

Guidelines for Pre-slaughter Care and Ante-mortem Inspection of Slaughtered food Animals

Acknowledgement:

We would like to acknowledge the committee of National Egyptian Guidelines for Veterinary Medical Interventions, Egyptian Health Council for adapting this guideline.

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Scope:

Before slaughtering, all food animals are evaluated at ante-mortem inspection to make sure that they are suitable for human consumption. Signs of contagious or zoonotic diseases are observed as well as of animal welfare being compromised. The official veterinarian at the slaughterhouse is responsible for performing the inspection.

Objectives:

1. To screen all food animals destined to slaughter.
2. To ensure that food animals are properly rested and that proper clinical information, which will assist in the disease diagnosis and judgment is obtained.
3. To reduce contamination on the slaughtering floor by separating the dirty animals and condemning the diseased ones if required by regulation.
4. To ensure that injured animals or those with pain and suffering receive emergency slaughter and that animals are treated humanely.
5. To require and ensure the cleaning and disinfection of trucks used to transport livestock.

Pre-slaughter care:

- It must cover four critical areas which are farms, transportation vehicles, markets and lairages.
 1. On **farm level**, animals must be handled carefully to avoid damaged carcasses later, for example the presence of vaccination abscesses, bruising or even sending animal to slaughterhouse without a sufficient withdrawal period of a given drug.
 2. **Transportation** process and vehicles are one of the most stressful factors on animals that affect the animal normal physiology and meat quality afterwards. To ensure that animals are

transported with the least stress, transportation vehicles should be suitable for the animal under transportation, well ventilated, easily cleaned & disinfected, non-slippery, animals in the vehicle should be in transverse position and the speed of the lorry not more than 50 km/hr.

- **Problems occurring during transportation including:**
 - a. **Loss of weight:** There are two types of weight loss, **gross loss** which occurs due to normal body excretions and **proper loss** which occurs due to dissolution of muscle glycogen. Loss of weight is affected by factors as season, body condition, sex, and journey duration.
 - b. **Transit fever:** This condition occurs due to bad weather and transportation. It is manifested by fever, coughing and diarrhea during ante-mortem inspection, while at post-mortem inspection ill bled carcass and lobar pneumonia appear.
 - c. **Transit tetany:** It affects cows in the later stage of pregnancy particularly in warm weather and recumbent position with no post-mortem evidence of the condition.
 - d. **Transit erythema:** Affect pigs after long journey which is manifested by red patches on the skin and s/c fat.
 - e. **Death of the animal:** It occurs usually in sheep & pigs due to inadequate ventilation, high temperature in an overcrowded vehicle.
 - f. **Injuries (Fracture /bruising):** Which occurs mainly due to rough handling.
 - g. **Stress:** Generally, stress causes increase in adrenaline levels in blood which raises the heart rate and blood pressure resulting in constricted blood vessels which may rupture lately causes ecchymosed or petechial hemorrhages.
- 3. In markets animals are usually under continuous stress from surroundings, noises, and different stimuli.
- 4. Lairage is the place where animal can be rested prior to slaughter including:
 - a. **Resting:** The slaughterhouse hygiene regulations a maximum resting period of 72 hours to enable animal recovery from fatigue and allow muscle glycogen restore.
 - b. **Feeding:** It is important to supply animals with adequate feeding to restore muscle glycogen and ensure low ultimate pH, animals must be fed every 12 hours.
 - c. **Watering:** Animal must be provided with continuous supply of potable water which facilitates the dressing process and wash out GIT bacteria.
 - d. **Fasting:** Animal must be fasted 12 hours before slaughter with continuous ultimate supply of potable water.
 - e. **Washing:** Removal of dirt from the hide and feet of the animal will reduce the source and incidence of carcass contamination.

Ante-mortem inspection of slaughter animal

- **Procedures or technique of ante-mortem inspection**
 1. Owner's name.
 2. The number of animals in the lot and arrival time.
 3. Definition of the animal species, age, sex.
 4. Clinical signs (temperature, pulse, and mucous membrane).
 5. Pregnancy diagnosis.
 6. General condition of the animal (clean, dirty, fatigue).
 7. Nutritive state (poor, emaciated).

- **Some of the abnormalities that are checked during ante-mortem inspection:**
 1. **Abnormalities in respiration:** If the breathing pattern is different from the normal animal should be segregated as a suspect.
 2. **Abnormalities in behavior:** It is manifested by walking in circles or showing an abnormal gait or posture, pushing its head against a wall, acting aggressively, and showing a dull and anxious expression in the eyes.
 3. **Abnormalities in gait:** An abnormal gait in an animal is associated with pain in the legs, chest or abdomen or is an indication of nervous disease.
 4. **Abnormalities in posture:** abnormal posture in an animal is observed as tucked up abdomen or the animal may stand with an extended head and stretched out feet.
 5. **Abnormalities in confirmation** are manifested by swellings, enlarged joints, umbilical swelling, enlarged sensitive udder, enlarged jaw and bloated abdomen.
 6. **Abnormal discharges or protrusions**
 7. **Abnormal colours** such as red areas on light coloured skin (inflammation), dark blue areas on the skin or udder (gangrene).
 8. **Abnormal odours** are difficult to be detected on routine ante-mortem inspection.

- **Decisions of Ante-mortem Inspection**
 1. **Approved for normal slaughter:** Ante-mortem inspection has revealed no evidence of any abnormal condition or disease and the animal is adequately rested.
 2. **Animal should not enter the plant:** Animal show evidence of septicemia or other conditions, which on post-mortem requires total condemnation and animal disease that represents a hazard for meat handlers.
 3. **Slaughter under special precautions:** If at ante-mortem inspection, the animals diseased, which at post-mortem, require condemnation.
 4. **Delayed slaughter:** If the animal is affected by condition, which temporally limits its fitness for human consumption.
 5. **Emergency slaughter:** The animal suffers from acute pain.

- **Importance or significance of ante-mortem inspection**
 1. To safeguard the health of consumer as there are certain diseases not intended with gross lesions in the carcass, although they are harmful.

2. Facilitates post-mortem examination and direct attention of inspector to part or organ to be examined.
3. Prevent infection of butcher with contagious diseases.
4. Immediate detection and isolation of animals affected with notifiable disease.
5. Detection of diseases which cannot be detected in post-mortem.
6. Detection and separation of diseased animals.
7. Detection of emergency slaughtered animals.

- **Diseases and conditions encountered at ante-mortem inspection:**

1. **Cattle:** Actinomycosis, actinobacillosis, emaciation, black leg, tumors, listeriosis, ringworm, pseudorabies, mange, metritis, mastitis, retained placenta, milk fever.
2. **Calves:** Immaturity, arthritis, calf diphtheria, ringworm, cowpox, white scour, and salmonellosis.
3. **Sheep:** Emaciation, sheep scab, tetanus, FMD, caseous lymphadenitis, scrapie, and pneumonia.
4. **Swine:** Atrophic rhinitis, gut edema, rabies, pseudo-rabies, actinomycosis of udder, hernia, tumors, swine fever, swine erysipelas, and tail necrosis & abscess formation.

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