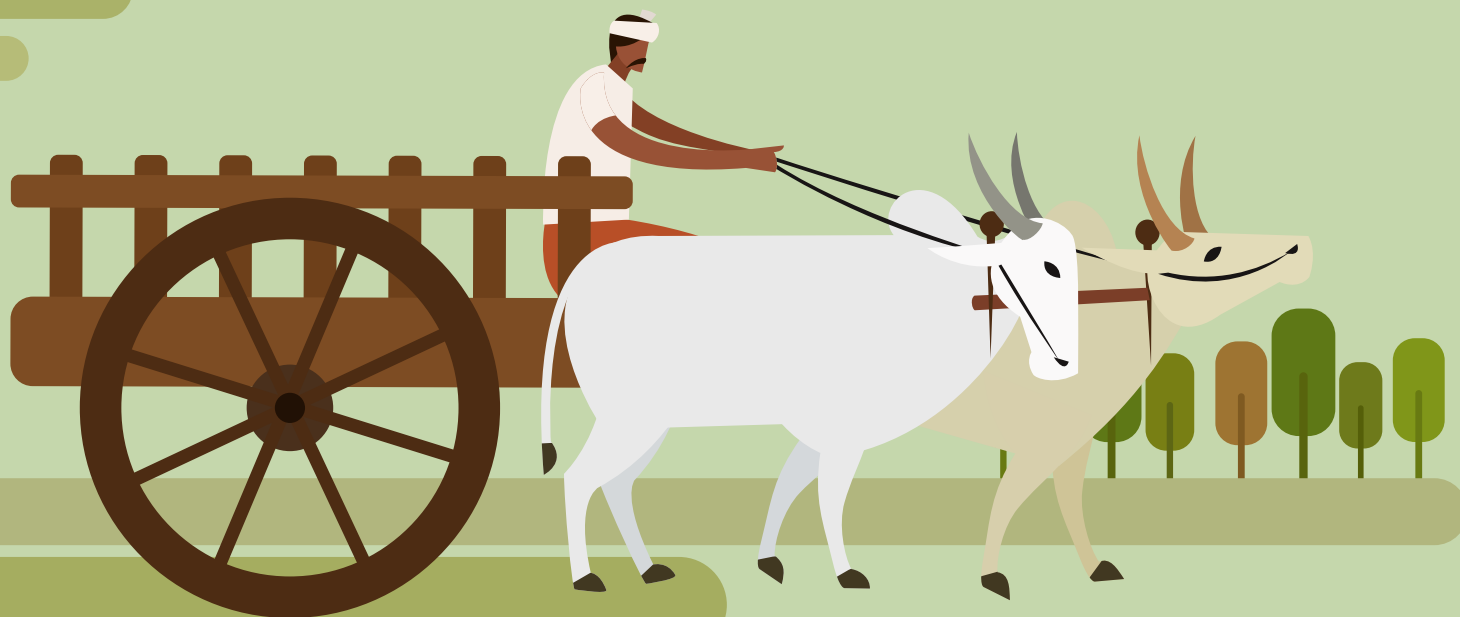


9

MARKET LINKAGES

CONNECTING THE DOTS

BUILDING EFFECTIVE MARKET LINKAGES
FOR LIVESTOCK SUSTAINABILITY





BACKGROUND / INTRODUCTION

In an era of rapid economic transformation, the livestock sector stands as a vital engine for inclusive growth, rural employment, and sustainable development. With an astonishing contribution of Rs. 1.55 lakh crore to the state's GVA and a significant share in national production, the sector embodies immense potential for doubling farmers' incomes and fostering resilient livelihoods. Yet, despite its strategic importance, fragmented market access, information asymmetry, and infrastructural bottlenecks hinder its full potential.

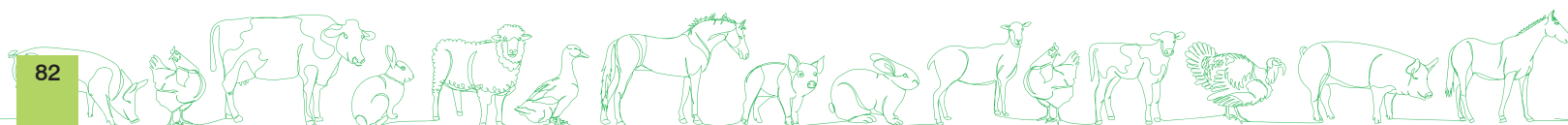
To realize the vision of achieving double-digit growth and sustainable income streams, a paradigm shift is imperative one that harnesses innovative market linkages, technology, and strategic infrastructure investments. This document outlines a comprehensive roadmap to unlock the sector's latent potential, transforming it into a robust, inclusive, and sustainable economic powerhouse.



SCOPE This strategy encompasses the entire livestock value chain poultry, dairy, meat, and allied sectors integrating stakeholders from farmers and cooperatives to private enterprises and government agencies. It aims to strengthen backward and forward linkages, enhance infrastructure, leverage digital platforms, and promote sustainable practices to ensure scalable, impactful outcomes.

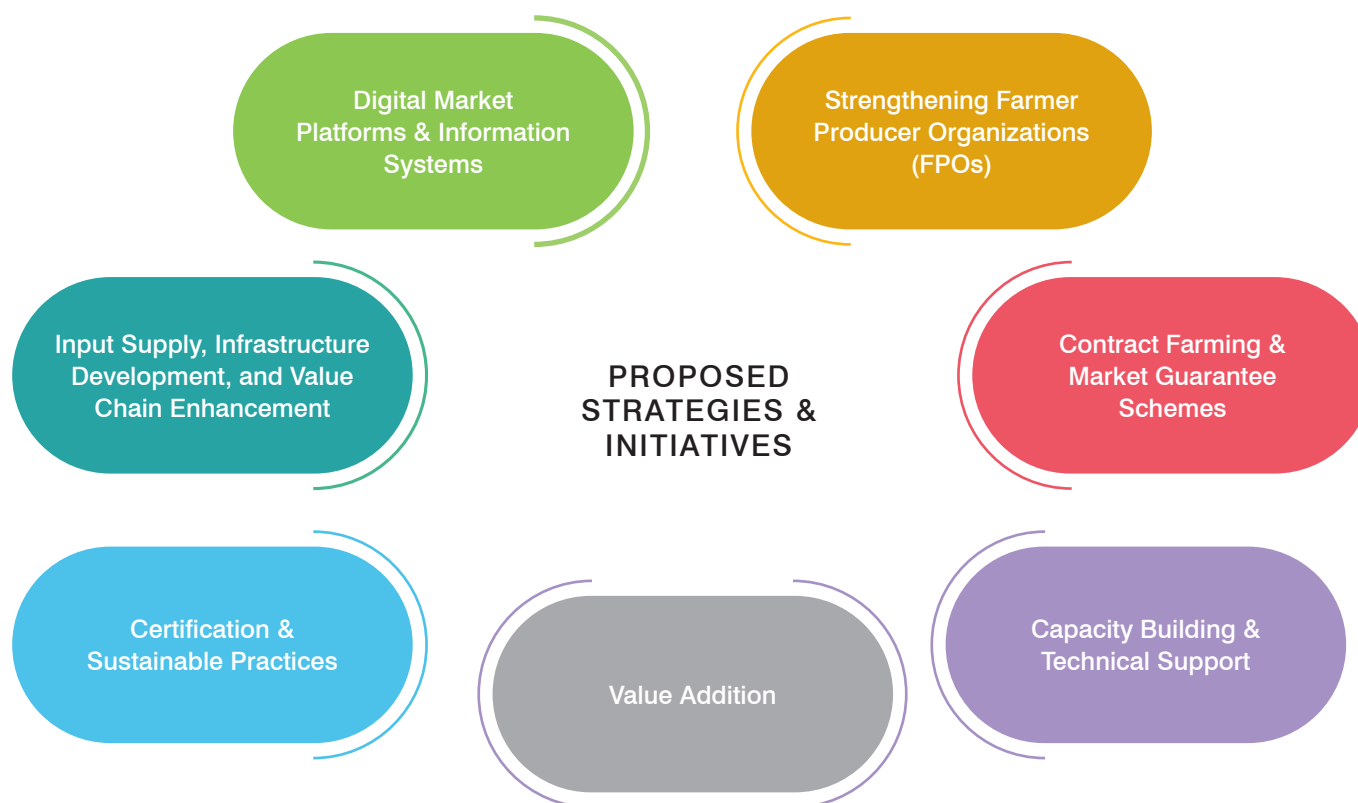
AIM To establish an efficient, transparent, and resilient market ecosystem that ensures double-digit growth, sustainable income, and inclusive prosperity for livestock farmers and related stakeholders.

- OBJECTIVES**
- Enhance Market Accessibility: Expand market reach for small-scale farmers through digital platforms and organized markets.
 - Improve Market Information Systems: Provide real-time, accurate data on prices, demand, and trends.
 - Strengthen Infrastructure & Value Addition: Develop cold storage, processing units, and logistics to reduce post-harvest losses and boost value chains.
 - Foster Sustainable Practices: Promote organic farming, certification, and biosecurity to meet global standards.
 - Build Capacity & Technical Skills: Empower farmers with knowledge on and modern farming and marketing techniques.
 - Facilitate Public-Private Partnerships: Leverage private sector investment and innovation for scalable solutions.





MARKET LINKAGES *CONNECTING THE DOTS*



1 DIGITAL MARKET PLATFORMS & INFORMATION SYSTEMS

- Develop a centralized, user-friendly digital marketplace connecting farmers directly with buyers, such as Amazon and Flipkart
- Implement mobile-based real-time market information portals on prices, demand, and supply trends.
- Foster blockchain-enabled traceability for quality assurance.

2 STRENGTHENING FARMER PRODUCER ORGANIZATIONS (FPOS)

- Facilitate capacity building for FPOs in negotiation, logistics, and compliance.
- Support collective procurement of inputs like feed, medicines, and equipment to reduce costs.

3 INPUT SUPPLY, INFRASTRUCTURE DEVELOPMENT, AND VALUE CHAIN ENHANCEMENT

- Establish small and medium-scale processing units, slaughterhouses, and cold storage facilities in strategic locations.
- Support to manufacture of livestock farm machinery (milking machines, chaff cutters, poultry farm equipment, etc)
- Establish Milk chillers and milk packaging machines at certain pockets.
- Promote equipment procurement such as milking machines, slaughterhouse equipment, and fodder processing units.
- Develop integrated supply chains with efficient logistics and transportation.
- Establishment of TMR, Silage, Hay making units





4 CONTRACT FARMING & MARKET GUARANTEE SCHEMES

- Encourage contract farming models with assured markets and fair pricing.
- Implement interest subventions and insurance schemes to mitigate risks.
- Temples should purchase milk and milk products directly from FPO

5 CERTIFICATION & SUSTAINABLE PRACTICES

- Promote organic, quality, and sustainability certifications to access premium markets.
- Support environmentally friendly practices like silage making, manure management, and biosecurity measures.
- Milk and Milk Products should be sold in the brand name of Vijaya

6 CAPACITY BUILDING & TECHNICAL SUPPORT

- Conduct training on breeding, nutrition, disease management, and biosecurity.
- Establish veterinary and diagnostic facilities in collaboration with private partners.
- Regular conduct of livestock melas, dairy shows, milk yield competitions, Exposure visits.
- Training on by-product making, such as Khova & Ghee

7 VALUE ADDITION

- By-production conversion from milk to Khova & Ghee

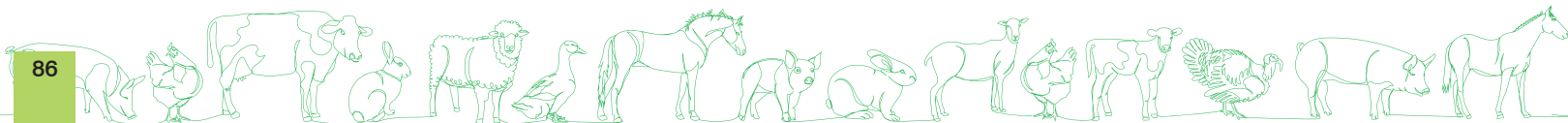


EXECUTION ROADMAP

Timeline	Key Activities	Responsible Stakeholders	Expected Outcomes
0-6 Months	Digital platform launch; FPO formation; Infrastructure assessment	Government, Private Sector, NGOs	Increased farmer engagement; Baseline infrastructure data
6-12 Months	Capacity building; Equipment procurement; Pilot contract farming schemes	Cooperatives, Private Firms	Improved farm productivity; Market linkages initiated
1-2 Years	Infrastructure roll-out; Certification drives; Expansion of digital systems	State agencies, Private investors	Enhanced value chain; Market access for smallholders
2-3 Years	Scaling successful models; Policy adjustments; Strengthening public- private partnerships	All stakeholders	Double-digit growth trajectory; Sustainable income streams

WAY FORWARD

- Policy Support & Incentives: Formulate supportive policies on contract farming, certification, minimum support price for milk, and infrastructure investments.
- Innovative Financing: Encourage blended finance models, grants, and low-interest loans for infrastructure and capacity building.
- Monitoring & Evaluation: Establish robust M&E frameworks to track progress and adapt strategies.
- Stakeholder Engagement: Foster continuous dialogue among farmers, private players, academia, and government.
- Sustainability & Inclusion: Prioritize eco-friendly practices and vulnerable groups to ensure equitable growth.
- High Yielding Milch Animals: Introduction of high yielding milch animals with 15-20 ltrs per day.
- Fodder Support: bridging the gap of feed supply by Implementation of Fodder policy



CONCLUSION

Transforming the livestock sector into a high-growth, sustainable frontier requires strategic market linkages underpinned by technology, infrastructure, and capacity enhancement. By implementing these targeted, practical strategies, the sector can catalyze rural incomes, bolster the economy, and contribute meaningfully to sustainable development goals. This integrated approach promises not only economic prosperity but also resilient, inclusive livelihoods for generations to come.

Together, let's build a livestock economy that's not just profitable but also sustainable driving double-digit growth and inclusive prosperity.

Contributed by:

Dr. R. Chinnaiah,

Joint Director (AH), & Team.



10

ONE HEALTH APPROACH

BUILDING CLIMATE

RESILIENT VETERINARY SERVICES
FOR BETTER FUTURE





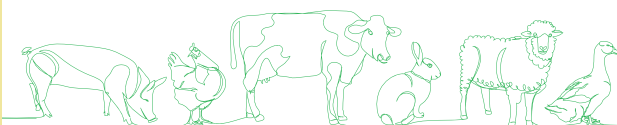
BACKGROUND / INTRODUCTION

The Integrated Awareness Strategy in Andhra Pradesh unites agriculture, health, and community sectors for holistic disease prevention. Key initiatives include forming a One Health Task Force, using digital outreach, conducting joint campaigns, training local leaders, and integrating zoonotic disease education ensuring effective biosecurity, public health awareness, and rural development.

In an era where climate change accelerates the frequency and intensity of zoonotic diseases, environmental upheavals, and extreme weather events, the health of animals, humans, and ecosystems is more interconnected than ever. The livestock sector, vital for India's food security, rural livelihoods, and economic stability, stands at a crossroads. Its growth potential aiming at double-digit expansion can only be realized through a resilient, sustainable, and holistic approach that leverages veterinary services as a cornerstone of the One Health paradigm.

India's livestock sector faces pressing challenges: a severe shortage of qualified veterinarians, inadequate diagnostic infrastructure, low awareness among farmers, and vulnerability to climate-induced stresses such as heat stress and disease outbreaks. Addressing these issues requires innovative, scalable strategies that integrate veterinary services into broader health and environmental frameworks, ensuring both economic growth and ecological sustainability.

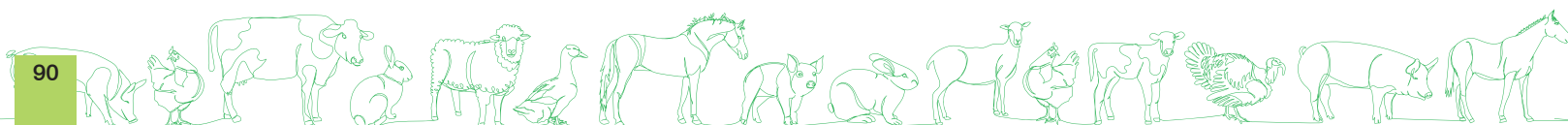
This strategic framework delineates practical, context-specific interventions to harness veterinary services for fostering climate-resilient, sustainable, and inclusive growth aiming to achieve 15-20% sectoral growth while safeguarding public health and the environment.

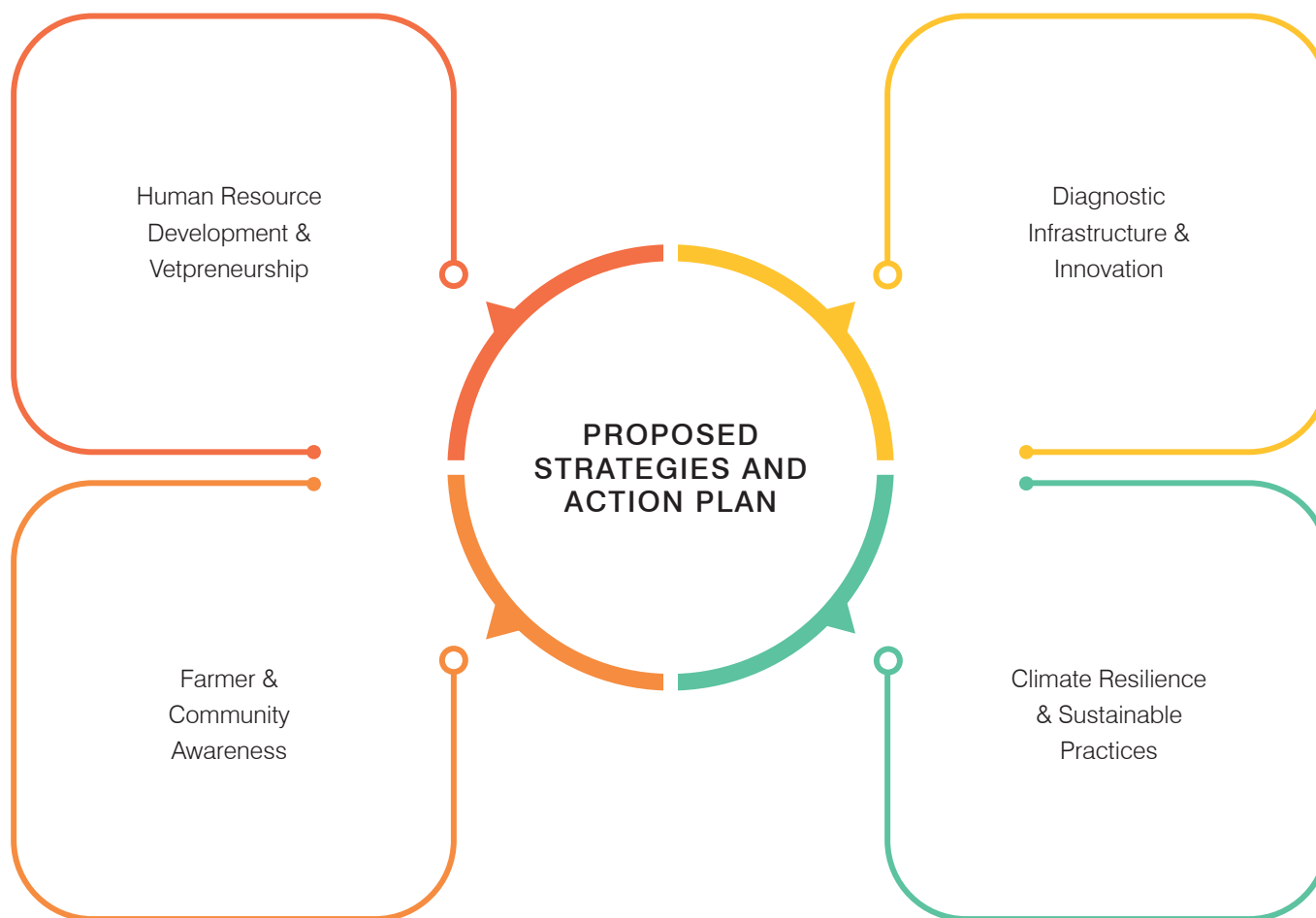


SCOPE This framework focuses on enhancing veterinary services, diagnostic infrastructure, farmer awareness, and climate resilience within India's animal husbandry sector, with particular emphasis on Andhra Pradesh's livestock economy. It advocates for multi-sectoral collaboration, technology-enabled solutions, and community-driven models to create a resilient, sustainable, and health-conscious livestock ecosystem.

AIM To develop a comprehensive, actionable strategy that empowers veterinary services as catalysts for sustainable sectoral growth, climate resilience, and public health security, thereby fostering a healthy environment and society.

- OBJECTIVES**
- Expand and strengthen veterinary human resources to ensure timely, quality animal healthcare.
 - Establish integrated diagnostic and disease surveillance systems to enable rapid response to emerging threats.
 - Enhance farmer and community awareness on zoonotic diseases, biosecurity, Animal welfare and climate adaptation.
 - Promote innovative, private-sector-driven veterinary and diagnostic solutions through public-private partnerships.
 - Implement climate-resilient practices in animal husbandry to mitigate heat stress and climate-related risks.
 - Create a roadmap for phased, scalable implementation aligning with sustainable development goals.



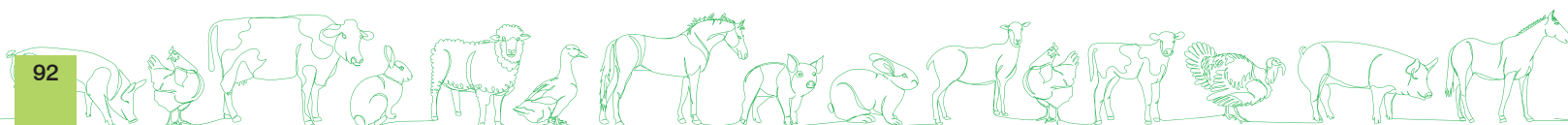


1 HUMAN RESOURCE DEVELOPMENT & VETPRENEURSHIP

- Expand Veterinary Workforce: Increase intake in veterinary colleges, incentivize rural postings, and establish specialized training on climate resilience and zoonosis control.
- Vetpreneur Model: Support unemployed veterinary graduates to become private veterinary entrepreneurs (“Vet-preneurs”) through financial grants, infrastructure support, and capacity building. This includes:
 - Modular clinics with essential diagnostic tools.
 - Mobile veterinary units for remote outreach.
 - Fodder and waste management units promoting circular economy.
- Digital Vet Networks: Develop tele-veterinary platforms to extend expert advice, diagnostics, and disease surveillance, reducing response times and bridging resource gaps.

2 DIAGNOSTIC INFRASTRUCTURE & INNOVATION

- Integrated Diagnostic Labs: Establish multisectoral diagnostic hubs at district levels, with capacity for rapid detection of zoonoses, climate-related illnesses, and antimicrobial resistance.
- Research & Development: Invest in affordable, rapid diagnostic kits tailored for rural contexts, with a focus on zoonotic and climate-sensitive diseases.
- PPP & Private Sector Engagement: Incentivize private diagnostic labs and vetpreneurial ventures through subsidies, policy support, and innovation grants.
- Data & Surveillance: Implement real-time data sharing platforms integrating veterinary, human health, and environmental data for proactive disease management.





3 FARMER & COMMUNITY AWARENESS

- One Health Awareness Campaigns: Conduct Village Health & Livestock Days, combining vaccination drives, biosecurity workshops, animal welfare and climate adaptation education.
- Digital Outreach: Use mobile apps, WhatsApp groups, community radio, and IEC materials to disseminate information on zoonoses, antimicrobial resistance, and climate resilience.
- Capacity Building: Train SHG members and local leaders as health champions to promote best practices in hygiene, disease reporting, and climate adaptation without compromising animal welfare aspects.

4 CLIMATE RESILIENCE & SUSTAINABLE PRACTICES

- Climate-Resilient Livestock Management: Promote shade structures, cooling systems, drought-tolerant fodder varieties, and water conservation measures.
- Fodder & Waste Management: Support fodder cultivation schemes, organic manure production, and biogas plants to reduce environmental footprints.
- Risk Assessment & Early Warning Systems: Develop localized climate and disease forecasting models to prepare farmers for extreme events.

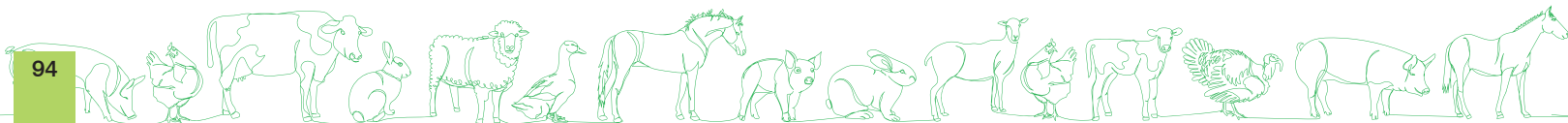


EXECUTION ROADMAP

Phase	Timeline	Key Activities	Responsible Agencies	Expected Outcomes
Short-term (0-1 year)	Initial planning & pilot	Establish Vetpreneur schemes, diagnostic labs, awareness campaigns	State Animal Husbandry, Veterinary Colleges, NGOs	Pilot projects operational, baseline data collected
Medium-term (1-3 years)	Scaling & integration	Expand Vetpreneur network, enhance diagnostic infrastructure, digital platforms	State & Central Govt, Private Sector, Research Bodies	Increased veterinary coverage, rapid diagnostics in rural areas
Long-term (3-5 years)	Consolidation & sustainability	Full integration of climate-resilient practices, data-driven surveillance	All stakeholders	Sectoral growth of 15-20%, climate adaptation mainstreamed

WAY FORWARD

- Policy Support & Funding: Secure dedicated budgets, policy reforms, and incentives for Vetpreneurship, diagnostics, and climate resilience initiatives.
- Capacity Building & Knowledge Sharing: Regular training, workshops, and knowledge exchange platforms.
- Monitoring & Evaluation: Establish KPIs aligned with sectoral growth, disease control, climate adaptation, and sustainability goals.
- Multi-sectoral Collaboration: Foster partnerships among agriculture, health, environment, and financial sectors to ensure a unified approach involving research centres, Animal husbandry department, Universities.
- Community Engagement: Empower local communities through awareness, training, and livelihood support.





CONCLUSION

Harnessing veterinary services as strategic pillars in the One Health framework is crucial for achieving double-digit sectoral growth, ensuring climate resilience, and fostering a sustainable, healthy society. By integrating innovative, scalable, and context-specific strategies, India can transform its livestock sector into a resilient engine of economic growth and environmental stewardship securing a prosperous and sustainable future for all.

Together, through proactive veterinary stewardship, we can cultivate a resilient, sustainable, and health-conscious livestock ecosystem fuelling India's journey towards inclusive growth and ecological harmony.

Contributed by:

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ANNEXURE

DOCUMENTATION COMPILATION GROUP



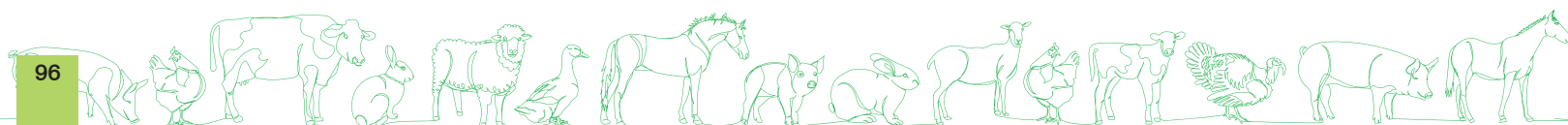
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SMALL RUMINANT DEVELOPMENT: “SMALL BUT MIGHTY”

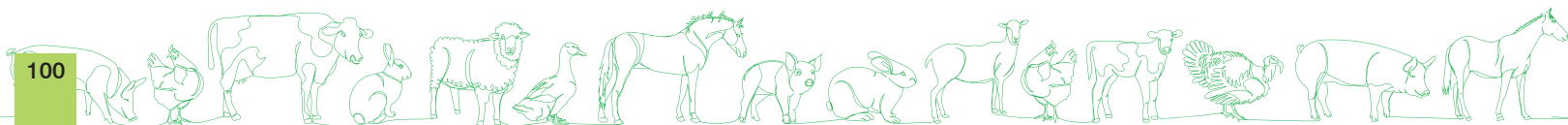


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