The Role of the Competitive Exclusion Product Aviguard in Preventing Necrotic Enteritis and Dysbacteriosis in Broilers

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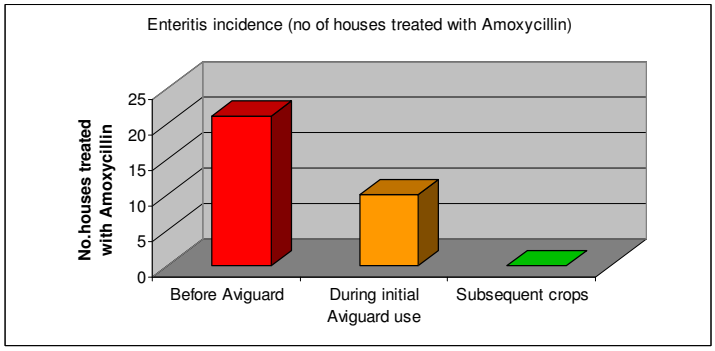
Clostridium perfringens associated necrotic enteritis (NE) is a common problem among rapidly growing broiler chickens that are raised intensively. It was found throughout 3 studies, that the competitive exclusion product, Aviguard, was as effective as the antibiotic virginiamycin in preventing NE gross lesions and mortality. It was also found that Aviguard was more effective in reducing NE lesion scores than 2 other commercial CE products, a probiotic and 3 additional antibiotics (Hofacre et. al, 1998).

Bacterial enteritis is a problem for broiler producers worldwide. The level of enteritis has risen considerably over the last 5 years. Withdrawal of antibiotic digestive enhancers (ADE) in Europe has been a significant factor. Three forms of enteritis are commonly seen including necrotic enteritis, dysbacteriosis, or non-specific enteritis, and cholangeohepatitis. Dysbacteriosis is considered to be the most common form of bacterial enteritis occurring in Europe.

The term dysbacteriosis was first used in northern Europe to indicate the presence of an abnormal balance of enteric bacteria. The condition is poorly defined but is associated with wet litter and pale droppings with undigested feed, usually between 20 and 30 days of age. Birds may flick whole feed particles or pellets from feed pans. There are also fluctuations in water intake, with an increase in water consumption usually seen. Diagnosis is usually confirmed by wet droppings returning to normal with administration of antibiotics. Birds remain susceptible for the entire growing period and immunity does not occur. Relapses will often occur.

The scenario described above, was just such a problem for an independent broiler producer with a 90,000 bird site in the UK. In the past he used Maxus (Avilamycin) in the feed, but was forced to withdraw this from the diet by the company he produces for, even prior to its European ban. Following the removal of Maxus, enteritis became a real problem on the farm. An increase in water consumption, wet litter, flicking out of feed from the pans and a reduction in growth would all be seen at around 18 to 20 days of age. Post mortems were carried out and Amoxycillin prescribed (3 days) as treatment. Often the enteritis was so severe that it would reoccur at around 27 days and a further 3 day treatment would be required. This situation occurred crop after crop. The cost of the amoxycillin treatment was significant, not to mention the cost of poor FCE (feed conversion efficiency), and reduction in growth.

The broiler producer had used Aviguard in the past for salmonella control in turkeys, and had found as a result that there was a reduction in enteritis in the turkeys. He therefore decided to try Aviguard in the broilers. Aviguard was administered via the drinking water 48 hours after antibiotic treatment used in the first few days of life to start the chicks. The results are shown below. After initial use to build up the bacteria within the environment, continued use each crop has prevented enteritis on the farm for 7 consecutive crops.



In conclusion, Aviguard used in place of antimicrobial digestive enhancers for enteritis control has proved successful in the field in significantly reducing the incidence of enteritis, reducing associated antibiotic use and improving bird welfare. It can be considered a serious alternative to ADE's.