



MODULE NO 17: STUNNING AND SLAUGHTERING OF POULTRY



The welfare of birds during slaughter is protected by law and must be integral to every processing plant's Standard Operating Procedure

Stunning methods should be

- minimize the risk of causing pain
- fear or distress to the birds.
- Stunning must render the birds immediately insensible to pain
- excitement or distress.



STUNNING METHOD

Poultry may be stunned by

1. Electronarcosis
2. percussive stunning (captive-bolt)
3. controlled atmosphere (gas) stunning.



ELECTRICAL STUNNING

- This is achieved by passing a current through the bird that causes immediate loss of consciousness and sensibility to pain.
- Hand-held electrodes for small flocks or through an electrified water bath where larger throughputs are required.
- The current must be of sufficient strength and duration to ensure that the birds are rendered.

SIGNS OF AN EFFECTIVE ELECTRICAL STUNNING



- Neck arched with head held vertically
- No rhythmic breathing
- Rigidly extended legs
- Constant, rapid body tremors
- Absence of a third eyelid reflex wings held tightly against body

CONTROLLED ATMOSPHERE STUNNING (CAS)

- Birds killed by exposure to appropriate anoxic gas mixtures

The signs of an effective stunning:-

- A relaxed and recumbent body
- Absence of the nictitating membrane (third eyelid) reflex
- Fully dilated pupils
- Absence of rhythmic breathing.

CONCUSSION STUNNING



Achieved by a blow to the head using a captive-bolt instrument

Signs of an effective stun:-

- Absence of rhythmic breathing
- Uncontrolled wing flapping
- Leg flexion and extension
- Absence of vocalization

NECK DISLOCATION



It cause rupturing of the spine and concussion

- Methods that crush the neck do not cause concussion
- Their use is therefore NOT recommended.
- It is important that a technician applying neck dislocation is mentally prepared



SLAUGHTER OF "MEAT-TYPE" BIRDS

- Live Hang
- Electrical Immobilization
- Neck Cutting
- Bleed Out Tunnel and Scald Tank
- Ruptured Blood Vessels
- Gas Stunning
- Slaughter



SLAUGHTER LAWS FOR POULTRY

"Humane" Poultry Slaughter Bills Introduced in the U.S. in the 1990s

1. 1957 Poultry Products Inspection Act
1. 1906 Meat Inspection Act
2. 1958 Humane Methods of Slaughter Act.



FUTURE PROSPECTS

❖ Federal Legislation in the U.S. Improved by

1. Slaughter Act (1958)

2. 1957 Poultry Products Inspection Act

3. State Anti-Cruelty Laws in the U.S.

4. Eliminate/Prohibit Electrical "Stunning"

5. Pre-Stun Shocks

6. Gas Stunning



Suggested readings

- Gregory N.G (2005). Recent concerns about stunning and slaughter. *Meat Science* 70:481–491
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- James C., Vincen C., de Andrade Lima T.I., James S.J. (2006) .The primary chilling of poultry carcasses a review. *International Journal of Refrigeration* 29: 847- 862



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