Disease Control and Treatment in Poultry
Common Diseases and their Treatment
Disease Control and Treatment in Poultry

– Common Diseases and their Treatment –

2019
# Disease Control and Treatment in Poultry

## Table of Contents

**Introduction** ........................................................................................................................................ 1

**Signs of Unhealthy Birds/Sick Birds** ................................................................................................. 1

**Common Poultry Diseases** .................................................................................................................. 1

- New Castle Disease ............................................................................................................................... 1
- Marek’s Disease .................................................................................................................................. 2
- Infectious Bursal Disease (Gumboro) ................................................................................................... 3
- Fowl Cholera .......................................................................................................................................... 4
- Coccidiosis ............................................................................................................................................ 5

**Factors That Can Easily Lead To Disease** ......................................................................................... 6

**Costs Associated With Disease** ........................................................................................................ 7
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

2. **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
3. **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
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