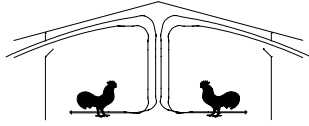




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Poultry Housing Tips

Litter Treatments and House Moisture

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With the price of shavings increasing and the availability decreasing, many growers are forced to go longer between cleanouts than they ideally would prefer. One of the problems with starting off chicks on built up litter is that the producer will have to deal with high ammonia levels from day one. The producer traditionally has had two ways of coping with this problem: he can increase his timer fan settings by 30% or more over what is needed in houses with fresh litter, which will of course result in higher fuel bills, or ignore the high ammonia levels and possibly end up with poor performance, sick or blind birds.

Over the past few years a third option has become increasingly popular, litter treatments. A day or so before chicks arrive the litter treatment is either spread or sprayed on the old litter. The litter treatments minimize the production of ammonia either through chemical or biological action. The effect can be quite dramatic, decreasing ammonia levels from over 80 ppm (bring tears to your eyes) to less than 20 ppm (barely perceivable). Since there is very little ammonia production, producers have found that they can run lower ventilation rates than they traditionally do without adversely affecting bird performance.

Some producers have taken the lack of ammonia to mean that they only have to operate their timer fans a token amount (i.e., 30 seconds out of ten minutes) or not at all during the first week of production. In other words, to many producers: no ammonia = no ventilation. Severely reducing minimum ventilation rates in houses, even those with litter treatments, can have significant consequences.

For instance, one of the primary purposes of minimum ventilation fans is to prevent the build up of moisture produced by the birds. Better than 70% of the water that flows into a house will end up in the air or litter. When a person reduces timer fans setting too much because he feels that since there is no ammonia there is no need to ventilate, house sweating and floor caking under the waterers will eventually begin to occur. If litter is allowed to become wet and caked, it really makes little difference in the long run whether a litter treatment is used or not. The quantity of manure and moisture deposited by the birds in a poultry house will overwhelm even the best litter treatment in 10 to 21 days. For this reason, after two to three weeks into the flock, ventilation rates will have to be increased to get rid of litter moisture and the ammonia that accompanies wet litter. Increased ventilation rates even on older birds will decrease house temperature and the producer may have to use furnaces or brooders in order to maintain the proper house temperature. As a result, though the producer saved gas when the birds were young by under ventilating, he may have to use a significant portion, or possibly all of his savings later on to dry out his litter and to keep ammonia in check. He is better off to ventilate a little more when the birds are young to keep litter moisture from becoming a problem in the first place.

Complicating matters is that almost all dry litter treatments are activated by moisture. If the litter is excessively dry, they will not work very well. On the other hand, if there is excessive litter moisture the product can be “used up” in a too short a time. Reports have indicated that with excessive house moisture (relative humidity above 80%) that the life of some products can be reduced from three weeks to less than one week. As soon as the product is “used up” ammonia levels may increase dramatically.

To maximize litter treatment product life as well as to keep ammonia and litter moisture levels to a minimum, house relative humidity should be maintained between 50 and 70%. Relative humidity gauges are fairly inexpensive, less than \$35, and can help you determine whether you are ventilating enough.

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