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AUBURN UNIVERSITY
DEPARTMENT OF POULTRY SCIENCE



WORTHWHILE OPERATIONAL GUIDELINES & SUGGESTIONS

Application of Water Treatments during Broiler Feed Withdrawal

Both feed and water are removed from broilers during the final hours prior to processing. Feed is scheduled to be removed first allowing for 8-12 hours off feed prior to slaughter. This allows for utilization of nutrients from feed that has already been consumed and emptying of the digestive tract, which helps minimize contamination during processing. Water is not removed until just prior to catching. This provides an opportunity to administer water treatments to birds which may minimize the presence of pathogens such as *Salmonella* or *Campylobacter* during processing.



A commonly used method of water treatment is drinking water acidification. During feed withdrawal, as the crop empties there is a decrease in growth of lactic acid producing bacteria leading to an increase in crop pH. This increase in crop pH allows for the growth of pathogens such as *Salmonella*. Providing acidified water during feed withdrawal keeps the crop pH low, therefore, avoiding pathogen growth. Drinking water can be acidified using products containing organic acids such as lactic, formic, or citric acid or using inorganic acid products containing sodium bisulfate. Although acidification has a positive impact on minimizing contamination, there may be negative effects including damage to drinker line components or decreases in water consumption. If using drinking water acidification treatments, both water pH and broiler water consumption should be monitored. Alternatively, other commercially available feed withdrawal water treatments include chlorine dioxide or a combination of chlorine dioxide and acidification. Hydrogen peroxide and cetylpyridinium chloride treatments are currently under investigation.



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