

## Case – Acute Mortality and Production loss in Broiler Breeders during Lay

### History:

The following case describes an actual disease break in the Tarlton area of Gauteng on a large integrated broiler breeder laying farm. Prior to the disease challenge, the broiler breeders (age of flock - 35 weeks) were producing on standard with good hatchability. Feed finishing time was normal and mortalities were < 0,02% per week.

Mortalities started increasing on a 6 house breeder site ( 6500 breeders per house) in one house , spreading to other houses over a time period. The breeders received a standard vaccination program.

### Clinical and Post Mortem observations:

Live chickens presented with a watery, mucoid diarrhoea with increased morbidity, fuffed feathers and reduced feed finishing time. The affected houses' egg production dropped acutely over a period of a week. Mortalities increased to 1-2% per day. A broad spectrum antibiotic was administered in the drinking water for 5 days while laboratory samples were being processed.

On post mortem the following was seen:

1. Acute septicaemia and peritonitis
2. Splenomegaly
3. Enlarged livers with rounded edges – becoming a bronze colour after exposure to air
4. Ovaries – regression and signs of bacterial infection



Liver, spleen and swabs from septicaemic organs were collected for bacterial culture and antibiograms.

While on antibiotic treatment the mortality decreased, but increased sharply once withdrawn. It was also confirmed that back-yard chickens were dying on a small-holding adjacent to the commercial breeder farm. Some of the farm workers had visited the small-holding prior to the outbreak.

### Laboratory findings:

Organs and swabs collected for bacteriology were cultured and an initial identification of a *Salmonella* spp. was made.

### Questions:

#### *Private vet questions:*

- What would your DD's be when considering the information provided above?
- What would be the logical next step be after obtaining the preliminary bacteriology result?
- Would you consider serological tests? If so, what test would you do?
- If required (depends on the diagnosis) when must this be reported to the state veterinarian?
- What would the long term strategy be to prevent spread and further losses?

#### *State vet questions:*

- *What does the quarantine notice look like?*
- *Where would you do the trace back and how many samples?*
- *Focus specifically on the manure and handling thereof?*
- *What type of improved biosecurity would you put in place going forward?*