Livestock health priorities in the Ethiopia livestock master plan

Improved animal health services could hugely increase livestock productivity and the earnings of their owners. Although the coverage and quality of such services are less than satisfactory, provision has expanded and improved across Ethiopia. The government has established a new authority to control and administer the quality, safety and efficacy of veterinary drugs, biological and animal feeds.

Veterinary and para-veterinary training is improving, the use of community animal health workers has grown, and the National Veterinary Institute now produces 16 vaccines against livestock diseases. The diagnostic laboratory system—well equipped and staffed—now has 14 diagnostic laboratories nationwide. The National Animal Health Diagnostic and Investigation Center is also implementing a ‘quality management system’ as part of its application for ISO-17025 accreditation. So far the laboratory has been accredited for 14 tests and six diseases.

Despite substantial international demand for Ethiopian meat and livestock products, exports are often hindered by stringent animal health requirements. Endemic diseases limit livestock productivity and agricultural development. Their impact stems from direct losses due to mortality and indirect effects due to slow growth, low fertility and morbidity-related reductions in productivity—particularly among young animals and reproductive females. These losses have significant economic, food security and livelihood impacts.

To meet rising export standards and enhance the quality of animal health services, the Government of Ethiopia has embraced standards set by the World Organisation for Animal Health (OIE) and the Performance of Veterinary Services (PVS) Pathway. The coverage of veterinary services has improved over recent years as the government has made progress towards meeting its ambitious target of providing an animal health clinic for every three villages. Considerable efforts are being made to improve the quarantine and inspection services to meet requirements set by trading partners, and standard quarantine facilities are under construction. These factors all helped the rapid growth in the volume and value of Ethiopian exports.

In response to rising demand for animal health services, the importation and distribution of veterinary drugs and the establishment of private pharmacies have been liberalized. Yet sustainable growth would be facilitated by establishing an autonomous statutory body to uphold ethics and educational standards, helping ensure veterinary education is best placed to address new challenges such as the diversification and intensification of production systems. Business viability is a challenge for veterinary entrepreneurs.

The prevention and control of economically important diseases requires further attention and would be enhanced by the implementation of livestock movement control, and identification and traceability systems. Effective surveillance systems strategies, encouraging active public and private sector participation, to meet the challenges posed by emerging infectious diseases are urgently needed, as are coordinated emergency preparedness and contingency plans for exotic, emerging and/or re-emerging diseases.
Goals and objectives for livestock health

The seven major objectives for animal health in the livestock master plan are:

1. Establish a robust animal health information system by: improving the quantity and quality of disease outbreak and inspection reports; establishing a real-time livestock-diseases-information exchange system conducting risk-based active surveillance on selected Transboundary animal disease (TAD); and supporting the National Animal Health Diagnostic and Investigation Center (NAHDIC) and all regional laboratories in establishing and strengthening epidemiology units.

2. Reduce the impact of livestock diseases by: reducing the impact of peste des petits ruminants (PPR) and foot and mouth disease (FMD); reducing lamb and calve mortality; building regional capacity in prioritizing and preparing control strategies; improving accessibility of livestock clinical services; engaging the public sector in areas not attractive to the private sector; creating environments conducive to private sector expansion; facilitating vaccine supply; implementing model herd/flock health programs on dairy and poultry farms; and preparing biosecurity systems for the main commodities.

3. Increase the export volume of live animals, meat and meat products by strengthening the quarantine, inspection and certification system. This is mediated by: increasing the volume of safe and quality meat and meat products; increasing the number of healthy and bio-secured animals; building an animal identification, registration and traceability system; and opening up new destination markets.

4. Reduce the impact of zoonotic diseases on human health by controlling such diseases and ensuring the safety of animal products. The key focus areas are: reducing the impact of rabies and tuberculosis on public health; facilitating the establishment of abattoirs through public- and investor-led spending in regional capitals, zones and woredas; establishing a training institute on meat inspection and food safety; and establishing a one-health forum at the federal and regional levels.

5. Improve animal welfare by raising public awareness and introducing good practices.

6. Improve the implementing capacities of Ethiopia’s animal health services through the preparation, endorsement and implementation of various legal frameworks.

7. Build an advanced animal health system by restructuring veterinary services in line with the 2011 OIE evaluation, evaluating regional animal health services, identifying the gaps and enabling preparation of a strategy to bridge these gaps.

Disease prioritization

During the LMP development process, the livestock sector investment and policy toolkit (LSIPT) was used to help inform decision makers to prioritize diseases to work on. The 10 most important diseases were ranked according to their impact on rural households and their livelihoods, markets and value chains, and intensification pathways. The global scores were weighted for total numbers of households affected, total value added generated from the sub-chain, and the animal populations affected.

For cattle, the total scores indicate that FMD, contagious bovine pleuropneumonia (CBPP) and brucellosis are the three most important diseases. During the weighting process, the results were different. For market and value chains, FMD came first, then lumpy skin disease (LSD), and brucellosis. For households the ranking was FMD, CBPP and tuberculosis (TB). In the case of intensification, brucellosis, FMD and TB were the top three.

For sheep and goats, the top ranked according to household, market and value chains, and intensification are Peste des petits ruminants (PPR), sheep and goat pox (SGP) and contagious caprine pleuropneumonia (CCPP). Ranking by impact on household attributes led to CCPP first followed by PPR and SGP. For camels, surra ranked first while for chickens, Newcastle disease virus ranks first.

Subsequent discussion with stakeholders generated a top priority list: FMD, PPR, and trypanosomosis, SGP, CBPP, and external parasites.
Transforming the livestock sector through health interventions

1. With the support of donors and international partners, develop and implement a plan to improve veterinary services in line with international OIE and World Trade Organization (WTO) requirements.

2. Strengthen livestock disease surveillance and information systems by implementing guidelines on reporting systems, the harmonization of the animal health information system at both federal and regional levels, the use of new technologies to enhance reporting, and expansion of data sources to veterinary laboratories, abattoirs and quarantine stations.

3. Develop and implement progressive strategies to control or eradicate livestock diseases of importance to trade and livelihoods. This could be done through participation in the Pan-African Tsetse and Trypanosomosis Eradication Campaign and regional approaches to controlling TADs.

4. Strengthen veterinary public health services to combat zoonotic diseases by implementing international standards and regulations for the food safety applied to primary animal products—including hygiene and sanitation of meat and meat products—, and food safety awareness and private investment promotion.

5. Establish coordination procedures between federal and regional veterinary services in the control of TADs, ensuring regional states comply with national reporting requirements and execute national disease control programs.

6. Improve the efficiency and coverage of public clinical services, moving gradually to self-financing delivery, by providing adequate operational budgets, in-service training for animal health workers, and the establishment of veterinary clinics and standards.

7. Improve laboratory self-financing diagnostic services by establishing effective laboratory information and accredited quality management systems at federal and regional levels, in close collaboration with world reference laboratories, such as the OIE.

8. Promote animal welfare by establishing a fund for animal welfare groups and enforcing relevant legislation, good farm-level practices, and producing and disseminating accurate, useful and timely public information.

9. Strengthen the legal framework on animal health and food safety by implementing outstanding proclamations and regulations, public awareness campaigns, and establishing review and enforcement mechanisms in line with international standards.

10. Improve national capacity for early detection and response to animal health emergencies by establishing an early warning and emergency preparedness unit, preparing generic and disease-specific plans and operating procedures, allocating adequate resources, and developing coordinated and efficient mechanisms for stakeholder collaboration.

11. Expand private animal health services by outsourcing certain public goods activities and supporting veterinary physicians to produce and sell agricultural inputs, and strengthen public private partnership by providing incentives to establish private animal health service delivery system.

12. With the Pan African Vaccine Centre, develop analytical capacities to determine the quality, safety and efficacy of veterinary drugs and biological agents, and establish an authority to regulate their importation, production, distribution and use.

13. Ensure the timely and regular supply and storage of adequate animal health inputs by establishing a drug fund for public veterinary clinics, particularly to produce key quality vaccines, and support the private sector to import, manufacture and market appropriate veterinary drugs and vaccines.

14. Develop and implement legislation for the phased establishment of a livestock identification and traceability system, including a registry and traceability databank, starting with export animals and gradually expanding to the national herd.

15. Strengthen the quarantine and inspection system to reduce the risk of disseminating diseases during the cross-border trade of livestock and livestock products through the application, monitoring and enforcement of certified management and biosecurity procedures. This to include food handling, training of staff, risk-based import procedures and protocols in line with international standards, and those of major trading partners.

16. Strengthen grassroots animal health extension services to prevent and control the spread of parasitic diseases, through the identification of areas of risk, the preparation of an animal health knowledge kit, and sharing of good practices.

17. Strengthen veterinary services in lowland pastoral areas by implementing an accredited, coordinated, nationally harmonized, and transparent community-based animal health system, involving the coordination of all agencies operating in the sector, including private pharmacies.

Research priorities

In collaboration with regional and international research organizations with advanced laboratory and related facilities, national institutions should prioritize research/action research of strategic importance such as:

• Technology transfer of a reliable thermo-stable vaccines against major livestock diseases.
• Combined and differentiating-infected-from-vaccinated-animals vaccines.
• Pen-side tests, diagnostic kits and reagents.
• Epidemiological and socioeconomic studies on TADs.
• Root causes and appropriate remedies to prevent meat darkening and improve its shelf life.
Background to the LMP
Since 2014, the Livestock Resources Development Sector (or Livestock State Ministry) of the Ethiopian MoA and ILRI have been collaborating to develop a livestock master plan (LMP) to provide guidance to the government of Ethiopia on future priorities for livestock research and development activities.

The LMP project development process was funded by the Bill & Melinda Gates Foundation (BMGF). Beyond the plan itself, the project aims to build the capacity of the government to carry out data-driven, fact-based analytics and planning.

The LMP was developed by a joint team from ILRI and the MoA. Development was overseen by a high-level technical advisory committee (TAC) comprising directors of key MoA Livestock State Ministry departments and institutes, as well as representatives from the Food and Agriculture Organization of the United Nations (FAO), the Intergovernmental Authority on Development (IGAD), the Ethiopian Agricultural Transformation Agency (ATA) and the presidents of the relevant professional associations of livestock experts (the Ethiopian Society of Animal Production and the Ethiopian Veterinary Association).

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