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POULTRY IN THE DEMOCRATIC REPUBLIC OF CONGO—A MARKET SYSTEMS ANALYSIS

FEED THE FUTURE MARKET SYSTEMS AND PARTNERSHIPS ACTIVITY

MARCH 2023

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ACRONYMS

ASANK	Association des Aviculteurs du Nord Kivu (North Kivu Producer Association)
CAM	Competitive Appraisal Matrix
CDF	Congolese Franc
DGDA	Direction Générale des Douanes et Accises (Directorate of Customs and Excise)
DOC	Day Old Chick
DFI	Development Finance Institution
DRC	Democratic Republic of Congo
EFC	Eggs for Congo
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
IFC	International Finance Corporation
MFI	Microfinance Institution
MT	Metric Tons
OCC	Office de Contrôle Congolais (Congo Office of Control)
SME	Small and Medium-sized Enterprise
SSA	Sub-Saharan Africa
TA	Technical Assistance
USAID	United States Agency for International Development

1. Summary

The Democratic Republic of Congo (DRC) has a very low consumption of poultry produce relative to regional neighbors. Annual per capita consumption is only 2.4 kg of meat and 8 eggs consumed which is well below the African average, and 90% of consumption takes place in urban areas. At a national level, this equates to a current market of 230,000 MT of chicken meat and 800 million eggs consumed annually.

There are three key market supply channels for poultry produce in DRC: imported meat and eggs, locally reared commercial chickens and layers[1], and backyard indigenous breeds. Locally reared commercial chicken meat is more expensive than imports, resulting in up to 90% of meat consumed by the urban population being imported. On the other hand, rural communities consume indigenous breeds reared at or near home. Backyard husbandry is very unsophisticated, relying on natural reproduction with minimal attention paid to animal health and nutrition. The few large scale poultry farms (>50,000 birds) are located near Kinshasa, Haut-Katanga, and the Kivus[2], specializing in egg production and are responsible for 90% of domestically farmed eggs. Competition with imports and high production input costs squeeze their margins and limit investment and growth. Small and medium-sized farms struggle with high input costs, which limits their ability to sustain and scale.

To improve the current situation, three broad areas of intervention objectives are suggested. First, there is a need to increase the availability and affordability of poultry meat and eggs. Second, conditions for small and medium-scale sector growth must be improved. Finally, productivity and health of small-scale poultry must be improved. These goals can be achieved through improvements in supporting markets, such as increasing feed crop availability and processing capacity to drive down input costs. Also, improvements in the availability of appropriate poultry genetics, production equipment, veterinary service provision, and finance is needed. Additional help for producers to differentiate and market their products and support for private sector advocacy around standards policies, import competition, and regulations are also important. Partners in this work will include large broiler[3] and layer producers and feed mills.

2. Background & Context

Objectives and methodology

The purpose of this report is to present an in-depth market systems analysis for the poultry value chain in DRC. The approach combined a mix of rapid desk research and stakeholder interviews, with Gregoire Poisson leading the fieldwork in person in this phase. The team triangulated inputs among the available literature, key stakeholder interviews, and the latest quantitative data

[1] Layer chickens are a particular species of hens which need to be raised from one day old, and they start laying eggs commercially from 18-19 weeks of age. They remain to lay eggs continuously till 72–78 weeks of age.
[2] North Kivu and South Kivu
[3] Broiler chickens are chickens raised specifically for meat.

available. This involved leveraging ÉLAN, IFC, the World Bank, USAID/DRC, and the team's personal networks to reach out to key informants. A series of in-depth interviews were conducted with different primary value chain actors and players performing supporting functions. The data collected was used to conduct in-depth analysis of the core market, supporting functions, and rules for each value chain, identifying constraints and opportunities at the firm and system levels.

Poultry was selected alongside rice and soy for in-depth market systems analysis through a Competitive Appraisal Matrix (CAM) methodology, which involved shortlisting from a list of 10 pre-selected agricultural value chains. The CAM is a tool used to screen value chains across three main criteria: competitiveness, systemic impact, and feasibility. Based on the findings, maize, palm oil, and poultry scored the highest across these criteria, but given other considerations—e.g., the need to coordinate with other donor priorities as well as political economy and environmental concerns—poultry, rice, and soy were selected for deeper analysis.

The following report provides an overview of:

- poultry market system, including current supply and demand dynamics in the core market for poultry meat and eggs;
- key constraints holding back market system functioning and growth at the firm and system levels (e.g., supporting functions and rules); and
- initial guidance and partnership potential for interventions in the sector.

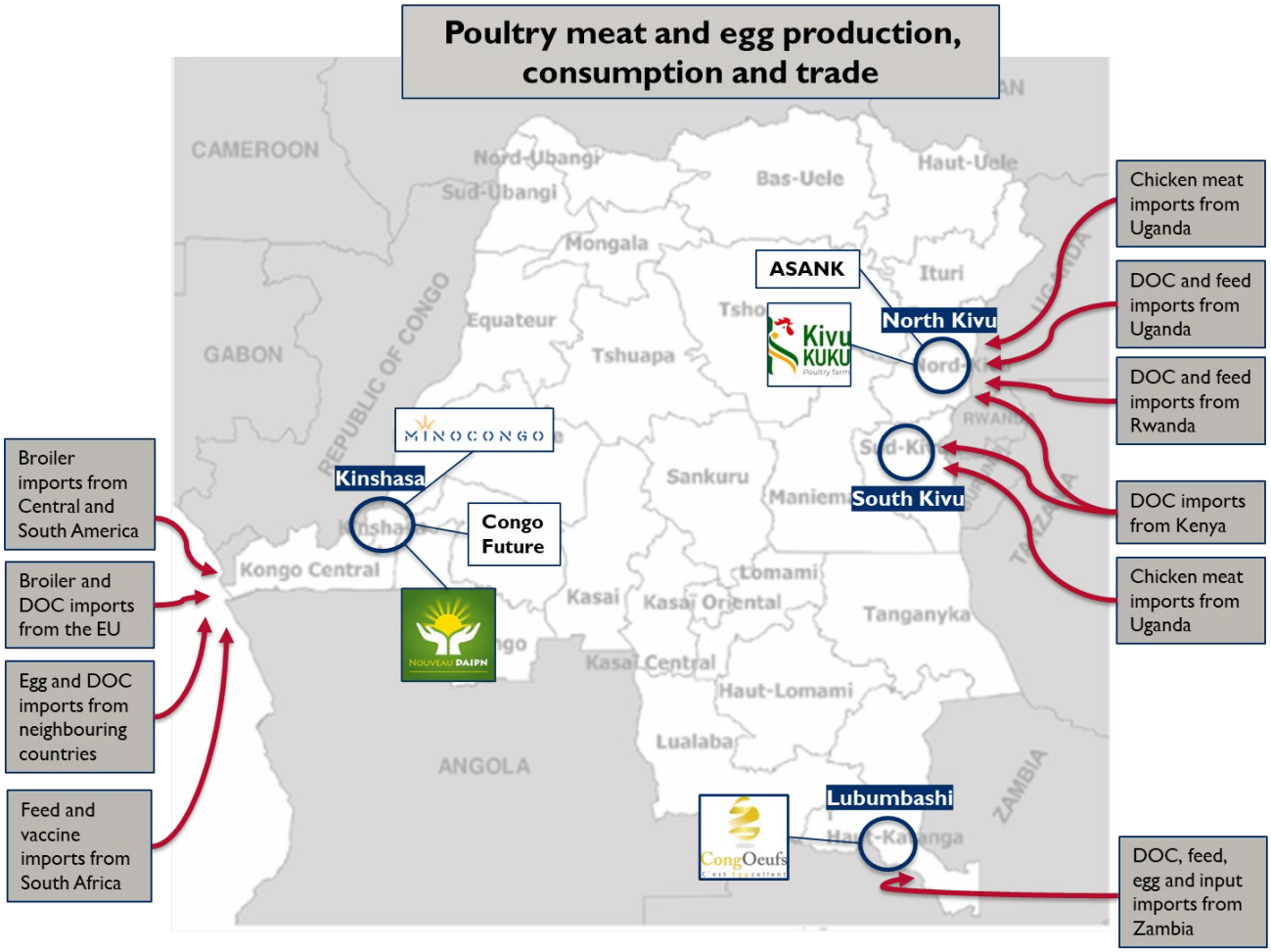
There is limited reliable data on the consumption, production, or importation of poultry meat and eggs for the DRC. This analysis, therefore, aims to triangulate consumption and production estimates from official sources (e.g., FAO) with primary data collected from key industry informants (e.g., importers and producers).

DRC poultry sector overview

There is huge demand for eggs and chicken in DRC's major urban centers due to their large populations (Kinshasa: 16 million, Lubumbashi 2.8 million, Goma 1.2 million, and Bukavu 1.2 million)[4] and concentrated purchasing power. A fast-growing urban middle-class is driving the demand. However, based on the analysis, 90% of the meat and 50% of the eggs consumed in these hubs are imported. The nascent domestic poultry production that exists (excluding subsistence or backyard farming) is currently dominated by a handful of large commercial companies, especially in Kinshasa (MinoCongo and Congo Future) and Lubumbashi (Congo Oeufs). The exception is in the Kivus, which are both less reliant on imports and have more small and medium-sized enterprise (SME) producers. Import substitution potential is theoretically huge. According to a 2018 study,[5] there is a need for ~3,200 small poultry farms in Kinshasa alone, which would create more than 30,000 jobs.

[4] United Nations - World Population Prospects - 2023 projections
[5] *Increasing self-sufficiency in poultry meat and egg production in Kinshasa,* Netherlands Enterprise Agency, *2018*

Figure 1: Poultry meat and egg production, consumption, and trade



3. Core Market

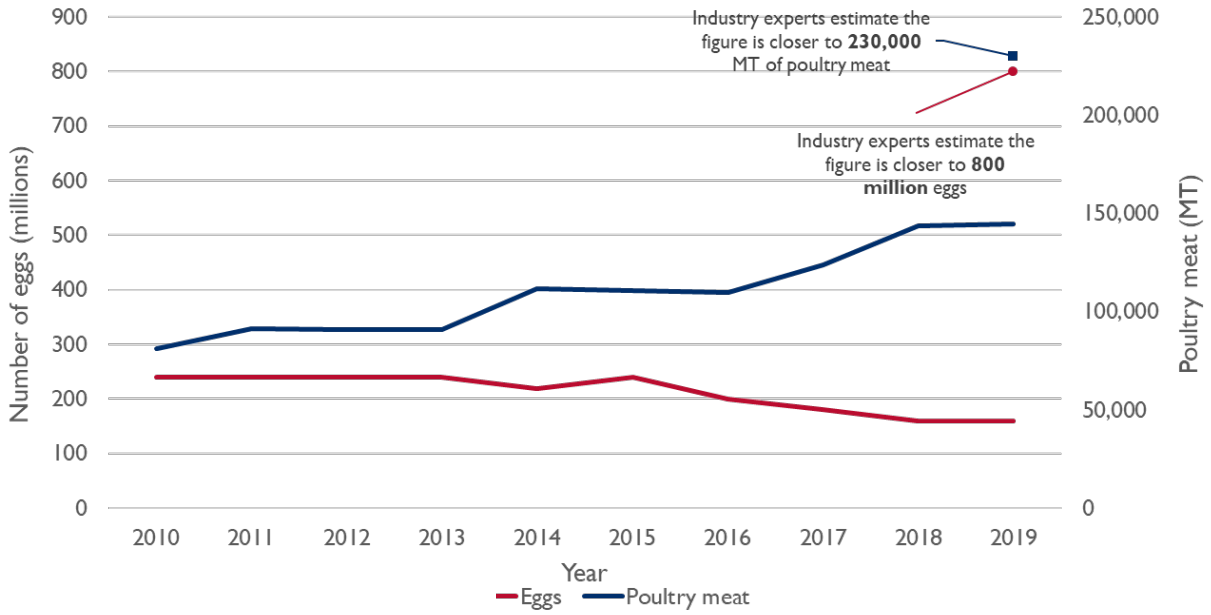
Supply and demand dynamics

The DRC has one of the lowest poultry product consumption rates in the world. According to FAO statistics, annual consumption in 2019 was approximately 144,900 MT of poultry meat (~1.65 kg per capita) and 8,000 MT of eggs (~0.07 kg or 1-2 eggs per capita).[6] However, this research shows these figures are likely underestimated, with national consumption closer to 230,000 MT of meat and 800 million eggs, or 2.3 kg meat and 8 eggs per capita (based on industry consultations). FAO data on eggs, in particular, appears to be significantly underestimated, in terms of domestic production, and it does not account for any egg imports into DRC from 2017 onwards. This is almost certainly an oversight based on the assessment of regional egg supply and demand dynamics (see page 7 below). Nevertheless, even when using these higher estimates, due to its low purchasing power, DRC's poultry meat consumption is almost three times lower than the African average (estimated at 6.28 kg per capita in

[6] FAOSTAT, 2023

2019), while egg consumption is over five times lower than the African average (estimate at 2.15 kg per capita in 2019).[7]

Figure 2: Total number of eggs and MT of poultry meat consumed

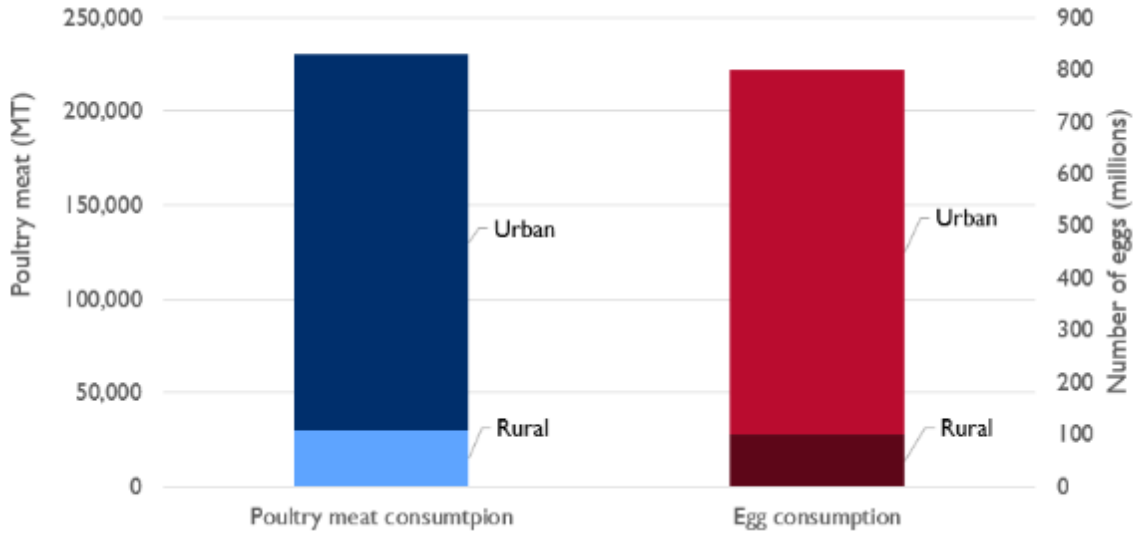


Poultry products are primarily consumed by the urban Congolese middle-class. In Kinshasa alone, with a population of 16 million inhabitants, industry informants estimate that annual consumption could reach 150,000 MT (approximately 1 chicken per family per week on average) and over 700 million eggs (roughly 1 egg per person per week). Thus, when including the other main urban hubs, industry informants believe that existing urban annual consumption is over 200,000 MT of poultry meat and over 800 milion eggs.

Rural communities in DRC consume very little poultry meat and eggs. A recent survey[8] indicates that rural poultry producers consume an average of six chickens per family each year. The same research finds that rural households rarely consume eggs, as most eggs are left to hatch. A conservative estimate is that rural subsistence poultry producers might consume 17,000 MT annually (approximately 6 chickens per family per year) and other non-poultry keeping households consume a further 13,000 MT annually (roughly 2 chickens per household per year), totaling 30,000 MT of rural consumption. It is worth noting, however, that the FAO estimated total local production at 10,000 MT in 2020 (see Figure 3 below).

[7] ibid.
[8] Aviculture familiale au Bas-Congo, République Démocratique du Congo (RDC), 2020

Figure 3: Number of eggs and MT of poultry meat consumed in urban vs. rural settings



Source: FAOSTAT, 2023; Aviculture familiale au Bas-Congo, République Démocratique du Congo (RDC), 2020

Poultry meat consumption

There are three key market segments for poultry meat in DRC: imported meat, locally reared commercial broilers (chicken bred and raised for meat) or spent layers (egg-laying chickens past their prime, which are replaced by more productive younger layers), and backyard indigenous breeds. Key characteristics of each market segment are summarized in Table 1 below, with the subsequent section estimating market sizes for each segment.

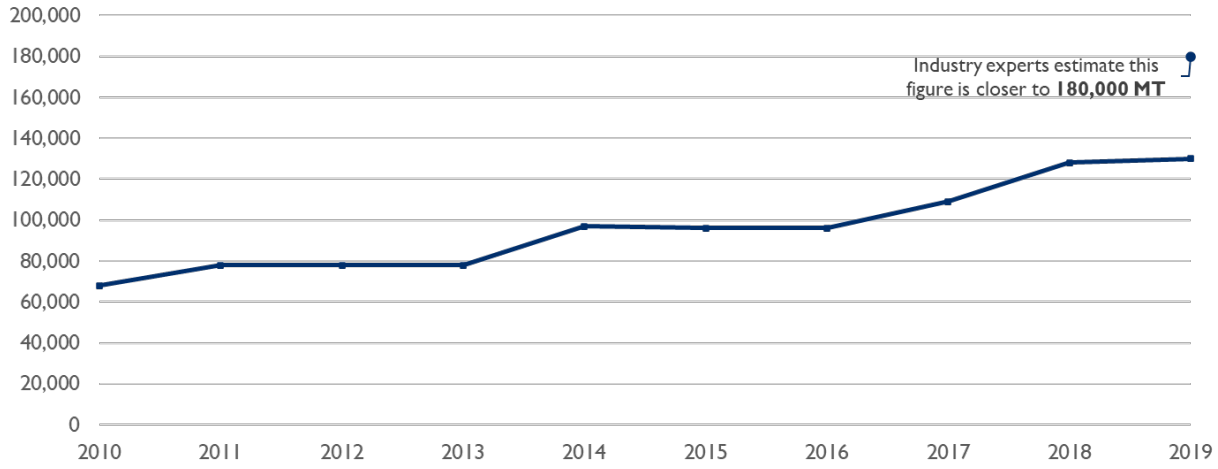
Table 1. Poultry meat market segmentation summary

Market Segment	Defining Attributes	End Market	Inclusive Development Potential
Imported meat	• Price competitive, typically as low as half the price of locally produced meat • Widely available in urban areas (up to 90% of urban consumption)	Urban consumers, especially in larger cities	**Low,** minimal local development potential aside from cold chain and distribution
Locally reared commercial broilers/spent layers	• Up to twice the price of imports, and buyers are price sensitive • Quality and freshness	Wealthy urban consumers, especially in Kivus. Few households can afford, and	**Medium,** potential for SMEs to produce more poultry to supply middle-class consumers if they can innovate to become more price competitive. Poultry

Market Segment	Defining Attributes	End Market	Inclusive Development Potential
		therefore, it is a niche market.	production creates opportunities for inclusive smallholder supply chains in soy and maize for stock feed.
Local backyard indigenous breeds	• Primarily rural subsistence on-farm consumption • Local chicken with favored taste and texture	Rural households and urban consumers in secondary cities with preference for 'local' chicken	**Low,** evidence shows biggest impact for this segment is to increase productivity through supply of vaccines, de-wormer, and knowledge. However rural consumers have extremely low purchasing power and are hard to reach.

Imported meat makes up 90% of poultry meat consumption in urban areas. According to official data, this amounts to about 117,000 MT and costs US$97 million annually. However, these figures are probably understated due to smuggling and informal trade. Based on key interviews with industry informants the estimated recent annual consumption of imported poultry meat (e.g., in 2022) is approximately 180,000 MT, with the majority of imports coming from Brazil.[9] The urban middle-class consumes most of these imports, as they have higher purchasing power than rural populations. However, this consumer segment is highly price sensitive, hence favoring imported broiler meat which can be up to 40% cheaper than locally produced meat,[10] and is also processed and packaged more suitably for urban lifestyles.

Figure 4: Poultry meat imports in MT



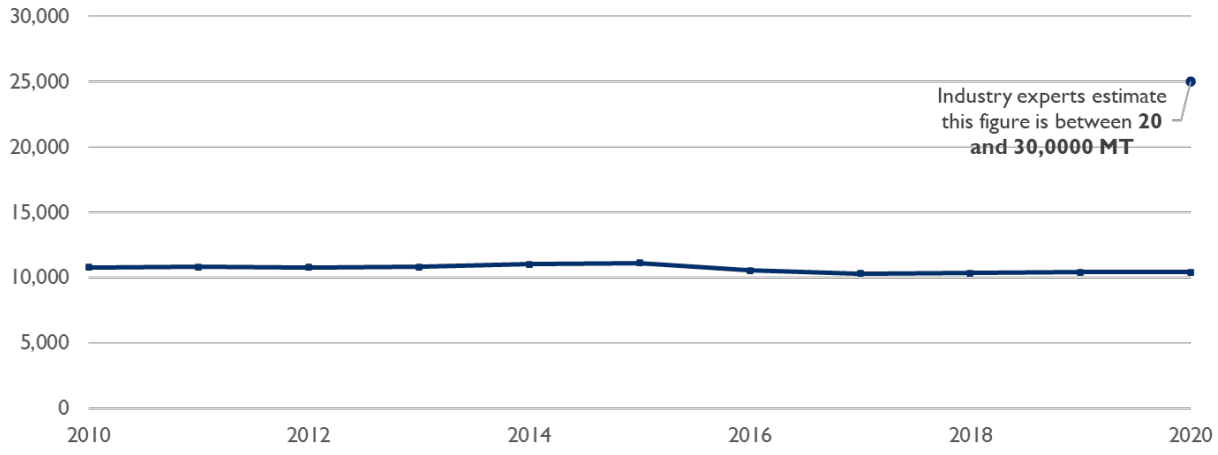
Source: FAOSTAT, 2023

[9] Whilst the OEC references the EU and US as main exporters of poultry meat to the DRC, interviews with key informants suggest figures for poultry meat imports from Brazil are much higher than OEC figures.
[10] Multiple key informant interviews and team observation in Kinshasa markets

Higher income urban consumers who value freshness can buy fresh, commercially reared, local meat, although this makes up approximately only 1% of total domestic consumption. Most of that consumption consists of spent layers, but there are also some small broiler producing companies. This is, however, a very niche market. Altogether, based on day-old-chick (DOC) sales in country, local commercial producers account for just 2–3,000 MT (i.e., ~1%) of annual poultry meat consumption across DRC,[11] of which two thirds are spent layers and the rest broilers. Goma and Bukavu, as well as other well connected secondary cities, tend to prefer fresh meat over imports, but their purchasing power is limited. Larger hubs, in particular Kinshasa, tend to prefer the convenience of processed and imported meat.[12]

Backyard indigenous poultry breeds are primarily consumed in rural areas and secondary cities. Congolese rural populations have among the lowest incomes in the world[13] and cannot generally afford to buy meat, and so any poultry meat they consume is typically from local breeds of chickens they have raised and slaughtered on a subsistence or informal basis. Due to the lack of cold chain, rural areas and secondary cities are not able to receive imports, and those who can afford to buy poultry meat tend to prefer local breeds' taste and texture to commercially reared broilers. Although the FAO puts total domestic production at 10,000 MT in 2020, key industry informants and desktop estimates suggest that backyard indigenous production is closer to 20–30,000 MT or 10-15% of national consumption.

Figure 5: Domestic poultry meat production in MT



Source: FAOSTAT, 2023

[11] Ibid
[12] LR, the largest broiler producer, says they sell frozen pieces for this reason
[13] DRC GDP per capita is $577 according to the World Bank, but given DRC is both a very urban (45%) and extractive economy (15–20% of GDP depending on copper markets), some argue their rural poor are worse off than many others in the poorest 10 nations.

Egg consumption

Eggs consumed in DRC are either domestically produced or imported from neighboring countries such as Zambia. Although data is poor, by extrapolating from domestic production data gathered in industry interviews **it is estimated that approximately 50% of the 800 million eggs consumed annually are produced domestically while the rest are imported.** Key characteristics of each market segment are summarized in Table 2 below.

Table 2. Poultry eggs market segmentation summary

Market Segment	Defining Attributes	End Market Buyers	Inclusive Development Potential
Domestically produced eggs	• Quality and freshness • Close to being price competitive/parity with imports in some areas	Urban consumers, especially in Kivu	**High**, lower feed prices could catalyze more local production
Imported eggs	• Price competitiveness or parity vs local production • No official records of imports over last 3 years; likely all smuggled or through informal trade	Urban consumers, especially in Lubumbashi	**Low**, no local industrial development

Urban consumers primarily consume imported eggs, as they are slightly cheaper than domestically produced eggs. Differentials vary, but according to one of the major egg producers interviewed eggs average 10% cheaper in Kinshasa, 15% in Kivus, and 20% in Lubumbashi, where an estimated 80% of eggs are imported due to the cross-border trading links with the Zambian poultry industry in the copper belt. Zambia produces significant volumes of maize and soy at competitive prices and has substantial stock feed, poultry, and livestock industries. A large share of its production in the copper belt is targeted at cross-border trade into DRC. The trade is informal and/or smuggled and does not show up in official import records.

Goldenlay is Zambia's largest and only fully automated egg producer, selling 150 million eggs per year from their factory in Ndola, close to the DRC border. The company is owned by Phatisa, an African agricultural investment fund, and trades profitably. It has dedicated sales warehouses providing informal/unbranded eggs wholesale from the border.

In Kinshasa, approximately 50% of eggs are imported, amounting to approximately 800,000 per day. In the Kivus, imports make up approximately 30%, amounting to 60,000 per day. **Even though they are generally more expensive, consumption of locally produced eggs is more prevalent in modern urban retail settings where consumers prioritize freshness and in areas where local eggs are price competitive** (e.g., Goma and Bukavu and more remote cities from import borders).

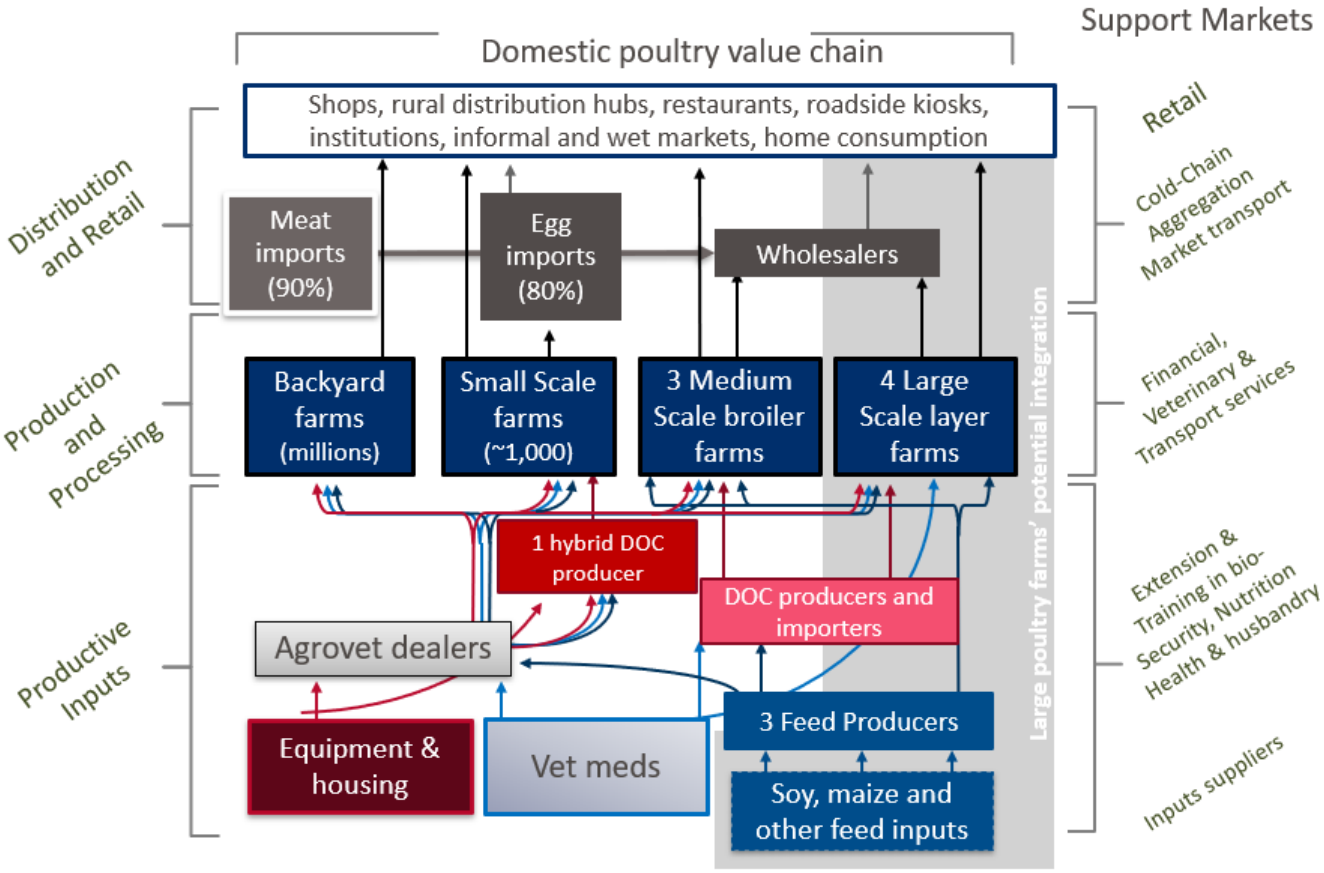
Supply-side opportunities and constraints

Poultry value chain overview and context

The primary poultry value chain involves a range of formal and informal actors and supporting markets. In order to provide advice on intervention opportunities and partnerships later in this report, it is important to understand the value chain structure and interconnections. The sector map presented in Figure 6 provides an overview of the poultry value chain in DRC. Please note that it is a general map intended to highlight the actors in the sector and the ways in which they interact.

The chicken supply chain begins with the production of field crops and other animal feed ingredients and production of DOC and veterinary inputs. Chicken and egg producers of various sizes and levels of sophistication make use of these inputs at different levels and take different routes to the final market. These are broadly split between the live broiler market and informal egg market (including on-farm consumption) and retail outlets such as kiosks, shops and restaurants which purchase slaughtered and dressed chickens (a whole chicken, plucked, with feet, head, neck, and offal removed), chicken pieces (breast, legs, thighs, etc.), and eggs.

Figure 6: Poultry value chain



Source: Wellspring generic poultry value chain model

Two critical aspects to the poultry chain that require further definition and scrutiny are chicken genetics and chicken farm types. The two are interrelated, and it is essential to understand which type of genetics matches with each farm system type.

Chicken genetics

All chickens are not created equal. A farmer's choice of genetics impacts greatly on his/her choice of housing, health care needs and feed regimes, and will also impact on his/her ability to sell the bird or eggs at harvest. For many years, there were only indigenous chickens (currently kept by backyard producers) as well as commercial chickens (high-output broilers and layers kept by large commercial farms) available. Indigenous chickens occupy one end of the spectrum, having high disease and predation resistance and ability to survive in a scavenging system, but low productivity. At the other end of the scale, commercial broilers and layers have high productivity but low disease resistance, requiring intensive indoor production systems and complete commercial feed regimes.

It is also necessary that for each new batch of layers or broilers reared, farmers need to purchase DOCs from commercial producers who either import hatching eggs or keep 'parent flocks' under license from regional or international genetics suppliers who crossbreed lines for optimal egg and poultry production.

Over recent years, there has been growth in a third category of chicken, the dual-purpose hybrid. These are breeds that offer a significant new opportunity for farmers 'stepping up' from the backyard or small commercial poultry systems. Dual-purpose hybrid birds balance disease resistance, feed and management requirements, and productivity. In the past decade, the number of dual-purpose hybrids has grown dramatically in the region due to their commercial sustainability at smaller scale and in tough environments. In Kenya for example, two commercial companies are producing dual-purpose hybrids, Kenchic with the Kenbro, and Kukuchick with the Rainbow Rooster. In Ethiopia, Uganda, and Tanzania, the Sasso and Kuroiler breed are enjoying rapid scale-up and private sector investment from industry and development finance institutions.

The hybrid birds are also distributed and managed using a different system and supply chain. Under the model, brooder units, or mother units, are supplied with DOCs which they then properly rear, feed, and vaccinate. After brooding, the birds are then sold to smallholder farmers, somewhere between 28 and 42 days of age.

The commercial development, production, and distribution of dual-purpose hybrid varieties is an area that has received significant commercial and developmental funding. It is now at the stage where the breeds are available sustainably and at scale in many developing countries in Sub-Saharan Africa (SSA) and South Asia. This is a particularly strong focus area for the Bill & Melinda Gates Foundation through partnerships with the World Poultry Foundation and others. As demonstrated later in this report, **it is likely that any significant scaling up of the domestic poultry meat or egg production industry in DRC will require hybrid poultry hatcheries with distributors of the chickens, inputs, and technical support close to production clusters, particularly for the small and medium-sized producers.**

Poultry producers across SSA range from backyard subsistence producers to large commercial operations with flock sizes of over 10,000 birds (see Table 3 below). It is important

to note that, in practice, making the transition between producer segments is extremely challenging. Even with grant and technical assistance (TA), support from donor programs, and sufficient working capital, usually only a fraction of farmers can grow into the next segment. Sometimes, medium-scale farmers grow from small commercial farmers, but more often, they are also entrepreneurs who come out of paid employment in the private sector (often the larger-scale poultry industry) or public sector.

Table 3. Poultry meat production types

	Backyard	Small Scale	Medium Scale	Large Scale
Type of confinement	Free range	Indoor/outdoor	Indoors	Indoors
Flock size	~1 – 50	~50 – 1000	~1,000 – 30,000	> 100,000
Housing	Minimal	Closed/Open	Closed	Closed/ Temperature-controlled
Type of genetics	Indigenous	Hybrid	Commercial/hybrid	Commercial
Use of inputs	None/Low	Low-Med	High	High
Market outputs	Rural/None	Urban/Rural	Urban/Rural	Urban
Contact with other poultry	Yes	Yes	None	None
Veterinary Services	Irregular/None	Irregular/Contract Services	Contract Services	Own Services

All production segments can play a valuable role in a national poultry industry and have potential to deliver different developmental impacts. For example, while supporting medium to large-scale producers in DRC to become competitive with poultry meat and egg imports is likely to be a quicker route to improving nutritional outcomes, the poultry sector also offers some useful pathways out of poverty for smallholders and the rural poor (e.g., as producers of chickens, eggs, and feed or employment as vaccinators, aggregators, or in slaughterhouses). However, it is important to ensure that enabling systems and support are there for farmers who have the desire and ability to grow their production alongside support to optimize production at every level for farmers who do not wish or lack conditions to grow further.

DRC genetics supply

There is a very limited domestic supply of DOCs in DRC, with only two small broiler parent flocks and no layer parent flocks at present. In Kinshasa, DAIPN has a 1,000-parent bird flock and mostly provides for its own DOC production. It also sells 2–3,000 broiler DOCs a month to third-party SME farms. In Goma, Kivu Kuku has 2,500 parent birds and produces around 20,000 DOCs per month. None of the large egg production farms keep parent flocks, however Eggs for Congo (EFC) in joint venture with Hendricks genetics, a Dutch company, has recently launched a parent farm to provide hybrid Sasso DOCs. Their aim is to sell 25,000 DOCs a day in rural and semi-rural areas around Kinshasa and neighboring provinces. This would be the first attempt to bring a hybrid poultry system into the DRC commercially.

Case study: Kivu Kuku Hatchery, Goma

Kivu Kuku is a DOC producer established in 2019. Based in Goma, the company sells chicks in Goma, Bukavu, and Kinshasa and provides technical advisory to small poultry producers. As of 2022, they sell approximately 50,000 DOCs and hatching eggs per month (including 10,000 layers).

The company's recently installed hatchery has a capacity of 10,000 chicks per week, but it is now used at 50% capacity due to a shortfall of hatching eggs from his parent flock because of financial pressures. Thus, the Managing Director still imports hatching eggs from neighboring countries to meet demand, despite this costing US$0.45 per hatching egg from Uganda, Rwanda, and Kenya, vs US$0.20 when produced from his own parent flock. Locally produced DOCs are 20% cheaper than imported ones, and Kivu Kuku claims to achieve 50% gross margins on local DOC production.

Kivu Kuku tried to sell animal feed at US$35 per bag after buying concentrate in Uganda, adding milled maize and soymeal bought from Bahati (Rutshuru) to produce up to 5 MT per day at full capacity. However, the company was unable to compete with Rwandan feed imports at US$32 per bag.

Constraints:

- Expensive and unstable supply of electricity, an important issue for hatching
- High cost of feed and imported hatching eggs.

Given the limited local parent flocks, the majority of DOCs in the DRC are imported from Europe or East and South Africa. Imported DOCs were reported to be 50% to 100% more expensive than in exporting countries (e.g., US$0.70 in Uganda vs US$1 in Goma, or US$0.60 in Europe vs $1.20 in Kinshasa). According to industry consultations, producers in Kinshasa typically import DOCs from France, the Netherlands, and Belgium, while those in the Kivus and Katanga usually import from neighboring countries such as Uganda, Rwanda, or Zambia. This includes:

- **Kinshasa**: GMK (ex-Mino Congo) imports 100,000 DOCs every 6 weeks from France; Congo Future imports 50,000 per month; and DAIPN imports roughly 10,000 per month. Some DOCs are also resold to smaller farms for between US$1-1.20 each.
- **Katanga:** Congo Eggs imports 60,000-layer DOCs from Zambia every 4 months for their own production. Smaller poultry producers also import at a cost of roughly US$1.20 per chick. Importers resell DOCs domestically for US$1.50 in very limited volumes of 1–2000 per month.

- **Goma:** DOCs are imported mainly from Uganda, with the balance coming from Kenya and Rwanda. Association des Aviculteurs du Nord Kivu (North Kivu Producer Association) (ASANK) imports 40,000 DOCs per month, and Kivu Kuku imports 20,000 per month. Import costs are approximately US$1.00 for broiler DOCs and $1.80 for layer DOCs.

DRC feed supply

Industry consultations indicate that, with the exception of maize, most poultry feed in DRC is imported. In Kinshasa, the majority of large-scale farms import concentrate feeds from Europe and South Africa and buy maize locally when they can. Some farms such as GMK (see case box on following page) and Congo Future produce stock feed for themselves and also sell stock feed to smaller farms. In Lubumbashi, Congo Oeufs imports animal feed formulas from Zambia. It is interested in developing the capability to produce less complex feed that can be used for maintaining layers after they reach the point of laying, around 16 weeks of age. In Goma, feed is mostly imported by producers from Rwanda and Uganda. Some mills used to source local maize, bran, and soymeal, adding these to an imported feed premix; however, the increasing insecurity in the region has meant that local production has become uneconomical.

Consultations with producers indicate that the cost of feed is 50% higher in the DRC than in neighboring countries that supply it with eggs, and up to 100% higher than in meat exporting countries such as Brazil. For example, layer feed costs approximately US$0.40 per kg in Uganda vs US$0.60 per kg in DRC. As feed accounts for roughly 70% of the cost of production for broiler chickens and 80% for layer chickens, **this is the most critical constraint on competitive domestic production.**

Domestic feed prices are determined largely by availability and price of maize and soy. These are either not available locally or substantially more expensive than in exporting countries:

- Maize is grown locally, but is substantially more expensive than in neighboring countries, as their agriculture is subsidized to some extent (e.g., Rwanda and Zambia subsidize seeds and fertilizers for smallholder farmers) as well as more efficient in production techniques, post-harvest storage, road conditions, and power availability. Most of the maize for feed is produced in various inland areas (Bandundu, Bumba, Kasaï, Mbandaka) and transported by boat to Kinshasa or bought locally around Lubumbashi and Goma.
- Soy is not grown in western DRC, and the small volumes grown in southern DRC are used primarily for cattle feed. Kivu used to be an exception where producers were using local soy to process and include it in stock feed. Because of the area's instability, soymeal is now imported. Soy is grown extensively in Zambia on the back of a substantial livestock industry with mills selling soy oil and cake. It is even less expensive in Brazil, Argentina, or the U.S.

There are only 3 active feed mills in DRC—all of them in Kinshasa and mostly serving their own farms. The lack of local feed mills accentuates the dependency on imported feed crops. Feed mills themselves require milling equipment, bagging etc., as well as cheap energy. In DRC, the lack of electricity means mills have to be operated with generators. Milling is, thus, more expensive than in countries with reliable electricity supply such as Rwanda.

Table 4. Summary of feed challenges by producer size

Backyard	Small commercial	Medium commercial	Large commercial
Little or no consumption of commercial feed. Indigenous chickens scavenge for their sustenance and are supplemented by household food scraps and products from maize grinding. Feeding indigenous chickens commercial feed is uneconomical due to the birds' poor food conversion abilities.	Requires feed and a shift in thinking for farmers: if not done right (timing, quantity, and quality of feed) then chickens do not perform. Susceptible to the false economy of home-mixing feeds and low-cost/poor quality feeds, often as a result of mislabeling and poor regulation.	Better understanding of the need for quality feed and a stable supply. Layer farmers at this level of sophistication notice poor quality feed immediately because laying rates drop within days, but broiler farmers have a harder time identifying quality unless they are closely monitoring feed conversion rates.	Able to minimize the cost of feed as much as possible within systemic national constraints through vertical integration or close cooperation with high-quality feed providers. Suffer from price and availability inputs for their feed mills, hence unable to meet import parity in most cases in DRC.

Case study: GMK, feed mill and largest layer operation in DRC

GMK (ex-MinoCongo) is a diversified food business, including cereal milling, poultry, bread, and imports of various other foods. It has the largest layer operation in DRC, with 800,000 layers producing up to 520,000 eggs per day when operating at full capacity. Eggs are sold at US$60 per 360. The company imports 100,000 DOCs from France every 6 weeks for US$1.15 in Kinshasa or $1.20 including the costs of vaccination.

Its feed mill processes several animal feeds, including for poultry layers (but not broilers). The mill has a capacity of 200 MT/day and currently operates at 60% capacity, producing 120MT/day. The company reports that 80% of feed produced is used within its layer operations and 20% for smaller farm clients.

Spent layers are sold at the market price for meat. The company previously slaughtered and sold them within a month, but now it has upgraded to a larger slaughterhouse with a capacity of 20,000/day that should allow them to process a 100,000 flock in a week.

Veterinary products and services

Poultry health is handled differently depending on farm size and level of sophistication, and the challenges facing the different categories of farmers differ accordingly. **The backyard poultry system in DRC places minimal attention on animal health**, as indigenous birds have some resistance to disease and are not viewed by farmers as a commercial endeavor, so farmers typically do not vaccinate or treat their birds for common illnesses. However, diseases like Newcastle Disease cause high mortality rates which can mean backyard poultry farmers are rarely able to grow their flocks. Backyard poultry also carry high levels of worms in their digestive systems, putting increased stress on the animal and its ability to convert feed into proteins. Anthelmintic drugs (de-wormers) are cheap, effective, and beneficial even at this level of poultry production as they improve the bird's appetite. The better the bird eats, the better its health and the greater its resilience to other diseases. Combined with vaccinations, this level of intervention can have profound impacts on family nutrition for backyard farming households.

Small and medium commercial farmers in DRC must take disease seriously, but often struggle to do so. Inappropriately large package sizes make vaccinations expensive. The difficulty and cost of last-mile cold chain delivery of small quantities limits some farmers' ability to access the vaccines, most of which must remain refrigerated up to hours before use.

There are a few specialized importers and distributors of vet products and farm equipment such as MinoCongo in Kinshasa, Pharmavet in Lubumbashi, and Agriforce in the Kivus. Most vaccines are either provided as a service by the DOC providers or imported directly, especially by larger stakeholders. Congo Oeufs imports from South Africa, while MinoCongo and other Kinshasa players source from Europe. Medium and large farms usually employ a full-time or part-time veterinary doctor who supervises and/or administers veterinary services.

Production

Based on discussions with the Ministry of Agriculture, as well as with industry associations and input providers, there may be over 1,000 medium and large poultry farms in the three main hubs of Greater Kinshasa, Haut- Katanga, and the Kivus. It is estimated that more than 90% of the poultry farms are specialized in layer production, and most of the other farms have a combination of layers and broilers.

Large farms (>50,000 birds)

Based on the farms visited and expert consultations, it appears that just four farms produce 90% of domestically farmed eggs. In Kinshasa, GMK keeps 800,000 layers and produces 500,000 eggs per day; Congo Future keeps 300,000 layers, producing 200,000 eggs per day; and DAIPN keeps 90,000 layers, producing 60,000 eggs per day. In Lubumbashi, Congo Oeufs keeps 300,000 layers, producing 180,000 eggs per day.

As highlighted in the Congo Oeufs case study below, **due to competition with imports and high input costs, many of these large producers are running very tight operating margins, which**

makes investment in expansion challenging. Access to lower cost feed would help to make these players more competitive against imports and provide a pathway to further scale.

Note, there are only 2 large broiler farms in DRC (> 10,000 birds)— Mbeko Shamba (12k) and LR Group (25k).

Case study: Congo Oeufs, largest poultry producer in Lubumbashi

Congo Oeufs is part of a diversified business which includes mining and food subsidiaries. The company produces eggs and meat from spent layers, and also owns a large maize farm (Terra) and a maize mill (African Milling).

The company sources the majority of its inputs from Zambia, including packaging, 34 MT of feed per day (in 2022), and 60,000 DOCs every 6 weeks. It also imports vaccines from South Africa. Congo Oeufs' average selling price for eggs is 10–20% higher than imports (e.g., 360 eggs at $39 vs $35-36 for imports), and this is keeping their operating margins very tight, limiting potential to invest in expansion.

Spent hens are sold into the live bird market at approximately US$4 for a 2 kg bird. According to the company, it takes approximately 6 weeks to sell a lot of 60,000 spent hens. Opportunities it seeks to develop include potential to use poultry manure to produce biogas and to manufacture some of its own feed to reduce price and availability risk.

Small to medium sized farms

Approximately 1,000 small to medium sized commercial farms (50-2000 birds) are operating in DRC, according to industry interviews. In the Kivus alone, there are over 300 small to medium sized commercial producers.

ASANK and Kuku Kivu are the main input and technical services providers to these farms. These small to medium sized farms also face high input costs, and additional challenges around reliable offtake and distribution agreements which limit their ability to scale (see case study below).

Case study: Reseau Commercial et Agricole (small broiler operation), Lubumbashi

The farm produces 1,000 broiler birds on an 8-week production cycle. The farm aims to sell 70% of the broilers at 28 days for US$5 for smaller live birds (e.g., 1.3 kgs), and 30% at 45 days for US$7.50 for larger live birds. Their estimated gross margin is US$1.20 per bird.

All inputs come from Zambia: DOCs are either sourced directly in Zambia at US$1.20 or via an importer in Lubumbashi at US$1.50. Feed is bought at US$30 per 20 kg in Zambia (imported by the farmer) or bought in Lubumbashi at US$35/bag.

The main challenge faced by this operation is ready market access since slow sales erode profitability. Commercial broilers must continue to be fed high quality feed and this leads to them literally 'eating the profit.' To grow, it would need to develop a more reliable distribution and offtake arrangement and/or transition to producing using hybrid poultry (e.g., the Sasso) which can be maintained on much cheaper rations when it has achieved selling weight.

Processing

At the most basic level, chicken processing refers to the slaughter, de-feathering, and removal of the head, legs, and internal organs. This is undertaken by consumers at home, by SMEs attached to live markets, or in commercial slaughterhouses. Further processing involves cutting the carcass into portions, de-boning, and chilling or freezing. It is typically only done by large slaughterhouses integrated with commercial broiler companies.

Poultry in DRC are either slaughtered on industrial farms or informally by backyard farmers, traders, or at home. Small-scale farmers in DRC who sell to live markets typically do not have any other option. There are no abattoirs who buy from external producers, nor large processors. Three Kinshasa producers have basic slaughterhouse setups for their own stock, as well as Ferme Espoir in Lubumbashi (12,000 broilers). The rest is informal slaughtering. Even Congo Oeufs (60,000 of spent layer batches) does not have a slaughterhouse since there is adequate demand from the live bird market. Sub-national, mid-sized slaughterhouses do not exist. Most of the locally slaughtered birds available are spent layers, which are sold, and slaughtered at the end of their laying period (16–90 weeks).

Retail

Poultry meat and eggs in DRC are either sold in wet markets or more modern retail points of sale (e.g., supermarkets, butchers). Modern retail point of sales almost exclusively sell frozen imports of poultry meat. The exception to this is in Kinshasa, where some display DAIPN locally bred broilers (mostly frozen). They also sell locally produced eggs. Wet markets sell frozen imports that have been 'refreshed' to room temperature and live chickens, and this is how most local chickens and broilers are sold. Wet markets also sell both local and imported eggs. Traders cannot feed their chickens, thus, they buy small quantities at a time.

Cost drivers and local production competitiveness

Eggs cost US$39 per crate of 360 eggs at farm-gate, and US$41 at retail (equivalent to CDF 7,000 for 30 eggs) in Lubumbashi. In Kinshasa, eggs cost US$60 at farm-gate and retail for US$68 (CDF 12,500 for 30 eggs).

Local poultry meat sells for ~US$4 for 1.3 kg at farm-gate in Lubumbashi and US$4.30 (CDF 9,500) per kg at retail. Imported meat costs US$2.30 (CDF 5,000) in Lubumbashi and US$2.60 (CDF 5,800) in Kinshasa.

The cost of transportation, processing (mainly slaughtering) and trade is low, as poultry products are produced in or very close to towns, processing is minimal (slaughtering for broilers, packaging for eggs), and traders focus on volumes rather than margins for these fast-moving products.

The key costs affecting local production prices are inputs for eggs, feed cost accounts for 80% of the farm-gate price, and 70% for broilers.[14]

[14] Increasing self-sufficiency in poultry meat and egg production in Kinshasa, Netherland Embassy, 2018

Reducing the cost of production to increase farmer net profit and or reduce prices in the market will require lower feed costs from:

- lowering the price of local maize and soy
- improving the efficiency of local feed processing
- developing or introducing strains (such as Sasso and other hybrids) that can be produced using cheaper feed rations

Interventions to address these and other potential avenues to improve competitiveness and increase farmers' profits are detailed in Section 4 below.

4. System-level Constraints

Recap on firm level constraints

As highlighted in the previous section, there are two key firm-level constraints which are holding back the commercialization of the poultry sector in DRC.

I. Imported poultry meat and eggs are cheaper than those produced in DRC, although locally produced eggs have the potential to become competitive

Interviews indicate that locally produced broiler chickens cost typically 40% more than imports, while eggs cost about15% more on average, but can reach parity in Kinshasa. While locally produced eggs have the potential to become cost-competitive with imports from neighboring countries (e.g., Uganda, Rwanda, or Zambia) if input costs can be reduced, local broiler production has to compete with competitive frozen imports from top global exporting countries such as Brazil, the EU, and the U.S. that have access to cheaper inputs, subsidies, and efficient intensive production systems.[15]

II. High cost of inputs, especially feed, in the DRC vs poultry exporting countries in the region and globally

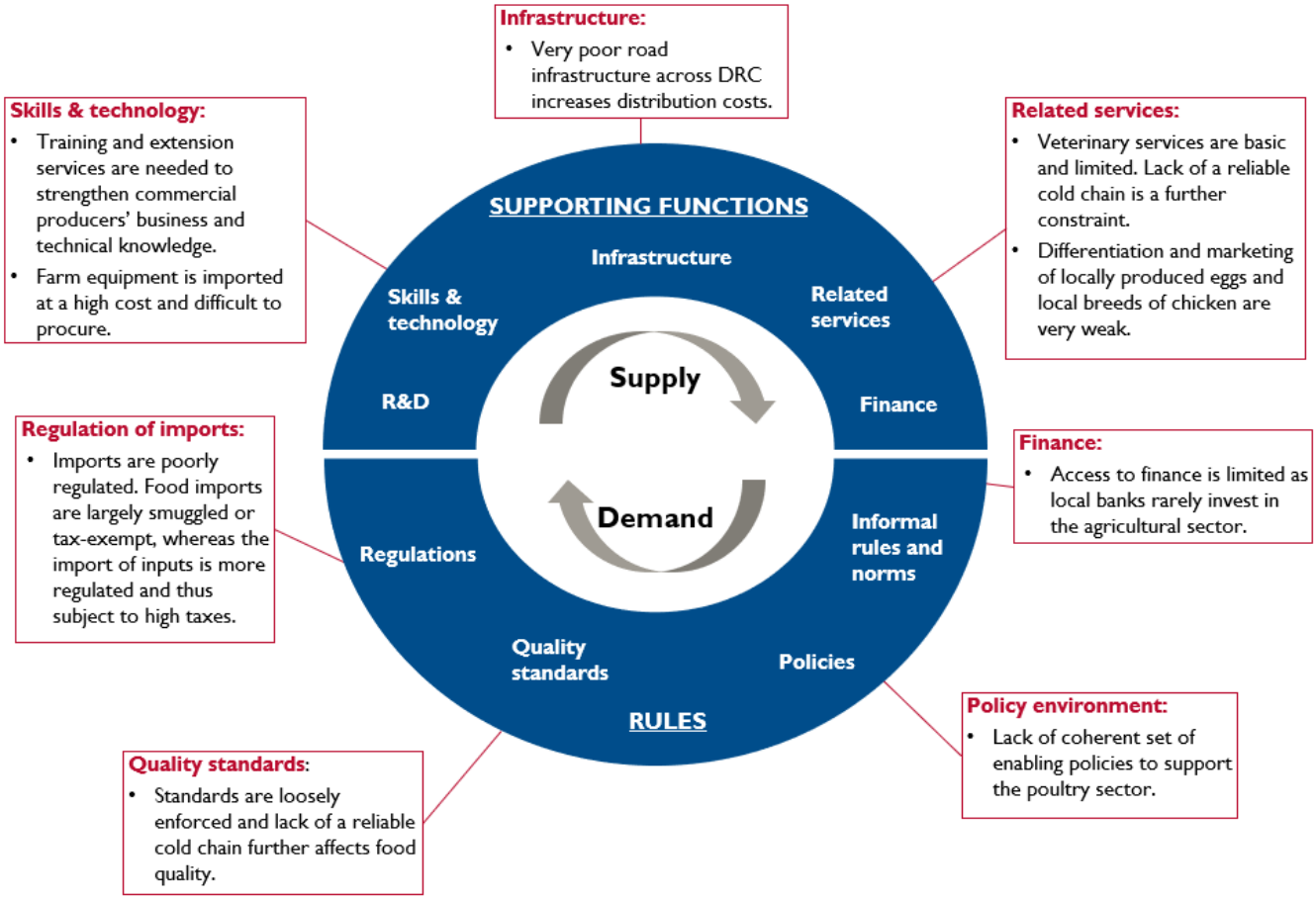
Local poultry production is hindered by very high input prices. DOCs, hatching eggs, and most of the poultry feed are imported, resulting in much higher prices locally than for producers in the exporting countries. Consultations indicate that feed costs in DRC are about 50% higher for egg producers and up to twice as expensive for poultry meat producers when compared to producers in countries which export to DRC. These direct costs represent about 80% of the total cost of production for both commercial broiler and egg producers. There is also a high dependency on imported poultry farm equipment, vaccines, and medicines which contribute further to the high cost of production.

[15] Whilst most key informants interviewed stated that imports primarily came from Brazil, it is also noted that OEC references EU and US, although it appears a significant percentage may then be routed on to Angola: https://oec.world/en/profile/bilateral-product/poultry-meat/reporter/cod

Supporting functions and rules

In addition to these key firm-level issues, the enabling environment for the poultry sector in DRC hinders sector growth. Figure 7 below provides a summary of system-level constraints faced by poultry meat and egg producers in the DRC.

Figure 7: Constraints in supporting functions and rules in the poultry sector



Supporting functions

Technology: Poultry equipment is expensive in DRC. Feeders, drinkers, heaters, laying boxes, and incubators are difficult to procure and rarely locally made. Thus, they are expensive.

Veterinary services: Improvement of veterinary services is necessary at several levels:

- capacity of veterinarians to improve diagnosing and treating poultry diseases;
- capacity of diagnostic laboratories to investigate and diagnose poultry diseases;
- availability and reliability of cold chain, vaccines, and medicine; and
- capacity of the national government to monitor and respond to disease outbreaks.

Training and extension: Small and medium-scale commercial producers lack technical and business knowledge. Extension service support is lacking aside from ASANK which may provide some support to its members.

Differentiation and marketing: Currently, locally produced eggs and broilers (or local breeds) cannot compete on price alone. They need to clearly differentiate themselves to justify a price premium. With the possible exception of the Kivus, consumers are more driven by price than quality. Differentiation in terms of safety, freshness, taste, and local consumption may help support local marketing.

Access to finance: Developing production and support services (hatcheries, mills etc.) requires capital expenditure to improve infrastructure, and working capital to scale up production cycles or procure and store feed inputs. Unfortunately, DRC banks are risk averse and rarely invest in the agricultural sector.[16]

Rules

Standards: Poultry product standards, such as testing for salmonella, are implemented by the Congo Office of Control (Office de Contrôle Congolais (OCC)). However, the testing system is not upheld, and to date, bans on imported products have resulted from information shared from the EU's alert system rather than the OCC. The high dependence on imported poultry products often leads to unsafe products sold on the market. Imported products, often passed the due-by-date, and cold chain issues pose a health risk to the community.[17]

Regulation of imports: Responsibility for regulating imports is divided between the Ministry of Commerce, the Ministry of Agriculture, the customs agency—Directorate of Customs and Excise (Direction Générale des Douanes et Accises (DGDA))—and the OCC. Imports are, however, poorly regulated. While finished products enter the country without being taxed, either because they are smuggled in or because their importers benefit from an exemption, inputs, which should be exempted, are often subject to various taxes or illegal harassment.

Sectoral enabling policies and associations: At present, there are no meaningful industrial strategies for delivering growth in the sector. According to Dr. Pius (Head of the Department of Studies and Planning (Direction d'Etudes et de Planification) and Dr. Muyumba of the Direction Service National de Developpement de l'Elevage:

> ***"The poultry value chain is unstructured, with individual actors operating solo, very little support from the government, nor a national professional body. Given the financial importance of the sector, the government should implement a coherent set of policies to develop local production."***

[16] FCDO's ÉLAN program reported only 4% bank lending going to agriculture in 2014. Earlier studies reported 3.8%

[17] Increasing self-sufficiency in poultry meat and egg production in Kinshasa, Ndambi. A, Wageningen University, 2018

5. Potential Areas of Intervention

Addressing constraints in the poultry market system in DRC is tied to three major developmental objectives:

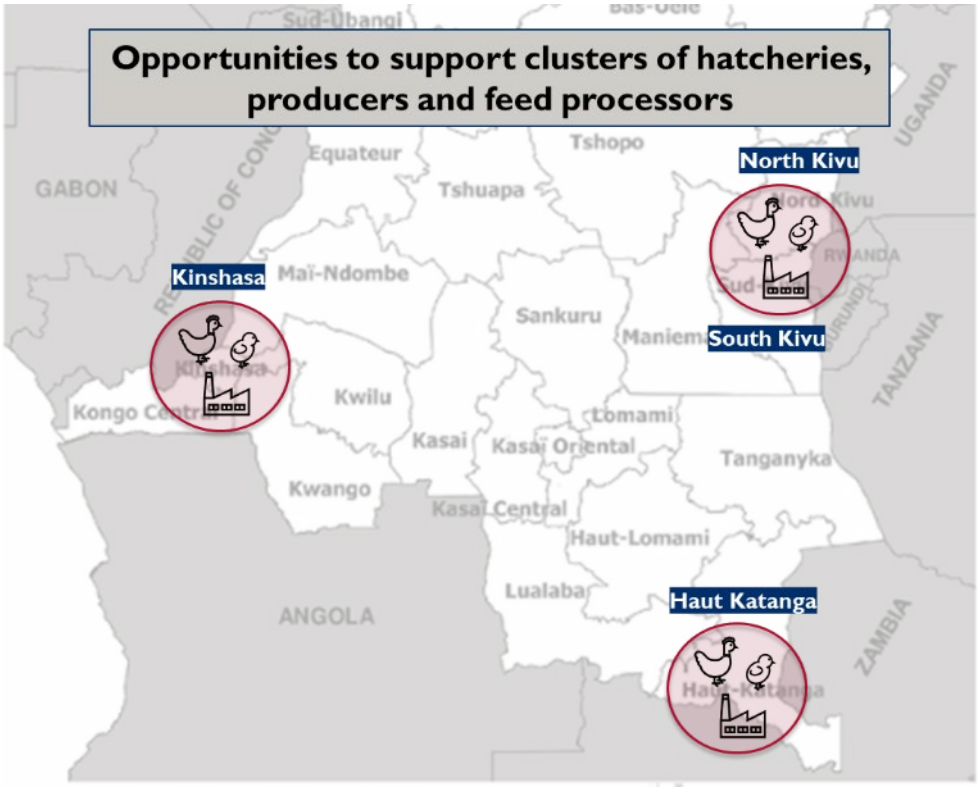
1. **Widespread provision of low-cost animal source foods** e.g., through wider availability and reducing cost of poultry products (in the short to medium-term most realistic for eggs to poor urban households).

2. **Sustainable inclusive growth:** Backyard poultry production does not generate direct jobs or much income, nor do large-scale integrated poultry players that are highly efficient and mechanized. The opportunity to stimulate inclusive growth via poultry development typically is in the SME sector.

3. **Household food security** e.g., through interventions which enable backyard producers to improve productivity and health of their poultry.

As poultry meat producers in the DRC are highly uncompetitive compared to imports, in the short to medium-term the most significant overarching intervention opportunity is around supporting domestic egg production. The exception to this is supporting meat producers targeting niche, high-end markets in urban areas where consumers prioritize freshness and quality. As shown in the map below, it will be critical to take a joined-up, regional cluster approach when designing interventions and partnerships in the sector, given the poor infrastructure and size of the country. This could involve intervening in the three main geographic clusters around Kinshasa, Haut-Katanga, and the Kivus.

Figure 8: Opportunities for intervention in the poultry sector



Intervention 1: Increase feed crop availability in producer areas

Support maize and especially soy production around the main hubs, based on forward offtake commitments from the poultry producers and feed mills to incentivize farmers to invest in inputs, quality, and yield. Soy and maize are often grown on crop rotation on the same fields due to their complementarity and the nitrogen fixing qualities of soy.

- Specific support: facilitate availability of improved seed, distribution, fertilizers, crop protection, and good agricultural practices through concessional capital and TA to farmers; explore de-risking and financing options for poultry producers and feed mills.
- Potential partners: Commercial farms in Lubumbashi (best suited area for soy); smallholder associations in North and South Kivu

***Note*:** Although this intervention is key, it is not part of the intervention ranking table below as it is developed in more detail in the soy market system section.

Intervention 2: Improve installed feed milling capacity and efficiency

Support the development of new feed mills outside of Kinshasa and/or improve efficiency of existing feed mills.

- Specific support: Provide access to capital and technical support or support access to cheaper renewable energy (biogas, solar).
- Potential partners:
    i. Existing mills such as Mashamba and Go Congo in Lubumbashi and Midema in Kinshasa
    ii. Maize milling facilities seeking to upgrade into value-added products (animal feed and maize bran)
    iii. Large layer operators such as Congo Oeufs in Lubumbashi
    iv. Input providers in the Kivus such as Kivu Kuku and ASANK

Intervention 3: Improve availability and appropriateness of poultry genetics and production supply systems for DRC environment

Support the development of parent flocks and hatcheries outside of Goma and/or support expansion of existing Kivu Kuku hatchery. It will also be important to conduct a detailed commercial feasibility study for the introduction and rapid scale up of the hybrid poultry production system in DRC, building on successes and lessons in Tanzania, Ethiopia, Uganda, Kenya, and India.

- Specific support: Provide access to concessional capital for hatcheries and specialized TA (e.g., to conduct feasibility studies and test viability of different hybrid breeds in DRC context).
- Potential partners: Broiler operation in Kinshasa (LR Group), Sasso hybrid start-up (EFC), mills or large layer operations in Lubumbashi (Congo Oeufs, Ferme Espoir), existing hatchery in the Kivus (Kivu Kuku)

Intervention 4: Support local producers to differentiate and market their products

Support local industry marketing and communication around the quality and freshness of locally produced eggs, as well as meat targeted at high-end consumers.

- Specific support: Subsidize individual or industry-wide campaigns and TA to help with development of branding.
- Potential partners: Industry leaders and industry associations (GMK, LR Group, EFC, Congo Oeufs, ASANK, and FEC Agriculture)

Intervention 5: Support private sector advocacy around standards, policies, and regulations

Support tighter control and communication around standards, import regulations, and enforcement of regulations, as well as advocating for sectoral policy development and government investment (e.g., in supporting infrastructure around key clusters)

- Specific support: Support private sector advocacy through research, coordination, and capacity building e.g., to producer associations.
- Potential partners: Industry leaders (depending on the issue) and industry associations (LR Group, Congo Oeufs, ASANK, FEC Agriculture)

Intervention 6: Improve veterinary service provision and training through working with DOC and feed providers to develop embedded services

In other markets, there have been examples of successful integration of veterinary services and trainings with the distribution of DOCs and basic inputs.

- Specific support: De-risk commercial service development and innovation through financial and technical support. Consider integrating this with development of a hybrid poultry system whereby the distributors of the birds at district level (hubs) also provide basic inputs such as vaccines, feeders, and basic training.
- Potential partners: DOC and feed providers in Kinshasa (EFC, LR Group) and Lubumbashi (Congo Oeufs), Goma (ASANK, Kivu Kuku)

Intervention 7: Increase access to finance for producers

Given low levels of domestic bank lending to the agricultural sector in DRC, this will involve de-risking domestic bank lending and supporting financial institutions to develop tailored products.

- Specific support: Develop new products that include leasing or loans for poultry equipment; support banks understanding of the sector, support farms and service provider in accessing finance, De-risk banks investment (guarantee).
- Potential partners: SME banks (Equity, TMB), MFIs (SMICO), financial advisers, non-bank financial providers such as input or equipment providers giving credit against offtake agreements

Intervention 8: Increase availability of low-cost poultry equipment, particularly for SMEs

Support poultry equipment distributors and local manufacturers to improve distribution models and improve customer acquisition.

- Specific support: Marketing support, client financing (e.g., through linkages with MFIs and local banks), technical support around improving operations (e.g., improving distribution models and partnerships).
- Potential partners: Input, DOC, and feed providers in Kinshasa (LR Group, EFC, Indigo) and Lubumbashi (Indigo), Goma (ASANK, Kivu Kuku), existing welders/equipment manufacturers

Table 5. Intervention summary and ranking

Area	Intervention	Impact	Feasibility	Potential partners
Feed mills	1. Support the development of new feed mills	High	High	Congo Oeufs, Midema, Kivu Kuku
Hatchery	2. Support the development of parental farms, hatcheries, and new strains	High	High	LR Group, EFC, Kivu Kuku
Differentiation and marketing	3. Support local industry marketing and communication	High	Medium	GMK, LR Group, EFC, Congo Oeufs, ASANK, FEC Agriculture
Rules	4. Support private sector advocacy	High	Low	LR Group, Congo Oeufs, ASANK, FEC Agriculture
Veterinary services and training	5. Develop embedded technical and veterinary services, vaccination	Medium	High	EFC, LR Group, Congo Oeufs, ASANK, Kivu Kuku, equipment manufacturers
Access to finance	6. Link banks and businesses	Medium	Medium	Equity, TMB, MFIs (e.g., SMICO), financial advisers
Farm equipment	7. Support poultry equipment distributors and local manufacturing	Medium	Medium	Indigo, EFC, LR Group, Congo Oeufs, ASANK, Kivu Kuku, equipment manufacturers