



DEPARTMENT: AGRICULTURE

## Gut conditions in poultry



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### WHY ARE THESE CONDITIONS IMPORTANT?

**Apart from death, these conditions lead to production and economic losses, meaning that you will have fewer eggs and less meat to eat and sell while spending more on food and medication. These diseases may cause the same signs in live chickens, e.g. diarrhoea. It is important to recognise the different diseases in dead chickens so that the correct treatment can be given to the sick ones.**

## WHAT CAUSES GUT CONDITIONS?

Many different things can cause gut conditions. The most frequent sign seen, is diarrhoea. While diarrhoea is not specific, the following diseases can cause the condition in chickens:

The following diseases are caused by bacteria:

- fowl typhoid
- salmonellosis
- necrotic enteritis
- infectious coryza
- spirochaetosis

The following diseases are caused by viruses:

- Newcastle disease
- gumboro disease

Other causes of gut conditions are:

- coccidiosis
- worms
- ulcers

## HOW DO I KNOW THAT MY CHICKENS HAVE A GUT CONDITION?

They may show some of the following signs:

- **diarrhoea** → watery and smelly droppings
- **feathers** around the vent area may be dirty and stuck together
- **depression**, ruffled feathers, not eating or drinking
- **poor growth**

## HOW DO I RECOGNISE THE CAUSES?

### BACTERIA

Bacteria are usually present in carcasses, bird droppings and in dirty cages/houses. When birds eat food or drink water contaminated by carcasses or droppings they get infected.

### *FOWL TYPHOID*

#### Signs in live chickens

Chicks → white droppings, high number of deaths.

Adults → thin yellow diarrhoea, a drop in egg production, pale wattles.

#### Signs in dead chickens

Carcass is dark red in colour, intestines contain watery fluid, sometimes blood. Liver and spleen are bigger than normal. Small white spots on liver, heart and lungs in birds that have been ill for some time.

### Treatment

Antibiotics such as tetracyclines or amoxycillin can be given in the feed or in water.

## ***SALMONELLOSIS***

### **Signs in live chickens**

**Generally affects chickens under two weeks of age. Diarrhoea with caked feathers around the vent area is seen. Sick birds are depressed and reluctant to move.**

### **Signs in dead chickens**

**Lungs, liver, spleen and kidneys are swollen and dark red in colour. The caecum is affected. It is bigger than normal and is filled with a hard white substance.**

### **Treatment**

**Antibiotics can be used such as tetracyclines, penicillins or enrofloxacin (baytril). These can be given in feed or water.**

## ***NECROTIC ENTERITIS***

### **Signs in live chickens**

**Signs are nonspecific. Chickens may show depression, refuse to eat and there will be a high number of dead ones. Sometimes they will just be found dead with no other signs. These signs are similar to coccidiosis.**

### **Signs in dead chickens**

**The gut wall is usually thickened and very red.**

## **Treatment**

**Penicillins or tetracyclines can be given in drinking water. Coccidiosis and necrotic enteritis can occur simultaneously and therefore it is important to also treat for coccidiosis.**

## ***INFECTIOUS CORYZA***

### **Signs in live chickens**

**Chickens have green diarrhoea. Their heads swell, especially around the eyes and they have mucous around the nose and eyes. There is a big drop in egg production.**

### **Signs in dead chickens**

**The nose and eyes are red. There is swelling of the head and wattles.**

## **Treatment**

**Antibiotics such as sulphonamides, tetracyclines and enrofloxacin can be used. These can be given in feed or water.**

## ***SPIROCHAETOSIS***

### **Signs in live chickens**

**Usually affects young chickens, which appear depressed, do not eat and have diarrhoea. The feathers around the vent area are dirty. The chicks from sick hens show poor growth and may also have wet droppings.**

## **Signs in dead chickens**

**The spleen is enlarged and mottled.**

## **Treatment**

**Chickens can be treated with antibiotics such as penicillins in water.**

## **VIRUSES**

**Viruses are usually present in droplets in the air or in droppings from infected chickens. Chickens become infected by breathing in these droplets or eating or drinking food or water contaminated by droppings. Although expensive, vaccination is important for viral diseases. Because treatment of these diseases is usually ineffective it is better to prevent them than to try and treat them.**

## ***NEWCASTLE DISEASE***

### **Signs in live chickens**

**Green diarrhoea, high number of deaths, difficulty in breathing, decrease in egg production, eggshell problems.**

### **Signs in dead chickens**

**Very red windpipe (trachea), red spots on glandular stomach and in intestines.**

### **Treatment**

**There is no treatment available. Sick birds should be destroyed.**

**Newcastle disease should be reported to a state veterinarian or animal health technician.**

## ***GUMBORO DISEASE (INFECTIOUS BURSAL DISEASE)***

**Usually affects young chicks up to 6 weeks of age.**

### **Signs in live chickens**

**Depression, white droppings, ruffled feathers, head bent down with eyes closed.**

### **Signs in dead chickens**

**Small red spots (bruising) on glandular stomach and on thigh, breast and leg muscles. The bursa is large and cherry red in colour. The bursa is a gland that is found at the end of the gut.**

**It is usually important in chicks for protecting them against diseases. In older chickens it is very small and not of much importance.**

### **Treatment**

**There is no treatment for Gumboro disease.**

## **PARASITES**

**There are two important types of internal parasites in chickens. These are coccidia and worms.**

**These parasites are usually easier to prevent than to treat. It sometimes works out cheaper to dose your chickens against coccidia and worms instead of treating them when you see signs of**

**infection.**

## **COCCIDIOSIS**

**This is important to farmers who keep their chickens in houses. Coccidia are present in the droppings from infected chickens. If cages/houses are not cleaned properly, then chickens can get infected by eating food or drinking water contaminated by droppings.**

### **Signs in live chickens**

**Chickens may have diarrhoea or even very soft droppings with blood spots. However, sometimes the only sign may be poor growth.**

### **Signs in dead chickens**

**The gut may contain watery or slimy fluid, sometimes with blood spots, or the gut may be filled with blood. There may also be red spots on the gut.**



### **Treatment**

**Drugs available to treat coccidiosis include the sulphonamides. If you suspect coccidiosis in your chickens it is better to contact your local animal health technician so that he/she can help you to treat the problem.**

## **WORMS**

**The two most important types of worms are roundworms and tapeworms. These are important in**



**free-ranging birds. These worms live in the gut of chickens. Worm eggs or early stages of worms can be found in droppings or sometimes in flies or beetles. When chickens eat food or drink water contaminated with these droppings or if they eat these flies and beetles they get infected with worms.**

- **Chickens will not get sick if they are infected with worms but will not grow very well.**
- **It is easy to treat worms. Dewormers are available. If you are unsure about which dewormer to use, ask your local animal health services for advice.**

## **ULCERS**

- **Ulcers are sometimes seen in the gut of chickens. These appear as rounded punched-out areas and can appear anywhere in the intestines but are commonly seen in the stomach.**
- **Ulcers are usually caused by stress. This happens when birds get sick or when too many birds are placed together.**
- **Certain diets, especially those that contain fishmeal, can also cause ulcers.**
- **Sometimes bleeding or ulcers in the gut can be a sign of another disease, e.g. coccidiosis or even Newcastle disease.**
- **Ulcers do not usually make chickens sick but it can be uncomfortable and they may show poor growth.**
- **Most gut conditions can appear to be the same in live chickens. However, if you look at the dead chicken, you may be able to find out what kind of disease is killing your chickens.**

## **DISEASES AND CONDITION AFFECTING SPECIFIC PARTS OF THE GUT**

***Condition affecting mouth to gullet: roundworms.***

***Diseases affecting the glandular stomach: Gumboro disease, Newcastle disease.***

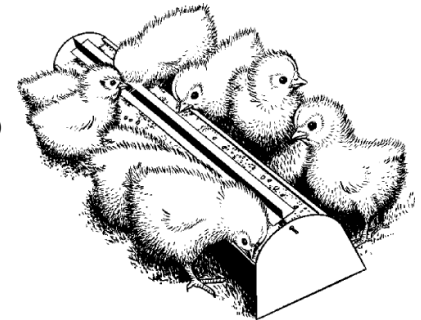
***Diseases and conditions affecting the intestines:* coccidiosis, roundworms and tapeworms, fowl typhoid and necrotic enteritis.**

***Diseases and conditions affecting the caecum:* coccidiosis, roundworms, fowl typhoid**

## **HOW DO I PREVENT MY CHICKENS FROM GETTING ANY GUT CONDITIONS?**

**Good management is the key to healthy chickens. Here are a few tips on how to manage your chickens:**

- **Try to feed them properly. If they are always hungry they are more likely to eat food or drink water contaminated by droppings and therefore get sick.**
- **Keep cages/houses clean. Wash and disinfect them before bringing in new birds.**
- **Use clean machines and equipment.**
- **Try to prevent too many people from coming onto your farm because Newcastle disease and other diseases can be spread by people.**
- **Chickens should not be overcrowded. Keep the correct number of chickens for the space available.**
- **Control other birds and rats in the area. They can also spread diseases.**
- **Remove carcasses as soon as possible.**
- **Insects such as flies can also spread disease. Control flies by using flytraps, papers and sprays.**



**There are vaccinations available for most of these diseases. However, they can be expensive and may not all be required for your area.**



**For further information contact your local animal health technician or state veterinarian**

**or**

***Animal Health for Developing Farmers***  
**ARC-Onderstepoort Veterinary Institute**  
**Private Bag X05, Onderstepoort 0110**



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