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AUBURN UNIVERSITY
DEPARTMENT OF POULTRY SCIENCE



WORTHWHILE OPERATIONAL GUIDELINES & SUGGESTIONS

Broiler Stunning for Halal Meat Processing

The import of Halal food into the Gulf Cooperation Council countries is expected to increase from \$25.8 billion in 2010 to \$53.1 billion by 2020. Production of Halal broiler chicken products will be an increasingly important market.

One essential aspect of the production of Halal chicken is the method of stunning. Depending on the certification, allowable stunning methods can range from no stunning at all, to recoverable electrical stunning, to unrecoverable controlled atmosphere stunning (CAS).

Stunning prior to slaughter should not:

1. Interfere with a swift killing by the neck cut
2. Interfere with the flowing of blood following the neck cutting
3. Cause the animal's death (heart stoppage) prior to neck cutting
4. Cause any additional stress or pain



Each of these components can be impacted by the stunning method.

Swift killing by neck cut can be achieved more rapidly in electrical systems than CAS systems due to the necessity of shackling birds after stunning. Blood flow following the neck cut is also influenced by stunning type. Low voltage electrical stunning has been shown to lead to more initial blood loss during exsanguination than high voltage electrical stunning and CAS. A key component of these Halal requirements is that death occurs when the heart stops. In CAS and higher voltage electrical stunning systems there is no respiratory reflex, but the birds continue to have a heartbeat at the neck cut. The stress or pain during slaughter occur during bird handling and the neck cut in non-stunned birds, during handling and shackling in electrically stunned birds, or during the induction phase in controlled atmosphere stunning. Currently, there is disagreement as to which stunning methods are appropriate for use in Halal slaughter. Increased standardization of acceptable stunning methods for broiler Halal slaughter is presently a topic of discussion and is expected to be addressed in the near future.



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