



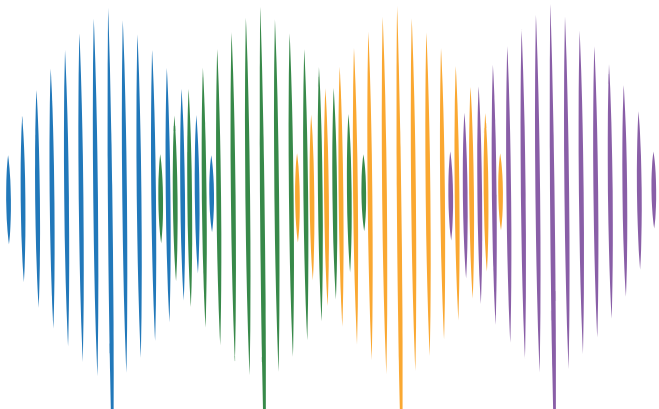
Food and Agriculture
Organization of the
United Nations

Small livestock development in Rwanda: enhancing the policy environment for pig and poultry value chains

Policy brief



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Funded by the
European Union

Key messages

The Government of Rwanda (GoR) and key stakeholders should take policy actions to strengthen pig and poultry value chains, with a focus on smallholder farmers. GoR and stakeholders are recommended to:

- **Incentivize feed millers to collectively import raw materials for animal feed production** as more coordinated importing would increase the bargaining power of buyers and improve the supply chain for the feed industry.
- **Establish innovative links and collaboration measures** between farmers, animal feed producers and other stakeholders to overcome the complex problems around animal feed.
- **Increase local consumer demand for eggs, poultry and pork** through awareness raising and capacity development around cooking and consumption of pork and poultry products.
- **Create or increase incentives for private investments in the small livestock sector** including market infrastructure, feed mills and feed distribution networks, which could also offer embedded after-sales services, animal processing facilities, and cold chains for animal products.
- **Incentivize private veterinarians to set up businesses in remote rural areas of Rwanda.** Increasing the number of private veterinarians in the country should be a main response to current animal health issues, as would a subsidy scheme for vaccines and medicines for livestock.
- **Sensitize and motivate commercial banks and microfinance institutions** to introduce well-tailored agricultural credit lines and revise measures for credit and insurance access for farmers and investors in the livestock sector.
- **Implement standards and regulations for small livestock transport with reference to animal welfare and food safety.** Awareness of such standards and regulations among logistics and transport operators should increase. Enforcement of regulations is also needed.
- **Review and enforce standards and regulations governing the small livestock sector to enhance quality and promote consumer demand.** Effective standards and regulations should cover all operations on both the input and output sides of small livestock value chains from farms to consumers, including service provider operations.
- **Establish a platform for all actors in small livestock value chains in Rwanda.** A platform would play multiple functions in developing small livestock value chains, such as promoting collective imports of raw materials for feed production, collective procurement of feed by farmers, expanding the e-Soko agricultural market pricing information system, and strengthening technology exchange and information sharing.
- **Attract investors to transport and logistics infrastructure for small livestock in reference to animal welfare and food safety.** This entails introduction of specialized trucks to move live animals and animal products (e.g. processed meat) long distances and developing cold chain facilities.

Introduction

In recent years, much has been accomplished to develop the small livestock subsector in Rwanda. The Livestock Master Plan (LMP) 2017–2022 and the Fourth Strategic Plan for Agricultural Transformation (PSTA 4) 2018–2024 have attracted investments that have improved the productivity of small livestock value chains, including better pig and poultry genetics and feed and health services. However, this subsector still faces many problems related to policy and the enabling environment.

These problems were identified by a policy analysis involving stakeholder consultations in September and October 2022 and a national policy dialogue held in November 2022, jointly organized by the Food and Agriculture Organization of the United Nations (FAO) and the Ministry of Agriculture and Animal Resources (MINAGRI). Results were verified and refined with stakeholders at a reflection workshop in March 2023. The European Union supported this study under the FAO-led TAP-AIS project “Developing capacities in agricultural innovation systems: scaling up the Tropical Agriculture Platform Framework.”

The main problems facing small livestock development in Rwanda include:

- insufficient access to affordable, suitable and nutritious animal feed;
- limited or poor market infrastructure and processing facilities for animal products;
- limited extension and animal health services to control disease outbreaks;
- financial constraints to smallholder farmers’ participation in small livestock value chains;
- insufficient means of transport and logistics services for live animals and animal products;
- limited access to improved animal breeds; and
- poor links between smallholder livestock farmers, feed producers and animal processing facilities.

The analysis of these problems led to eleven recommendations highlighted in this policy brief.

Analysis of identified problems in pig and poultry value chains

Current problems in pig and poultry value chains, focusing on policy and the enabling environment, were analysed in multistakeholder focus group discussions and interviews with value chain actors in Rwanda and two national workshops. The following problems were identified.

Insufficient access to affordable, suitable and nutritious animal feed

A detailed problem analysis was conducted using the problem tree technique for animal feed, the highest priority problem. In Rwanda, animal feed producers face major challenges in sourcing enough raw materials (primarily maize and soybeans) from domestic and import markets and input costs are high. Feed millers tend not to join efforts to discuss solutions to the existing issues in the animal feed supply chain. Farmers complain about the high cost and poor quality of animal feed they have access to. Farmers say the market price for their animal products is too low compared to the cost of inputs. In the current situation, some farmers drop out of small livestock raising. Insufficient access to animal feed is the result of multiple causes, including:

- the limited number of feed millers are concentrated in Kigali, Rwamagana and Musanze;
- low productivity per land unit for maize and soybeans which are the main raw materials for feed millers;
- low investment in research and innovation capacity regarding animal feed production;
- insufficient incentives for private sector investors in feed production for small livestock;
- strong competition for maize and soybeans between animal feed production and human consumption;
- high cost of imported raw materials leads to expensive animal feed that farmers may be unable to afford;
- poor animal feed distribution networks;
- low quality of feed produced by feed millers in Kigali when maize and soybean grains are scarce, as they may substitute costly imported raw materials with poorer inputs leading to poor product quality; and
- insufficient horizontal and vertical links (business networks) among animal feed value chain actors.

Weak local market demand for pork and poultry products

Weak local demand for pork and chicken meat and eggs is restricting the development of pig and poultry value chains in Rwanda. The low demand in local markets is linked to traditional customs, perceptions and taboos regarding the consumption of these foods (e.g. pork and eggs are for rich people). As a result, skills for cooking pork and poultry

(e.g. broilers) are not well developed. Local consumers need to be targeted to increase the demand side of value chains. Actions to raise awareness, knowledge and skills around cooking and consumption of pork and poultry products are needed, including behaviour change communication. The health sector may need to be involved regarding nutritional aspects. Also, the development of an egg processing industry, which is in the pipeline, should be accelerated.

Limited or poor market infrastructure and processing facilities for animal products

Market infrastructure and processing facilities for animal products are constrained by:

- low incentives for the private sector to invest in market infrastructure, animal processing facilities and distribution networks for animal products;
- poorly developed and inefficient market infrastructure (e.g. slaughterhouse facilities, butcheries, trucks transporting live animals and processed animal products and cold chain equipment);
- limited innovation capacities for value addition, processing and marketing animal products (e.g. pork, egg powder, poultry, meat cuts); and
- insufficient consumer orientation in small livestock markets.

Limited health services despite the increasing number of disease outbreaks

Animal health services are limited, and recurrent disease outbreaks impoverish smallholder livestock farmers nationwide. There is currently one public veterinarian in each of the 416 administrative sectors in Rwanda. On average, three private veterinarians operate per administrative sector, but they are unevenly distributed and some administrative sectors in remote areas do not have access to private veterinary services.

At least eight to ten private veterinarians are needed in each administrative sector (Enabel, 2022). Their work can be controlled by public veterinarians to avoid overlap between public and private veterinarians. Although private veterinarians provide important extension services for animal health, farmers may be unable to afford private sector services. Viable, clear business models for such services should be developed to stimulate the establishment and operation of private veterinary clinics. The study revealed that animal health issues are caused by:

- poor housing and inadequate animal husbandry for small livestock, including pigs and poultry;
- disease outbreaks (e.g. African swine fever and exudative dermatitis (greasy pig) in pigs, and coccidiosis and respiratory diseases in poultry);
- insufficient qualified private and public veterinarians to provide timely services, particularly in remote rural areas;
- lack of financial means for farmers to afford required vaccinations and medicines leads to high mortality rates in animals; and
- limited biosafety measures for disease control on farms.

Biosafety during feed distribution needs attention

Millers are concentrated in Kigali City and use trucks to distribute animal feed from farm to farm without taking biosafety into consideration and may therefore propagate diseases such as pork fever and coccidiosis in poultry. A clear policy on biosafety would reduce such risks and attract more foreign investors to poultry farming.

Financial constraints to smallholder farmer participation in small livestock value chains

Some commercial banks (e.g. Bank of Kigali, Urwego Opportunity Bank, BPR Bank, and microfinance institutions (e.g. Umutanguga and Duterimbere) have agriculture portfolios but give little consideration to small livestock businesses. Banks do not issue agricultural loans easily because they are concerned about risks associated with agriculture and livestock production. The issue is a lack of trust in farmers' capacity to repay loans. Financial constraints that prevent farmers from running a small livestock business smoothly are:

- low investment capacity and lack of business and entrepreneurial skills for livestock production;
- limited access to start-up capital, especially in remote areas;
- low access to credit due to lack of collateral to secure bank loans;
- low access to insurance schemes;
- high interest rates at commercial banks and other financial institutions; and
- limited provision of financial products tailored to small livestock production.

More awareness should be created regarding farmers' access to finance, but an information-sharing scheme on existing agricultural financing products in Rwanda is lacking. Farmers need detailed information from banks and financial institutions regarding bank selection criteria, loan amounts and subsidy rates, and conditions for getting a loan. Awareness campaigns on access to finance and targeting actors in pig and poultry value chains are needed. Bankers need training on tailoring their credit services to agricultural seasonality rather than requiring monthly repayments. There should be tailor-made financing products in the existing financing institutions.

Insufficient means of transport and logistics services for live animals and animal products

Pigs are stressed during lorry transport and some mortality occurs, especially during long-distance transport. The same applies to chickens when transported on bicycles. Transport facilities are one of the key problems in marketing live animals and animal products. This is due to:

- low investment in transport facilities for the small livestock sector; and
- few cold chain facilities for transport of pig and poultry products to markets.

Insufficient means of transport for advisory services staff

Veterinarians need transport (e.g. motorbikes) to provide quick and responsive services to pig and poultry farmers. This problem is being addressed by the PRISM/Enabel project (Enabel, 2022) in close collaboration with Veterinaires Sans Frontières. Insufficient transport facilities for veterinary staff prevent them from delivering timely animal health services and inspections regarding animal feed, veterinary medicine products and animal product standards and safety.

Limited farmer access to improved animal breeds

Rwanda has regulations on the import of high-quality animal breeds and breeding centres, but these need to be enforced. Despite the efforts being put into genetic improvement through artificial insemination centres and other breeding techniques, farmers still have limited access to improved pig and chicken breeds. The reasons include:

For pigs:

- limited genetic improvement services for local pigs;
- Insufficient national supply of pig semen due to limited number of trained veterinarians; and
- insufficient import of improved pig breeds leading to low productivity in the pig industry.

For poultry:

- poor genetic improvement services for local chickens;
- low national supply of day-old chicks as almost all are imported, mostly from Uganda, Belgium, and the Netherlands (Kingdom of the); and
- a limited number of trained farmers to rear one-day-old chicks leads to limited distribution of improved chicken breeds and low productivity in the poultry industry.

Limited links between smallholder livestock farmers and feed producers

Farmers and feed producers do not have strong links. Most work in isolation. They do not collaborate or have a culture of solving their problems jointly. Collaboration of farmers to source animal feed would reduce the volatility of prices to some extent. Along the same line, feed millers can improve their way of doing business by collectively sourcing and stocking maize and soybeans as raw materials. The root causes of this problem are essentially:

- insufficient knowledge and skills of farmers and feed producers in doing business; and
- lack of coordination and collaboration mechanisms for farmers to collectively procure animal feed and for feed producers to collectively import raw materials.

Insufficient access to extension and advisory services

Smallholder livestock farmers have insufficient access to extension and advisory services. There are opportunities for feed distributors and feed millers to provide embedded after-sales services to farmers regarding good practices around animal feed. This engagement would stimulate and strengthen relationships between distributors, millers and farmers and build trust. As well-fed animals are healthier, such after-sales service would help prevent and control diseases, thus complementing the services of veterinary shops.

Low awareness of and compliance with standards

Standards regarding good practices in the small livestock sector are important but complex and not always adhered to. The first step is to build awareness among value chain actors and service providers about the existing standards and then monitor compliance.

Policy recommendations

Based on the above analysis, the following recommendations are offered.

1. **Incentivize feed millers to collectively import raw materials for animal feed production.** Incentives for the collective import of raw materials for animal feed production should be created at the national level. Currently, each feed miller imports their own raw materials, largely maize and soybeans, but issues around price, quality and a regular supply abound. A more coordinated import effort would increase the bargaining power of buyers and improve and stabilize the supply chain of inputs for the feed industry.
2. **Establish links and collaboration networks among farmers, animal feed producers and distributors.** Giving feed producers access to cheaper ingredients through joint sourcing and storage would be a good start in this networking process. Thereafter, the distribution channels for animal feed could be organized by millers in collaboration with farmers, whereby trustworthy distributors could be selected.
3. **Strengthen consumer demand for eggs, poultry meat and pork, including at local markets.** Actions to raise awareness and develop knowledge and skills around cooking and consumption of pork and poultry products are needed, including behaviour change communication. The health sector should be involved in this effort.
4. **Continue to create incentives (e.g. tax exemptions) for private investors** to upgrade small livestock market infrastructure, including meat processing facilities, feed mills and distribution networks. Some areas of policy intervention to incentivize private sector investments are:

- Attract investments for constructing market and slaughterhouse facilities through incentives such as plot availability and a tax exemption for five years of production. Such incentives to private investors should be extended for local market development and for animal product distribution networks at national and international levels.
 - Promote and enforce the use of cold chain infrastructure and certified and calibrated scales for animal products and conduct regular inspections to ensure that weighing scales at markets are consistent.
5. **Incentivize private veterinarians to set up businesses in remote rural areas.** Increasing the number of private veterinarians should be a main response to animal health issues. This should be done gradually because their training, set up and equipment costs are expensive. The government could:
- Help set up private veterinarians in remote areas and develop business models for their services to stimulate private veterinary clinics.
 - Introduce a subsidy scheme for vaccines and medicines for livestock production, or exempt them from taxes.
 - Enforce inspections of feed industries and their outlets. This intervention would boost veterinary services across the country, even in very remote areas. Once established, veterinarians could also be used by the Rwanda Council of Veterinary Doctors in collaboration with district veterinarians to regularly inspect livestock farms, hatcheries and abattoirs in their area of operation.
6. **Strengthen extension and advisory services by expanding the role of feed distributors and feed millers.** These groups can provide embedded after-sales services to farmers and promote good practices around animal feed. As well-fed animals are healthier, such after-sales services would help prevent and control diseases, thus complementing the services of veterinarians.
7. **Sensitize commercial banks and microfinance institutions to introduce well-tailored agricultural credit lines in their portfolios and revise conditions for credit and insurance access for farmers and investors in the livestock subsector.** Bank staff need training on tailoring their credit services to livestock value chains and agricultural seasonality. Farmers also need to be trained on how to apply for and use loans and credit as well as insurance products. Awareness campaigns about access to finance are needed, targeting actors in pig and poultry value chains. In addition, when smallholder livestock farmers engage in contract farming, financial institutions should accept such contracts as collateral for loans. This has become a common practice in crop production value chains in Rwanda (e.g. maize, rice, cassava, Irish potatoes).
8. **Implement standards and regulations for small livestock transport with reference to animal welfare and food safety.** Introduction of specialized trucks is paramount for the safe transport of live animals and animal products. Private sector investors need to be involved. Some transport standards and regulations for live and slaughtered animals are in place. However, awareness needs to be increased, particularly among logistics and transport operators. Availability and

use of specialized trucks should be increased. Government and partners' enforcement of regulations regarding transport of animals and animal products is needed, as well as a clear policy on biosafety during feed transport.

9. **Review and enforce existing regulations on the import of high-quality animal breeds and strengthen breeding centres across Rwanda.** To address genetic improvement and traceability across the country, redefining the role of actors through certification and licensing will be essential. It will also be necessary to improve coordination among actors involved in genetic improvement work to minimize the risks of inbreeding. Quality control of animal breeds from import points to the farm gate should be compulsory. This could be addressed by establishing a mechanism through which breeders are certified and their licensed practice is monitored by zone and livestock type. It would also prevent uncertified farmers from spreading poor-quality stock.
10. **Establish a platform for all actors in small livestock value chains.** A platform of actors in small livestock value chains would have multiple functions. The platform could analyse and solve problems regarding access, availability and quality of animal feed. It could promote the collective import of maize and soybeans as raw materials for feed production and the collective procurement of feed by farmers. It could strive to expand the MINAGRI e-Soko agricultural market pricing information system to include crop and animal product prices as well as animal feed prices. Sharing up-to-date prices among platform members would enhance links among categories of small livestock value chain actors.
11. **Attract investors to transport and logistics infrastructure for small livestock, emphasizing animal welfare and food safety.** This entails introducing specialized trucks to move live animals and animal products (e.g. processed meat) long distances and using innovative packaging material and cold chain facilities.

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Acknowledgements

We are grateful to key informants interviewed and participants in focus group discussions for their contributions. Participants in a national policy dialogue, held on 10 November 2022 in Kigali, gave valuable advice on this policy brief, and several reviewers from organizations engaged in the small livestock sector in Rwanda provided insightful comments on an earlier draft. We thank them all. This policy brief was funded by the European Union under the TAP-AIS project.

Prepared by: Leonidas Dusengemungu

Contacts

FAO Representation in Rwanda

FAO-RW@fao.org

Food and Agriculture Organization of the United Nations

Kigali, Rwanda

Office of Innovation

OIN-Director@fao.org

Food and Agriculture Organization of the United Nations

Rome, Italy

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Required citation:

FAO. 2023. Small livestock development in Rwanda: enhancing the policy environment for pig and poultry value chains. Rome. <https://doi.org/10.4060/cc6015en>



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