



Worthwhile Operational Guidelines & Suggestions

BROILER PROCESSING TIMELY INFORMATION - OCTOBER, 2001

NECESSITY FOR FREQUENT CARCASS RINSES DURING PROCESSING

Understanding the mechanism(s) of bacterial attachment to meat and skin surfaces is critical to the design and implementation of effective pathogen intervention strategies during poultry processing.

The process of bacterial attachment to the meat and skin surfaces involves two distinct stages:

1. A primary and a readily reversible stage, in which the attachment is due principally to the number of bacterial cells in suspension and the physical forces.
2. A time-dependent secondary stage, during which the strength of attachment is increased due to the formation of extracellular attachment fibrils and entrapment.

Experiments have shown that upon contact with the meat and skin surfaces, bacteria are initially suspended in surface water film and can be easily removed by prompt and effective rinsing with water. If allowed to remain on surfaces, additional contact time increases the strength of bacterial attachment, which reduces the effectiveness of carcass rinses.

Accidental spillage of digestive tract contents is undesirable, but often unavoidable, given the nature of mechanical forces applied to carcasses during processing. The placement of spray-cleaners at sites of possible ingesta/fecal contamination could help prompt removal of the bacteria, dilute the number of bacterial cells in suspension, and, more importantly, replenish the surface water film to reduce the strength of bacterial attachment to carcass surfaces. Properly located and pressurized spray cleaners can be very effective in removing visible and non-visible contamination after scalding, rehangng, vent opening, viscera draw, and giblet harvest operations. Chlorination of the water may also provide additional reductions on bacterial load on eviscerated carcasses prior to chilling. In addition, frequent carcass rinses should also help reduce the likelihood for cross-contamination along the evisceration line and help processors meet the food safety performance standards for the final product(s).

Contact: S. F. Bilgili, Ph.D.

Phone: (334) 844-2612

E-mail: sbilgili@acesag.auburn.edu



Poultry Science Department, Auburn University, Auburn, AL 36849-5416