

Aspergillus on the broiler farm

by David Oxley-Goody, Janssen Animal Health, Turnhoutseweg 30, 2340 Beerse, Belgium.

This is the last of three articles on aspergillus within the poultry operation. The first two articles concentrated on the breeder farm and the hatchery. We will now look at aspergillus and its effects and control on the broiler farm.

First, you need to consider where the contamination actually comes from:

- Chicks arriving from the hatchery may be infected already during the hatching process.
- Litter which has become damp (especially straw) may be infected. If litter is re-used without proper treatment this can increase chances of infection.
- Stale or damp feed or contaminated feed from the mill may be the problem.
- The ventilation on the farm can be contaminated by outside sources leading to contaminated feed/litter.

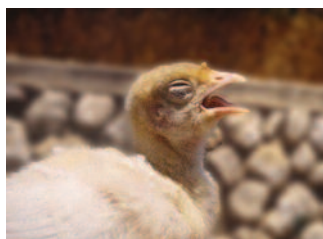
Chick arrival

Chicks arriving from the hatchery should be examined closely, especially if there is a history of hatchery infection. Any chicks infected at the hatchery will probably show signs of mortality on arrival.

There may be dead chicks in the boxes and other chicks may show signs of rapid breathing, wheezing or open beaks.

Mortality starting on day 1-5 is almost certainly hatchery related. This type of infection will probably peak between 3-8 days and reduce by 10 days, but many infected birds

Respiration problems.



that do not die will suffer from secondary infections and will not perform well. Mortality can eventually be as high as 30%.

Hatcheries as well as farms can often be subject to seasonal challenge from aspergillus and depending on seasonal weather conditions it may be noted that certain months of the year are more likely to produce outbreaks than others.

During these months extra vigilance will be required after chick deliveries.

Litter

Contaminated litter is often found to be the cause of infection. All types of litter will grow aspergillus, but the use of damp/mouldy straw is the cause of many outbreaks. Many companies now re-use litter from previous flocks. This may be disinfected or composted to reduce micro-organisms/spores.

If not properly treated, it can heavily contaminate the chicks. If there is any history of aspergillus on the farm, use new litter.

Ensure that drinkers are maintained properly, as wet areas around drinkers are often found on affected farms. Any areas of wet litter should be dug over to allow the area to dry. This area should then be treated with an Enilconazole solution.

With this type of infection you could expect symptoms to appear anytime, but if chicks are placed on an already heavily infected farm, symptoms may be seen at about 4-5 days, with mortality starting at about seven days dependant on the degree of litter/air contamination.

This mortality will continue, as unless the litter is treated, the contamination will increase very quickly.

Feed

Contaminated feed, if present at time of chick delivery, will give similar times of symptoms/mortality as infected litter.

Sometimes a broiler farm may be left empty for a period due to over-



Feed storage.

production in an area and the left-over feed may be stored for a period to use for the next flock.

If allowed to become damp, contamination can occur.

If feed is left in a bulk bin, condensation can form on the bin interior, allowing mould growth. In this situation it is worth sampling old feed being stored, prior to arrival of chicks.

New feed can be contaminated at the mill. If regular aspergillus infections are encountered on different farms and the hatchery is proven to be innocent, I would suggest samples are taken from each feed delivery to check whether the feed is being infected at source.

This type of infection can show symptoms at any time during growing stages.

Outside sources

As mentioned previously, air will carry aspergillus spores onto the farm to grow on litter and feed, allowing infection of birds. This can be more obvious during seasonal changes such as Spring/Autumn.

Pollen from trees in an area can carry spores onto the farm. Agricultural activity causing dust such as combining nearby, can also have the same effect.

Dust can be carried on the wind from a nearby feed mill. Even cutting

the grass around the farm will show an increase in spores released into the air at this time. Again, note that extra vigilance should be applied at times of seasonal infection.

This type of infection will normally show at a later stage in the life of the birds as it will result in more gradual contamination of the farm.

Treatment of infection

There is no 100% effective treatment for aspergillosis once birds are infected. Antibiotics are sometimes used but are ineffective except in the case of secondary infections.

Infected litter can be treated with the same fog with the birds in situ.

Mortality may be reduced considerably by spraying the birds and litter.

If infected feed is found to be the cause of infection, destroy the feed, clean all feeding equipment and use Enilconazole smoke canisters in the bulk bins and feeder tubes.

After any aspergillus outbreak, once birds are removed, ensure the farm is cleaned, washed thoroughly and fogged with Enilconazole solution or the problem may continue flock to flock.

The broiler farm is the last link in the breeding chain of events, but is the link to your final profit margin. Ensure you are controlling aspergillus on your broiler farm. ■