

Evans School Policy Analysis and Research (EPAR)

Professor Leigh Anderson, PI and Lead Faculty

Associate Professor Mary Kay Gugerty, Lead Faculty

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Overview

Demand for livestock products, including poultry, is expanding in West Africa as a result of population growth and increased urbanization. Trade liberalization has had differing effects on poultry markets in the region, with some countries experiencing large import flows of frozen poultry from the European Union and others receiving very little. This report provides an overview of poultry market trends in Sierra Leone in comparison with trends in the wider West African region.

The West African poultry sector faces high production costs, safety concerns due to lack of sanitary controls, and technical constraints in processing and marketing. Production costs are higher in Africa due to the lack of an integrated and automated industrial poultry sector. Farmers lack reliable access to inputs, including chicks and feed, and face high costs for veterinary services.¹ African livestock markets are also limited by global concerns about product safety.² The persistence of animal disease outbreaks continues to limit domestic and export production potential.³ In addition to biological issues, the lack of breeders, marketing, and processing technology present technical constraints to poultry sector growth.⁴

The introduction of the Common External Tariff (CET) in West Africa reduced the tariff rate applied in most countries, facilitating an influx of cheap poultry imports from Europe and decreasing the ability of the regional sector to compete with imported products. Under the CET, import tariffs on final consumer goods (including poultry) are set at 20 percent.^{5,6} Sierra Leone did not adopt

the CET until 2005, however 2004 tariff rates were already on par with official CET rates. The tariff for live chickens, hens, poultry meat and eggs for consumption was 20 percent. Live turkeys and eggs for hatching were subject to a five percent tariff.⁷

There is little public information available regarding poultry production in Sierra Leone. The primary sources for this analysis are Government of Sierra Leone documents responding to the Avian Influenza epidemic in the West African region. Appendix 1 presents an overview of Sierra Leone's poultry sector compared to other West African countries. An accompanying EPAR Brief number 82, *Poultry Market in West Africa: Overview* (forthcoming) provides detailed comparative analysis of the West African countries examined in this study.

Sierra Leone

NOTE: The findings and conclusions contained within this material are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.

Figure 1. Sierra Leone



Source: CIA World Factbook

Consumption & Consumer Preferences

Sierra Leoneans receive 0.63 percent of their daily calories from poultry and eggs compared to 5.24 percent from all livestock. Per capita poultry consumption in Sierra Leone peaked in 2002 at 6.42 kilograms per capita. The end of the civil war in January 2002 and the availability of cheap poultry imports from Europe likely contributed to the high level of poultry consumption that year. After dropping to 4.32 kilograms per capita in 2006, likely due to the influence of Avian Influenza, consumption rose slightly to 4.89 kilograms per capita in 2007.⁸ Chickens account for most poultry stocks with ducks and Guinea Fowl making up only 0.3 percent.⁹

Domestic Production

Rural and backyard poultry account for 90 percent of poultry production in Sierra Leone.¹⁰ Rural poultry are found throughout the country.¹¹ On average, 59 percent of households possess at least one chicken. This figure varies by district, from 31 percent in Kono (East) to 84 percent in Port Loko (West).¹²

Sierra Leone has very few commercial poultry enterprises, mainly located in the Western area.¹³ Nationally, commercial operations supply only ten percent of total poultry.¹⁴ Within the area surrounding Freetown, however, commercial operations produce 30 percent of poultry.¹⁵

As Figure 2 demonstrates, domestic production does not fully supply the market for chicken meat and hen eggs. The gap between domestic production and consumption has fluctuated since 2002, averaging about 24 percent. In

2002, per capita consumption exceeded production by 2.3 kilograms. This difference was only 1.1 kilograms per capita in 2007.

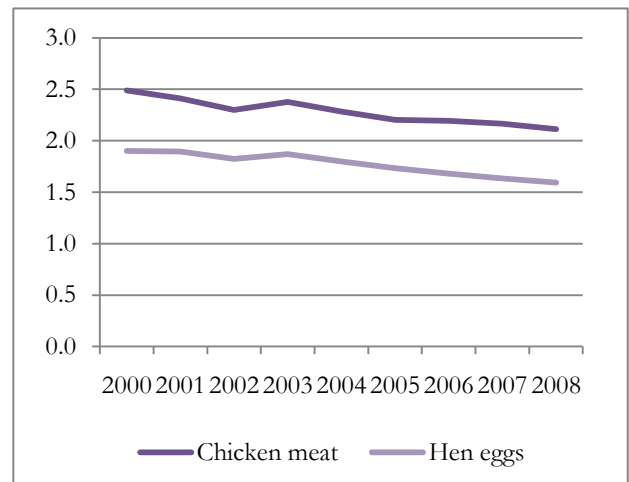
Figure 2. Domestic Poultry Production & Consumption (Tonnes)



Source: FAOSTAT

Figure 3 shows a declining trend in per capita chicken meat and egg production since 2000. The civil conflict from 1991–2002 destroyed key livestock infrastructure and the availability of cheap imports likely creates inadequate incentive to rebuild this infrastructure and promote domestic production.¹⁶

Figure 3. Domestic Chicken Meat and Egg Production (Kilograms per Capita)



Source: FAOSTAT

Production Costs

No information is available regarding poultry production costs in Sierra Leone.

Processing & Marketing

Information regarding urban agriculture practices in Freetown suggests that the marketing of agricultural output takes place at the farmgate and in local markets. Intermediary traders also carry produce to far away markets.¹⁷

Producer Prices

There is no data to compare Sierra Leone's producer prices to world average prices for chicken meat or hen eggs. However, information regarding urban agriculture in Freetown suggests that imported poultry tends to be less expensive than domestically produced products.¹⁸

Safety Concerns

Sierra Leone is a major destination area for migratory birds, which were identified as the primary hosts of Avian Influenza.¹⁹ Commercial poultry operations have high biosecurity and the chickens do not come into contact with wild birds. Rural poultry, however, roam freely and are more likely to come into contact with migratory wild birds, especially in communities located close to nesting spots along the Atlantic Coast.²⁰

Trade Flows

In 2007, imports accounted for over 20 percent of all poultry products consumed.²¹ Data on the source country for imports are not available, but imports likely come mostly from Europe and consist largely of chicken meat (62.5 percent), canned chicken meat (17.3 percent) and hen eggs (19.5 percent).^{22,23} Guinea Fowl meat, goose meat, and other bird eggs accounted for less than one percent.²⁴

Policy & Organizational Environment

In 2005, the Government of Sierra Leone published its Poverty Reduction Strategy Paper (PRSP) with a three-year framework to promote peace, good governance, and human development and support pro-poor sustainable growth for food security and job creation. The food security strategy centers on support for small-scale subsistence farmers to increase and diversify production.

Improving feeder roads and market access are also critical components of the strategy.²⁵ The plan specifically refers to interventions in agriculture and fisheries but does not mention any livestock or poultry initiatives.²⁶

The civil conflict from 1991–2002 destroyed key livestock infrastructure, including the Central Veterinary Laboratory (Teko) and the regional livestock clinics. As of 2006, this infrastructure had not been rebuilt or re-equipped.²⁷ There were only six veterinary doctors in the public sector, seven in the private sector, and an additional 100 sub-professional veterinary service providers that year.²⁸

Also in 2006, as part of the response to the Avian Influenza epidemic, Sierra Leone established the Avian Secretariat and a Technical Committee on Bird Flu.²⁹ The Secretariat was responsible for implementing the *National emergency action plan for the prevention and containment of the Highly Pathogenic Avian Influenza (HPAI) Bird Flu*. The plan included heightened surveillance of farms, markets and borders, culling, and compensation for owners of poultry suspected to be infected. In addition, it included countrywide poultry vaccinations, preventative vaccinations for at-risk humans, and the stockpiling of veterinary medicines. The plan also called for control of the trade in poultry and poultry products, but did not specify the actions that would be taken to exert control.³⁰

Opportunities for Poultry Development

Given the general lack of information regarding Sierra Leone's poultry sector, identifying opportunities for the sector is challenging. However, opportunities likely exist to increase domestic poultry production to meet demand. More information regarding the extent of government support, production costs, and feasibility of organizing the supply chain would aid in identifying specific opportunities.

The lack of sufficient veterinary services presents a clear challenge to the productivity of rural production and the expansion of commercial production. Improving the availability of veterinary services could increase the productivity of existing operations and allow for expansion. Initial opportunities include rebuilding the infrastructure such as the Central Veterinary Laboratory and regional livestock clinics. Opportunities to improve the production practices of rural producers include increasing vaccination and the use of veterinary services as well as improving biosecurity measures to prevent contact

with wild animals and the spread of potential disease.

According to Sierra-Invest, an investment firm for the development of feasible commercial operations in Sierra Leone, demand for meat is increasing as the population grows and purchasing power gradually recovers from the war. They identify opportunities to invest in animal rearing, slaughter facilities, and a more efficient marketing chain to better meet this demand.³¹ An opportunity also exists to increase commercial (industrial or semi-industrial) production to serve the hotel and tourism sector, such as exists in Burkina Faso, for example. This sector was seriously affected by the war but is gradually being rehabilitated and thus provides an expanding market outlet for poultry and other products.³² However, the small scale of current commercial operations could present a challenge to the expansion of industrial production.

Conclusion

Because of the small amount of information regarding poultry production in Sierra Leone, further information is necessary to understand the scope of market opportunity for poultry development.

Please direct comments or questions about this research to Leigh Anderson, at eparx@u.washington.edu

Appendix 1. West African Poultry Market Comparison

		West Africa*	Burkina Faso	Ghana	Mali
<i>Demographic Overview</i>	Population ¹	291,266,000	15,234,000	23,351,000	12,705,700
	Percent rural population ¹	59%	80%	50%	68%
	GDP per capita ¹	\$807	\$522	\$713	\$688
	Percent annual GDP growth ²	4.9%	4.5%	7.3%	5.0%
	Major urban areas	N/A	Ouagadougou, pop. 1,475,000 ³ Bobo-Dioulasso, pop. 490,000 ³	Accra, pop. 1,847,000 ⁴ Kumasi, pop. 1,170,000 ⁵	Bamako, pop. 1,475,000 ⁶ Segou, pop. 490,000 ⁶
<i>Consumption & Preferences</i>	Per capita consumption of poultry products ⁹	5.1 kg/capita	5.5 kg/capita	6.0 kg/capita	3.94 kg/capita
	Percent of daily calories from poultry and eggs ⁸	0.78%	0.89%	0.60%	0.69%
	Percent daily calories from all livestock ⁸	9.5%	8.4%	6.6%	14.8%
<i>Domestic Production & Market Structure</i>	Per capita poultry production ⁹	4.4 kg/capita	5.5 kg/capita	2.5 kg/capita	3.93 kg/capita
	Producers	Varies by country	Mostly rural smallholders and peri-urban, semi-industrial producers	Dominated almost exclusively by urban, industrial production	Mostly traditional rural production, industrial sector produces at most 10% of domestic total
	Smallholder Production Share	--	--	--	90–96% ¹⁰
	Percent of consumption** supplied by domestic production ⁹	86.3%	99.94%	41.7%	99.7%
<i>Trade Flows***</i>	Imports ⁹	0.68 kg/capita	0.004 kg/capita	3.52 kg/capita	.011 kg/capita
	Exports ⁹	.001 kg/capita	.0002 kg/capita	.002 kg/capita	.002 kg/capita
<i>Policy & Organizational Environment</i>		Common External Tariff of 20%; growing need to address negative externalities of livestock production	Non-profit producer organization (MDA) working to increase the domestic poultry sector	International and domestic NGOs promoting poultry development in eight of ten regions	Several producer organizations at all levels of the supply chain supporting industrial production

		West Africa*	Senegal	Nigeria	Cote d'Ivoire
<i>Demographic Overview</i>	Population ¹	291,266,000	12,211,200	151,212,300	20,591,300
	Percent rural population ¹	59%	58%	52%	51%
	GDP per capita ¹	\$807	\$1,087	\$1,370	\$1,137
	Percent annual GDP growth ²	4.9%	3.3%	6.0%	2.2%
	Major urban areas	N/A	Dakar, pop. 1,009,300 ⁷ Touba, pop. 451,300 ⁷	Lagos, pop. 8,030,000 ¹² Kano, pop. 2,993,000 ¹³	Abidjan, pop. 3,576,000 ¹³ Bouake, pop. 574,000 ¹³
<i>Consumption & Preferences</i>	Per capita consumption of poultry products ⁹	5.1 kg/capita	5.84 kg/capita	5.39 kg/capita	2.42 kg/capita
	Percent of daily calories from poultry and eggs ⁸	0.78%	1.00%	0.83%	0.57%
	Percent daily calories from all livestock ⁸	9.5%	10.1%	4.98%	5.9%
<i>Domestic Production & Market Structure</i>	Per capita poultry production ⁹	4.4 kg/capita	5.76 kg/capita	5.39 kg/capita	2.37 kg/capita
	Producers	Varies by country	Both traditional, rural producers and semi-industrial producers in urban areas	Traditional, rural producers; semi-commercial backyard producers, and large-scale industrial facilities	About 70% family production, 30% semi-industrial production of chicken meat and eggs
	Smallholder Production Share	--	47% ¹¹	69% ¹⁶	70% ¹⁷
	Percent of consumption** supplied by domestic production ⁹	86.3%	98.6%	99.98% ⁹	97.7%
<i>Trade Flows***</i>	Imports ⁹	0.68 kg/capita	.094 kg/capita	.001 kg/capita	.056 kg/capita
	Exports ⁹	.001 kg/capita	.012 kg/capita	--	Less than .001 kg/capita
<i>Policy & Organizational Environment</i>		Common External Tariff of 20%; growing need to address negative externalities of livestock production	Ban on poultry imports from all countries since 2006	Ban on poultry imports from all countries since 2002, but illegal imports continue to enter the country	IPRAVI coordinates the sector, umbrella for producer organizations and connection to government

		West Africa*	Niger	Benin¹	Sierra Leone
<i>Demographic Overview</i>	Population ¹	291,266,000	14,704,300	8,662,086	5,559,853
	Percent rural population ¹	59%	84%	59%	62%
	GDP per capita ¹	\$807	\$364	\$771	\$352
	Percent annual GDP growth ²	4.9%	9.5%	5.1%	5.5%
	Major urban areas	N/A	Niamey, pop. 708,000 ¹⁴ Zinder, pop. 171,000 ¹⁴	Cotonou, pop. 818,100 ⁷ Abomey, pop. 114,800 ¹⁵	Freetown, pop. 772,900 ⁷ Bo, pop. 150,000 ⁷
<i>Consumption & Preferences</i>	Per capita consumption of poultry products ⁹	5.1 kg/capita	1.54 kg/capita	2.0-5.14 kg/capita ¹⁸	4.89 kg/capita
	Percent of daily calories from poultry and eggs ⁸	0.78%	0.24%	1.48%	0.63%
	Percent daily calories from all livestock ⁸	9.5%	13.31%	6.32%	5.24%
<i>Domestic Production & Market Structure</i>	Per capita poultry production ⁹	4.4 kg/capita	1.53 kg/capita	3.27 kg/capita	3.8 kg/capita
	Producers	Varies by country	Mostly smallholders	Mostly smallholders	Mostly rural backyard, some commercial operations ¹⁸
	Smallholder Production Share	--	97%	90%	90% ¹⁸
	Percent of consumption** supplied by domestic production ⁹	86.3%	99.97%	28.02%	78.09%
<i>Trade Flows***</i>	Imports ⁹	0.68 kg/capita	Less than .001 kg/capita	8.29 kg/capita	1.07 kg/capita
	Exports ⁹	.001 kg/capita	--	Less than .001 kg/capita ¹⁹	--
<i>Policy & Organizational Environment</i>		Common External Tariff of 20%; growing need to address negative externalities of livestock production	Weak due to political instability, GAP/CUN/E organizes producers around the capitol	Limited government involvement; producer organizations and NGOs working to improve the domestic poultry sector	Avian Secretariat established in 2006

¹ Per capita consumption of poultry products in Benin is based on 2004/2005 estimates from the Food and Agriculture Organization (FAO) and the Government of Benin. Exact statistics on domestic consumption are not available due to the high volume of undocumented poultry exports. Benin is a high-volume transit point for poultry products from the EU and Latin America to other countries in Sub-Saharan Africa. Trade flow volumes are based on estimates.

Sources: ¹World Development Indicators, 2008; ²World Development Indicators, 2007 – 2008, based on constant 2000 U.S. dollars; ³Encyclopædia Britannica Online, 2006; ⁴Encyclopædia Britannica Online, 2003; ⁵Encyclopædia Britannica Online, 2000; ⁶Gale Virtual Reference Library, 2006; ⁷Encyclopædia Britannica Online, 2004, ⁸World Food Programme, 2004 – 2006, FAOSTAT, 2004 – 2006; ⁹Estimates based on FAOSTAT, 2007 data; ¹⁰Dupaigne, 2004; ¹¹USDA, 2005; ¹²Encyclopædia Britannica Online, 2002; ¹³Encyclopædia Britannica Online, 2005; ¹⁴Encyclopædia Britannica Online, 2001; ¹⁵Oxford Reference Online, 2002; ¹⁶Obi, T. W., Olubukola, A., & Maina, G. A., 2008; ¹⁷Kone & Danho, 2008; ¹⁸Government of Sierra Leone, 2006; -- indicates no data *Includes Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo **Chicken meat & eggs, ***Chicken meat, turkey meat, duck meat, canned chicken, hen eggs

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Endnotes

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- ² Perry et al, 2005, p. vii
- ³ Dupaigre et al, 2004, p. 147
- ⁴ Dupaigre et al, 2004, p. 147
- ⁵ Dieye et al, 2004, pps. 7–8
- ⁶ World Trade Organization Statistics
- ⁷ World Trade Organization Statistics
- ⁸ FAOSTAT, Author's calculations
- ⁹ Government of Sierra Leone, 2006, slide 3
- ¹⁰ Government of Sierra Leone, 2006, slide 3
- ¹¹ Government of Sierra Leone, 2006, p. 5
- ¹² Sierra Leone Ministry of Agriculture, Forestry & Food Security, 2005, p. 3, Author's calculations
- ¹³ Government of Sierra Leone, 2006, p. 5
- ¹⁴ Government of Sierra Leone, 2006, slide 3
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- ¹⁸ Condeh, 2009
- ¹⁹ Government of Sierra Leone, 2006, p. 2, 7
- ²⁰ Government of Sierra Leone, 2006, p. 5
- ²¹ FAOSTAT
- ²² Mari, 2009, p. 5
- ²³ FAOSTAT
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- ²⁵ Government of Sierra Leone, 2005, p. xiii
- ²⁶ Government of Sierra Leone, 2005, p. 83–85
- ²⁷ Government of Sierra Leone, 2006, p. 3
- ²⁸ Government of Sierra Leone, 2006, slide 13
- ²⁹ Government of Sierra Leone, 2006, slide 20
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- ³¹ Sierra-Invest, 2007
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