



Increased mortalities on commercial layer farm

Questions:

Private vet questions:

1. The diagnosis is clinical *Salmonella gallinarum* because of the increased mortalities. If it has not been detected a previous time, it does not mean that it is not present. Intermittent shedding of the organism can occur.
2. In taking samples, fresh liver samples must be collected. If *S. gallinarum* is suspected, then the laboratory must be informed that the disease is a possibility. This particular salmonella produces very small colonies and therefore routine salmonella screening does not necessarily detect it. The spleen and gallbladder can also be sent in to be tested.
3. On the farm itself, also look at the post mortem lesions, and with blood sample collection know what the vaccination status of the flock is.
4. The state veterinarian must be notified on suspicion or reasonable suspicion of the disease. The laboratory will also notify the state veterinarian if the test result is positive.
5. This particular farm is a multi-age farm, and different flocks can be affected.
6. Fortunately, this particular salmonella is not of concern with regards to public health.
7. If manure is sold to a broiler farmer, it is of concern as broilers can also become infected.
8. In this instance, serology will detect the vaccinations that have been given to the birds. In the instance of a live vaccine, it helps with gut colonisation. A booster vaccination (live) can be given at 6-8 weeks, and is followed by an inactivated vaccine at 14 weeks. When a live vaccine is given, remember that no antibiotics should be given 5 days before and 5 days after the vaccination has been given.
9. Differential diagnoses are other bacterial septicaemic diseases like *E-coli*, *Staphylococcus* and other salmonella species.

State vet questions

1. *S. gallinarum* fortunately does not have zoonotic implications. With eggs that are sent out, remove the cracks and the dirty eggs. Culled birds can be sold.
2. Fresh eggs can be tested, though it is not the ideal samples since the albumin in eggs is toxic to salmonella. Laboratories therefore can only use the yolk in eggs for testing. When antibiotic treatment is given, the birds should be treated for 5 days and the antibiotics then withdrawn. The eggs should also be tested for any antibiotic residues.
3. If there are negative boot swab results, they should be taken again since birds are not always shedding the organism.
4. Faeces can collect beneath the cages, and it can become difficult to take the samples.
5. Sources to consider are bait boxes (rodents), wild birds, feed, water and personnel.
6. Boot swabs should be done on all the houses to monitor whether the disease is spreading. Staff movement should be restricted and rectal swabs of personnel should be done as well. The



vaccination status of new birds that are placed on the farm must be known. They must also be revaccinated again at a later time.

7. With the quarantine, eggs and the treatment of eggs should be monitored. If there are any free range flocks, they cannot be allowed out of the houses. When people collect eggs, it becomes important to use hand sanitizers.