WP

CLIMATE

Birds require a breath of fresh air

Fresh air is good for birds as well as poultry producers. Preventing wet litter can go a long way in maintaining a good in-house environment as well as to retain good relations with your neighbours. Trials with a litter conditioner show that it may help producers to better control their wet litter problems.

By Stuart Lumb

The fresh litter conditioner absorbs moisture and leaves nice bedding for the birds to safely walk and rest on.

Intensification of livestock production leads to many problems - pollution of the environment, emission of ammonia, and so on. Generally, these days, birds are kept on deep litter systems, often wood-shaving or straw-based. As faecal material builds up, it allows bacterial activity to increase and with this, ammonia. A small amount of ammonia, even 10ppm can have detrimental affects on birds, causing respiratory problems and leading to a greater susceptibility to coccidiosis and ammonia burns.

Increasing levels of ammonia will lead to increased nervousness and aggression in birds, including feather pecking, fighting and a decreased immune response to specific (respiratory) diseases.

Any material that can reduce wetness in the litter has to be a benefit for keeping broilers healthy and ensuring they grow quickly and convert food as efficiently as possible. The French company Olmix developed such a product, called Mistral. This litter conditioner was highly commended in the New Products Award contest at VIV Europe last November. It absorbs virtually its own weight in liquid, is non-aggressive, doesn't burn and is accepted by organic farming organisations, such as 'Ecocert'.

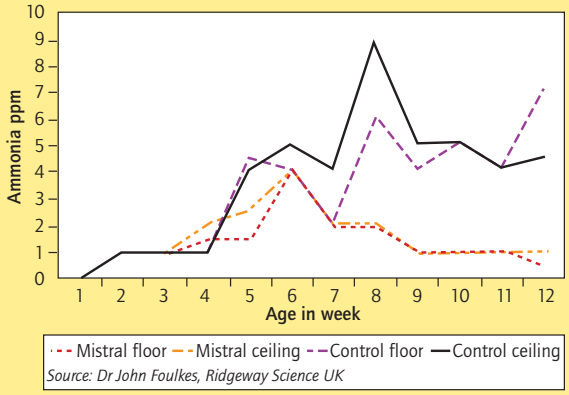
Dr John Foulkes of UK-based Ridgeway Science Ltd carried out independent trials with Mistral. He measured the amount of ammonia on a weekly basis at both floor and ceiling levels, over a period of 12 weeks. As can be seen from his data (*Table 1*) and the graphs (*Figure 1*), under normal conditions the ammonia levels on average increase gradually over the 12-week trial period. On the other hand, with the Mistral treatment, ammonia levels increased up to 6 weeks but thereafter declined to around 1ppm at 9 weeks and thereafter. With the treated house, the litter was much drier and didn't produce wet spots.

From a commercial point of view, keeping the litter drier, over and above the health considerations, means that less moisture needs to be removed by ventilation, less litter has to be brought in and transported and less litter must be removed and disposed of. This all results in cost savings. And since it is increasingly difficult for farmers to dispose of manure because of odour, pollution etc, any reduction in the quantities to be disposed of has to be a bonus. □

Table 1. Ammonia levels in ppm in poultry sheds

Age in weeks	*Trial Mistral shed Floor*	*Control shed Ceiling*	*Floor*	*Ceiling*
1	0	0	0	0
2	1	1	1	1
3	1	1	1	1
4	1,4	2	1	0,9
5	1,5	2,5	4,5	4
6	3,9	4	4,1	5
7	1,9	2	2,1	4
8	1,9	2	6	9
9	1	0,9	4	5
10	1	0,9	5	5,1
11	1	0,9	4	4,1
12	0,5	1	7	4,5

Figure 1. Ammonia released from the litter measured at floor and ceiling level



Source: Dr John Foulkes, Ridgeway Science UK