



**GOVERNMENT OF KERALA
KERALA STATE PLANNING BOARD**

**FOURTEENTH FIVE-YEAR PLAN
(2022-2027)**

**WORKING GROUP ON
INCREASING MEAT PRODUCTION IN KERALA:
THE ROLE OF PUBLIC POLICY**

REPORT

**AGRICULTURE DIVISION
MARCH 2022**

FOREWORD

Kerala is the only State in India to formulate and implement Five-Year Plans. The Government of Kerala believes that the planning process is important for promoting economic growth and ensuring social justice in the State. A significant feature of the process of formulation of Plans in the State is its participatory and inclusive nature.

In September 2021, the State Planning Board initiated a programme of consultation and discussion for the formulation of the 14th Five-Year Plan. The State Planning Board constituted 44 Working Groups, with more than 1200 members in order to gain expert opinion on a range of socio-economic issues pertinent to this Plan. The members of the Working Groups represented a wide spectrum of society and include scholars, administrators, social and political activists and other experts. Members of the Working Groups contributed their specialised knowledge in different sectors, best practices in the field, issues of concern, and future strategies required in these sectors. The Report of each Working Group reflects the collective views of the members of the Group and the content of each Report will contribute to the formulation of the 14th Five-Year Plan. The Report has been finalised after several rounds of discussions and consultations held between September to December 2021.

This document is the Report of the Working Group on “Increasing meat production in Kerala: The role of public policy”. The Co-Chairpersons of Working Group were Dr.B.Sunil and Dr. A. Kowsigan, IAS. Dr.R.Ramakumar, Member of the State Planning Board coordinated the activities of the Working Group. Sri.S.S.Nagesh, Chief, Agriculture Division was the Convenor of the Working Group and Smt. Kumari Sangeetha K.R., Deputy Director, Agriculture Division was Co-Convenor. The terms of reference of the Working Group and its members are in Appendix 1 of the Report.

Member Secretary

PREFACE

As part of formulation of the 14th Five Year Plan, the Kerala State Planning Board had constituted working groups of experts in all the major sectors. In Agriculture and Allied Sectors, 6 working groups were constituted viz. Agriculture and Cooperation, Animal Husbandry and Dairy, Inland and Marine Fisheries, Forest and Environment, Water Resources and Regional Packages. To discuss and frame policies in each of these sectors, the working groups were further divided into 28 Expert Sub-Groups (ESG) with specific mandates.

Each Expert Subgroup held at least three meetings beside one focused group meeting before finalising the report. We, the Co-Chairs, place our deep appreciation and gratitude to all the esteemed members of the ESG for their valuable contributions in preparing the report. We are extremely grateful to Dr. V. K. Ramachandran, the Honourable Vice-Chairperson, Kerala State Planning Board, Dr. R. Ramakumar, Member, Kerala State Planning Board and Sri. S. S. Nagesh, Chief, Agriculture Division for their consistent guidance and suggestions in preparing the report. The drafting team put in commendable work in bringing together all the views and opinions of the members. We sincerely hope the recommendations in the report can lead to important changes in the public policy for the development of Animal Husbandry and Dairy sectors in the State.

Dr.B.Sunil
Expert Co-chairperson

Dr. A. Kowsigan, IAS
Official Co-chairperson

CONTENTS

List of Tables	03
List of Figures	03
Executive summary	07
Chapter 1 Introduction	09
Chapter 2 Challenges in the Meat Sector	11
Chapter 3 Targets and Deliverables	13
Chapter 4 Policies and Strategic Action Plans	15
Appendix-1	21

LIST OF TABLES

1	Establishment of meat animal farms	13
---	------------------------------------	----

LIST OF FIGURES

1	Species-wise meat production of Kerala 2020-21	11
2	Import of animals into Kerala, by type, 2012-13 to 2019-20	12



INCREASING MEAT PRODUCTION IN KERALA:THE ROLE OF PUBLIC POLICY

HIGHLIGHTS

- Kerala is ideal for meat-based industries owing to cultural practices.
- Production has to grow at least 5 percent per annum over the next decade for Kerala to reach closer to self- sufficiency in meat production
- Policy orientation and strategic action points have been provided.

EXECUTIVE SUMMARY

Kerala is ideal for meat-based industries owing to cultural practices and the absence of a taboo on meat eating unlike other parts of India. Meat production has to grow at least 5 percent per annum over the next decade for Kerala to reach closer to self-sufficiency in meat production. The challenges facing the sector as well as the distribution of individual species in the meat industry are examined in detail.

The targets and deliverables of each intervention in different sectors, namely, establishment of meat animal farms, training and awareness, and meat production and processing have been summarized. Concrete indications have been provided for policy adoption and strategic action plans for livestock production for meat purpose, meat production and processing, training and awareness, and research.

Due emphasis has been laid on value addition – which is important in our context – and on mitigating the effects of the covid-19 crisis.

1.INTRODUCTION

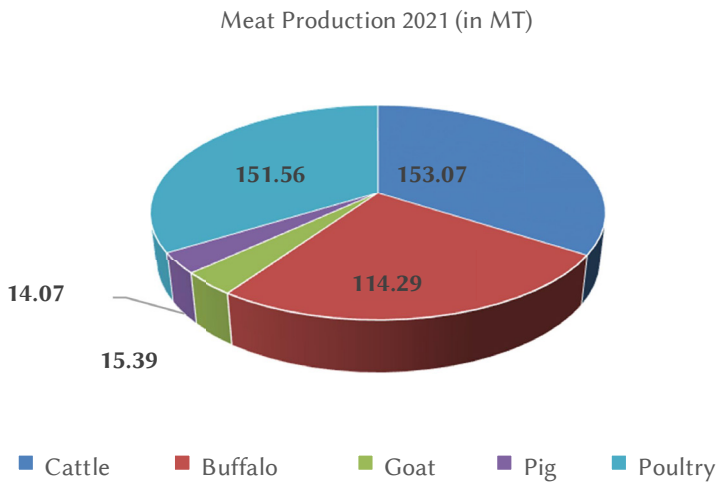
Kerala is the most ideal state in India for the development of the meat sector because of a highly literate population having awareness about the nutritional requirement for a healthy living. Meat production in Kerala has witnessed a steady increase since 2007-08. With the lack of taboos and sentiments regarding the consumption of various types of meat and higher purchasing power of the population, the demand for meat in Kerala is showing a regular increase of about 5 percent per annum. Though the requirement of meat in Kerala is 7.0 lakh tonnes / annum, the actual production is only 4.5 lakh tonnes (Source: Dept of AH, Govt. Kerala). It is imperative to note that only 10 percent of meat is produced from the domestic animals and 90 percent sourced from the animals imported from outside the State. It is therefore recommended that policies should be implemented to establish enough farms inside the state to raise the meat animals for slaughter.

NCAER's 2014 projections show that the demand for meat in Kerala was 4.8 lakh tonne in 2010, which was to rise to 6.5 lakh tonnes in 2020, 7.0 lakh tonnes in 2025 and 7.4 lakh tonne in 2030. But Kerala produced only 4.5 lakh tonnes of meat in 2018-19. Production has to grow at least 5 percent per annum over the next decade for Kerala to reach closer to self- sufficiency in meat production. It is also necessary to take into consideration the additional requirement of meat for the floating population (tourists and guest workers). For the production of safe and wholesome meat, it is absolutely essential to establish modern scientific infrastructure for the slaughter operations, value additions and strengthen human resource development for trained human resources in the sector. Such scientific infrastructure would eliminate the environmental pollution, prevent the spread of infectious diseases, emerging zoonotic diseases and generate economic returns from byproducts and waste. These policies will further be guided by the research and development and appropriate extension linkages required for the sector.

2. CHALLENGES IN THE MEAT SECTOR

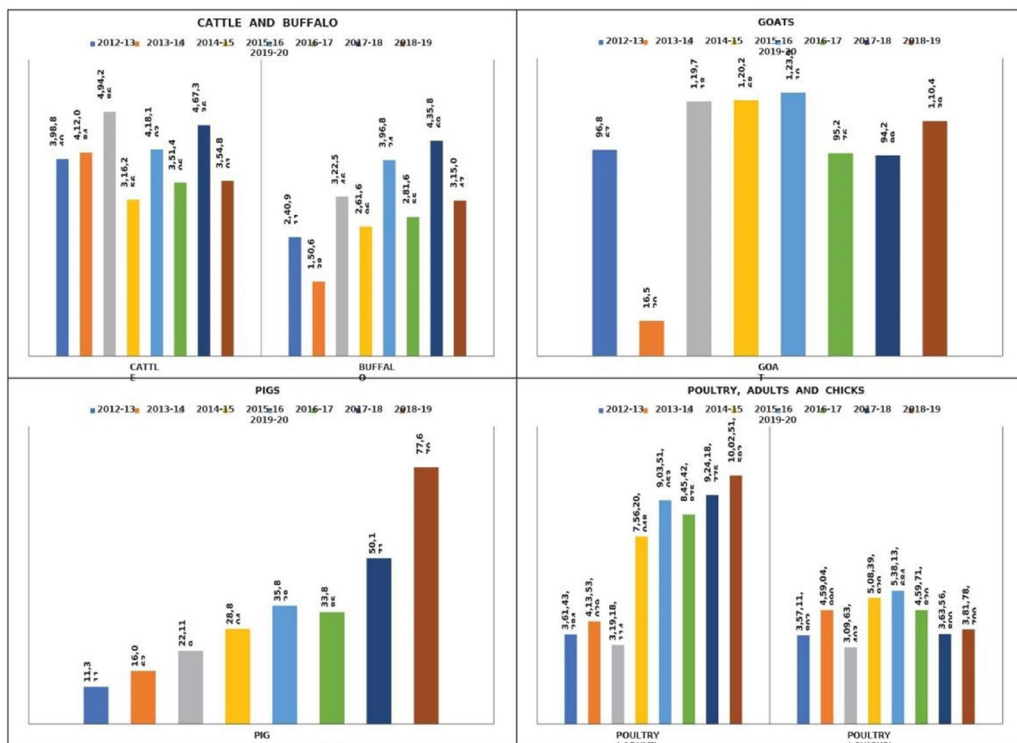
1. Lack of quality animals for meat production
2. Non-availability of land for farming activities
3. Gap in the supply of quality of feed and fodder
4. Inadequate focus on quality and safety standard
5. Lack of scientific infrastructure for production, processing and marketing
6. Illicit slaughter and inadequate waste management
7. Poor support for new product development, value addition and innovation in meat sector
8. Highly fragmented and unorganized meat sector
9. Constrains in the utilization of various governmental schemes and other funding agencies
10. Lack of trained human resources.

Figure 1. Species-wise meat production of Kerala - 2020 - 21



Source: Department of Animal Husbandry, Govt. of Kerala)

Figure 2. Import of animals into Kerala, by type, 2012-13 to 2019-20



Source: Department of Animal Husbandry, Government of Kerala

3. TARGETS AND DELIVERABLES

ESTABLISHMENT OF MEAT ANIMAL FARMS:

SlNo	Targets	Time Duration (Years)					Deliverables
		I	II	III	IV	V	
1	Formation of farmer producer organizations (FPO)- (facilitated byAHD / MPI/ KSPDC/ BDS/ Kerala Chicken)						30 FPOs will be formed
2	Licensing of available farms in the state						All the farms become licensed
3	Identification of land for the establishment of new meat animalfarm						Contribution of various animals to Meat Production Male buffalo/bull - 30%,Pig - 10%, Goat -5% Poultry - 50% and Other species - 5%
4	Procurement of animals by providing suitable incentives (loans, subsidies, veterinary care and disease control)						As per requirement
5	Feed / TMR Block manufacturing units under approved agencies (FPO/Entrepreneurs)						3 numbers during theplan period

MEAT PRODUCTION AND PROCESSING:

Sl No	Targets	Time Duration (Years)					Deliverables
		I	II	III	IV	V	
6	Establishment of infrastructure for slaughter, processing and rendering facility						One in each border area per year (total 3 Numbers)
7	Establishment of infrastructure for slaughter, processing and rendering facility						One in each district (total 14 Numbers)
8	Increase in Meat production						5 percent increase in meat production per year

TRAINING AND AWARENESS

Sl No	Targets	Time Duration (Years)					Deliverables
		I	II	III	IV	V	
8	Activities related to training and skill development						2000 numbers of Human resources for slaughtering and processing will be developed
9	Awareness programme: Radio talks, FM radio programmes, leaf lets, brochures, documentaries, awareness programmes, exhibitions and demonstrations.						Reach to entire population of Kerala through mass and social media

4. POLICIES AND STRATEGIC ACTION PLANS

LIVESTOCK PRODUCTION FOR MEAT PURPOSE

Policies

- Farmers will be encouraged to establish licensed meat animal farms mainly bull calf, buffalo male calf, pigs, goats, broiler chicken, desi birds, ducks, quail and rabbit by providing suitable incentives (loans, subsidies, veterinary care and disease control).
- Traditional small-scale farmers will also be considered for suitable incentives as in the case of licensed farmers.
- Insurance and traceability for meat animal production will be assured.
- Good livestock farming practices and good veterinary practices will be adopted in the licensed meat animal farms.
- Farming enterprises will be recognized by the government as industrial units.
- Disease-free zones / compartmentalization / zoning will be established with respect to PPR, Classical Swine Fever, Brucellosis, FMD, TB, meat borne pathogens (salmonella, campylobacter, enteropathogenic e-coli).

Strategic Action Plan

- Livestock production for meat purpose will be implemented through department farms (AHD, KLDB, MPI, BDS, Kerala Chicken, KSPDC, KVASU), large- and small-scale farmers, entrepreneurs, farmers co-operatives, farmer producer companies and start-ups.
- Farms/vendors in adjoining states will be recognized by Kerala State Animal Husbandry Department / Kerala Meat Board for the supply of buffalo/bull calves, pigs, goats and poultry.
- A health check-up package may be made available in AHD institutions for the imported meat animals including important parasitic and hemoprotozoan diseases and biochemical indicators of growth potential.
- Insurance of meat animals should be based on age/body weight of the animal at any given time. The premium may have to be decided taking into consideration the future value of the animal. In case of mortality on account of calamities, the state may compensate the farmers.
- The insurance compensation amount will be based on the age/body weight - value table / chart approved by the State AHD and the insurance companies.
- Forward integration with buyers should be facilitated through creation of government approved e-marketing platforms.
- (1) Area for zones, (2) species and type of diseases, (3) biosecurity plan will be designed by the State AHD for the prevention and control of infectious and zoonotic diseases.
- SOP will be developed with regard to farming practices and veterinary care and management by Kerala Veterinary and Animal Sciences University.
- All licensed meat animal farms should have facilities for effluent and waste treatment which should be integrated with various missions (eg: Haritha Keralam, Clean Kerala,

etc.) of the State Government.

- The sustainability of pig farming in the state will largely be a function of their environmental impact and regulatory compliance. Hence, standard farming practices need to be offered to the farmers with thrust on solid and liquid waste management, odour control and biosecurity (feeding of poultry offal) issues. Such farms can be recognized as certified pig suppliers to meat production units.
- Good quality feed/TMR blocks for various types of meat animals and poultry shall be manufactured either within the State or outside the state by approved agencies / AHD / Meat Board / KVASU.
- Establishment of Community Fodder Banks for the effective utilization of agricultural waste and fodder grass.
- Manufacture of animal farm implements through PSUs similar to KAMCO
- State AHD will formulate an Action Plan for the control of diseases specified in the policy item No. 1.6
- The Action Plan shall include 100 percent vaccination cover, animal identification, publicity and mass awareness campaign, sero-monitoring, recording / regulating animal movement through appropriate quarantine measures (if required) / check post, creation of emergency response team during outbreaks.
- For promoting meat animal production and processing, a single window clearance and ease of doing business may be implemented.

MEAT PRODUCTION AND PROCESSING

Policies

- All meat and meat products (fresh, chilled or frozen) marketed in Kerala should be wholesome, clean, safe and duly certified by Veterinarian.
- Slaughter of animals should be performed only in certified, licensed abattoirs having all infrastructural facilities essential for the scientific slaughter operations and by-products utilization.
- Modern scientific abattoirs shall be established in few identified border areas and at least one in each district and corporations.
- Abattoirs at the borders shall be owned and managed by the Government or Public-Private-Partnership mode.
- Abattoirs at districts and corporations shall be owned and managed by LSGD as service abattoirs.
- Clean modern meat stalls shall be established in all cities, towns and panchayats and the workers hitherto employed in slaughter operations shall be employed after special training and certification.
- Legislation has to be made mandatory for all the meat handlers / butchers (meat technicians) to undergo training provided by an approved agency.
- The Kerala State Poultry Development Corporation (KSPDC) / Meat Products of India (MPI) / State AHD / Brahmagiri Development Society (BDS) may undertake the establishment of integrated chicken slaughter & processing facilities with ETP, Rendering Plant and biogas plant.

- Establishment of small-scale poultry dressing units with tie up / arrangement with a licensed pig farmer or a rendering plant should be ensured.
- Separate pig slaughterhouses shall be established in selected corporations and districts.
- All stakeholders shall be encouraged to promote further processing and value addition of meat.
- Separate rendering plants will be established at least one in all districts and corporations for diseased / dead animals and waste from meat and poultry stalls.
- To foster One Health Concept, the State Animal Husbandry Department will create a Veterinary public health wing for managing all matters related to public health including meat hygiene and inspection.
- Positions of veterinary officers shall be created for meat inspection under LSGD/ AHD and be provided with special training in Meat Inspection/post-graduation in LPT/ VPH. They may be posted in all the integrated abattoirs in the State.
- A “Meat Board of Kerala” headed by a veterinarian shall be created to organize and coordinate all activities to augment the meat sector in Kerala including registration of various stakeholders in the sector, channelizing funds, backward and forward linkages to farmers, regulating input production and supply, processing and marketing, regulation of waste management etc.
- Freezing of meat is not a processing or value addition. As such, the GST on frozen meat may be removed. State may take up this matter with the GST council.

Strategic Action Plan

- All slaughter operations should be performed under scientific procedures without causing undue suffering and taking into consideration all animal welfare measures.
- Wholesome, clean and safe meat for the state of Kerala will be ensured through the implementation of a safe and hygienic meat programme based on scientific evaluation of meat borne risk to human health. The principles of food safety risk analysis will be followed.
- Slaughter of animals should be performed only in certified, licensed abattoirs having all infrastructural facilities essential for the scientific slaughter operations and by-products utilization.
- An abattoir to be licensed and certified (FSSAI / HACCP) should have facilities viz: Lairage, animal passage to slaughterhouse, Killing box (Halal box), stunner, carcass lift to the bleeding rail, Bleeding rail, Blood collection and treatment facility, Head cutter, Horn cutter, Hock cutter, Dressing rail, Leg cutters, carcass re-railing facility, De-hiding facilities, Hide puller, chutes for removal of by-products, Brisket cutter, adjacent rail for offals like head, heart, liver, spleen, lungs, Inspection platforms for Vets at specified areas, Evisceration facilities, chute for stomach and intestines, Inspection platforms, Carcass splitter, Carcass washing facility, Carcass quartering facility, rail leading to the chiller, Deboning hall and facilities, packing hall, Freezer & Freezer store (wherever required). The abattoir should have clean potable water supply and hot water supply. The abattoir should have entry for workers & supervisors and changing rooms & toilet facilities. There shall be clear demarcation of clean and unclean operations and should

not allow passage of workers or other staff from unclean sites to clean sites in the abattoir. Joint-free flooring and walls. Air-conditioning shall be provided throughout the abattoir especially at deboning, packing etc.

- Facilities for cleaning the byproducts, inspection and packing of edible byproducts should be integrated.
- In-edible offals and condemned portions should be conveyed to the Rendering plant.
- Trained manpower should be employed for each operation.
- Only healthy animals should be allowed to enter the slaughterhouse and the animals should be inspected Ante-mortem and Post-mortem by qualified Veterinarian.
- Only chilled/frozen packed meat shall be made available for the consumers and the carcass will be retained in the chiller for conversion of muscle to meat. Thus wholesome, safe meat will be made available to the consumers in Kerala.
- Integrated abattoirs shall be established at notified borders of the State so that animals entering the State for slaughter are slaughtered scientifically at the border itself, preventing live animal transport within the State. This will also help in the control of diseases and in facilitating epidemiological studies regarding emerging diseases and zoonotic diseases of importance.
- Modern scientific abattoirs shall also be established at least one in each district and corporations for slaughter of animals arising within the State. All such abattoirs will have all infrastructural facilities described earlier.
- Land available in plantation areas / revenue “purampokku ” / departmental farms may be utilized for the establishment of modern abattoirs and meat animal farms.
- Clean, modern meat shops registered/approved by FSSAI shall be established in all towns and major panchayats and the workers hitherto engaged in slaughter operations in various places shall be accommodated for the sale of wholesome meat and products. Meat shop shall have the following facilities - air-conditioned area for processing and sale, display chillers for holding the carcass/meat, sterilization and sanitation facilities, tables and appliances made of SS304, (FSSAI Specification), effluent management system (soak pit / biogas plant) and a tie up with a rendering plant.
- All such workers shall be given training in handling and sale of meat and also would be trained in value addition of meat at the Meat Technology Unit, KVASU.
- Facilities shall be established by the trained workers for value addition and preparation of various meat products, wherever needed and may be provided financial support (Loan) for the establishment of such facilities by accredited agencies including MSME.
- The integrated abattoirs shall be multi-species abattoirs viz: Cattle/Bufaloes, Goats, Rabbit and Poultry. Separated facilities may be created for pig slaughter.
- The present system of chicken slaughter at all panchayats, towns and cities are creating tremendous quantities of waste which are in general not properly utilized. The chicken thus dressed invariably are contaminated and not wholesome, creating chances of spread of diseases among the consumers. The Kerala Chicken Project / Kerala State Poultry Development Corporation (KSPDC) / Meat Products of India (MPI) / Brahmagiri Development Society (BDS) / Meat Board may undertake the establishment of major

chicken slaughter & processing facilities coupled with ETP, Rendering Plant and bio-gas plant.

- Cold store facilities and slaughtering facilities in the abattoirs can be leased to startups and entrepreneurs during second or third shifts.
- Recognized private cold chain facilities may be permitted in the States for the storage and marketing of carcasses / meat.
- Only scientifically slaughtered, dressed and inspected chicken need be packed after due chilling, and the same shall be made available in the meat stalls for sale to the consumers.
- Facilities for making special cuts, marinated parts, Ready to cook/Ready to Eat chicken products may be established in cities.
- In addition to the above-mentioned facilities, rendering plants may be established in all the major towns and cities for the proper treatment and disposal of sick culled animals, carcasses, dead birds and animals. This would facilitate the proper disposal of dead animals and carcasses preventing environmental pollution and the spread of diseases.
- Innovation Capacity Building through the supply chain (working with value chain partners to develop and implement new solutions for the sector)

TRAINING AND AWARENESS

Policies

- The Meat Technology Unit, KVASU shall be recognized as the Centre of Excellence in Meat Science and Technology (COEMST). COEMST will coordinate all training programmes in the State in collaboration with AHD, MPI, BDS and KSPDC.

Strategic Action Plan

- Consumer Awareness campaigns should be undertaken by experts in the field regarding safety, wholesomeness and scientific slaughter & its effect on the health of the consumers.
- Literature, videos, materials for extension activities shall be developed by the COEMST and shall be shared to other agencies - AHD, MPI, BDS, KVKs and KSPDC. First phase of the awareness campaign must be completed within one year with the financial support of the above agencies.
- The importance of conversion of muscle to meat and the use of chilled meat has to be widely given publicity.
- Post-Covid environment in our State had impacted the livelihood and opportunities of many including NRIs. Many of them have shown interest in livestock farming, meat production and processing, value addition and establishing meat stalls. They should be provided with skill training, in entrepreneurship, credit support and marketing in the meat sector with the active support of LSGD, AHD, MPI, BDS, KVKs, KSPDC and any other governmental agencies.
- Training in meat animal rearing may be provided to the stakeholders.

RESEARCH

Policies

- Research will be undertaken in the following areas- consumer studies, market analysis, supply chain analysis, quality analysis, product development, byproduct utilization, livestock rearing management and feeding strategies for safer meat and transportation of foods of animal origin.
- Animal Welfare activities

Strategic Action Plan

- Research and monitoring of supply chain including cost effective safe feeding of meat animal and transportation of meat and meat products
Customer expectation studies and exploring possibilities of value addition and financial viability
- Mitigation of risk in supply chain
- Microbial, residual analysis and eating quality parameters
- Product quality and shelf-life evaluation studies
- HACCP and Food safety
- Recent advances in packaging
- Value addition and product development
- Mapping and standardization of indigenous and traditional meat products
- Development of shelf stable meat products
- Product diversification and post rendering application
- Development of live animal and carcass grading system suitable for the State
- Relationship between carcass quality and age of slaughter / breed and rearing practices
- Optimum mechanization, automation and IoTs for slaughterhouse and livestock farms
- Exploring TMR based on unconventional feedstuffs for the economical rearing of meat animals
- Traceability studies.

APPENDIX -1

**PROCEEDINGS OF THE MEMBER SECRETARY
STATE PLANNING BOARD
(Present: Sri. Teeka Ram Meena IAS)**

Sub: - Formulation of Fourteenth Five Year Plan (2022-27) – Constitution of Working Group on Animal Husbandry and Dairy sectors – Revised Proceedings - reg.

Read: 1. Note No. 297/2021/PCD/SPB dated: 27/08/2021
2. Guidelines on Working Groups
3. This Office order of even number dated 08.09.2021

ORDER No. SPB/342/2021-Agri(2) Dated:14.09.2021

As part of the formulation of Fourteenth Five Year Plan, it has been decided to constitute various Working Groups under the priority sectors. Accordingly, the Working Group on **Animal Husbandry and Dairy sectors** is constituted. For the smooth functioning of the Sectoral Working Group (SWG), it is decided to split the Working Groups into Expert Sub Groups (ESG). Hence the Working Group is categorized into Five Expert Sub Groups as indicated in the proceedings. The names of the members of the SWG are indicated under each ESG. The Working Group shall also take into consideration the guidelines read 2nd above in fulfilling the tasks outlined in the ToR for the Working Group.

1. PREPARING KERALA FOR A SURPLUS IN MILK PRODUCTION: A PLAN

Co - Chairperson

1. Dr P. Sudheer Babu, Registrar, KVASU
2. Mr. K. S. Mani, Chairman, MILMA

Members

1. Dr G. R. Jayadevan, Assistant Professor, Dairy Technology, KVASU
2. Dr Archana Chandran, Asst. Professor, Dairy Technology, KVASU
3. Ms Mini Ravindradas, Director, Dairy Development Department
4. Sri K Sasikumar, Joint Director, Dairy Development Department
5. Mr.Prakash, Joint Director (Rtd), Dairy Development Department
6. Ms V. S. Harsha, Assistant Director, Dairy Development Department
7. Dr Denny Franco, Assistant Professor, Agriculture Economics RARS, Ambalavayal, Wayanad
8. Mr K. R. Mohanan Pillai, Karthika, Kottara, Kollam - 691537
9. Dr B. N. Shaji, Assistant Director (Rtd), Animal Husbandry Department
10. Mr Biji. V. Easo, Joint Director(Rtd), Dairy Development Department

Terms of Reference

1. To assess Kerala's progress in increasing milk production over the past decade, and its sufficiency vis-à-vis the domestic demand for milk and milk products.
2. To examine the potential of Kerala to produce a surplus in milk production and suggest measures for policy preparedness.
3. To assess the extent of infrastructural and institutional requirements to meet the challenge of surplus milk production in Kerala.
4. To suggest measures to modernise the functioning of dairy cooperatives in Kerala.
5. To suggest specific measures for diversification of milk use into value added products.

2. INCREASING PRODUCTIVITY AND PROFITABILITY IN LIVESTOCK: CHALLENGES AND PATHWAYS

Co - Chairperson

1. Dr M. R. Saseendranath, Vice Chancellor, Kerala Veterinary and Animal Sciences University
2. Dr Jose James, Managing Director, Kerala Livestock Development Board

Members

1. Dr Patil Suyog Subhashrao IFS, Managing Director, Milma
2. Dr C. Latha, Dean KVASU
3. Dr P. T. Suraj, Associate Professor, Livestock Production Management, KVASU
4. Mr V. S. Padmakumar, Kerala Karshaka Sangham, Anitha Bhavan, Edavakkode, Sreekaryam
5. Mr Koshy K Alex, Deputy Director, Dairy Development Department
6. Dr K. Sindhu, Director, Institute of Animal Health and Biologicals, Palode
7. Dr Murali, Managing Director, Malabar Milk Union
8. Mr N. K. Subramanian, Naduvil Purakkal Veedu, Mullassery P.O, Thrissur
9. Dr Shajil, Assistant Director, Animal Husbandry Department
10. Dr Easwaran, Deputy Director (Rtd), Animal Husbandry Department
11. Dr Binu Prasanth, Assistant Director, Animal Husbandry Department

Terms of Reference

1. To assess the productivity in Kerala livestock sector over the past decade.
2. To suggest measures to improve Kerala's productivity in livestock farming to the levels of best performing states, including through better breeding, feeding and management.
3. To assess the demand and supply of fodder in Kerala and suggest measures to increase fodder production in the short-term and medium-term.

4. To suggest measures to increase investments in larger livestock farms in the State.
5. To suggest measures to improve the system of registration of all livestock in the State, especially dairy animals.

3. EASE OF ENTREPRENEURSHIP IN ANIMAL HUSBANDRY: REFORMS IN POLICY AND ADMINISTRATION

Chairperson

1. Ms Tinku Biswal, Secretary, Department of Animal Husbandry

Members

1. Dr A. Prasad (LPM, KVASU)
2. Dr Sajith Purushothaman, Assistant Professor, KVASU
3. Dr Syam Suraj (AP, DBM, KVASU)
4. Smt. Rejeetha, Deputy Director (IT), Dairy Development Directorate
5. Mr C. P.-Shyjan, Niranjana, Vayalambalam Temple Gate P.O, Kannur 670102
6. Dr. C.V. Thomas, Cherukarakunnel, Kalaketty P.O
7. Dr Pradosh, Assistant Director (Rtd), Animal Husbandry Department
8. Dr Selvakumar, Assistant Director, Planning, Animal Husbandry Department

Terms of Reference

1. To suggest a broad quantitative framework to regularly assess ease of entrepreneurship in animal husbandry in Kerala.
2. To identify the constraints to the flow of entrepreneurial capital into the processing and value addition segments in animal husbandry.
3. To suggest short-term, medium-term and long-term measures to improve the ease of entrepreneurship in animal husbandry.
4. To suggest legal and administrative measures to be initiated at different levels of governance, including LSGIs, to improve the ease of entrepreneurship in animal husbandry.

4. INCREASING MEAT PRODUCTION IN KERALA: THE ROLE OF PUBLIC POLICY

Co - Chairperson

1. Dr A. Kowsigan IAS, Director, Animal Husbandry Directorate
2. Dr B. Sunil, Prof & Head, Department of Livestock Products Technology KVASU, Mannuthy

Members

1. Dr.N.Ashok, Director of Academic, KVASU
2. Dr V. N. Vasudevan, Assistant Professor, Department of Livestock Products Technology KVASU, Mannuthy

3. Dr A. Irshad, Assistant Professor, Department of Livestock Products Technology KVASU, Mannuthy
4. Dr A. S. Bijulal, Managing Director, Meat Products of India
5. Mr A. Krishnaprasad, Chairman Brahmagiri Development Society, AIKS
6. Mr M. Sukumara Pillai, Plamoottil, Pathiyoorkkala, Keerikkad P.O. Alappuzha 690508
7. Dr Janakidas, District Epidemiologist, Animal Disease Control Project, Pathanamthitta
8. Dr T. R. Jayakrishnan, Veterinary Surgeon, Animal Husbandry Department
9. Dr Chandrababu, Veterinary Surgeon, Animal Husbandry Department

Terms of Reference

1. To assess the progress made in Kerala in increasing meat production over the past decade.
2. To assess the overall demand and supply of different types of meat in Kerala, and the level of dependence on inter-State trade.
3. To prepare a roadmap – a Meat Sector Strategic Plan (MSSP) – for increasing meat production in the next decade comprising production, processing and marketing of meat and meat products.
4. To suggest requirements of infrastructure and investment in the development of a value chain in meat, including aggregation, slaughtering, processing, integrated cold chains and retail outlets.
5. To suggest specific policy measures to prepare the State for better hygiene, quality and food safety in the meat sector.
6. To identify specific research gaps in the meat sector and suggest measures to improve the research-extension linkages.

5. THE POULTRY SECTOR IN KERALA: CHALLENGES TO GROWTH AND POLICY SUGGESTIONS

Co - Chairperson

1. Dr P. A. Peethambaran, Professor (Rtd) (KVASU)

Members

1. Dr P. Anitha, Professor & Head, Department of Poultry Science, KVASU, Mannuthy
2. Dr. Harikrishnan, Assistant Professor, Department of Poultry Science, Mannuthy
3. Dr R. Sudhi, Veterinary Surgeon, Animal Husbandry Department
4. Dr Binoj Chacko, Assistant Professor, KVASU
5. Dr Prakash T, Joint Director (Retd), Animal Husbandry Department
6. Dr Vinod John, Managing Director, KSPDC
7. Mr Mohandas, Panavilakom Veedu, Thirupuram P.O, Neyyattinkara -695133
8. Dr A Sajeev Kumar, Programme Officer, Animal Husbandry, Kudumbashree
9. Dr Sunil Kumar, Additional Director (Rtd), Animal Husbandry Department

Terms of Reference

1. To assess the progress made in Kerala in increasing chicken and egg production over the past decade.
2. To assess the overall demand and supply of chicken and egg in Kerala, and the level of dependence on inter-State trade.
3. To prepare a roadmap – as part of the Kerala Chicken Project – for increasing chicken and egg production in the next decade comprising production, processing and marketing.
4. To suggest requirements of infrastructure and investment in the development of a value chain in chicken and eggs, including production, aggregation, processing, integrated cold chains and retail outlets.
5. To suggest specific policy measures to prepare the State for better hygiene, quality and food safety in the poultry sector.
6. To identify specific research gaps in the poultry sector and suggest measures to improve the research-extension linkages.

Convener

Mr. S.S.Nagesh, Chief, Agriculture Division, State Planning Board

Co- Convener

Ms. Kumari Sangeetha K.R, Deputy Director, Agriculture Division, State Planning Board

Terms of Reference (General)

1. The non-official members (and invitees) of the Working Group will be entitled to travelling allowances as per existing government norms. The Class I Officers of GoI will be entitled to travelling allowances as per rules if reimbursement is not allowed from Departments.

2. The expenditure towards TA, DA and Honorarium will be met from the following Head of Account of the State Planning Board "3451-00-101-93"- Preparation of Plans and Conduct of Surveys and Studies.

The order read as reference 3 is modified to this extent.

(Sd/-)
Member Secretary

Forwarded By Order


Chief,
Agriculture Division

To

The Members concerned

Copy to

PS to Vice Chairperson
PA to Member Secretary
CA to Member (Dr.Ramakumar.R)
Economic Advisor to VC
Chief, PCD,SPB
Sr. A.O, SPB
The Accountant General, Kerala
Finance Officer, SPB
Publication Officer, SPB
Sub Treasury, Vellayambalam
Accounts Section, File/Stock File