



Disease Control and Treatment in Poultry

Common Diseases and their Treatment

Zambia Agribusiness Society

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Introduction

Disease can be defined as any change or impairment of normal body function that affects the chickens' ability to survive, grow or reproduce. An understanding of the cause of a disease and its method of spread (transmission) will assist in controlling it. Knowledge of the clinical signs of a disease and the characteristics of lesions found at Post-mortem will help in its diagnosis and instituting preventative measures.

Signs of Unhealthy Birds/Sick Birds

- Tiredness and lifelessness
- Dull eyes and comb
- Abnormalities in gait
- Sit or lie down
- Eat and drink less
- Lay less or stop laying eggs
- Ruffled and loose feathers
- Wet droppings with blood or worms, diarrhoea
- Cough, sneeze and breathe noisily

Common Poultry Diseases

Infectious diseases are caused by organisms that can be transmitted from one bird to another. Such organisms include; viruses, bacteria, fungi and protozoans. Other infectious organisms are external (lice, fleas and ticks) or internal (roundworms, tapeworms, flukes) parasites.

1. **New Castle Disease.** This disease is zoonosis i.e. it infects both humans and birds. In humans it causes conjunctivitis. It was imported to Zambia.
Cause: Virus
Host: Birds
Transmission: Contact with infective materials including secretions and excretions
Signs: Respiratory difficulties, digestive problems, drop in laying eggs, high and low mortality

Diagnosis: Signs, history, viral isolation from trachea or cloaca swab, gross lesions (enlarged spleen)

Treatment: N/A

Prevention: Biosecurity, proper hygiene and feed management, vaccination



Figure 1. New Cattle Disease Signs

- Marek's Disease.** This disease affects the nervous system. Chicks cannot stand because of nervous problem. Mortality rate varies.

Cause: Virus

Host: Chickens

Transmission: Inhalation of virus which is in scurf

Signs: Paralysis of legs

Diagnosis: signs, swollen nerve or liver, tumour of lymph nodes in post-mortem exam

Treatment: N/A

Prevention: Biosecurity, proper hygiene control and feed management, vaccination



Figure 2. A Chicken Failing to Stand

- Infectious Bursal Disease (Gumboro).** It is called Gumboro because it was discovered in a city called Gumboro. Mortality rate varies.

Cause: Virus

Host: Chickens

Transmission: Oral transmission of virus in faeces

Signs: Dullness, diarrhoea

Diagnosis: serum, sampling bursa of fabricius

Treatment: N/A

When poultry recovers naturally, it does not grow well because they do not have strong immunity.

Prevention: Biosecurity, proper hygiene control and feed management, vaccination



Figure 3. Gumboro Symptoms in Male Chicken

4. **Fowl Cholera**

Cause: Bacteria (*Pasteurella multocida*)

Host: Poultry

Transmission: Inhalation of bacteria in secretion

Signs: Respiratory difficulties, diarrhoea

Diagnosis: Signs, isolation from necropsy specimen

Treatment: N/A

Prevention: Vaccination



Figure 4. Chicken Suffering from Fowl Cholera

5. **Coccidiosis**

Cause: Eimeria tenella (destroys membrane and cells of intestines)

Host: Chickens

Transmission: Oral transmission

Signs: Diarrhoea

Diagnosis: Faecal examination, signs

Treatment: Sulpha drug

Prevention: Clean pen using boiling water to destroy oocyst



Figure 5. Blood in Faecal Matter of Chicken

In many cases, disease results from a combination of factors such as, nutrition, environmental factors and flock management. All these have a direct and important influence on the health and productivity of chickens.

Factors That Can Easily Lead To Disease

a. General Condition

- Age
- Stress
- Inherited characteristics
- Susceptibility to disease

b. Environment

- Climate (temperature, rain, wind)
- Housing Conditions
- Availability of water and feed
- Feed Quality
- Air Quality

c. Infectious Agents

- Viruses
- Bacteria
- Mycoplasmas
- Fungi
- Parasites

Costs Associated with Disease

- Mortality
- Morbidity
- Reduced productivity- weight gain/egg production
- Downgrading at processing

Some important takeaways are:

- Separate chicks from adult birds except from the mother hen
- Vaccinate chicks against the most important diseases and revaccinate where necessary
- Isolate and treat sick birds – if medication is not available then kill the sick birds
- Burn or bury killed birds

- Keep different species of poultry for example hens, turkeys, pigeons, ducks and guinea fowls separate