

The Poultry Value Chain in Lesotho

A rapid assessment of the status and prospects of
poultry production and trade

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Abbreviations

BAPOFA	Basotho Poultry Farmers Association
BOS	Bureau of Statistics
CBL	Central Bank of Lesotho
DLS	Department of Livestock Services
DOC	Day Old Chicks
EPA	Economic Partnership Agreement
FAO	Food and Agriculture Organisation of the United Nations
GoL	Government of Lesotho
IFAD	International Fund for Agricultural Development
LCSAIP	Lesotho Climate Smart Agriculture Investment Plan
LFFM	Lesotho Farm Feed Mills
LENAFU	Lesotho National Farmers Union
LENAFUSP	Lesotho National Farmers Union Strategic Plan
LNDC	Lesotho National Development Cooperation
MAFS	Ministry of Agriculture and Food Security
MSCM	Ministry of Small Businesses Cooperatives and Marketing
NSDP II	National Strategic Development Plan (NSDP) II
PSCEDP	Private Sector Competitiveness and Economic Diversification Project
SACAU	Southern African Confederation of Agricultural Unions
SADP	Smallholder Agricultural Development Project

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Background

The Southern African Confederation of Agricultural Unions (SACAU) is implementing a project to strengthen the capacity of SACAU and National Farmers' Organizations (NFOs) in agriculture trade policy. The project enables SACAU and eight participating NFOs develop strategies for influencing national and regional agricultural trade policies at national and regional levels.

NFOs participating in the project are; Eswatini National Agriculture Union (ESNAU), Lesotho National Farmers' Union (LENAFU), Coalition Paysanne de Madagascar (CPM), National Smallholder Farmers' Association of Malawi (NASFAM), Namibia National Farmers' Union (NNFU), Agri South Africa (AgriSA), Agricultural Council of Tanzania (ACT) and Commercial Farmers' Union (CFU) of Zimbabwe.

Project activities cover a period of 18 months with three workshops scheduled at a 6-month intervals. The first workshop was in February 2020 and was aimed at orienting Farmers' Organisations on various trade tools; sensitizing FOs on their (potential) role in trade policy negotiations; jointly selecting a commodity which FOs will work on during the next 18 months and country specific work plans. At the end of the workshop participants selected poultry as the commodity of focus for the project.

The choice of the poultry value chain was informed by its potential to spearhead the development and transformation of the agriculture sector due to its inclusive nature as well as its flexibility for diversified and dispersed production systems. Besides, poultry has clear health and nutrition benefits as it is the main source of animal protein in many southern African countries. It also provides ample opportunity for wealth creation, due to its adaptability to both small-scale and commercial settings and because of the large numbers of smallholder farmers already involved in poultry production. Its short production cycle, low capital intensity and limited demand for land, coupled to its potential in high-value markets and access to mass decentralised makes it attractive to the youth and to women as an enterprise option. Lastly, the poultry value chain plays an important role in agro-processing, and can therefore be a major driver of development and job creation in the region. Poultry also has strong backward linkages with the production of maize and soya for animal feed, as these are key inputs in the poultry production process.

To support NFOs in their lobby and advocacy regards the marketing and trade of poultry products, a rapid assessment of the poultry value chain is carried out in seven SACAU countries, namely Eswatini, Lesotho, Madagascar, Malawi, Namibia, Tanzania and Zimbabwe. The findings of these studies should provide information on the following: (i) The status of the poultry value chain with special emphasis on trade issues; (ii) Scope for improved poultry trade through better use of existing opportunities; (iii) potential additional opportunities for poultry trade through effective advocacy at policy level; the role of NFOs in supporting producers make optimum use of existing opportunities and lobbying policy makers to create additional opportunities for poultry trade. The findings of the seven studies will be compiled by SACAU in a Policy Brief and will be discussed at the next SACAU workshop under this project (time and location depending on development in the Covid-19 situation).

This study presents the findings of the assessment in Lesotho. Information was compiled first via a desk study of policy documents, value chain and other studies and statistical data on trade. This was complemented with interviews, such with as primary producers, producer associations, processors, traders, wholesalers and retailers as well as from policy makers and technical staff in government.

1 Introduction

1.1 Role of agriculture in the overall economy

Agriculture plays a significant role in Lesotho's economy. Over 70 percent of the country's population lives in rural areas and depends, directly or indirectly, on agriculture for employment and livelihood. The sector has potential to increase food security, reduce rural poverty, and generate both on- and off-farm employment opportunities. However, Agricultural sector's contribution to GDP has declined over time, from a high of 15.2 percent in 1984 to a low of 5.2 percent in 2014, with a slight increase of 6.9 percent in 2016. The sector is estimated to employ 8.5 percent of the urban population and 54.3 percent of the rural population (BOS 2018). Main crops include maize, sorghum, and wheat which are planted as monocrops on 85 percent of the country's arable land which comprises 10 percent of Lesotho's total land area. Livestock contributes 75 percent of the total agricultural output, including semi-intensive and intensive production of pigs and poultry, as well as extensive (free range) production of goats and sheep on rangelands in the foothills and highland areas. Sheep and goats, which dominate the livestock sector, are reared mainly for wool and mohair.

Over the past three decades, the structure of Lesotho's economy has changed significantly. Agriculture, which is the pillar of the rural economy and the sector that employs most of the poor, has been on a downward trajectory since the early 1990s. As a result, its contribution to Lesotho's GDP has been declining. Between 1985 and 1994 it shrunk from 11.8 percent to approximately 7.2 percent, and today makes up around 5 percent of GDP.

The Central Bank of Lesotho's Macroeconomic Outlook of June 2019 (covering the 2019-2021 period) estimates that the Agriculture, Forestry and Fishing sector will contract by 0.6 percent in 2019, from growth of 1.6 percent in 2018. The CBL predicts that the sector will expand going forward, with growth of around 2.8 percent expected in 2020 and 2.9 percent in 2021.

The poor performance of the sector was predominantly driven by the crop subsector, which contracted by 9.7 percent in 2018 following a prolonged dry spell, and is expected to continue to fall by an estimated 3.1 percent in 2019 as a result of late rains for summer crops. This situation was exacerbated by water logging and a shortage of seeds for winter crops following the poor harvest in the previous production year. Crop production is forecast to recover to 3.1 percent in 2021.

In the case of livestock farming and fishing, although the subsector grew by 7.4 percent in 2018, it was expected to contract slightly in 2019. However, the CBL predicts that growth in the subsector will rebound, and it is forecast to expand by 3.5 percent in 2020 and 3.0 percent in 2021.

Lesotho's agricultural sector is dominated by smallholder and subsistence farmers. While it is Government's priority to commercialise the farming system, there are a number of constraints that currently affect domestic production. These include limited use of irrigation and technology, weak extension systems, sub-standard marketing infrastructure, poor access to markets for small producers, insecure land tenure and land degradation. In addition, the sector has struggled with the consequences of climate change, such as unpredictable weather conditions, marked by inconsistent rains and persistent droughts.

The arable subsector is concerned primarily with rain-fed cereal production, with livestock farming focused on extensive animal grazing, wool and mohair production, as well as a fast-growing aquaculture industry. While arable output has decreased over the years, the livestock subsector has expanded substantially, and presently comprises some 62 percent of the agricultural sector.

Agriculture is the sector with the greatest potential to alleviate rural poverty and generate both on and off farm employment while increasing food security (NSDP 11, 2017). The current Development Plan therefore prioritises the development of the agricultural sector.

1.2 Importance of poultry in the national economy and agriculture sector

Despite over 70 percent of the rural population being engaged in some form of agricultural activity, the sector contributes only 6 percent to the national GDP. Livestock farming makes up approximately 62 percent of agricultural GDP, the livestock subsector comprises primarily cattle, sheep, goats, pigs and poultry. Cattle are raised mainly for subsistence, draught power, milk, fuel (dung) and meat, while pigs are reared solely for food. Sheep are kept for meat production and also provide wool and skins, with goats a source of meat as well as mohair and hides. Livestock farming - in particular wool and mohair - has been singled out as one of the country's most important value chains.

The Basotho Poultry Farmers' Association (BAPOFA) acts as an umbrella body for the poultry sector, which comprises both commercial activities and village industries. The association attempts to encourage a supportive business environment through advocacy, training and provision of technical assistance in the development and implementation of enabling policies and laws.

Phula Poultry Products, one of the first National University of Lesotho (NUL) companies to be developed under the university's innovation hub, aims to cover the entire value chain, from production of fertilised eggs and one day old chicks to selling full grown chickens. The venture has already seen the development of an artificial egg incubator with a hatching rate of over 80 percent compared with conventional egg incubators, which have a hatching rate of between 50 and 60 percent. Phula aims to raise output to 40 000 chickens per month over the next two to three years, and has plans to open an abattoir for local commercial outlets.

In the case of livestock farming and fishing, although the subsector grew by 7.4 percent in 2018, it was expected to contract slightly in 2019. However, the CBL predicts that growth in the subsector will rebound, and it is forecast to expand by 3.5 percent in 2020 and 3.0 percent in 2021 (CBL, 2019). Egg production declined by 73.1 percent in 2015/2016 and then increased by 12.4 percent in 2016/2017. The production declined by 52.7 percent and 20.5 percent in 2017/2018 and 2018/2019 respectively (BOS, 2020).

The Lesotho commercial broiler sector has potential; however, there are weaknesses in the value chain that hold back this sector. Shortages of quality day old chicks, lack of rural market development, a shortage of veterinarian assistance, absence of cold storage facilities, and absence of an accredited slaughterhouse facility constrain development of the sector, even in high potential regions. In order to meet market demand; the broiler sector must improve production and marketing efficiency.

Focus and purpose of this study:

Poultry production is defined as the domestic rearing of birds for their eggs, meat or feathers. This can refer to chicken, Guinea fowl, quail, pigeons, turkeys, geese, ducks and other birds. However, as the emphasis of this study is trade, its focus is on chicken, as these are the most internationally traded species of poultry.

The emphasis of this study is on trade, and in principle this can refer to local markets in rural areas all the way up to the exportation to global markets. However, for Lesotho, the study focused on local

markets before expounding to trade across the border because the country imports about 80% of the poultry products.

Approaching the poultry value chain from a trade perspective is not limited to looking at poultry products that are either imported or exported. In fact, trade issues can be identified at every stage of the value chain, whether it is the importation of feedstuffs or veterinary drugs; the availability of slaughter, cold storage and market infrastructure; or access to the means of (cold chain) transportation to further away markets. This report aims to identify relevant trade issues across the spectrum of the poultry value chain.

Ultimate objective of this report is to empower the LENAUFU in their lobby and advocacy activities on behalf of poultry producers and with respect to increasing the trade in poultry products. This lobby and advocacy work can be in two directions: (i) Upstream, to policy and decision makers with respect to improving the enabling environment for trade in poultry products and inputs; (ii) Downstream to poultry producers, to ensure they make optimum use of existing trade opportunities. Recommendations will be provided under each of these areas in the last chapter.

Limitations of this study included limited availability and access to data.

2 The poultry value chain

2.1 Type of poultry production

Two types of producers characterize the local poultry sector: many small farmers who produce for consumption and the local market, and a few larger farmers who have commercial enterprises. Historically this sector is subject to large supply fluctuations due to inaccurate interpretation of market signals, and the inconsistent quantity and quality of input supplies. Larger producers suffered the most from the cyclical swings, and several have gone out of business.

Chickens were categorized into improved and unimproved. Improved chickens include broilers, grower pullets, improved laying hens and Koekoeks. Improved laying hens and Koekoeks are chickens kept for egg production. Grower pullets are improved laying hens that are between one-day and 16 weeks old. Broilers are improved chickens that are specifically kept for meat production. “Other improved chicken” refer to chickens which are unproductive (these can be old or cocks). Unimproved chickens are normally kept in smaller numbers for home consumption. They include laying hens and other unimproved chicken. Staff from Marketing Department maintain that the large cyclical fluctuations in poultry production are due to a lack of understanding of how the market functions. Producers charge and receive increasingly exorbitant prices for poultry, and then at a certain point they are not able to sell because consumers will not buy at those prices. The producers go out of business, and production goes down. Input suppliers have no market, and they go out of business.

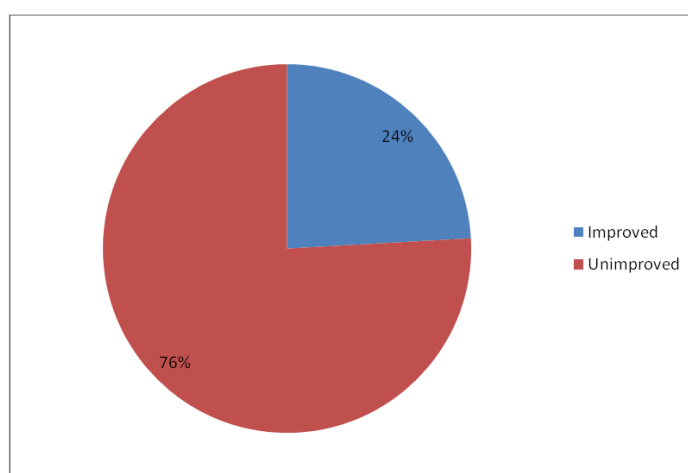


Figure 1: Percentage share of chickens by category. Source BOS 2012

Broiler production is generally concentrated around urban centers. Maseru, Berea, Quthing, Butha-Buthe, Mafeteng and Leribe are the highest producing districts. Development of this sector is constrained by inadequate supplies and low quality of inputs, lack of market development, and a lack of adequate infrastructure and cold storage facilities.

There are large poultry layer farms close to Maseru in Matsieng and Marabeng, and in villages close to the national abattoir. A Chinese concern built three poultry layer houses (24,000 layers), and parent stock (3,500 pullets), in Mafeteng. There is know-how and potential for increasing poultry production in Lesotho.

Livestock in general play a significant role in the rural economy through the sale of live animals and products like wool and mohair. Livestock sub-sector includes cattle, sheep, goats, poultry, pigs and rabbit. In rural households, poultry is kept mainly for home consumption and to a lesser extent for income generation.

2.2 Volume of domestic poultry production

In 2018, production of poultry meat for Lesotho was 1,840 tonnes. Production of poultry meat of Lesotho increased from 1600 tonnes in 2010 to 1,840 tonnes in 2018 growing at an average annual rate of 2,64% (BOS, 2020).

Table 1: Change in broiler meat production

Year	Quantity (tons)	Change %
2018	1,840	-4.17
2017	1,920	4.35
2016	1,840	4.55
2015	1760	4.76
2014	1,680	5.00
2013	1600	0.00
2012	1600	2.56
2011	1,560	-2.50
2010	1,600	-16.67

Source: BOS 2020

As stated in the Bureau of Statistics report (2020), layers are defined as chickens that are mainly kept or reared for production of eggs. The report categorises layers as improved or unimproved.

Improved : These are chickens that are bred to lay eggs. Table 2 below depicts change in stock of improved layers for 2013/2014 agricultural year. According to this table, the highest number of improved layers was purchased in the first quarter (19,434). The third quarter had the highest opening stock of 47, 419 improved layers but was decreased to a closing stock of 21,530, mainly due to 28,135 chickens being sold and 1,139 which died due to diseases. It is worth mentioning that a lot of improved layers were for mafisa - in the first and 3rd quarters (11,470 and 14,818 respectively). Table 2 below indicates stock of improved layers 2013/2014 Agricultural year.

Table 2: Change in eggs production

Quarter	Opening stock	Purchases	Mafisa-in	Sold	Slaughter	Disease	Stolen	Other Losses	Closing stock
1 st	16,485	19,434	11,470	0	32	58	0	58	47,240
2 nd	47,240	760	0	254	0	116	0	212	47,419
3 rd	47,419	3,748	14,818	28,135	725	1,139	130	927	21,530
4 th	21,530	0	0	6,320	127	76	0	206	14,802

Source: BOS 2020

Unimproved layers: These are indigenous local chickens that lay eggs. Table 3 below illustrates change in stock of unimproved layers for 2013/2014 agricultural year. According to the table, there were 11,278 unimproved layers at the beginning of the first quarter. The losses appeared to outweigh gains in stock resulting in a closing stock of 106 at the end of the year. The highest number of purchases was in the third quarter with 462 chickens while the lowest was in the first quarter with 31 chickens. Most unimproved layers were slaughtered in the fourth and second quarter with 1,533 and 1,155 respectively. Chickens succumbed to diseases in all quarters, where third quarter was most affected with 694 unimproved layers. Only a small portion was sold in the third and fourth quarter (367 and 141 chickens). Table 3 shows stock change of unimproved layers 2013-2014 Agricultural year.

Table 3: Stock change of unimproved chickens

Quarter	Opening stock	Purchases	Mafisa In	Sold	Slaughter	Disease	Stolen	Other losses	Closing stock
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1 st	11,278	31	921	0	671	417	0	4,378	6,729
2 nd	6,729	310	467	0	1,155	66	33	2,635	3,617
3 rd	3,617	462	106	367	150	694	0	877	2,128
4 th	2,128	120	400	141	1,533	171	0	366	106

Source: BOS 2015

2.3 Domestic production versus consumption

The poultry value chain comprises three principal marketing channels: formal dressed bird markets; informal city markets for live birds and informal rural markets (MSCM). Only some 20 percent of chicken is marketed through the formal sector. The main challenge is the high cost of inputs, many of which need to be sourced from outside the country. The lack of domestic hatchery services has been a concern for some time, with inadequate hatchery machines limiting growth as most local poultry farmers have to import fertilised eggs and chicks from South Africa.

Lesotho is a net importer of poultry products. Poultry meat is imported for food security reasons because Lesotho is not self-sufficient in terms of poultry meat. With regards to egg production, the supply is cyclical in that in some cases the demand will exceed the supply necessitating importation from South Africa. In this case, the Marketing Act and the regulations are implemented in that a permit system becomes operational, where the traders are given import permits allowing them to buy eggs outside Lesotho. When the supply and demand are balanced or there is a surplus, the permits are suspended and only locally produced eggs are sold within Lesotho.

2.4 Production and business models

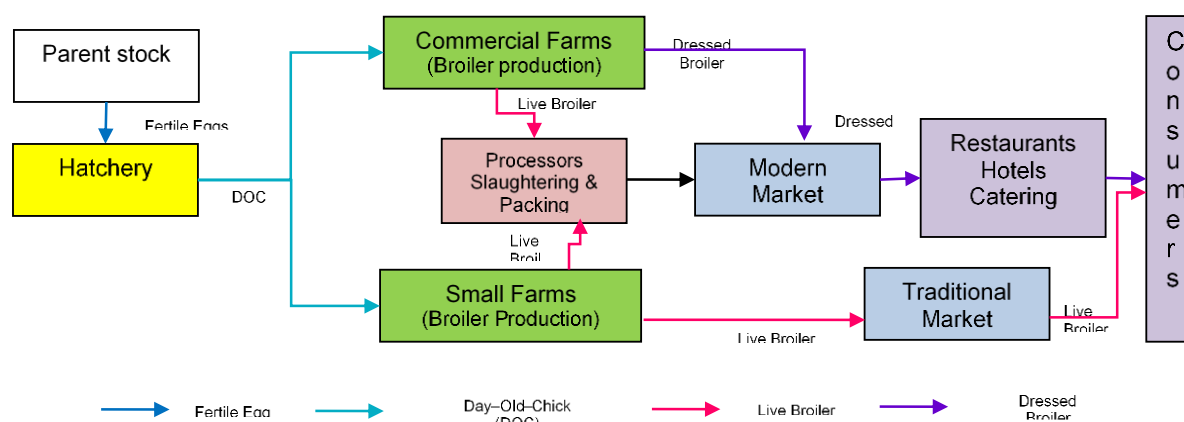
2.4.1 Production systems

Village chickens are usually reared as free range with limited feeding and minimal veterinary assistance and are a source of high value protein for farmers. They are usually unimproved local breeds of chicken reared for household egg and meat production. In some instances the chickens and the eggs are sold for cash, but this is not the main reason for rearing them. Traditional poultry farming is an important meat source in Lesotho. Birds are simple, and slow growing, with a relatively low survival rate. One of the problems of traditional farming is marketing their poultry outside of the village.

The broiler production system starts with the procurement of Day Old Chicks (DOCs) from hatcheries mainly from South African Agents in Lesotho. Some farmers procure fertilized eggs of indigenous species from producers and obtain incubation services from hatcheries. With larger farms, the DOCs are reared into 6-week broilers for delivery to processors, while small farms that rear fewer than 500 chicks per cycle sell 6-week live birds at farm gate or to traditional markets. Traditional markets are informal, open markets where many commodities including eggs and live chickens are sold. On the other hand, dressed broilers from processors that receive broilers from commercial farms (larger farms rearing above 500 chicks per cycle) is distributed to modern markets such as supermarkets and mini-markets. Some commercial farms have their own slaughtering units where broilers are slaughtered, cleaned and packed for selling to restaurants and supermarkets. The transaction flow and linkages associated with broilers are presented in

Figure 2 below.

Figure 2: Broiler production Flow Chart



Source: Global Development Solutions, LLC

Local broiler farmers generally keep broilers to the age of 6 weeks, although some farmers keep the birds up to 8 weeks. The average production cost of rearing broilers is primarily driven by the duration of the rearing period, and feed price and quantity. In general, the longer the rearing period, the higher the production cost. Production costs are also affected by overhead costs and access to water. Regardless of whether the birds are sold live or dressed¹, sold at farm gate or at market, the selling price is the same: LSL70 to 90 per chicken. That is value addition is not considered important in this regard, especially among small scale farmers. The absence of price differentiation between live and processed chickens indicates slaughtering, packing and transportation to the market is not valued. This is a reflection of the lack of a value added-based pricing structure in the market that otherwise could improve income earning opportunity for farmers.

Production is mainly by small scale farmers and fewer commercial producers. Broiler production and egg production is done by both men and women while rearing of local chickens is predominantly done by women.

2.4.2 Input supply

Broiler chicks go through three consecutive two-week stages of growth before being slaughtered. The chicks undergo physical changes in live body weight during the three stages and are provided feed meals with different protein content categorized as starter meal, grower meal and finisher meal with protein content of 24%, 20% and 18% respectively. The daily feeding rate also increases from stage to stage to stage. Some farmers keep the finisher broilers for an additional one to two weeks before selling in order to increase their body weight. There are also farmers that extend the starter period by a week or more but do not make any extra benefit since sales are by unit and not by weight.

The amount of feed given to broilers during each of the three growth stages varies from farms to farm due to lack of uniform practices as a result of the absence of standard guidelines for broiler rearing. The feed conversion efficiency for broiler farms is given as a ratio of the total quantity of feed consumed per bird in kilograms to the mean body weight gain of the broiler in kilograms. A value of 1.8 kg or less at 6 weeks of age is desirable. However, the measurement and record keeping

¹ A dressed broiler (or dressed chicken) in the context of this report is a broiler that is slaughtered, de-feathered and gutted, with head and feet removed but otherwise left intact (not cut into parts).

of live body weight of the broilers at each stage of growth is necessary for planning proper feeding rates. Unfortunately, such practice is not common in Lesotho. All broilers of 6 weeks of age and above are only assumed by the farmers to be of 2 kg each and all are sold at the same price.

Unlike broilers that are bought as DOCs, layers are usually procured by the farmers at the point of lay. Upon arrival at the farm, they are fed laying mash in preparation for laying. They are fed the same meal until they have completed their laying cycle and are culled or exposed off.

The cost of rearing broilers varies from district to district. For the purposes of this exercise, cost of rearing chickens in Berea was taken and used as an example. In 2016, an average farm in Berea, with a 150 broiler capacity per cycle and an average mortality rate of 7.4%, had a production cost of LSL64.93 (USD4.40)/dressed broiler. The cost of DOCs, including the cost of transporting DOCs to the farm, amounted to LSL7.20 (USD0.49)/DOC. The amount of feed increases from starter to finisher during the rearing period as the bird grows and progressively consumes more feed each day. However, due to the type and mixture of meals used during each rearing stage, the average unit cost of feed meal declines at each rearing stage: starter (LSL5.6 (USD0.38)/kg); grower (LSL5.54 (USD0.37)/kg); and finisher (LSL5.34 (USD0.36)/kg).

The cost of stocking the farm with DOCs accounts for 11.5% of the total cost, followed by the cost for supplements and medication (2.2%) and labor (2.1%). Overhead costs, consisting of rent for animal shelter and farm maintenance, contributed 1.3% to the overall cost. The low overhead and labor costs are due to the fact that most farms are operated by owners and family members. Table 3 summarises the cost of rearing broilers.

Table 3: Production Cost of Hyline White broilers in Berea district

Description	LSL/Broiler/Rearing	% Contribution
Starter feed (week 0 - 2)	8.27	16%
Grower feed (week 2 - 4)	13.46	26%
Finisher feed (week 4 - 6)	29.41	58%
Broiler feed meal	51.14	81.3%
Stocking cost of broiler	7.2	11.5%
Loss due to mortality	0.58	0.9%
Electricity for rearing	0.50	0.8%
Water for rearing	0.00	0.0%
Labor	1.30	2.1%
Supplements and medication	1.35	2.2%
Overhead cost	0.80	1.3%
Total expense	62.86	100.0%

Source: Global Development Solutions, LLC, 2016

Financing for poultry production is still problematic. However, Lesotho Post Bank is in the process of providing financing to agricultural development including poultry production. SADP project through its competitive grants programme is also providing grants to farmers for poultry production and value addition.

2.4.3 Broiler marketing

Broilers are either sold live at the farm gate or taken live to the market for sale. Alternatively, farms sell slaughtered and processed broilers at the farm gate or take the whole cleaned and packed chicken to the traditional market for sale. There are additional costs of labor, hot water, packing material, and the occasional transport cost to the market when broilers are slaughtered and processed, increasing costs by LSL2.07 (USD0.14)/broiler.

Both live and dressed birds are sold by the farmers at LSL70 (USD4.75)/broiler whether at the farm gate or in the market. Slaughterhouses charge LSL2 (USD0.14)/broiler to slaughter and process a broiler. Table 4 shows the processing costs of broilers in Berea district.

Table 4: Processing Cost and Estimated Income from Sales in Berea district

Slaughtering	LSL/Broiler	% Contribution
Initial cost of broiler	62.86	96.8%
Fuel for water boiling for slaughtering	0.42	0.6%
Water for slaughtering and cleaning	-	0.0%
Labor for slaughtering and packaging	1	1.5%
Packing material	0.15	0.2%
Transport	0.5	0.8%
Total cost of dressed broiler	64.93	100.0%
Selling price	70	
Gross profit	5.07	
% gross profit	7%	

Source: Global Development Solutions, LLC, 2016

The value chain analysis of broiler production in Berea revealed that the cost of husbandry accounts for 83.6% (LSL64.9 (USD4.41) per bird) to produce a dressed broiler. Of the cost of husbandry, the broiler feed meal accounts for 94.2%, followed by the costs of supplements and medication, and labor which accounts for 2.5% and 2.4% of costs, respectively. In Berea, the main cause for the high share of feed meal as a percentage of total cost of dressed chickens can be attributed to farmers keeping the birds up to two weeks longer prior to sales compared to farmers in other area.

The second highest cost is attributable to stocking the farm with DOCs, which accounts for 11.1% of the total cost. Slaughtering - which includes de-feathering, eviscerating and removing the head and feet - is the third major cost and accounts for 2.4% of the total cost. Labor, electricity and fuel for boiling water, and packing comprise 63.7%, 26.8%, and 9.6%, respectively, of the cost of slaughtering. Table 5 shows the cost analysis of dressed chickens from production to packaging.

Table 1: Production Cost of Dressed Chicken in Berea district

Activity	LSL/Broiler/Rearing	Contribution (%)	Breakdown (%)
Stocking cost of broiler	7.2	11.1%	
Husbandry	54.3	83.6%	
Broiler feed meal	51.1		94.2%
Electricity	0.5		0.9%
Water	-		0.0%
Labor	1.3		2.4%
Supplements and Medication	1.4		2.5%
Transport	0.5	0.8%	
Slaughtering	1.6	2.4%	
Electricity / fuel	0.4		26.8%
Water	-		0.0%
Labor	1.0		63.7%
Packing	0.2		9.6%
Admin	1.4	2.1%	
Overhead cost	0.8		58.2%
Loss due to mortality	0.6		41.8%
Total	64.9	100.0%	

Source: Global Development Solutions, LLC, 2016

The two marketable products from the broiler production system are live and dressed broilers. There are two categories of the production system, namely, commercial farms and smallholder farmers.

Slaughtering: Slaughtering of broilers takes place formally in the chicken abattoirs, and informally on the broiler farms where a small space is set aside for slaughtering for selling dressed chickens directly to customers or taking to traditional markets.

Large scale abattoirs with an average capacity of 3,800 broilers/day receive live broilers from commercial and small farmers where the abattoirs process, pack and deliver to end-users (supermarkets, restaurants, hotels, hospitals, etc.). Such abattoirs have cold stores to chill the prepared chicken for a period of more than a week when necessary before delivering to institutional buyers.

Small scale (informal) abattoirs on the broiler farms can handle, on average, up to 50 broilers per day. The chickens they process and pack are sold either at the farm gate, taken to the traditional market or to restaurants that have placed orders for delivery. These small scale on-farm slaughterhouses have limited storage capacity for processed chickens because they generally only own small deep freezers.

Live broilers: The market outlets for small farms are traditional markets where either traders or farmers bear the cost of transporting live birds. Individual consumers also buy live birds at the farm gate.

Surprisingly, both live and dressed broilers are sold for the same price, be it at the farm gate or taken to the traditional market. Hence, the value adding activities of processing (slaughtering and packing) and transport to the market are not taken into account. Similarly, all broilers, whether live or dressed, are sold by the bird and without any consideration for the weight of the product, except in few cases where they are sold to the supermarkets.

2.5 Trade issues along the poultry value chain

2.5.1 Input supply and input use

There are independent feed suppliers in the rural areas where the farmers are based and mainly provide locally produced feed, Makhulo and imported feeds such as Itau feed brands and meadow. Feeds constitute a major cost in poultry production. More than half of the feeds are imported from South Africa. Feed imports are reliable. Even locally produced feeds by Lesotho Farm Feed Mills (LFFM) relies heavily on imported feed ingredients. The mill is owned by Seaboard USA (51%) and Lesotho (LNDC 49%). There are no import restrictions on feed or raw materials; also there are no duties.

Poultry accounts for 82% of the demand for LFFM feed, 62% of that is for layers. There is feed distribution throughout the country, including in the highlands. Overall, LFFM feed quality compares favorably to South African feed. Most producers indicated that LFFM feed quality and prices were good.

Feed, DOC, supplements, medicine and technical assistance are provided by South African commercial enterprises and producer associations. Lesotho producers are satisfied by the quality of inputs and support they receive, and are not disturbed about the transportation time or cost.

Since the border is porous, it is relatively easy to resort to South Africa for supplies. The problem with this approach is that those who purchase supplies in South Africa and return through official border channels are subject to long delays at the border.

Medication for poultry is also accessible in the towns of the districts where the farmers are based. Failing which, farmers access the medication in Maseru district at suppliers like Lero-med supplies, Maqalika Veterinary Clinic, OVK etc. Sometimes farmers prefer buying medication from RSA in companies like OVK depending on a number of factors such as price, variety, expert supervision etc. With the COVID-19 lock down, medication was in no short supply, but luckily no disease outbreaks were reported.

Veterinary services at the national level are problematic due to farmer expectations. The mandate of MAFS veterinarians should be clear in order to prevent false expectations and free up MAFS veterinarians for their tasks in regulating disease, monitoring imports and providing animal health information on a countrywide level. It is a challenge to provide this service with the few veterinarians in Lesotho. It is possible to provide basic veterinary know-how to farmers so that they can provide basic treatments.

There are not enough veterinarians and/or veterinary aides to provide service to the livestock industries. This is an area where the government can contribute to all livestock sectors. There must be an effort to increase the number of private veterinarians in Lesotho; whether by encouraging established veterinarians to work in Lesotho, and/or by providing incentives for Lesotho students to obtain veterinary degrees. Currently smaller and medium farmers have little access to veterinary services. Larger producers have an advantage since they can go to South Africa, where the poultry associations and veterinarians provide ready assistance with health issues.

2.5.2 Processing/value addition

Lesotho has six operating slaughterhouses; none are certified to sell to retail outlets. Of these, the two largest facilities are idle. The slaughterhouses provide services such as slaughter, processing and distribution of meat to the end-users. They have access to water and electricity for cold storage.

All slaughter facilities experience seasonal variation in demand for their services. The busiest months are generally during Christmas, Easter and the summer; with a significant slow-down in the winter. The factor that limits increased activity and sales is the availability of broilers for slaughter.

The road network is fair with a combination of tarred road and all road gravel roads. However, road maintenance is proving to be a challenge. Transport does not seem to be a constraint in poultry production chain or marketing. This is likely because most of the locally produced broiler meat is consumed locally. Small scale producers who have to transport inputs or meat pay approximately Maloti 150 to 200 to rent a truck for 10 km trip/journey. Fuel is readily available at petrol stations in the main urban centres.

2.5.3 Output marketing

Lesotho poultry producers cannot begin to compete with South African poultry producers at this time due to the lack of certified slaughter. There are two tracks for marketing broiler meat in Lesotho: to the local market that accepts custom slaughter (20% of the market), and to retail and wholesale markets that require veterinary certification (80% of the market). Broiler meat imports from South Africa account for all of the wholesale and retail broiler meat consumed in Lesotho.

The frozen meat is marketed throughout Lesotho in wholesale outlets, and in wholesale and retail (Shoprite, Pick n' Pay, Econo Foods) outlets in major urban areas. Households, institutions and other consumers purchase imported frozen broiler meat.

The imported South African poultry, usually frozen low priced dark meat, make it difficult for local broiler operations (producing fresh and highly perishable whole chickens), to compete on price. A small reduction in import prices of low priced chicken cuts can have a disproportionate impact on demand for locally produced product, particularly whole birds. This situation, combined with liberalization of markets under multilateral or regional trading agreements, has resulted in strengthening South African poultry exports to Lesotho.

Only veterinary certified meat is sold. Imported broiler meat from South Africa is sold frozen and chilled, in parts or as whole broilers. Heads and feet are popular, as is organ meat. The frozen broiler meat is brine injected, and is of a lower quality than the chilled. Chilled whole and portioned broilers are of a higher quality since they cannot be injected with brine. Currently retail outlets are not able to supply enough chilled broiler meat to keep up with demand.

From the consumer's point of view, they generally prefer locally produced broilers due to superior taste and quality of the meat; but South African frozen portions are cheaper and easier to prepare. People know that frozen South African poultry shrinks when cooked due to large amounts of brine in the meat.

While trading in poultry within the country, there are no levies and taxes imposed along the poultry value chain.

2.5.4 Cross-border trade

In order to establish a viable commercial broiler slaughterhouse facility, producers must commercialize production to provide the required quality, quantity and uniform supply. A commercial broiler slaughterhouse in Lesotho must produce high quality products in a hygienic atmosphere. While ensuring financial viability of the broiler sector, the facility will be designed to obtain a finished product characterized by professional and consistent cutting, packaging and presentation according to Lesotho consumer demand.

There are Lesotho meat inspection regulations, and marketing regulations. These regulations require political commitment to be enforced fully. This will ultimately assist the sector to gain credibility and quality. MAFS is charged with directing veterinary services at accredited slaughterhouses. The international markets standards are generally known even though the focus has never been on exporting poultry products. However, the country can easily access and use such standards. Being a member of the international community, the FAO CODEX standards on poultry and egg production can be applied.

3 Policy and strategic framework

3.1 Agriculture policies and strategies

3.1.1 Vision 2020

Vision 2020 states that approximately 75% of the Lesotho population live in the rural areas and derive their livelihood from agriculture. The vision aims to improve food security and overcome hunger by combating rampant stock theft, diversification into cash crops, review of land tenure system and advance irrigation methods and effective extension service. The National Vision for Lesotho (Vision 2020) makes food security and poverty reduction, along with sustainable resource management, the main priorities of Government. This places Agriculture at the forefront of all other sectors in championing the way forward to achieving the objectives of food security and poverty reduction.

3.1.2 National Strategic Development Plan (NSDP) II

The National Strategic Development Plan (NSDP) II 2018/19-2022/23 prioritized agriculture as one of the key pillars for economic growth. It seeks to pursue inclusive, sustainable growth and private sector-led employment creation. In the plan, the Government of Lesotho (GoL) has identified four productive sectors, namely agriculture, manufacturing, tourism and creative industries, and technology and innovation as potential sectors for job creation and inclusive economic growth under a new growth path led by the private sector. Lesotho is undertaking critical measures to build a commercial and climate-resilient agricultural sector. Recognizing the significant role of agriculture in its overall economic growth agenda, the NSDP II, which prioritizes the development of the agricultural sector, identifies three broad areas of strategic action: (a) sustainable commercialization and diversification of agriculture, (b) a well-functioning agri-food system, and (c) rehabilitation of rangelands and wet lands. Priorities for action within these areas relevant to livestock includes (a) improved technology and infrastructure (b) increased production of high-value crop and livestock products, (c) the development of institutional frameworks for producer and industry organizations, (d) building the capacity of farmers to benefit from these institutions, and (e) the development of value chains and agricultural markets. Gender and climate change are indicated as critical cross-cutting issue in the plan.

3.1.3. Lesotho Food Security Policy and Strategic Guidelines

Lesotho Food Security Policy and Strategic Guidelines (2005) recognises an important role played by livestock in livelihoods of more than 70% of the households. The policy objective focuses on improving access to food by maintaining household cattle, small stock and poultry livestock assets and improving their productivity. Policy measures includes promoting small stock and poultry among the poor and vulnerable households because they have the capacity to keep them at their homesteads. These livestock provides a complimentary source of household income, food supply and nutritional variety. The same policy intends to promote agricultural and food marketing, processing and trade. It also notes that the marketing channels from South Africa into Lesotho are well established, but internal marketing of agricultural produce in Lesotho as well as export marketing channels are poorly developed. Policy actions includes promotion of market organisation and market infrastructure; promotion of processing of food and agricultural products; export promotion and market information.

3.1.4 Lesotho Agriculture Sector Strategy

Lesotho Agriculture Sector Strategy of 2003 divides the livestock sub-sector into two farming practices of extensive livestock production and intensive livestock production practices. In order to attain food security and reduce poverty in the country, the strategy plans to increase the contribution of livestock by improving the quality of output. Poultry is the most common enterprise practised under intensive livestock production. It considers poultry as a high potential area if important constraints can be overcome. Understanding of husbandry techniques is fairly good among producers and productivity in egg production is satisfactory. Productivity in broiler production is less consistent and full genetic potential is not always realised. Marketing problems play an important part in this. The formal retail sector prefers packaging practices which are used for imported chicken. A capacity for this type of packaging is still lacking among domestic producers. As a result, large retailers trade mainly in imported chicken meat. Inadequate processing facilities for domestic producers sometimes delays their ability to dispose of their broilers beyond the optimum growth period, reducing productivity.

3.1.5 Lesotho Climate Smart Agriculture Investment Plan

The Lesotho Climate Smart Agriculture Investment Plan (LCSAIP) mentions that the World Bank and other development partners have provided substantial support to the development of Lesotho's agriculture sector over the past decade. Through the first phase of the Smallholder Agricultural Development Project (SADP) co-financed with International Fund for Agricultural Development (IFAD), as well as Private Sector Competitiveness and Economic Diversification Project (PSCED), the World Bank has provided financial and technical assistance to improve commercialization and competitiveness. SADP is providing training and competitive grants to smallholder farmers for improving marketable surplus in several value chains, including horticulture (fruit and vegetable production), poultry, piggery, and dairy. The PSCED is assisting in building an enabling business environment, leveraging private investment support, providing access to finance to increase productivity, and increasing market opportunities in Lesotho's horticulture subsector. It has recently facilitated the establishment of the Agricultural Financing with Lesotho Post Bank.

3.1.6 Other relevant sector policies and projects

The livestock sector has a draft policy that is in the process of being finalised. There is no specific poultry policy in place. In terms of marketing, the Agricultural Marketing Act of 1974 is a guiding tool in relation to marketing of agricultural products.

SADP is providing training and competitive grants to smallholder farmers for improving marketable surplus in several value chains, including poultry. The poultry support included provision of slaughter houses, hatcheries, parent stock and support to rearing of chickens. Other NGOs such as World Vision and Rural Self Help Development Association (RSDA) have been instrumental in promoting poultry among the farming communities. Examples from World Vision includes projects like Livestock Restocking project that focused on helping farmers with production of poultry and piggery.

3.2 Policies and strategies in marketing and trade

Trade in agriculture and livestock among countries is governed by different trade policies as well as national policies and strategies. The policies are meant to guide the smooth flow of agricultural products among countries.

Lesotho is traditionally a net importer of food and agriculture products. The country is highly reliant on food imports from neighbouring South Africa, and only wool and mohair make a significant contribution to exports and national incomes. Poultry meat is imported from South Africa and South Africa imports their poultry from elsewhere (EU, USA, Brazil). Due to COVID 19, poultry from elsewhere has been stock piling and with the opening of borders to South Africa, there is fear that the poultry meat will be dumped in South Africa and it will find its way to Lesotho easily.

For food security reasons the importation of poultry is encouraged politically mainly because the local supply is much lower than the current demand for poultry meat. However, there are some efforts to encourage and boost local production of poultry meat.

Cheaper imports of poultry products due to economy of scale and other policies favouring farmers in exporting countries makes their products cheaper, and that stifles local production. There is public and political awareness about this dumping of cheaper products from other countries to Lesotho.

Lesotho produces very little poultry compared to the local demand, as a result there are no poultry exports at the moment. In addition, due to non-compliance with international phytosanitary rules and regulations related to meat hygiene, Lesotho does not meet the export requirements or quality standards.

Lesotho has signed an Economic Partnership Agreement (EPA) with the EU, it is a partner of the European Free Trade Association (EFTA), which includes Iceland, Liechtenstein, Norway and Switzerland. Such agreements do not have any impact on Lesotho because the country does not import poultry meat from Europe.

4 Actors, institutions and organisations

4.1 Stakeholder overview

The stakeholders in the value chain can be categorized into two groups on the basis of their functions on the value chain. There are core value chain actors and actors providing supporting functions.

Core functions

Inputs suppliers

Poultry production inputs such as feed and medicines are readily available in Lesotho. Day-old-chicks are a problem for most producers, whether they are obtained from Solid Rock Hatchery, private traders or from hatcheries in South Africa.

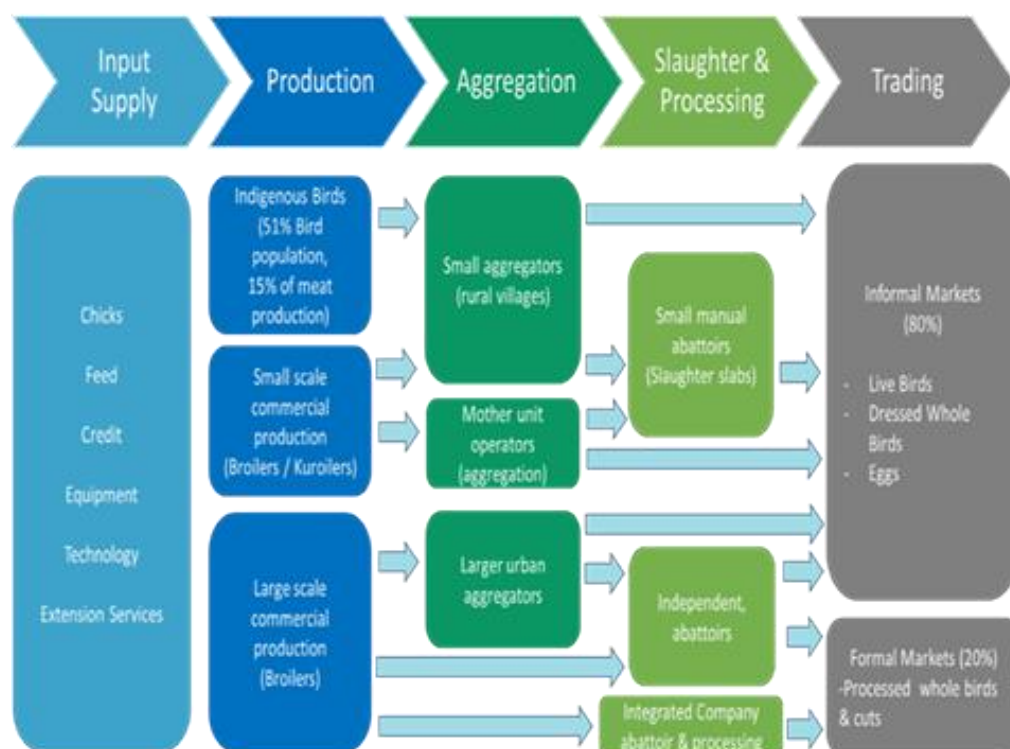


Figure 3: Core chain actors

Producers

Poultry producers are responsible for production of poultry meat and eggs. Poultry production is problematic in Lesotho. Prices for locally produced broilers are arbitrary, and supply is cyclical with extreme variation in the market. In the past, large and commercial producers went out of business due to variation in the market conditions. Most domestic production is sold directly to consumers at the farm-gate price, which is often higher than the retail price (frozen, imported meat).

Small-scale producers do not have timely access to quality DOC, medications, supplements, and veterinary services. There are generally no complaints about local feed, though producers often do not follow the recommended feed regimens identified by feed manufacturers. Sometimes they substitute other feeds to get desirable characteristics for their birds, even though the result is cosmetic, and does not provide benefit. These producers require training and access to quality inputs in order to produce broilers that are uniform and conform to retail market standards.

Several medium-scale producers have commercially viable operations. They have management skills and access to quality inputs that are not readily available in Lesotho. They can provide a steady supply of quality poultry meat. These producers are able to supply the local markets, but do not have access to retail outlets due to the lack of accredited slaughter facilities. There are no large-scale producers at this time, though some farmers that were interviewed intend to increase production dramatically in the near future.

Associations and farmers organisations

There are two prominent poultry production cooperatives and associations, such as Lentsoe la Lihoai (owners of the slaughterhouse structure in Selakhapane, Maseru), and the Basotho Poultry Farmers Association (BAPOFA). BAPOFA received funding (grants) from SADP and it now has a hatchery and slaughterhouse. In principle, organizing farmers into cooperatives and associations allows producers to realize economies of scale to reduce input costs, ensure adequate supplies, enter into contractual commitments and increase market power. Linking farmers collectively to markets and private sector supply integrators through contract farming and other forms of collective commitment strengthens farmers and the sector. The use of marketing agreements, quality standards and articles of association promote a steady supply of products that conform to the quality and standards of the market.

Investing in strengthening commodity aligned farmer associations makes sense. However, there is a drawback with commodity associations: they often become dependent on government and then politicized in the process. It is important to avoid transforming associations / cooperatives into inert bureaucracies.

Processors

There are six slaughterhouses in the country and none of them is certified to sell to the outlets. The slaughterhouse in Leribe, is slowly being upgraded, and can slaughter up to 1,000 broilers per day. The owner of the Leribe slaughterhouse has vertically integrated operations: producing broilers, slaughtering, and marketing through her own retail outlet. The long-term plan is to make contracts with local producers, slaughter and market a high-quality branded product. The other slaughterhouses have the capacity to slaughter 200 -3000 birds per day.

Wholesalers

Econo Foods and Fruit and Veg City wholesale markets are independently owned markets that supply informal retail markets, government institutions, restaurants, hotels, traders and consumers. These markets are well organized and located in urban areas. The markets can only sell veterinary certified meat, and therefore only sell frozen brine injected poultry from South Africa. The frozen poultry is the same as that offered at retail markets.

Retailers

The formal retail market in Lesotho is comprised of two South African franchises, Shoprite and Pick n' Pay; and some Chinese retailers. The South African supermarkets are comparable to those in South Africa. There are two Pick N' Pay shops in Lesotho, and Shoprite markets in Maseru, Leribe, Mafeteng, Sefika, Botha Bothe, Mokhotlong and Maseru's Hoek. The service is moderate, clean, and with a wide range of products - most products are imported. Only veterinary certified meat is sold. Imported broiler meat from South Africa is sold frozen and chilled, in parts or as whole broilers. IQF mixed portions, heads and feet are popular, as is soup pack.

Table 6: Market Demand for Poultry Portion Types

Type of Meat	% Of Total Poultry Consumed
IQF Mixed Portion	61
Whole	3
Heads and Feet	6
Giblet	3
Gizzard	5
Heart	1
Viscera	6
Liver	2
Soup Pack	13

Source: MSCM

Consumers

Consumers buy both local and imported meat, depending on their access to points of sale. Many families raise and eat their own broilers; however, they prefer the convenience of poultry that is slaughtered and cleaned, rather than having to slaughter it themselves.

Actors providing supporting functions

Ministry of Agriculture and Food Security (MAFS)

The Ministry is charged with providing a strategy for agricultural production and development, as well as services to support agricultural industries. Ministry staff monitor each sector and provide assistance in terms of extension, research and development. The relevant departments includes; Department of Livestock Services (DLS), Veterinary Services, Extension, Research and Development

The MAFS is well staffed, with qualified technical experts. In order to get information on production and agricultural processing issues, producers have to contact the main DLS office in Maseru. Local extension services do not seem to provide enough information to producers. Medium size and large producers generally rely on South African poultry producers and associations for information and supplies.

Veterinary services at the national level are problematic due to farmer expectations. The mandate of MAFS veterinarians should be clear in order to prevent false expectations and free up MAFS veterinarians for their tasks in regulating disease, monitoring imports and providing animal health information on a countrywide level. It is a challenge to provide this

In general, farmers were satisfied with MAFS assistance, though it seems that assistance is provided upon request, not as part of an effort to actively visit and engage farmers. To promote commercialization of broiler production MAFS needs to be more aggressive in visiting farmers and disseminating the concepts, value and culture of commercial agriculture.

Ministry of Small Businesses Cooperatives and Marketing (MSCM)

The Department of Marketing (DOM) in the MSCM recently began to analyze value chains of different agricultural sub-sectors. The objective is to determine which sectors have a competitive edge, identify bottlenecks in value chains, and suggest measures to improve competitiveness of different sectors. DOM is actively involved in consolidating market information, fostering market - production coordination, promoting commercialization of selected agricultural sectors, supporting a policies conducive to private enterprise, identifying physical and institutional infrastructures conducive to agribusiness development, increasing efficiencies of commodity value chains, and regulating trader licenses and imports/exports of agricultural products.

LENAFU

Lesotho National Farmers' Union was established in 2009 as a "voice for farmers." The objectives are to: i) advocate for farmers' with regard to agricultural development; ii) build farmer administrative and management capacities and iii) lobby the government on farmers' behalf. LENAFU is dedicated to training and providing assistance to farmers, as well as serving as the agricultural sectors' political advocate. LENAFU represents an umbrella farmer organization for producers of different commodities.

Financial services and investment

Lesotho Post Bank has expressed interest in providing financial support to poultry farmers. In addition, The Lesotho National Development Cooperation (LNDC) expressed interest in promoting enterprises that lead to import substitution, including a willingness to finance equity participation. LNDC services include leasing serviced industrial and commercial sites, financial assistance for investors, investment facilitation services, assistance to procure permits and licenses, assistance in company registration, assistance in managing industrial relations and project investment appraisal. They also are willing to give incentives such as access to finance for infrastructure and capital costs, and access to partial credit guarantee schemes.

Enabling environment

There is no livestock/poultry policy or poultry strategy in Lesotho. Despite poultry being hailed as a key sector in other strategies or policies, it does really seem like the Government is giving poultry the attention it deserves. The Government has been running a subsidy programme for decades to date, but poultry inputs are never included in the subsidy programme. More attention is given to the crops sector. There are no specific rules governing poultry production, processing and trade, nor specific regulations and incentives related to the poultry sector. This approach is completely different from the way Wool and Mohair is handled.

4.2 Networks and stakeholder platforms

In the poultry sector there are some limited networks and stakeholder platforms. There is Basotho Poultry Farmers Association responsible for organisation poultry producers into groups for bargaining power. It affiliated to LENAFU. BAPOFA acts as the legal regulatory body for the poultry sector, which comprises both commercial activities and village industries. The association attempts to encourage a supportive business environment through advocacy, training and provision of technical assistance in the development and implementation of enabling policies and laws.

5 Trends and outlook of the poultry value chain

5.1 Covid-19 and its consequences

As COVID-19 pandemic progresses in the Region, there were trade-offs between the need to contain the spread of the virus and to avoid disastrous economic and food security crises. Although no major food shortages were reported it resulted in negative effects and also created opportunities that could be taken advantage of by the farming community.

In May 2020, 500,000 people (of which 85 percent were in rural areas) were at risk of food insecurity due to drought. A significant proportion of the rural population in the country, particularly small-scale farmers and households whose livelihoods are based on agriculture, are most affected (UNDP, 2020). The drought is more severe in the lowlands and foothills, which are the main cereal production areas. The sector is expected to rebound modestly by 0.3 percent in 2020/21 partly due to increased levels of activity in response to the COVID-19 outbreak.

COVID 19 resulted in increased prices of poultry feeds. Most farmers consider high poultry feed costs as the major challenge in poultry production. These high feed costs are allied to decreased profits too; hence consumers are unwilling to purchase products at high prices (Tolo, 2020).

In the poultry production, the chickens in the production process suffered a high mortality rate which was attributed to the pervasiveness of water belly, which was aggravated by the lack of access to veterinary services. Veterinary services in the poultry industry are under normal settings dependent on import of drugs from South Africa where farmers would usually cross the border to procure essential inputs. Since the border crossing was not conceivable under the lockdown, access to such services was intolerable; hence production was adversely impacted by COVID-19 lockdown.

Furthermore, the findings reveal that in some occurrences, farmers were unable to acquire chicks because of the disruptions in the supply chains. In some occasions, farmers reported extended feeding periods of broilers beyond the usual 6 weeks resulting in more feeding costs being incurred because they could not sell off the chicks due to the COVID-19 induced distraction of the usual marketing channels in particular the closure of the informal street market of roasting broiler meat and/ or selling of boiled eggs. These had a knock on effect to the income loss of the people who run such informal street businesses and to the farmers who provide them with chicken meat and the eggs.

Additionally, limited effective working hours and absence of transport made it problematic to access animal feeds from local towns even where feed stocks were accessible. Conversely, it has been broadly stated that even where feeds were obtainable in the local market, the prices compounded beyond normal levels. Accordingly, the feeding programs could not persist hence undersized growth of the animals particularly pigs and broilers resulting in poor quality of carcass. Experience also shows that high mortality rate in poultry, was owing to low and improper feeding because of insufficient feeds.

In the instances of layer production, the findings further revealed that the layer market was in particular distressed by school closures, because the school feeding program accounted for a significant share of the eggs sales from the farm gate (Marake, 2020). Farmers also grumbled that the supermarkets are only prepared to buy local produce at very low prices knowing that the supply was much higher than the demand. Other market outlets affected by lockdown was that informal bakers could not buy eggs because they were also not operative under the lockdown situation.

It was further revealed that there was shortage of supplementary food and medication which also caused rise in prices. Agri-businesses had to source cross border permits as they fell in the section of essential services, but still COVID-19 lockdown destructively affected this sector in that, owing to restriction on movement, production was adversely affected, and this further exerted pressure on demand and supply. Distribution points were also affected as COVID-19 regulations limited a certain number of imports and a number of people going in and out of the country. Within the country, it

affected market (buying and selling) of animals in that, demand considerably dropped as buyers could not travel to farmers, also buying power condensed as customers did not have enough money to buy as articulated by farmers. Agro-business processor and input processor as secondary stage still experienced the negative impact in that, some of the production industries were closed in South Africa which affected the production capacity. Farmers could not get the inputs in time and in required quantities. Reduced access to markets of agricultural inputs and tools due to restrictions on movement were rampant during the lockdown period.

Abridged obtainability of food in local markets due to interferences in supply chains and impact of restrictions on production has caused localized food price to rise. There was also increased price of agricultural inputs and tools because of reduced availability in local markets.

The disturbances of the schools, mines, catering companies and hotels offset (in case of closure) was the main challenge pertaining to the sale of the agricultural products (poultry products such as eggs and broiler meat). The fact that usual markets were interrupted is a clear evidence that farmers were compelled to sell at farm gate with cheap prices particularly to evade wastage of unpreserved commodities.

During COVID-19 lockdown, there was a need to come up with legal frameworks that allow easy but safe movement like reducing the capacity of movement and traffic, increase time and make available more transport. Without the proper logistical planning, producers fail to produce needed goods in time, which means production quantity is reduced due to strict movement. When goods are in high demand and supply is very low, price of a product increases and exert pressure on the buying power of consumers. Consequently, the end products become very expensive to cover market demand and loss made in the production process due to lack of time in the production process. Thus, the COVID-19 has seriously impacted the food value chains and subsequently food security.

Opportunities as a consequence of Covid-19

Limited supply of poultry feeds from outside the country because of lockdown restrictions, resulted in high production within the country. This is imperative to the country's GDP to increase because there is limited amount of imported poultry feeds and less importation of poultry products, resulting in increased domestic demand and prices.

More people are willing to start embarking on poultry production for food security reasons as a result of COVID-19.

5.2 Potential forward scenarios

To establish a viable poultry slaughterhouse, MSCM estimates that there is a need to produce 4,900,000 broilers per annum translating into a supply of 20,000 broilers per day, 245 days per annum (considering weekends and holidays). Therefore the broiler supply must be planned in advance with the production farms to schedule a steady supply of broilers. A central body in the form of a Poultry Sector Board is recommended to manage inputs and broiler supply to the slaughterhouse in order to ensure the slaughterhouse will operate efficiently and substitute meat imports.

Increased production requires increased feed production. Therefore ingredients for feed production will also be required. Considering frequent drought and erratic rainfall, there is a need to adopt Climate Smart Agriculture technologies. Climate change adaptation strategies are useful for the success of the commercial poultry sector.

6 Role of the National Farmer Organisation

6.1 Current role of LENAUFU

National Farmer Organisations have a critical role to play in the poultry value chain. Lesotho National Farmers Union (LENAFU), is a conglomerate of farmer groupings in Lesotho namely 10 district farmer associations, 5 national commodity farmer associations and 2 national non-state actor associations/cooperatives. Its mandate is to enhance farmer contribution in transforming agricultural sector in Lesotho. It seeks to achieve this by building farmer capacity, providing leadership, sharing information and advocacy on behalf of the farming community. LENAUFU was established in 2004 and have consistently grown in terms of organisational development, popularity among farmers, recognition and relevance.

6.1.1 Roles of LENAUFU

- Do research on farmers' challenges and opportunities and advocate for policy response on land tenure system including applicability of Land Act;
- Unionize unaffiliated farmers, incorporate and promote emerging farmers groups;
- Collect and disseminate market, pricing and other necessary farmer related information;
- Do research on farmers' challenges and opportunities and advocate for policy response to the most challenges faced by the farmers;
- Take stock of and study policies that have bearing on agriculture and map necessary advocacy, implementation and monitoring action;
- Advocate for farmer-led policy response and implementation on farmers access to inputs, markets, finance and other enabling services;
- Amplify Lesotho farmers' voice on national, regional, continental and global issues;

6.1.2 Past and present activities of the LENAUFU in the poultry value chain

- Train farmers on livestock value chain (animal husbandry and other essential subjects), farm management, record keeping and enterprising livestock farming;
- Promote active participation of youth, women, people with disabilities (PWDs) and other vulnerable sectors of society in agriculture;
- Research on, expose farmers to and link them with different stakeholders and opportunities in value chain;
- LENAUFU organizes the market trade fairs with the objective to gather producers (inclusive of poultry producers) to the open market event. These are normally held as non-formal market events. There are also buyer-seller meetings organized principally to gather producers (farmers) and the local buyers together to discuss the market opportunities and linkages.

6.2 Potential role of LENAUFU

LENAFU can act on behalf of the farmers (producers) and form part of the national team on agricultural trade policies and investment opportunities. It can have the most necessary information about the trade issues/ opportunities between the countries and share it with the farming community. It can also participate actively in policy processes; informing and mobilising producers and value chain actors; becoming member of relevant platforms.

6.3 Supporting LENAFU in its role and responsibilities

LENAFU does not currently have adequate human resource capacity to take on a more active and effective role in supporting trade and marketing in poultry value chain. LENAFU has only three staff members comprising of the Coordinator, Field Officer and Administration Assistant.

LENAFU needs capacity building on policy analysis especially trade policies and Trade Agreements (trading opportunities between Lesotho and other countries). It should also be capacitated on how to get access to information related to trade and data as well and Food Quality Standards.

To bridge this capacity gap, LENAFU should take advantage of available online training platforms provided by different organisations such as World Bank. SACAU should also support LENAFU in addressing those training needs.

7 Recommendations

Recommendations with regard to:

The value chain itself:

A public-private partnership, where government supports private sector initiative rather than replaces it, would be beneficial to the broiler sector. A key challenge for Lesotho is to develop an enabling business environment. Building an integrated value chain will require more than investment in fixed assets or supply chain infrastructure. Developing market institutions entails improvements in supply chain and market infrastructure, creating institutions that match buyers and sellers and identify market-clearing prices. It also requires development of support services, such as veterinary services.

There are individuals and companies in the private sector who are willing and able to provide value chain services for increasing and improving local broiler meat production. For example, the private sector is capable of producing parent stock and DOC; providing supplements through independent traders; and establishing a certified slaughter facility.

LENAFU should lobby Government to provide initial production incentives to local entrepreneurs by subsidizing feed and providing alternative supply of poultry inputs as a way promoting a competitive environment. It should also work with other key stakeholders to persuade the Government to develop the National poultry development strategy with a clear road map of implementation with the objective of promoting poultry production for local consumption and exports to other countries.

The enabling environment:

The government through MAFS and MSCM may consider creating a Poultry Board to manage, coordinate, and strengthen supply and market linkages in the broiler sector. This is necessary to ensure viability of the commercial broiler sector. The Board will be charged with developing a Strategic Business Plan and then carrying out vertical integration in order to reduce the large cyclical production swings that have characterized this sector. Market information must be available to all for planning purposes, and contracts between suppliers and producers must be prepared and signed in advance of the production year to ensure that there are no surprises between co-dependent supply chain enterprises.

MAFS should promote veterinary training and provide incentives to encourage private veterinarians to work in Lesotho, rather than attempt to provide services to producers. Lesotho livestock industries require private veterinarians who are motivated and have medical and commercial know-how to assist producers.

Government should assist smallholders to have access to direct links to supermarkets provided that they meet certain safety standards.

In partnership with the Private sector, the Government should establish accredited abattoirs and make provisions for storage facilities for small-scale farmers closer the markets to reduce transport costs and consumer price.

As a policy goal, there is a need to come up with the Import substitution plan/ import ban and support strategies to promote local production and purchase.

Role of the LENAFU with respect to their lobby and advocacy activities towards policy and decision makers with respect to improving the enabling environment for trade.

- In collaboration with the Government, LENAFU should endeavour to intensify the role of collective action in enhancing competitiveness and to mentor small-scale farmers in creating groups.
- Farmers should be equipped with skills and knowledge through frequent capacity building sessions.
- LENAFU represents the producers (farmers) in policy development and review platforms. Farmers as the ultimate beneficiaries of the policies, they need not to be relegated during the policy making process but have to be part and pronounce their interests, challenges and capabilities. Once their views of the farmers are incorporated in the policy or legal framework, the ownership is shared between the Authorities and the farmers. Farmers cannot label the policy as developed by the authority to torcher them but will always take it a tool developed to assist them.
- LENAFU should encourage farmers to get into binding contract farming and vertical integration for job creation as well. Contracts are advantageous to both the growers and integrators. The benefits inherent in these contracts for the growers include: i) less production and price risk, (ii) insulation from price changes, and (iii) relatively predictable income.

8 Annexes

8.1 Resource documents used

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8.2 People interviewed

1. Mr. Khotso Lepheana, Coordinator, LENAUFU
2. Mr. Tlhakanelo Moshoeshe, National Project Coordinator at Ministry of Trade and Industry
3. Ms. Lehopo Makoe, Assistant Marketing Officer at Ministry of Small Business Development, Cooperatives and Marketing
4. Ms. Nthabiseng Hlalele, Secretary, BAPOFA
- Ms. Silvia, Poultry Production Officer at Department of Livestock Services
5. Dr. L. Mahloane, Director General, Department of Livestock Services
6. Ms. Lieketseng, Trade Statistician at Bureau of Statistics Lesotho.
7. Ms. Limakatso, Trade Statistician at Bureau of Statistics Lesotho.
8. Mr. Ntlaloe, District Marketing Officer, Ministry of Trade and Industry
9. Dr. None Mokitimi, a farmer for layer production
10. Ms. 'Mapoloko Malefane, a farmer for both layer and broiler productions.
11. Mr. Lefu Tseki, Sales personnel at Buti's Farm Feeds
12. Mr. Teboho Morake, Accounts Clerk at Makhulo Lesotho Farm Milling
13. Ms. Mots'elisi, Accounts Clerk at Jaay Farm Feeds
14. Mr. Thabiso Putsoane, Sales Personnel at Bay Enterprise
15. Mr. Mosia, Mosehle, Sales Personnel at RJM Farm Feeding
16. Dr. T. Lebese, a farmer for layer production