LA CUMBRE AVÍCOLA LATINOAMERICANA

INTERNATIONAL IPPE PRODUCTION & PROCESSING EXPO

# Stunning Best Management Practices

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In collaboration with:

INTERNATIONAL IPE POULTRY EXPO

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# Why do we stun poultry?

- Render the birds unconscious prior to cutting the neck
- Eliminate the potential pain caused by a neck cut
- Position the birds correctly for an automated neck cut

# What are our stunning options?

- Electrical waterbath stunning
  - Low voltage / high frequency – typical for United States
  - High voltage / low frequency – typical for European Union
- Controlled atmosphere stunning
  - Carbon dioxide
  - Low atmospheric pressure
- Others
  - Head only electrical stunning
  - No stunning

# Stunning Best Management begins at lairage

- Birds should be given some time to rest following transport
  - 30 minutes or so
- Birds should not remain in lairage for extended periods of time
  - < 2 hours if possible
  - First in first out
- Bird comfort during lairage should be considered
  - Cooling in hot environments
  - Heating in cold environments

# Stunning Best Management Electrical Stunning

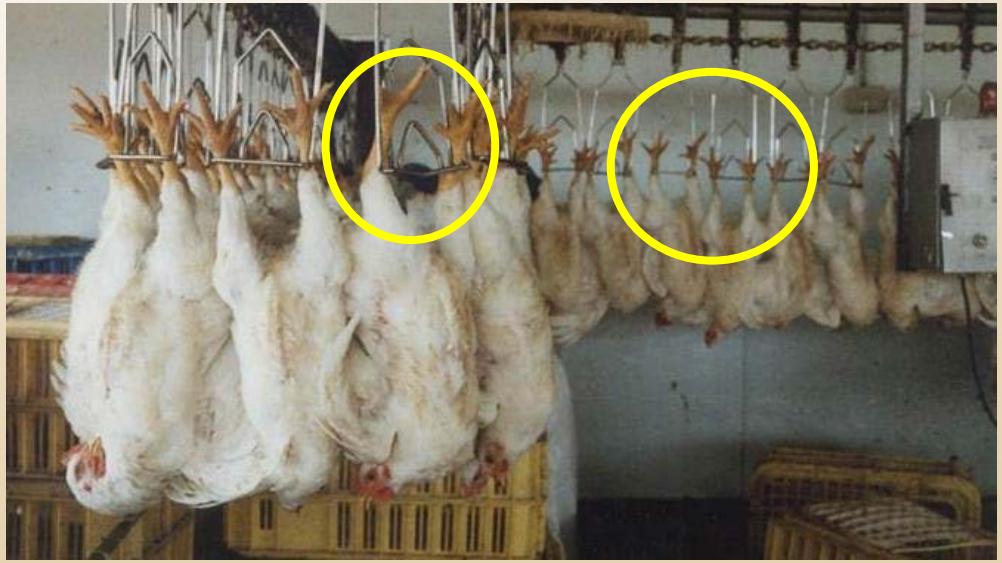
- Removal from transport modules
  - Tipping systems
  - Drawer/tray systems

# Stunning Best Management Electrical Stunning

- Shackling room environment
  - Lighting – low and/or blue lighting
  - Temperature – comfortable for both birds and personnel
  - Noise – kept to a minimum to avoid stressing the birds

# Stunning Best Management Electrical Stunning

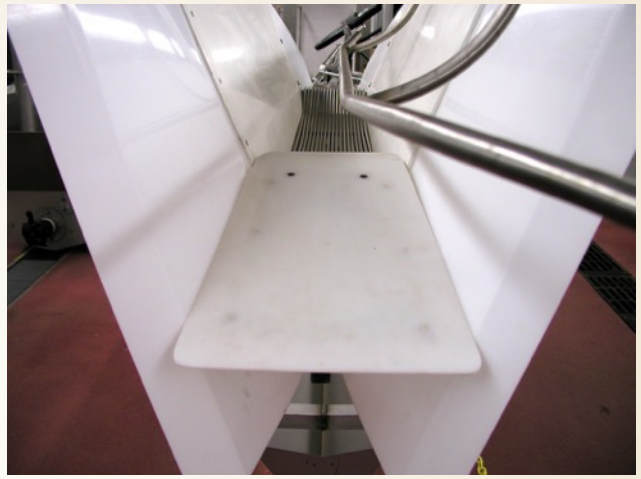
- Shackling
  - Handle birds with care
  - Shackle by grasping both legs and shackle both legs
  - Shackle needs to be the appropriate size for the size of the birds being slaughtered
  - Only one bird per shackle
  - Do not skip shackles
  - Do not shackle dead, sick, injured, or cull birds



# Stunning Best Management
# Electrical Stunning

- Shackling to stunning
  - Minimize the time/distance the birds travel between shackling and stunning
  - Lighting should remain low
  - Shackle line should be as straight as possible avoiding abrupt turns, dips, or bumps
  - A breast bar can be used for a supportive or calming effect

# Stunning Best Management Electrical Stunning



- Waterbath stunning
  - Prior to entry into the stunner, shanks should be sprayed with saline water
  - Avoid pre-stun shock
    - Bird's head needs to be the first point of contact with electrified water
    - Entry ramp electrically isolated from the waterbath
    - Prevent water overflow at the entry point
    - Configure shackle line so birds are drawn up the ramp

# Stunning Best Management Electrical Stunning

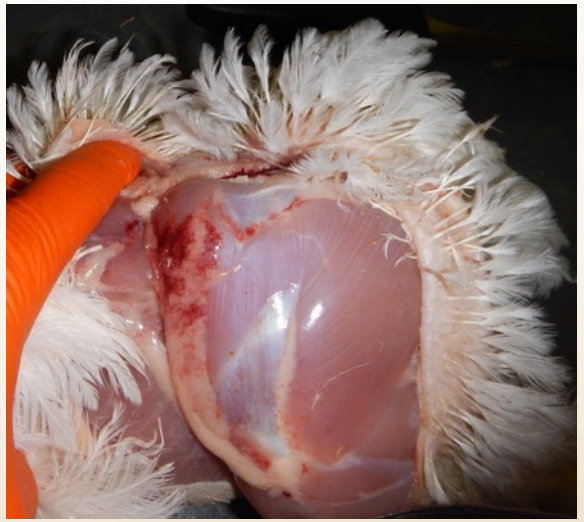
- Waterbath stunning
  - Adjust the height of the stunner based on the size of the birds
    - Monitor for each flock
    - Initial height should allow the head and neck to contact the water
    - Do not submerge the birds up to the breast
  - Shackles must remain in constant contact with the guide bar to complete the circuit
  - Ensure a proper stun duration
    - 10-12 seconds for low voltage stunning
    - Approximately 5 seconds for high voltage stunning

# Stunning Best Management Electrical Stunning

- Waterbath stunning
  - Monitor stunning effectiveness
  - Properly stunned birds
    - Relaxed posture, straight/slightly curved neck, minimal muscle spasms
  - Not properly stunned birds
    - Arched head, rhythmic breathing, wing flapping
    - Do not confuse with muscle spasms

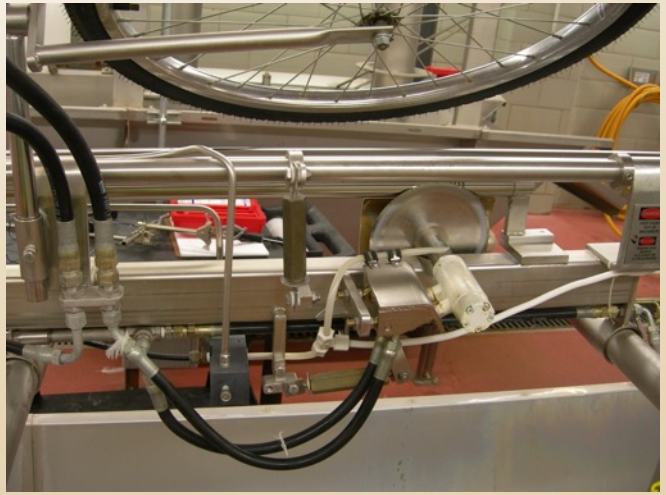
# Stunning Best Management
# Electrical Stunning

- Waterbath stunning
  - Over-stunned birds
  - Review and adjust milliamps per bird



# Stunning Best Management Electrical Stunning

- Kill machine
  - Adjust height based on bird size
  - Adjust guide bars to allow proper orientation of the head and neck for the desired cut
  - Sharpen or replace the blade as needed to maintain a clean cut
- Backup personnel are Absolutely Necessary
  - Visually ensure each bird has received a proper neck cut
    - Flow of blood
    - Presence of head



# Stunning Best Management
# Controlled Atmosphere Stunning

- Birds remain in their transport container during the stunning process
- Must identify DOAs prior to shackling
  - Drawer/tray systems – monitor prior to or following entry into the stunner
  - Whole transport module systems – must remove DOAs following stunning
    - Based on the presence of rigor

# Stunning Best Management
# Controlled Atmosphere Stunning

- Induction of unconsciousness is not instantaneous
  - Birds will exhibit some degree of distress
    - Head shaking
    - Gasping
    - Neck stretching
  - Should <u>not</u> exhibit severe behaviors
    - Severe wing flapping
    - Attempts to escape the system

# Stunning Best Management Controlled Atmosphere Stunning

- Severe behaviors
  - Adjustment of stunning parameters
    - Lower initial carbon dioxide concentrations
    - Slow the decrease in air pressure
  - Consider the ambient conditions
    - Temperature and humidity
    - Are the birds panting - taking in carbon dioxide more quickly?

# Stunning Best Management Controlled Atmosphere Stunning

- Some convulsions will occur after the birds are unconscious
  - Severe convulsions – carcass damage
    - Broken wings
    - Broken bones
    - Flips
  - Adjustment of stunning parameters
    - Slow the increase of carbon dioxide
    - Slow the decrease in air pressure

# Stunning Best Management
# Controlled Atmosphere Stunning

- Controlled atmosphere stunning is usually unrecoverable
  - If birds are recovering
  - Adjustment of stunning parameters
    - Carbon dioxide
      - Increase carbon dioxide concentrations in the final stage
      - Increase time spent in the final stage of stunning
    - Low atmospheric pressure
      - Increase time spent in the final stage of stunning

# Stunning Best Management Practices

- Any deviation from proper shackling and well managed stunning and bleeding should be immediately addressed.
- Regardless of which type of stunning is used (electrical or controlled atmosphere), when properly monitored, maintained, and operated each system is effective and humane for the slaughter of poultry.

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