



Worthwhile Operational Guidelines & Suggestions

BROILER PROCESSING TIMELY INFORMATION – JANUARY, 2003

MONITORING THE ELECTRICAL STUNNING PROCESS:

Stunning poultry immediately prior to neck cutting has been receiving a great deal of interest in recent years, both from animal welfare and carcass quality standpoints. Clear understanding of principles of electricity, animal physiology, and “the stun-kill system” is required to operate the stunning process. Electrical stunning technology has evolved considerably over the years, especially with the introduction of low voltage and current, and high frequency controllers. Although the improvements in electrical circuitry and stunning cabinet designs (length, grounding, capture, grill, and brine delivery) have been significant, the stunning process still requires constant monitoring. Following are some guidelines to help you evaluate your stunning system:

- Minimize bird struggle after shackling and prior to stunning (use breast rub-pads and curtains to calm birds; darken or dim lights in the hanging-stunning-bleeding area, except for the back-up killer; reduce pre-stun shocks; minimize turns and elevations of the overhead conveyor system)
- Make sure birds are “captured” immediately as they enter the stunning cabinet (use guide bars and rods to contain the birds; adjust height based on bird size; assure continuous grounding of the shackles; use a fine mist to increase the conductivity of feet-shackle contact point – but do not wet the birds; maintain a steady level of salt concentration throughout the shift)
- Birds exiting the stunner cabinet normally exhibit shuddering (tremors) with necks arched, eyes open and fixed, and wings tucked-in. Electrical stunning should only cause temporary (< 1 min) unconsciousness. However, with the ensuing neck cutting process (7-12 sec post-stunning) and rapid blood loss resulting from the severing of both carotid arteries and jugular veins, prompt and irreversible brain failure often ensues rapidly.
- Check the controllers often (voltage and amperage) to verify process control.

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