

**GHANA PRO-POOR HPAI REDUCTION  
REPORT  
GHANA BACKGROUND PAPER  
PRESENTATION**

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# INTRODUCTION

- Ghana divided into 10 Administrative regions is characterised by seven agro-ecological zones:
- 63% of the land area is covered by the Guinea Savanna;

- Administrative regions: Northern, Upper East, Upper West, northern portions of the Volta Region.
- Mean annual rainfall : 1100 mm
- Agricultural products: mainly cereals, pulses, cotton, (shea nuts) yams.
- High levels of livestock and local poultry.

- Rain forest:
  - 3% of total land area
  - Mean annual rainfall: 2,200mm
  - Agricultural products: Tree and root crops; maize, Low levels of livestock and poultry.

- Deciduous Forest:
  - 3% of land area
  - Mean annual rainfall: 1500mm
  - Agricultural products: Tree and food crops, low levels of livestock and poultry.

- Transitional zone (between Forest and Guinea Savanna)
  - 28% of land area
  - Mean annual rainfall: 1,300mm
  - High level cultivation of cereals other food crops,
  - Moderate production of livestock and poultry.

- Coastal Savanna
  - 2% of land area
  - Mean annual rainfall : 800mm.
  - Agricultural products – cereals, vegetables, cassava, moderate levels of livestock and poultry.

- The small North-Eastern tip of Ghana lies in the Sudan Savanna zone.
- The Ghanaian economy mainly agricultural
  - Contributes 41% to the GNP
  - Employs 60% of the labour force
  - (majority crop or mixed subsistence, resource-poor farmers)
  - Livestock /poultry component serves as safety net which provides vital sources of cash for emergency needs.



- Livestock/poultry contributes 7% to the agricultural GNP.
- In the 1960s Ghana government identified commercial poultry production as a high potential sector for addressing the poor animal protein supply and consumption challenge in the country.

- Various interventions (Govt. poultry farms; subsidies on poultry inputs, including drugs, feed additives, day-old chicks) were introduced over a period of time.
- Private sector initiatives were also encouraged.
- However, local poultry production has always lagged behind demand, as a result of high cost of production.
- Main disease challenges for commercial poultry  
Newcastle Disease, Gumboro, Fowl pox.

- Free range (village) poultry accounts for 60-80% of the national poultry population at any time. These birds contribute very significantly to rural livelihoods.
- Main disease challenge to local poultry: Newcastle Disease.

- Three outbreaks of HPAI were reported in commercial poultry farms in Tema, (GAR) and in the Brong-Ahafo Region. They were successfully contained.

- Aim of this review

- To present detailed background information on poultry-production in Ghana, with a focus on the poultry of resource-poor, small-holder farmer.
- To produce information to aid the formulation of strategies to control HPAI in local poultry and to secure the entire poultry population in Ghana.

## 2.0. VITAL COUNTRY STATISTICS

- National Population : 18,912,079 in 2000
- Annual growth rate : 2.7%
- Rural Population: 10,637,809 (56.2%)
- Total Population Estimated at 22.9 million as at July 2007.

- Agriculture and the Economy
  - The cocoa sector has contributed to the recovery of the agricultural sector, since 2003
  - The annual growth rate of the sector has increased to between 4.0 and 7.5 from 2001 to 2004,
  - Contribution to national GDP was 40.6% in 2005.

## Table 2.2

- Agricultural Sector consists of :

Cocoa	13%
Crops (other than cocoa)	64%
Livestock (incl. poultry)	7%
Fisheries	5%
Forestry and logging	11%



- Livestock consist of cattle, sheep, goats, pigs
- Poultry consist of chicken, guinea fowls, turkeys, ostrich

- Agriculture is predominantly smallholder activity.
  - About 90% of farm holdings less than 2ha.
  - Some level of mechanised farming is practised, but hoe and cutlass remain the main farming tools.
  - Smallholder account for 80% of total agricultural production.

- About 2.74 million households operate a crop farm or keep livestock or both.
- GDP growth rate rose from 3.3 – 4.7% in 1993-2002 period to 5.2 – 5.8 in 2003-2004.
- In 2002 GDP amounted to US\$6.2 billion  
Export revenues amounted to US\$2.1 billion.

- The Human Development Index (HDI) which takes into consideration life expectancy, education (adult literacy, and enrollment in school) and purchasing power parity of Ghana is 0.553, ranking 135<sup>th</sup> out of 177 countries.

- Life expectancy : 59.1 years
- Adult literacy: 57.9%
- Gross enrollment ratio: 50.7%
- GDP per capita: US\$2.480

# 3.0 THE POULTRY SECTOR

- Contribution of poultry to the national agricultural GDP (with livestock) is 7%
- It is not known the no. of people employed in the poultry sector, but it is estimated that nearly 2.5 million households benefit from village poultry (60% of the 3.7 million households live in rural Ghana).
- The number of commercial poultry workers is estimated at about 7000.

- The poultry sector is linked to a few other industries:
- Crop farming : Maize, soya-beans, groundnuts
- Fisheries: Fishmeal
- Food Processing:
  - Wheat bran
  - Soyabean meal
  - Groundnut cake
  - Copra cake

- Importers:

Poultry drugs

Vaccines

Vitamin-mineral

Feedmillers:

Poultry feed

Meat Processing:

Dressed chicken

Nuggets, sausages.



- Structure of the Poultry Sector
  - Categories of Production
    - Commercial
      - Large-scale (Industrial)
      - Installed capacity over 10,000, but may hold lower numbers.
      - Own feed mill (including hammer-mill)
      - 5 permanent workers registered with SSNIT
      - Only 5 such farms (privately owned)
      - Located in GAR, AR and BAR.

- Medium-scale

- Installed capacity 1000-5000 (may hold less than 1000).

### Small-scale

- Installed capacity less than 1000
- Some are backyard operators

- Poultry Keepers
- Semi-Commercial
  - Backyarders
    - Can hold 150-500
    - Have a small capacity housing
  - Village Poultry
    - 3-200 local birds kept in the extensive system.

- **FAO Classification**
  - **Sector 1: Industrial and Integrated**
    - » Biosecurity – High
    - » Market – export and urban
    - » Location – Near capital and major cities
    - » Birds kept –Indoors
    - » Housing – Closed Sheds
    - » Contact with other birds – None
    - » Breed of poultry - commercial

- Sector 2: Commercial

Biosecurity – High

Market – Urban/Rural

Location – Near capital and  
major cities

Birds kept – Indoors

Housing – Closed Sheds

Contact with other birds –

None

Breed of poultry - commercial

- Sector 3: Commercial
  - » Biosecurity – Low
  - » Market – Live urban/rural
  - » Location – Smaller towns and rural areas
  - » Birds kept – Partly in/partly out
  - » Housing – Closed/open
  - » Contact with other birds – Yes
  - » Breed of poultry - Commercial

- Sector 4: Village or Backyard

- Biosecurity – Low
- Market – Rural
- Location – Rural/peri-urban
- Birds kept – Everywhere
- Housing – Out most of the day, provided night housing or perch.
- Contact with other birds – Yes
- Breed - Local

- Table 3.2

- Number of Different Species of Poultry in Ghana

Table 3.3



- Proportion of Commercial, semi-commercial and backyard population that enters the wet market.
- Most poultry products (live birds and eggs) on the wet market are likely to come from the village poultry, medium, small-scale, semi-commercial and even large-scale commercial systems.

Proportions are unknown.

- Major Value Chains

- Small, medium-scale and Large-scale producers process their birds for sale as frozen whole birds
- An emerging category of processors convert chicken meat into nuggets, sausages, frankfurters and marinated chicken. The market for this is negligible.

- Poultry Production, Consumption and Trade

Fig. 3.1

- Poultry contributes 25% of the total domestic meat production
- Recent increases in poultry meat imports (2000-2005) have increased four-fold. Increases mainly in chicken parts.

Table 3.4

Local production has risen only slightly

Figure 3.2

Fig. 3.3

- The major countries exporting poultry meat to Ghana include the USA, EU and Brazil

Fig. 3.4

- The basic tariff on imported poultry products stand at 20%, but there are other taxes.

Table 3.5

- There have been efforts to get Government to protect local production by raising the basic tarriff. These efforts have not yielded desirable results.

- Marketing

- Imported poultry products are sold through well-organised cold chains in the cities and other urban centers.
- Importers may have their own cold-chains across cities from where they sell to wholesalers, who in turn sell to retailers and consumers

A large proportions is sold to institution (e.g. military, schools, hospitals), hotels and restaurants.

A few large Poultry enterprises process for sale.

Fig. 4.1

# DETAILED REVIEW OF THE POULTRY SECTOR

- Breeding
  - Breeding farms are limited to Parent stock for broiler and layer birds.

Table 4.2

## - Hatchery Operations

- On account of low demand for day-old chicks out of 17 hatchery operations in 2005 only 6 are currently producing layer, broiler and guinea fowl day olds.

Table 4.3



- Egg Production

- The numbers of listed egg production actors in Ghana in 2005 are shown in Table 4.4

Commercial Feed Producers

Table 4.5

Abattoirs and Poultry Meat Processors

Table 4.6

- Vaccines

- All vaccines used in Ghana are imported and distributed through the Vet. Services Directorate or private firms.
- Fowl pox vaccine was once produced locally

Production has been discontinued, apparently due to over-age equipment.

- Informal Sector Poultry and Egg Trade
  - This is the predominant trading system in the poultry sector in Ghana.

Table 4.8

Table 4.9

Table 4.10

# ACTORS IN THE POULTRY SECTOR

- Breeders
  - Species : Poultry Type: Chickens (broiler/layer) Guinea fowl
  - Typical numbers: Up to 20,000
  - Housing: Housed day and night on deep litter, concrete walls and floor; aluminium sheet roofing.

- Biosecurity
  - System fair
  - Contact with wild birds – no
  - Contact with other birds – possible
  - Free entry of materials - Yes
  - Free exit of materials/birds – Yes

- Routine Animal Health Practices
  - Newcastle HBI : 14 days
  - “ Lasota: 42 days
  - Inactivated: 16 weeks
  - Gumboro Intermediate  
or Intermediate Plus: 7 and 28 days
  - Fowl Pox: 35 and 84 days

- Antibiotics, coccidiostat, dewormers used according to the farm's previous health records and experiences.
- Debeaking varies
  - Where poultry are obtained bought in 100%
- Feeding : Appropriate feed for various ages. Source of feed: Own feed mill.

- Marketing: Information not available.
- Vertical and Horizontal Integration with other actors.
  - Breeders operate a largely integrated system: Imported day-olds, but operate own feed mill, hatchery and marketing outlet.



- Commercial Broiler and Egg producers
- Typical species: Poultry but may keep sheep, goats, cattle as well.
- Typical types: Chicken (usually layer, but also broilers for the festive market)
- Typical numbers: 50-10,000

- Biosecurity :

- Level is low otherwise as for breeders above

- Routine Animal Health Practices as for Breeders.

- Where poultry are obtained

- Bred on farm

- Large Scale - 100%

- Medium - 0%

- Small - 0%

- Bought in:

- Large scale - 0%
- Medium - 100%
- Small - 100%

Age bought-in : Day old, or in some cases as pullets.

- Type of Supplier
  - Breeder or
  - Importer

- Feeding
  - Feed given : normal poultry diets (starter, grower, finisher, layer)
  - Source of feed: Feed miller or own mill
  - Type of supplier
    - Large scale : Own feed mill
    - Medium: Commercial feed miller
    - Small: Commercial feed miller

- Marketing
  - % Sold : 100
  - Type of buyer: retailer (vendor), fast food operators, consumers
  - Seasonal trends in marketing
    - Eggs : all year round
    - Meat: Peak season – Christmas, Easter, Muslim Festivals
    - Vertical and Horizontal integration

See Fig. 4.1

- Backyard Producers

- Typical species kept: Poultry , sheep, goats (pigs)
- Typical type of birds: Chicken, guinea fowl, ducks, turkey
- Typical numbers kept: 30/hh (17-54 but may be as high as 100)
- Housing : Day-free range  
Night – coop with perches

- Biosecurity : None in place
- Routined Animal Health Practices  
Some farmers practise NDVI<sub>2</sub> vaccination
- Use of Poultry Health Service Provider
- VSD available to assist and advise vaccination
- Where poultry are obtained
- Bred on farm: Yes (data not available)
- Age bought in: Not known

- Feeding

- Scavenging, supplemented with grains; wheat and rice bran, cassava, kitchen waste; for guinea fowls pito mash, termites

### Marketing and other use of poultry

% sold : 80

% eaten: 20

% others: Not known



- Vertical and Horizontal integration with other actors
  - Producers sell to retailers or may retail themselves on wet markets.
  - They buy supplementary feed, eg pito mash or grains from the market.

- Interaction among Important Actors
  - Table 4.11
- Production System and Biosecurity

## 5.0 POULTRY AND RURAL LIVELIHOODS

Livelihoods patterns and strategies in Ghana typically linked to agro-ecological zones.

- Key elements are rain-fed and subsistence agriculture with livestock keeping.
- Community strategies informed by different natural resources endowments and feed and water availability.

e.g. Guinea and Savanna Savanna zones

Characterised by a single rainy season, long drought periods and Savanna rangeland that supports livestock and poultry keepers. But crop farming fishing and agro-processing are also major livelihood activities.

- Commercial poultry production is a prominent activity in the forest, Transition, and Coastal Savanna where two rainy seasons provide adequate water for crop farming, and therefore a relative abundance of maize.
- Live birds (chicken, guinea fowl, turkeys and ducks) feature prominently during religious festivals and other celebrations.

- They may also be given as gifts to individuals or key members on special occasions.
- The main reasons for keeping village poultry are
  - protein food security (Blackie 2006).
  - income supplementation (15% of total income according to Aboe *et al* 2006a)

Village poultry keeping also provide a ready source of protein in an emergency situation.

# GAPS IN OUR KNOWLEDGE

- 1. There are wide gaps in the records of actual poultry population, distribution and production figures. A comprehensive poultry survey can address this deficiency.
- In most of poultry farms village poultry in search of food gain access to commercial poultry farms. HPAI in either class of birds will easily be transmitted to the other.
- It would be necessary to do a limited serological study to measure levels of AI virus antibodies in village chickens, especially those around commercial poultry farms.