

## Case study: High 7 day mortality in Broilers

### History:

This case occurred on a well-managed South African commercial broiler farm housing approximately 320 000 broilers per cycle in environmentally controlled houses.

Chicks were obtained from various different aged flocks, all hatched at the same hatchery, and placed over a period of two days.

There was a complaint of high mortalities and culls (non-starters) during the first 7 days from a single house. 7 day mortalities reached 2.7% compared to the normal farm average of 1.1%

### Clinical and Post Mortem observations:

Post mortems were performed on chicks and the following was observed:

1. High number of non-starters and dehydrated birds.
2. Unabsorbed yolk sacs.



3. Enlarged and discoloured liver in some chicks.



4. Many septicaemias.



Swabs were taken from the infected heart sacs for bacterial culture.

GIT, including the liver and gallbladder, lung, spleen and yolk sac samples were also submitted for bacterial cultures.

Chicks were put onto a broad-spectrum antibiotic for 5 days, after which mortality was reduced.

Laboratory findings:

*E. coli* was isolated from the heart sac swabs.

*Salmonella* was detected in the organ samples and typed as *Salmonella* Enteritidis.

Questions:

*Private vet questions:*

- What are the legal obligations of the private veterinarian in a case such as this? If the isolate had been typed at *S. Montevideo* what would the obligations of the private veterinarian be?
- Name the most likely source of the infection? Which other important sources should be considered? What is your approach to determine the source of the infection?
- Detail some of the biosecurity measures that can be implemented at the farm to reduce the risk of further infections.
- Assuming that other broiler flocks will become infected, what procedures and treatments can you put in place to reduce the risk of *Salmonella* infected birds reaching the abattoir?

*State vet questions:*

- Does *S. Enteritidis* necessarily show clinical signs in poultry?
- What does the quarantine that you place on the farm look like?
- What measures should be put in place at the abattoir?
- Discuss the way in which salmonella should be tested. Why is it possible to get 'false' positives?