

# Protect the litter in breeders – stay in control of the flock

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In the modern poultry business we manage birds at high densities. As a result, the environment in which the birds are raised is normally actively managed in order to encourage optimum productivity levels.

Adequate control of the environment depends on many factors; among them the local weather, quality of the facilities (to confer proper isolation from the external environment), level of technology available in specific poultry houses, competence of the stock person in charge of bird management, sanitary status of the flock, and feed quality.

After reading these main categories of factors influencing the environment of confined birds it is easy to realise that many of these are difficult to control.

## Litter condition

Within a poultry house one of the best indicators of the overall environmental management is the litter condition. Among the functions of the litter are: direct isolation of birds from the floor (animal comfort), dilution of faeces, and thus dilution of bacteria, toxins and parasites.

Faeces with high humidity correlate with rapid agglomeration or 'caking' of the litter increasing the risk of further intestinal diseases as well as the risk of diseases affecting the respiratory system. Whenever a proportion of the litter is caked there is a considerable reduction in its ability to dilute faeces and to transmit the humidity from the top to the bottom layer of the litter. In plain language, birds are in direct contact with faeces and every time they peck the litter there is an increased intake of bacteria, toxins, and parasites. Moderate litter quality can rapidly progress to poor litter quality in a matter of hours.

## Early predictions

In poultry production we are more or less able to predict the performance of a flock based on the previous history of the farm.

Once the litter deteriorates it is very difficult to bring it back to its previous state without placing the flock under the risk of developing a disease.

It is important to realise that we are not in control of a poultry house in which litter has been badly deteriorated and our best hope is to act fast enough to solve arising complications.

A key factor to successfully preserve litter quality is the proper maintenance and man-

agement of equipment. Drinkers and water lines must receive maintenance as recommended by the manufacturer and their height must be frequently adjusted to match the bird's height. Fans, automatic shutters, and heating system should also receive maintenance according to the manufacturer's recommendations.

Along with the concept of preventive maintenance of the equipment, should be the concept of investing in 'preventive maintenance of a healthy gastrointestinal tract'.

It is common to wait for an intestinal disease to occur before adopting corrective measures. However, a good alternative to this practice is to actively protect the gut health of the flock. After all, good performance in terms of body weight and feed conversion are obtained only if our flock has adequate intestinal integrity.

## Bacterial populations

Sudden variation in the diet's raw materials, feed changes, bacterial contamination of feed and water, and antibiotic treatments cause rapid imbalance of bacterial populations (dysbiosis) in the intestine leading to altered digestion and a high incidence of watery faeces (see photographs).

After the onset of dysbiosis, viral and bac-

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**Pictures showing good quality faeces (left) and faeces with increased water content (right).**





**Pictures showing faeces with gas and undigested feed particles (left) and faeces with high water and gas content (right).**

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terial contaminations of the gastrointestinal tract are common and can frequently lead to diarrhoea. During an episode of diarrhoea, regardless of the treatment we select to fight the ongoing enteric disease, a great deal of damage to the environment has already taken place. In the case of breeders, manual labour is normally used to remove spots of damaged litter and replace it with fresh material increasing the operational costs. In addition, damaged litter and watery faeces are often associated with an increase in the number of 'dirty eggs' which is a never welcomed finding in a breeder flock.

## Controlling dysbiosis

To control dysbiosis Biomin created PoultryStar which is a synbiotic product (combination of probiotics and prebiotics) that offers direct anti-pathogenic activity coupled with competitive exclusion and modification of the intestinal pH.

Supplementing PoultryStar in poultry diets reduces the incidence of dysbiosis by colonising the intestinal epithelium with probiotic bacteria that are fully adapted to the intestinal tract of poultry. ■

