Be Aware of Heat Stress This Summer

Although we have only seen a couple rays of sunshine, the forecast warns us against a blistering summer. This heat may be a wonderful change from the dreary weather of the Lower Mainland, but can cause an increased amount of problems when dealing with poultry. In broilers, heat stress can cause reduced growth rate, depressed feed intake, and poor FCR. There can be a drop in egg production and a reduction in shell and internal quality in egg laying birds. For all types of poultry, heat stress can also cause increased mortality.

Heat stress is a bigger risk factor in older birds than younger birds, due to their insulation and size. Older birds have better feathering, which acts as insulation, making it difficult for the birds to expel heat that they are producing. Additionally, older birds are larger, making space in the barn minimal. This creates a denser, warmer environment, increases the temperature at the floor level, and decreases the birds ability to dissipate heat.

Although increased heat is seen as a major problem in poultry production, studies show that it is not only the excessively high temperatures, but the fluctuation of the temperature.

This naturally occurs during the temperature change from daytime to night time. Recent studies have shown that broilers tend to preform reasonably well in a high, but constant environment of 380C (100oF), but become stressed when fluctuating temperatures exist. When temperature fluctuations occur, birds need to use more energy in an attempt to maintain their body temperature of 41-420C (106-108oF). When their body temperature rises above 420C (108oF), mortality begins to occur. It is important to be aware of the temperature in the barn, and be conscious of how much it may fluctuate.

The most obvious clinical sign of heat stress is panting. Panting occurs because birds, unlike humans, do not have sweat glands that can cool their skin. Instead they must cool themselves by evaporation from the throat and respiratory system. This is the most effective means to significantly increase heat loss for birds. Unfortunately, panting takes a lot of energy for birds, which generates significant quantities of body heat. Therefore, panting makes the body temperature rise, which will increase the possibility of mortality.

Four Tips For Handling Heat Stress:

1. Add nutritional supplements to the feed or water.

The electrolyte balance in birds is altered during heat stress due to panting. Panting increases carbon dioxide loss in the bird, which reduces the birds ideal water intake. By adding electrolytes to the feed or water, birds increase their water intake, which aids in keeping a constant body temperature and maintains an effective system of evaporative cooling.

2. Carefully select a proper time of feeding and withdrawing feed.

During the late afternoon there is a significant rise in body temperature, which, if severe, may kill the bird. The late afternoon may not be the hottest time in the day, but it is the peak of digestion in birds when eating in the early-mid morning period. A good management strategy for layers to aid in reducing heat stress is to withdraw feed prior to the anticipated time of peak temperature so that it may take an unneeded heat load off the bird. For broilers, a period of darkness in the late afternoon can be used to avoid excessive activity. If using a feed withdrawal program, it can be beneficial to give supplemental lights during the period of natural darkness.

3. Have readily available, cool drinking water.

Lowering the water temperature helps to keep the birds cool. Ensure that the water is clean and of optimum quality. Water must be readily available and have nipple drinkers at the right height. Adding nutritional water supplements

that run continuously in hot weather is also of great benefit.

4. Ensure good ventilation.

By providing the birds with a comfortable environment, common stressors and heat will reduce. Always check airflow patterns and keep your ventilation system well cleaned. Misting systems can also be used to help aid the birds in their own cooling mechanisms.

By understanding heat stress and taking steps to prevent it, you will be keeping your birds comfortable and still loving the sunshine!

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