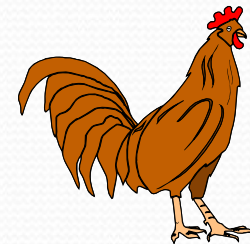




SALMONELLA CONTROL PROGRAMMES IN POULTRY: PRACTICAL EXPERIENCES IN KENYA.

Dr Moses Gathura Gichia.

Department Of Veterinary Services
Kenya.



Introduction

- Salmonellosis is the most frequently reported food borne disease in the world and chicken products are considered to be one of the most important food vehicles.
- The burden of the disease and the cost of control measures are high while both the zoonotic nature and the potential to disrupt international trade is significant

Bird Population

- Kenya has a population of 32 million chicken (gallus gallus)
 - Indigenous chicken (free range) - 79%
 - Commercial - 19%
 - Others(turkeys, ducks etc) - 2%
- This is against a human population of 38,610,097

The Poultry production system

vary:

- Commercial Poultry - broilers and layers.

The commercial set up confines their birds.

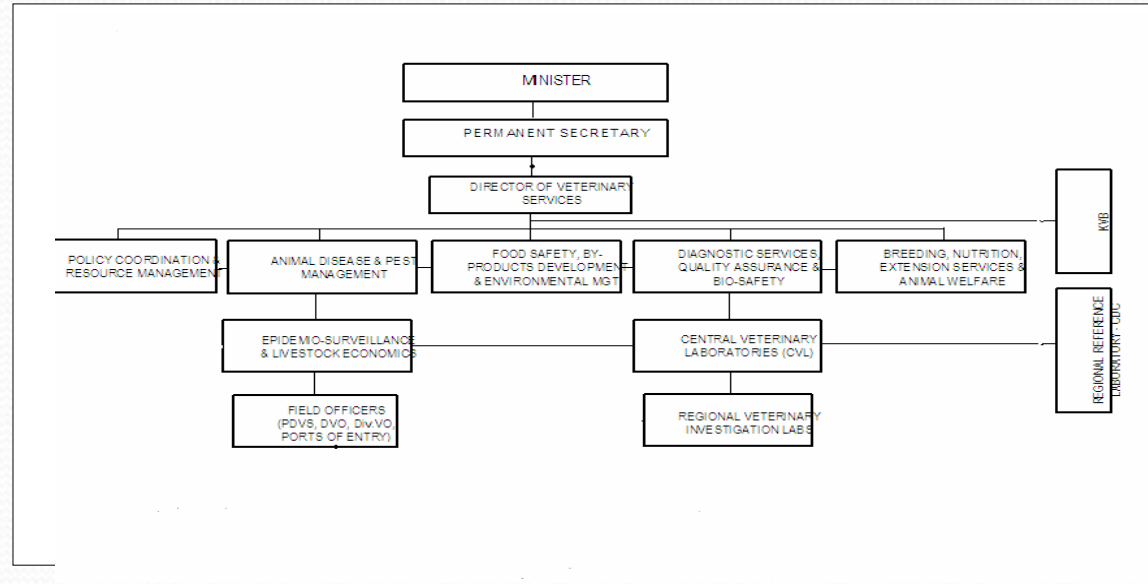
- The indigenous birds are dual purpose for eggs and meat.

The birds are not confined and are only housed at night in close proximity to their owners.

Disease control system

- The control, prevention and monitoring of Salmonella in Poultry is under the pervue of Department of Veterinary Services (DVS)- as the competent authority

Structure of The Department of Veterinary Services



Codes and Protocols

- **International Standards, Guidelines and Codes**
 - **World Trade Organization Agreement on Sanitary and Phytosanitary Measures**
 - **OIE Animal Health Code**
 - :Chapter 6.4: **Hygienic and Disease Security Procedures in Poultry Breeding Flocks and Hatcheries .**
 - :Chapter 6.5: **Prevention, Detection and Control of Salmonella in Poultry.**
 - **Codex Alimentarius Commission**
 - :CAC/RCP 15-1976 **Code of Hygienic Practice for Eggs and Egg Products**
 - :CAC /RCP 58-2005 **Hygienic Practice for Meat**
 - :Alinorn Rept 11/FH **Proposed Draft Guidelines for the Control of Campylobacter and Salmonella in Chicken Meat**

The National Legislations and Regulations

The DVS Implements the following:

- Animal Diseases Act (CAP 364): generally for control of all animal diseases and animal inputs.
- Hatchery Rules: Legal Notice 47 of 1985.
- Meat Control Act (CAP 356) – on Meat Hygiene hence food safety
 - Poultry Meat Regulations are made under the Act.
- Fertilizer and Animal Feedstuffs Act (CAP 345)

The National Legislations and Regulations

The DVS Collaborates in implementation of the following

- Public Health Act (CAP 242)
- Food, Drugs And Chemical Substances Act (CAP 254)
- The Standards Act (CAP 496)

Private Sector

- The Commercial Poultry Industry
 - Develop their individual internal control measures.

This includes

- All-in all out production
- Logistic slaughter planning.

The control measures are generally founded on:

- Good Hygiene Practices (GHP) that includes appropriate biosecurity and personnel hygiene.
- Hazard Control Measures

- Free range production

The control measures are near lacking in small scale and free range production

Existing Control Measures

Animal Feeds

- Are regulated by Fertilizer and Animal Feedstuffs Act (CAP 345).
- The Director of Veterinary Services regulates
 - : Importation of animal feeds,
 - : Manufacture of animal feeds.
- The animal feeds mills are required to regularly sample and analyze feeds for Salmonella in meat, bone and blood meals.
- Any positive batch should be reprocessed.
- In 2010: 162 samples were analyzed in Kenya Meat Commission with nil confirmed case.
- It's noteworthy that feeds of animal origin are used for non-ruminants only.
- DVS in collaboration with Kenya Bureau of Standards samples and analyze feed samples

Existing Control Measures

- **Importation of Breeding Stock**
 - Importation authorized by the DVS after establishing that the stock will not likely introduce Salmonellosis .
 - All the imported birds are inspected at the port of entry by Veterinary Officers
- **Breeding Farm/Hatchery**
 - Breeding farms/hatchery are inspected and licensed by the DVS. The license is valid for a year.⁷ Hatcheries licensed.
 - Inspection assures that the sitting, equipment , practices and operations are conducive to production of a healthy flock.
 - The establishments use the Salmonella typhi vaccine due to cross-protection

Existing Control Measures

The Hatchery Rules

- Prohibit selling, and/or breeding Day Old Chicks from parent stock that has not passed blood test for Pollurum Disease.
- Requires where practicable vaccination against notifiable diseases –Salmonellosis is.
- Breeding flock between 18 – 22 weeks to be screened for Pollurum disease.
- Any breeding/hatchery establishment suspected with notifiable disease must destroy the birds, clean, disinfect and fumigate the plant.
- The private players observe biosecurity measures and personnel hygiene

Existing Control Measures(cont)

Commercial Farms

- Good Hygiene Practices
 - Achieved by extension by Para-vets and processors workers
- The birds are confined.
- Farmers practice
 - all-in all-out
 - Biosecurity though not as strict as in breeding farms.
- Vaccination with fowl typhoid vaccine .
 - 5,349,800 doses were used in 2010(Thika District uses 200,000 doses/month)
- Farmers enthusiastically report deaths to the area Veterinary Officers.

In free range:

- Vaccinations against New Castle disease assists in boosting immunity.
- Farmers keep few birds (≤ 20) hence risk of disease spread low compared to a commercial set up.

Slaughterhouses

Export Slaughterhouses

- Siting, operations and practices are regulated by the Meat Control Act (CAP 356).
- Ante-mortem (AM) inspection on arrival.
- Good hygienic practice.
- Hazard based control in one slaughterhouse.
- Post – mortem (PM) inspection by DVS.
- Water immersion/chilling with chlorine as a decontaminant.
- Sampling for total plate count done in Export Slaughterhouses.

In local Slaughterhouses

- Workers are being trained on GHP
- A.M. and P.M.
- Washing of carcasses.

Consumer Level

Eating habits

- The threat of H5N1 assisted in creating awareness in Poultry health in Kenya.

For Indigenous birds:

- The local consumers cook meat for more than 1 hour at about 70C. This lessens the risk of Salmonellosis.

For Commercial birds:

- proper cooking
- In-built mechanisms for disease prevention.
- However, International angle of the travel and trade in Poultry is a potential threat.

Challenges

- Looping in 79% indigenous flock in formal control prevention and monitoring for Salmonella.
- Developing the Risk profile and the disease burden in order to influence policy changes-Underway now.
- Funding in Poultry health not commensurate with the risk of Zoonotic Salmonellosis.
- Capacity: Both human and infrastructures (Laboratories).
- Integrated farming system has not caught up.

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