

**Evans School Policy Analysis and Research (EPAR)**

*Professor Leigh Anderson, PI and Lead Faculty*

*Associate Professor Mary Kay Gugerty, Lead Faculty*

**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 Ghana 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.<sup>1</sup> African livestock markets are also limited by global concerns about product safety.<sup>2</sup> The persistence of animal disease outbreaks continues to limit domestic and export production potential.<sup>3</sup> In addition to biological issues, the lack of breeders, marketing, and processing technology present technical constraints to poultry sector growth.<sup>4</sup>

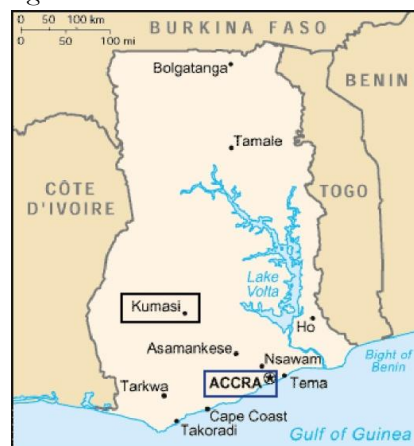
The introduction of the Common External Tariff (CET) in West Africa reduced the tariff rate applied in most countries, facilitating an influx of cheap poultry imports from Europe and decreasing the ability of the regional sector to compete with imported products. Under the CET, import tariffs on final consumer goods (including

poultry) are set at 20 percent.<sup>5,6</sup> Ghana adopted the 20 percent tariff in 2005.

The primary source for this analysis is the 2006 FAO-Emergency Centre for Transboundary Animal Diseases (ECTAD) poultry sector review.<sup>7</sup> Appendix 1 presents an overview of Ghana's poultry sector compared to other West African countries.

**Ghana**

*Figure 1. Ghana*



*Source: Federal Aviation Administration*

Livestock production in Ghana includes cattle, sheep, goats, and poultry. The majority of rural and peri-urban households keep some type of poultry to meet food and supplemental cash needs. One of the most significant challenges facing the country's poultry sector is competition from rising imports of frozen poultry products from Europe.<sup>8</sup>

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.

## Consumption & Consumer Preferences

The percentage of daily energy supply provided by animal products of any type is low in Ghana relative to other West African countries, only four percent.<sup>9</sup> Poultry meat and eggs together account for less than one percent (0.60 percent) of total daily calories consumed on average.<sup>10,11</sup> The population of Ghana consumed, on average, 6.0 kilograms of chicken meat and eggs per person in 2007.<sup>12</sup> Along with poultry and other types of livestock, fish are an important source of protein in the Ghanaian diet.<sup>13</sup>

Poultry are consumed during the religious celebrations of Christmas and Ramadan and are also given as gifts and for bride price payments.<sup>14,15</sup> Roosters are a common sacrificial animal, with different colored birds sacrificed for different events. For example, in northern Ghana, red roosters are sacrificed to ask for rain or good harvests, and black roosters are used to request protection from diseases, war, and quarrels. Due to these customs, birds with particular feather colors are relatively costly.<sup>16</sup>

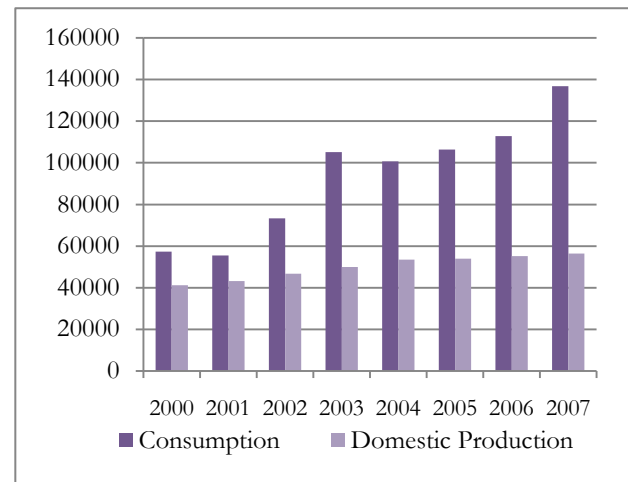
A survey of households in the urban areas around Techiman found that indigenous chickens are preferred over exotic (non-indigenous) chickens for religious rites and for traditional Ghanaian cooking. Exotic chickens were deemed more tender and meaty, but unsuitable for religious events and not preferred for national dishes.<sup>17</sup>

## Domestic Production

In 2007, Ghana's balance of trade was negative, with domestic production accounting for only about 42 percent of consumption, as shown in Figure 2. This share had declined from 72 percent of consumption in 2000.<sup>18</sup> The country produced 1.27 kg of chicken meat per capita in 2008, lower than the per capita average of 1.71 kg for all of West Africa. As shown in Figure 3, per capita chicken meat and egg production has remained fairly steady since 2004.<sup>19</sup>

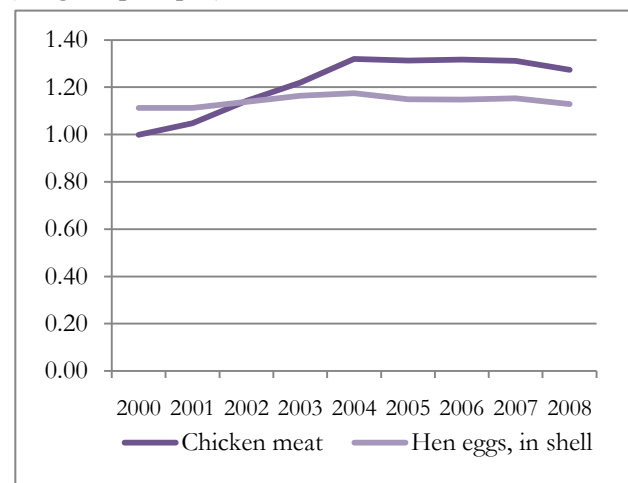
Poultry production in Ghana includes local and exotic breeds of chicken, turkey, Guinea fowl, duck, quail, pigeon, and ostrich. Appendix 2 shows the relative importance, in terms of numbers and distribution, of poultry species in the country's administrative regions.

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



Source: FAOSTAT

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



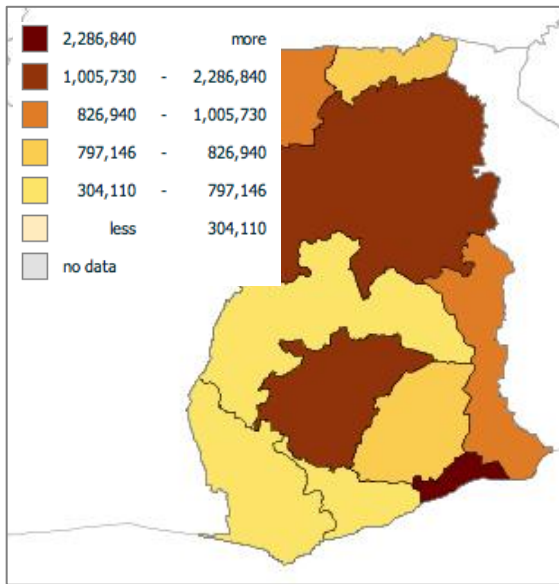
Source: FAOSTAT

Local chicken breeds raised in rural areas account for 60 to 80 percent of the country's total poultry population.<sup>20</sup> Figure 4 shows the number of chickens in Ghana's administrative regions. Almost all rural households raise local chicken breeds as a source of meat, eggs, and emergency cash. Local breeds of Guinea fowl are also kept in rural areas, particularly in the country's poorer northern regions.<sup>21</sup>

Keeping poultry for commercial purposes is not widespread in rural areas. A small percentage of the rural poultry population is comprised of exotic chickens raised for sale during festive occasions. Small-scale commercial egg layer units have also expanded in rural areas in recent years, aided by NGOs working to reduce rural poverty.

The eggs are sold locally.<sup>22</sup> Data on the share of domestic poultry meat and egg production supplied by smallholders are not available.

Figure 4. Number of Chickens in Ghana (1996)



Source: FAO Global Livestock Production and Health Atlas

Commercial poultry operations are found mostly in the urban areas of Greater Accra and Ashanti administrative regions. Three hundred eighty large-scale operations exist in the country, each with stocks of over 10,000 birds. Most large-scale operations are egg producers, with some raising exotic breeds of broiler chickens, Guinea fowl, and turkeys for meat. These operations manage their own feedmills. Some maintain hatcheries and parent stocks. Almost 1,000 small- to medium-scale (50 to 10,000 birds) facilities operate in the country. They rely on external suppliers for day-old chicks and feed.<sup>23</sup> Most commercial producers have adequate access to public or private veterinary services.<sup>24</sup>

Seven hatcheries, four in Ashanti, two in Greater Accra, and one in the Eastern region, produce day-old chicks and Guinea fowl keets for commercial production. All but three of the facilities rely on imported fertile eggs. The country has 12 feedmilling companies.<sup>25</sup> All hatcheries and feedmills operate below capacity due to limited demand, at about 25 percent and 42 percent of capacity respectively.<sup>26</sup>

#### Production Costs

Unit costs of production for poultry meat and eggs have increased since at least 2001 without comparable increases

in sale prices. Much of the increase has been due to rising costs of local maize, which producers use for feed.<sup>27</sup>

#### Processing & Marketing

Domestically raised birds are sold live or as processed whole birds. Most small-scale poultry keepers sell their birds at farmgate or market, either to local families or caterers. With access to alternative import sources, mostly from Europe, caterers are often able to dictate price.

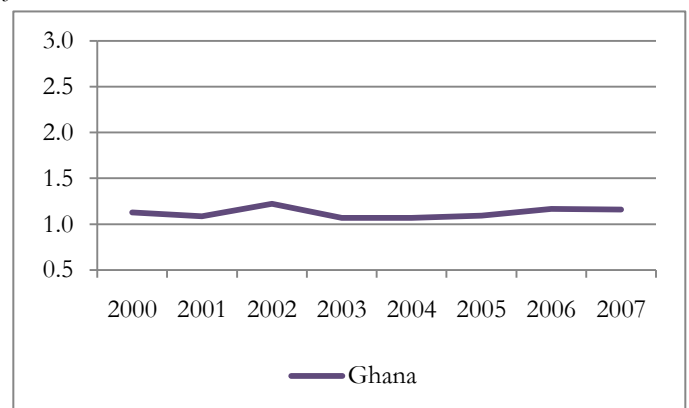
Most medium and large-scale producers sell broilers as whole birds. Only a handful of producers have capacity to process birds into cut parts, though a few are beginning to convert chicken meat into nuggets, sausages, frankfurters, and marinated chicken. High electricity costs have increased processing and storage costs and constrained processing operations.<sup>28</sup>

Four formal poultry slaughterhouses operate in the country, all in urban areas around Accra and Ashanti. Two offer mobile slaughterhouse services when requested by local broiler bird producers.<sup>29</sup>

#### Producer Prices

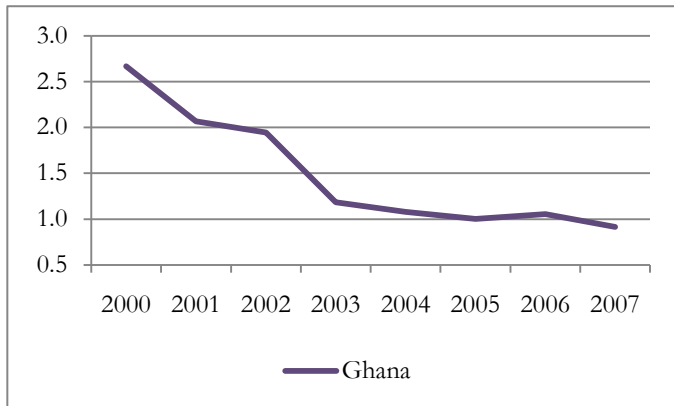
Figures 5 and 6 illustrate the ratio of domestic producer prices for chicken meat and eggs to world average producer prices. The producer price for chicken meat in 2007 was well above the world average, meaning that domestic producers will likely find it difficult to compete with imports until per unit production costs decline. Ghana may be more competitive in the global egg market because its producer price for eggs was almost identical to the world price from 2004 to 2007 (the latest year of data).

Figure 5. Ratio of Producer Price to World Average Producer Price for Chicken Meat



Source: FAOSTAT

Figure 6. Ratio of Country Producer Price to World Average Producer Price for Hen Eggs



Source: FAOSTAT

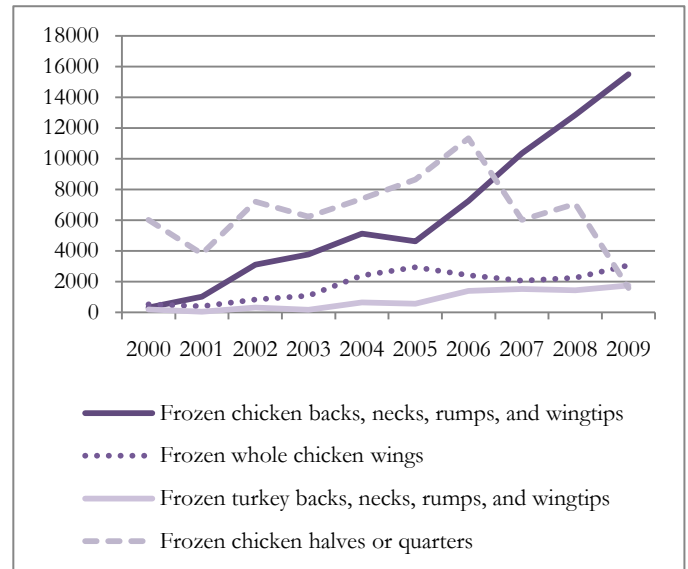
### Safety Concerns

Outbreaks of Infectious Bursal disease (Gumboro disease) and Newcastle disease caused high poultry mortality rates in past decades, but improved veterinary services and vaccination efforts led by the government and NGOs have reduced the threat of these diseases in recent years. When Avian Influenza was reported in Nigeria in 2006, consumer fears about an outbreak in Ghana caused demand for poultry meat, both domestic and imported, to fall by up to 80 percent. Although the virus never entered Ghana, many farmers were forced to sell off their stocks at low prices to avoid complete losses. Only after a sustained educational campaign on radio and television did consumer demand return. Since 2006, the government has worked to improve surveillance of domesticated and wild birds for signs of Avian Influenza.<sup>30</sup>

### Trade Flows

Imports of poultry products have increased almost 400 percent since 2000, growing at an annual average rate of 57 percent.<sup>31</sup> Most imported meat comes in the form of frozen chicken or turkey legs, wings, and other cut-portion by-products from the European Union. Egg imports are minor and offer little competition to the local market.<sup>32</sup> Figure 7 shows the top four types, in terms of quantity, of poultry products imported from the EU. Imports of the category “frozen chicken backs, necks, rumps, and wingtips” have increased 476 percent since 2000.<sup>33</sup>

Figure 7. Trends in Top Poultry Product Exports from the EU to Ghana (Metric tonnes)



Source: Eurostat

Imported poultry is generally offered at prices 30 to 40 percent cheaper than domestically produced birds.<sup>34</sup> The Ghanaian government maintains that imports are necessary to conform with international trade rules and to give the population access to cheaper sources of protein.<sup>35</sup> Low-quality roads make transporting foods difficult and more expensive, suggesting that fewer poultry imports are sold in the poorer northern regions farther from coastal ports.<sup>36</sup>

### Policy & Organizational Environment

In the 1960s, the Ghanaian government identified increased poultry production as a way to promote job creation and improve the availability of animal protein. The industry grew slowly initially due to irregular access to inputs and frequent outbreaks of Newcastle Disease. By the 1970s, due to removal of custom duties on poultry inputs and improved veterinary services, many farmers had undertaken poultry production, particularly in urban areas.<sup>37</sup> Poultry production declined in the 1980s due to economic downturn and less availability of inputs. The industry recovered slightly toward the end of the 1980s. However, trade liberalization and re-adoption of taxes and duties on imported inputs have since caused a severe decline.

Recent government interventions in the poultry sector include:

- Instituting import tariffs on poultry meat, adopted at a rate of 20 percent in 1999, dropped to 10 percent soon after, and removed completely in 2002 prior to adoption of the 20 percent Common External Tariff in 2005.
- Funding an initiative in 2003 to support increased processing and marketing for broiler birds.
- Importing maize during severe maize shortages in 2005 for re-sale to poultry farmers.
- Establishing a Poultry Development Board in 2006 to advise government on growth, modernization, and sustainability of the poultry industry.<sup>38</sup>
- Increasing provision of veterinary care and vaccinations against Gumboro and Newcastle diseases for rural and urban poultry producers and increasing surveillance for Avian Influenza.<sup>39</sup>

International and domestic NGOs are actively promoting poultry development in eight of Ghana's ten administrative regions. NGO interventions include providing rural poultry vaccinations and supporting smallholder layer and exotic chicken production.<sup>40</sup>

### Opportunities for Poultry Development

Despite competition from frozen poultry imports, opportunities exist in Ghana to expand poultry production. While reducing per-unit production costs to levels competitive with imports may be difficult, geographic and product niches exist that may be served by domestic poultry keepers. Poor road infrastructure means that imports in the north are more expensive, and, presumably, less available. Expanding poultry production in the northern administrative regions, among the poorest in the country, could provide new livelihood opportunities and increased access to animal protein. In addition, a survey of urban consumers found that indigenous poultry breeds are preferred for certain culinary and religious purposes over exotic birds, offering another opportunity for domestic producers to supply the market instead of imports.

Few commercial operations have capacity to process birds into cut parts, suggesting that new processing and storage infrastructure could improve the ability of domestic producers to compete with imported poultry parts.

However, high electricity costs will need to be addressed in order for domestic products to be competitive with imports.

### **Conclusion**

Poultry production in Ghana takes place in rural areas throughout the country and in commercial operations near urban centers. Poultry, particularly indigenous chickens, play important economic and socio-cultural roles in Ghanaian households. Many domestic producers have been unable to compete with frozen poultry imports, resulting in stagnant domestic per capita production and underutilization of production facilities. The country's coastal ports provide an entry point for poultry imports, which may explain why imports have dominated the country's market more than in land-locked countries such as Burkina Faso. Opportunities for poultry development in Ghana include expanding the role of domestic producers in supplying geographic and product niches.

*Please direct comments or questions about this research to Leigh Anderson, at [eparx@u.washington.edu](mailto:eparx@u.washington.edu)*

*Appendix 1. West African Poultry Market Comparison*

	<b>West Africa*</b>	<b>Burkina Faso</b>	<b>Ghana</b>	<b>Mali</b>	<b>Senegal</b>	
<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 <sup>^</sup>	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 &amp; Preferences</i>	Per capita consumption of poultry products <sup>§</sup>	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 &amp; 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%

		<b>West Africa*</b>	<b>Burkina Faso</b>	<b>Ghana</b>	<b>Mali</b>	<b>Senegal</b>
<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 &amp; 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

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

Appendix 2. Relative importance of poultry breeds in Ghana

Administrative Regions	Commercial exotic chickens		Village chickens	Guinea fowls		Turkey		Duck	
	Broiler	Layer		Exotic	Local	Exotic	Local	Exotic	Local
<i>Urban:</i>									
Greater									
Accra	+++	+++	++	++	+	+	+	+	++
Ashanti	+++	++	++	++			+		+
<i>Rural:</i>									
Central	+	++	++				+		+
Western	+	++	++				+		+
Eastern	+	++	++				+		+
Volta	+	++	++				+		++
Brong Ahafo	++	++	++				+		+
Northern	*	+	+++	+	+++				
Upper East	*	+	+++		+++				
Upper West	*	+	+++		+++				

Source: Adapted from Aning, 2006

+indicates relative importance, in terms of poultry numbers and distribution, \* indicates negligible importance



## References

- Aning, K. G. (2006). *The structure and importance of the commercial and village based poultry in Ghana*. Retrieved from [http://www.fao.org/docs/eims/upload/213723/agal\\_poultryreview\\_ghana\\_aug06.pdf](http://www.fao.org/docs/eims/upload/213723/agal_poultryreview_ghana_aug06.pdf)
- Asem-Bansah, C. K., Sakyi-Dawson, O., Ackah-Nyamike, E. E., & Colecraft, E. K. (2009). *Enhancing backyard poultry enterprise performance in the Techiman area of Ghana: a value chain approach* (Research brief 09-03-ENAM). Retrieved from <http://glcrsp.ucdavis.edu/publications/ENAM/09-03-ENAM.pdf>
- Dieye, P.N., Duteurtre, G., Cuzon, J.R. & Dia, D. (2004). *Livestock, liberalization and trade negotiations in West Africa*. Retrieved from [http://www.hubrural.org/pdf/dieye\\_et\\_al\\_livestock\\_and\\_trade.pdf](http://www.hubrural.org/pdf/dieye_et_al_livestock_and_trade.pdf)
- Dupaigre, B.F., Baris, P. & Liagre, L. (2004). *Étude sur la compétitivité des filières agricoles dans l'espace UEMOA: Elaboration d'un argumentaire de choix de filières*. Retrieved from [http://pdmas.org/pdf/Etude\\_competitivite\\_filieres\\_agricoles\\_espace\\_UEMOA.pdf](http://pdmas.org/pdf/Etude_competitivite_filieres_agricoles_espace_UEMOA.pdf)
- FAO. (2009). *Ghana nutrition profile*. Retrieved from <ftp://ftp.fao.org/ag/agn/nutrition/ncp/gha.pdf>
- Gueye, E. F. (2007). Evaluation of the impact of HPAI on family poultry production in Africa. *World's Poultry Science Journal*, 63. Retrieved from <http://www.fao-ectad-bamako.org/fr/Evaluation-of-the-impact-of-HPAI>
- Perry, B., Pratt, A.N., Sones, K. & Stevens, C. (2005). *An appropriate level of risk: Balancing the need for safe livestock products with fair market access for the poor*. Retrieved from [www.fao.org/AG/AGAINFO/programmes/en/pplpi/docarc/wp23.pdf](http://www.fao.org/AG/AGAINFO/programmes/en/pplpi/docarc/wp23.pdf)
- 17 Asem-Bansah, C. K., Sakyi-Dawson, O., Ackah-Nyamike, E. E., & Colecraft, E. K., 2009
- 18 FAOSTAT
- 19 FAOSTAT
- 20 Aning, 2006, p. 10
- 21 Aning, 2006, p. 10
- 22 Aning, 2006, p. 10
- 23 Aning, 2006, pps. 12-13
- 24 Aning, 2006, p. iii
- 25 Aning, 2006, pps. 16-17
- 26 Dieye, P. N., 2004, p. 8
- 27 Aning, 2006, p. 20
- 28 Aning, 2006, p. 26
- 29 Aning, 2006, p. 27
- 30 Aning, 2006, pps. 32-33
- 31 FAOSTAT
- 32 Aning, 2006, p. 19
- 33 Eurostat
- 34 Aning, 2006, p. 26
- 35 Aning, 2006, p. 23
- 36 FAO, 2009, pps. 17-18
- 37 Aning, 2006, pps. 1-4
- 38 FAO, 2005a, p. 32
- 39 Aning, 2006, pps. 14-15
- 40 Aning, 2006, pps. 29-30

---

## Endnotes

- <sup>1</sup> Dupaigre et al, 2004, p. 147
- <sup>2</sup> Perry et al, 2005, p. vii
- <sup>3</sup> Dupaigre et al, 2004, p. 147
- <sup>4</sup> Dupaigre et al, 2004, p. 147
- <sup>5</sup> Dieye et al, 2004, pps. 7-8
- <sup>6</sup> World Trade Organization Statistics
- <sup>7</sup> Aning, 2006
- <sup>8</sup> Aning, 2006, p. 37
- <sup>9</sup> FAOSTAT
- <sup>10</sup> World Food Programme Statistics
- <sup>11</sup> FAOSTAT
- <sup>12</sup> FAOSTAT
- <sup>13</sup> Aning, 2006, p. 19
- <sup>14</sup> FAO, 2009, pps. 17
- <sup>15</sup> Aning, 2006, p. 23
- <sup>16</sup> Gueye, 2007, p. 392.