

Evans School Policy Analysis and Research (EPAR)

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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 Senegal 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} Senegal adopted the 20

percent tariff in 1999, but implemented a ban on all poultry imports in 2006 in response to Avian Influenza and pressure from domestic producers.⁷

The primary sources for this analysis include the 2006 FAO-Emergency Centre for Transboundary Animal Diseases (ECTAD) poultry sector review and a 2004 report from the FAO Pro-Poor Livestock Policy Initiative.^{8,9} Appendix 1 presents an overview of Senegal's poultry sector compared to other West African countries.

Senegal

Figure 1. Senegal



Source: CIA World Factbook

Livestock, including cattle, sheep, goats, and poultry, are a significant contributor to food and income for about 30 percent of all Senegalese households. In rural areas, most

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.

households are involved in traditional poultry keeping as a source of food and financial security.¹⁰ Domestic production has increased in recent years following the 2006 government ban on poultry imports.¹¹

Consumption & Consumer Preferences

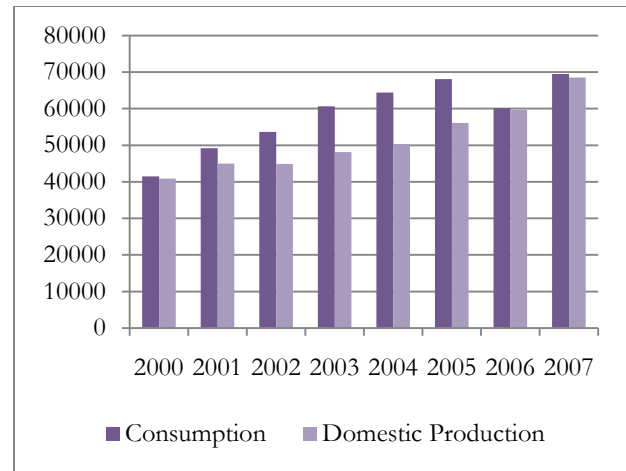
Animal products supply about ten percent of daily energy in Senegal, slightly higher than the West African average of 9.5 percent. Poultry meat and eggs together account for one percent of total daily calories consumed on average, close to the regional average.^{12,13} The population consumed 5.8 kilograms of chicken meat and eggs per person in 2007, a 40 percent increase from 2000.¹⁴

Thirty percent of poultry consumption is estimated to occur during religious and cultural occasions, such as Tamkharit (Muslim New Year) and Christmas. Chickens are also given as gifts to visitors and used for ritual sacrifice.¹⁵ Many consumers prefer the taste of indigenous chicken varieties over industrially produced exotic chickens, and indigenous chickens are the only accepted variety for ritual sacrifice and special occasions.¹⁶ Young women have traditionally avoided eating eggs due to perceived negative impacts on reproductive health, but this belief is gradually disappearing.¹⁷

Domestic Production

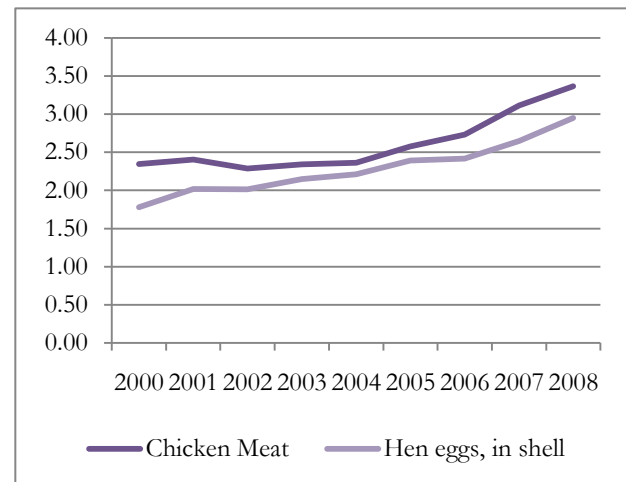
Prior to the import ban, domestic production supplied about 80 percent of the country’s poultry consumption. Production expanded following the ban and supplied close to 100 percent of consumption in 2007, as shown in Figure 2. The country produced 5.76 kilograms per capita of chicken meat and eggs in 2007, as shown in Figure 3.

Figure 2. Domestic Poultry Production & Consumption in Senegal (Tonnes)



Source: FAOSTAT

Figure 3. Domestic Chicken Meat and Egg Production in Senegal (Kilograms per capita)



Source: FAOSTAT

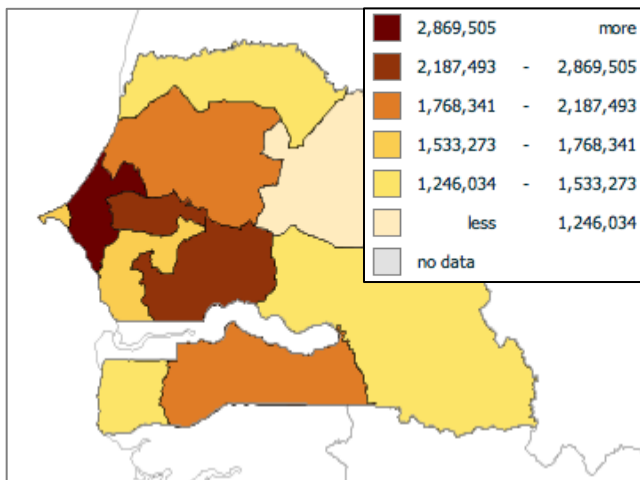
Poultry production in Senegal generally falls under two categories: traditional farmyard poultry keeping by smallholders and semi-industrial commercial systems. Most rural Senegalese households raise some type of poultry as a source of protein and supplemental income. Indigenous chicken varieties are widespread, with some Guinea fowl raised in the eastern regions and ducks raised in southern areas.¹⁸ Poultry’s short production cycle and ease of transport and sale relative to other livestock make the sector particularly important to the poorest segments of the population and to females.^{19,20}

Pastoralist groups in the northern and southeastern part of the country primarily raise cattle, sheep, and goats.²¹ As shown in Figure 4, chicken stocks are lower in these areas than elsewhere in the country. Data on numbers of chickens per capita for each region are unavailable.

Farmyard chickens kept by rural smallholders account for about 70 percent of the country's total chicken stock.²² While total production is difficult to evaluate, a report from the USDA Foreign Agricultural Service estimated 2005 production from traditional systems to be 7,300 tonnes, or about 47 percent of total domestic production.²³

Traditional poultry systems typically involve 50 to 100 birds.²⁴ Women and children are primarily responsible for tending the birds.²⁵ Constraints to increasing flock size and profitability in smallholder systems include lack of access to affordable veterinary services and inadequate feed. Vaccines are often only available in large quantities, or cost significantly more to purchase in small quantities. Feed quantities are generally too small to sustain large numbers of birds. Chickens scavenge for food or are fed household scraps and agricultural residues.²⁶

Figure 4. Number of Chickens in Senegal (2004)



Source: FAO Global Livestock Production and Health Atlas

Poultry keeping for commercial purposes takes place in peri-urban and urban areas, particularly in the Niayes region that extends from Dakar to Saint-Louis.²⁷ A handful of large-scale producers operate in and around Dakar, including one facility with about 30,000 birds. Most other commercial producers have stocks of 500 to 2,000 birds. Facilities tend to specialize in producing broilers for meat or raising laying hens for eggs. Many of the smaller producers focus on short-cycle broilers rather than laying hens, which require greater investment.²⁸ A few producers also raise turkeys for sale around Christmas and the New Year.²⁹

The vast majority of feed in commercial facilities comes from maize. Senegal produces little maize domestically, meaning that most poultry producers rely on imports.

Local crops such as groundnuts and rice can be processed into feed, but knowledge about processing methods is limited.³⁰

As of 2004, about ten hatcheries operated in different regions of the country to supply commercial producers with day-old chicks.³¹ Three-quarters of the fertilized eggs were imported, hatched in domestic facilities, and then sold to broiler and layer operators.³² Under the current import ban, egg imports are prohibited, but import of day-old chicks for reproduction is allowed (provided they are certified by a veterinary to be disease-free).³³

Production Costs

In 2005, feeding costs accounted for 59 percent of all expenditures by commercial producers.³⁴ Imported maize, the primary feed ingredient, was made more expensive by high value-added taxes on agricultural inputs. Producer groups successfully negotiated a reduction in value-added taxes in feed inputs in 2004, suggesting that production costs may have fallen since then.³⁵ However, no data on current production costs are available.

Processing & Marketing

In traditional poultry systems, the percentage of chickens sold for income is estimated to range from 30 to 50 percent per year.^{36,37} Males are typically responsible for selling birds. Chickens are sold mostly to relatives and close neighbors. Some smallholders sell to urban consumers, but no data are available about how frequently this occurs.³⁸ In a study of traditional poultry keeping in southern Senegal, 40 percent of smallholders sold chickens both at home and at market. The remaining 60 percent specialized in selling either at home or at market.³⁹ Smallholders also barter chickens for other livestock, such as sheep or goats.⁴⁰ In southern Senegal, two roosters and four hens are exchanged for one goat.⁴¹

Commercial producers sell poultry meat and eggs to supermarkets, restaurants, hotels, and *banabanas* (traders or re-sellers).⁴² Large-scale producers slaughter and package chickens for direct delivery to restaurants, hotels, supermarkets, and other clients. Supermarkets and hotels pay reliably but often have stricter quality and packaging requirements than other buyers. For example, chickens must be a certain weight and age, and eggs must be free of

dirt and blood marks. Purchasing agreements are typically unwritten, but sometimes take the form of written contracts.⁴³

Producers without established client relationships sell poultry products to *banabanas*. The *banabanas* buy meat and eggs at wholesale prices and sell them in markets for a small profit.⁴⁴

Producer Prices

Producer prices for poultry meat and eggs from FAOSTAT are not available for Senegal. According to the FAO-ECTAD analysis, prices for chickens in 2006 ranged from 800 to 1,000 CFA Francs in rural areas and 1,500 to 3,000 CFA Francs in larger towns.⁴⁵ The analysis notes that the sale price could be reduced by better organizing the large number of intermediary actors in the supply chain.⁴⁶ Prior to the import ban, imported poultry parts sold for 400 CFA Francs in Dakar.⁴⁷

Safety Concerns

Prior to the 1980s, the government provided veterinary services. Private veterinarians have been allowed to operate since then and today provide most vaccination services.⁴⁸ Large-scale commercial operators often employ their own veterinarians, while medium and small-scale commercial facilities tend to contract with private providers. Commercial facilities typically follow established vaccination schedules and have few incidents of disease outbreak.⁴⁹

Although the government partially subsidizes vaccines, prices remain too high for most smallholders, and many areas of the country are not served.⁵⁰ Outbreaks of Newcastle disease are common in traditional systems and cause 30 to 80 percent of all poultry deaths in these systems.⁵¹ In southern Senegal, only 22 percent of smallholders reported vaccinating their flocks against Newcastle disease.⁵²

Avian Influenza did not enter Senegal during the outbreaks that affected other African countries in 2006. The government suspended poultry imports and increased monitoring and emergency planning in response to the outbreak.⁵³

A study conducted in 2000 of commercial chicken production around Dakar found that nine percent of

chickens sold had unacceptably high levels of bacteria, particularly Salmonella. Poor hygiene practices along several points in the poultry supply chain, such as insufficient control of rodents on farms and unhygienic wet-slaughtering practices contributed to contamination. Improper refrigeration of slaughtered poultry amplified contamination that had occurred at previous stages.⁵⁴ Concerns about inadequate storage for frozen poultry imports led the government to tighten import regulations in 2002, as described below.⁵⁵

Trade Flows

Senegal's poultry imports grew rapidly in the early 2000s, driven by increasing consumer demand and falling tariff levels. As a member of the Union Économique et Monétaire Ouest Africaine (UEMOA) and the Economic Community of West African Countries (ECOWAS), Senegal lowered its taxes on poultry imports from 55 percent in 1998 to 20 percent in 1999.⁵⁶ Poultry imports increased from one percent of domestic consumption in 2000 to 19 percent in 2002. Frozen chicken cuts made up the majority of imports, with most coming from the Netherlands, Belgium, and Brazil.⁵⁷ Constraints facing domestic producers, such as expensive feed, limited their ability to compete with cheaper imports. Some broiler operations shifted to egg production, while others closed.⁵⁸

In 2002, poultry producer associations successfully lobbied the government to tighten and enforce refrigeration requirements for frozen products. The crackdown effectively halted imports, but only for a short period. Under pressure from consumers and importers, the government abandoned enforcement within one month, and imports returned.⁵⁹

The government adopted a ban on poultry imports in November 2005 in an attempt to prevent Avian Influenza from entering the country. The ban took effect in January 2006 and prohibits entry of live poultry, poultry meat in pieces, fresh eggs, and egg products for consumption.⁶⁰ Imports fell from providing 22 percent of domestic consumption in 2004 to providing 1.4 percent in 2007.

Senegal exports a small amount of poultry products to other West African countries, including chicken meat to Guinea Bissau and day-old chicks to the Gambia, Mauritania, Mali, Burkina Faso, and Guinea Bissau.⁶¹

Policy & Organizational Environment

Senegal's agricultural policy over the past 40 years has focused on crops, particularly groundnuts, with less attention paid to livestock.⁶² In the 1960s and 1970s, government support of the livestock sector primarily involved providing food, medicine, and other inputs to individual producers rather than investing in broader development projects. In the 1980s, privatization and liberalization reduced the government's role in livestock.⁶³

Today, the Centre National d'Aviculture is the main source of government support for the poultry sector. It provides training for producers, controls imports of day-old chicks, maintains statistics on the poultry industry, and enforces regulations.⁶⁴

Commercial producers formed the Fédération des Acteurs de la Filière Avicole (FAFA) in 2002 to represent their interests to the government, increase professional solidarity, and provide a forum for sharing information.⁶⁵ The FAFA and its allies are very active and have successfully lobbied to reduce value-added taxes on inputs and impose restrictions on imports.

Existing associations represent the needs of commercial producers, and the groups' gains to date have benefited industrial operations more than traditional poultry systems. Because smallholder poultry keepers are geographically dispersed, produce only a small amount of poultry for sale, and in general do not identify primarily as poultry farmers, they have had inadequate incentive to organize a producer association.⁶⁶

Several international development agencies and NGOs are active in the poultry sector, including Catholic Relief Services, OXFAM, and the African Development Foundation. As of 2006, at least 21 poultry development projects were underway.⁶⁷ The African Development Foundation, for example, funded a project in 2004 to increase poultry processing capacity in areas around Dakar.⁶⁸

Opportunities for Poultry Development

An analysis by FAO's Pro-Poor Livestock Policy Initiative concludes that Senegal's poultry sector is, in many ways, well positioned to benefit smallholder producers. Poultry production is practiced widely across rural households, domestic demand for poultry is growing, and consumers show a preference for indigenous chicken varieties for culinary and cultural purposes.⁶⁹ The country's ban on

poultry imports has dramatically reduced competition from imported products and spurred domestic production.

The most recent data show that smallholders supply less than half of domestic production, but maintain at least 70 percent of the national chicken stock. Increasing the productivity of traditional poultry systems and the percentage of smallholders raising chickens for commercial sale will require improving access to veterinary care and adequate feed. One opportunity for increasing productivity lies in building knowledge and capacity to process groundnuts and other local crops into poultry feed. In addition, most smallholders sell poultry to neighbors and relatives, suggesting that better transportation and marketing infrastructure could help smallholders access more distant urban markets.

Commercial producers could benefit from increased access to affordable feed, including maize and local crops. Improving organization of intermediary actors in the supply chain could also increase efficiency and lower prices.

Finally, egg production offers an opportunity for smallholders and commercial producers. A 2007 analysis by the USDA Foreign Agricultural Service notes that many commercial operators shifted from egg production to broiler production in response to the import ban. If the shift continues, the sector may be unable to meet domestic demand for eggs, leading to a removal of the ban on egg imports.⁷⁰ Smallholders and commercial operators could play a role in filling this gap in domestic production.

Conclusion

Poultry production in Senegal takes place in rural areas throughout the country and in commercial operations near urban centers. The 2006 poultry import ban has stimulated new growth in domestic production, and the country now produces almost 100 percent of its consumption. Analysts predict that the potential of the domestic market to absorb increased poultry production is quite large.⁷¹ If given support to overcome production constraints, smallholder poultry keepers and commercial operators have the potential to increase supply in response to growing domestic demand.

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	Senegal	
<i>Demographic Overview</i>	Population	291,266,000	15,234,000	23,351,000	12,705,700	12,211,200
	Percent rural population	59%	80%	50%	68%	58%
	GDP per capita	\$807	\$522	\$713	\$688	\$1,087
	Percent annual GDP growth	4.9%	4.5%	7.3%	5.0%	3.3%
	Major urban areas [^]	N/A	Ouagadougou, pop. 1,475,000 Bobo-Dioulasso, pop. 490,000	Accra, pop. 1,847,000 Kumasi, pop. 1,170,000	Bamako, pop. 1,475,000 Segou, pop. 490,000	Dakar, pop. 1,009,300 Touba, pop. 451,300
<i>Consumption & Preferences</i>	Per capita consumption of poultry products [§]	5.1 kg/capita	5.5 kg/capita	6.0 kg/capita	3.94 kg/capita	5.84 kg/capita
	Percent of daily calories from poultry and eggs	0.78%	0.89%	0.60%	0.69%	1.00%
	Percent daily calories from all livestock	9.5%	8.4%	6.6%	14.8%	10.1%
<i>Domestic Production & Market Structure</i>	Per capita poultry production**	4.4 kg/capita	5.5 kg/capita	2.5 kg/capita	3.93 kg/capita	5.76 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	Both traditional, rural producers and semi-industrial producers in urban areas
	Smallholder Production Share	--	--	--	90–96%	47%
	Percent of consumption supplied by domestic production	86.3%	99.94%	41.7%	99.7%	98.6%
<i>Trade Flows***</i>	Imports	0.68 kg/capita	0.004 kg/capita	3.52 kg/capita	.011 kg/capita	.094 kg/capita
	Exports	.001 kg/capita	.0002 kg/capita	.002 kg/capita	.002 kg/capita	.012 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	Ban on poultry imports from all countries since 2006
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Sources: FAOSTAT, World Development Indicators, ^ Encyclopædia Britannica Online & Gale Virtual Reference Library, §World Food Programme (2004 – 2006 data)

-- 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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