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BELIZE NATIONAL  
CODE OF PRACTICE FOR FRESH MEAT

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The preparation of this standard for the Standards Advisory Council established under the Standards Act of 1992, was carried out under the supervision of the Bureau's Technical Committee for Food and Food Related Products, which at the time comprised of the following members:

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## 0 FOREWORD

- 0.1 In order to ensure that fresh meat reaches the consumer in as fresh and clean a state, it is necessary to maintain certain conditions which will prevent the product from incidental contamination due to unhygienic conditions and improper handling etc.
- 0.2 This Code has therefore been formulated to assist the industry in supplying safe, sound, wholesome meat to the consumer.
- 0.3 In the preparation of the document, considerable assistance has been derived from:  
CAC/RCP 11-1976, Rev. 1 (1993) - Code of Hygienic Practice for Fresh Meat - Codex Alimentarius Commission.  
CP 13: 1979, Code of Practice For Fresh Meat, Barbados National Standards Institute.

## 1 SCOPE

This Code of Hygienic Practice applies to fresh meat intended for human consumption, whether by direct sale or through further processing. It contains the minimum requirements of meat hygiene up to and including the transport of meat and is intended to assure a healthful and wholesome meat supply.

## 2 TERMINOLOGY

- 2.1 **“Abattoir”** means any premises that is approved and registered by the Public Health Bureau and the Animal Health Authority in which animals are slaughtered and drained.
- 2.2 **“Animal Health Authority”** means the official authority charged by the government to address issues of Veterinary Public Health importance.
- 2.3 **“Carcase”** means the body of any slaughtered animal after bleeding and dressing.
- 2.4 **“Cleaning”** means the removal of soil, food residues, dirt grease or other objectionable matter.
- 2.5 **“Condemned”** in relation to a slaughter animal or meat, means inspected and judged as, or otherwise officially determined to be, unfit for human consumption and requiring destruction. Total condemnation **means** the entire carcass and offal are condemned (Judgement Symbol T\*). Partial condemnation means only parts of the slaughtered animal are condemned,

while others are judged otherwise (Judgement Symbol D\* for the condemned, diseased or defective parts).

T\* = Total Condemnation

D\* = Diseased/Defective

- 2.6 **“Contamination”** means objectionable matter, and includes substances and/or microorganisms that make fresh meat unsafe and/or unwholesome.
- 2.7 **“Disease or defect”** means a pathological change or other abnormality.
- 2.8 **“Disinfection”** means the application of hygienically satisfactory chemical and/or physical agents and processes to clean surfaces with the intention of eliminating microorganisms.
- 2.9 **“Dressed” or “Dressing”**
- (a) In relation to slaughtered animals except for pigs, sheep and lambs, goats and kids, means the removal of head, hide or skin, viscera (including or not including kidneys), genital organs, urinary bladder and feet up to the carpal and tarsal joints, and udders of lactating animals or animals that have calved or are in advanced pregnancy; and
  - (b) in relation to slaughtered pigs, means the removal of hair and bristles or skin, claws, eyelids, viscera (including kidneys), genital organs, urinary bladder, udders in the case of lactating animals or animals that have farrowed or are in advanced pregnancy, and the external acoustic duct unless in respect of that part an alternative effective form of cleaning is carried out; and
  - (c) in relation to sheep and lambs, goats and kids, means the removal of the head (except in the case of young lambs and young kids), the pelt or skin including or not including that of the head, viscera (including or not including the kidneys), genital organs, urinary bladder and feet up to the carpal and tarsal joints, and udders of lactating animals or animals that have given birth or are in advanced pregnancy; and
  - (d) in relation to cattle, pigs and solipeds includes where necessary splitting of the carcass. To split means dividing the carcass lengthwise along the centre of the vertebral column.
- 2.10 **“Edible offal”** in relation to slaughtered animals’ means offals that have been passed as fit for human consumption.

- 2.11 **“Establishment”** means any premises other than an abattoir that is approved and registered by the Public Health Bureau in which fresh meat is prepared, handled, packed or stored.
- 2.12 **“Fit for human consumption”** in relation to meat means meat that has been passed and appropriately marked or stamped by an inspector and in which no changes due to disease, decomposition or contamination have subsequently been found.
- 2.13 **“Fresh meat”** means meat that has not yet been treated in any way other than by modified atmosphere packaging or vacuum packaging to ensure its preservation, except that if it has been subjected only to refrigeration, it continues to be considered fresh for the purpose of this Code.
- 2.14 **“HACCP”** – Hazard Analysis Critical Control Point is a system which identifies specific hazard(s) and preventative measures for their control.
- 2.15 **“Inedible”** means inspected and judged to be, or otherwise officially determined to be, unfit for human consumption but not requiring destruction.
- 2.16 **“Inspector”** means a properly trained officer appointed by the Public Health Bureau or the Animal Health Authority for the purpose of meat inspection and control of hygiene.
- 2.17 **“Manager”** in relation to an abattoir or establishment includes any person for the time being responsible for the management of the abattoir or establishment.
- 2.18 **“Meat”** means the edible part of any animal slaughtered and includes edible offal.
- 2.19 **“Offal”** means brain, liver, gut, paunches, udders, sweetbreads (thymus, pancreas) tripe, spleen, lungs, salivary glands, lymphatic glands, testicles, uterus, and ovaries, skin other than pork rind, cartilage and bony tissue.
- 2.20 **“Potable water”** means water that is suitable for regular use for human consumption.
- 2.21 **“Protective clothing”** means clean special garments intended to prevent the contamination of meat and used as outerwear by persons in an abattoir or establishment and includes head coverings and footwear.
- 2.22 **“Public Health Bureau”** means the official authority charged by the government with the control of meat hygiene, including meat inspection.

- 2.23 **“Refrigeration Temperature”** means  $1^{\circ}\text{C} - 6^{\circ}\text{C}$ .
- 2.24 **“Residues”** mean residues of veterinary drugs, pesticide residues, and contaminants, as defined for the purpose of this Code<sup>1</sup>.
- 2.25 **“Risk analysis”** includes risk assessment, risk management and risk communication, all of which are essential to the decision making process that determines acceptable levels of risk, and the implementation of those decisions.
- 2.26 **“Safe and wholesome”** refers to meat that has been passed as fit for human consumption using the criteria that it:
- (a) will not cause food borne infection or intoxication when properly handled and prepared with respect to the intended use;
  - (b) does not contain residues in excess of established Codex Code limits;
  - (c) is free of contamination;
  - (d) has been produced under adequate hygiene control; and
  - (e) has not been treated with illegal substances as specified in relevant national legislation.
- 2.27 **“Seal”** means any mark or stamp approved by the Public Health Bureau and the Animal Health Authority and also includes any tag or labels bearing such mark or stamp.

<sup>1</sup> **Veterinary drug** means any substance applied or administered to any food-producing animal, such as meat or milk-producing animals, poultry, fish or bees, whether used for therapeutic, prophylactic or diagnostic purposes or for modification of physiological functions or behaviour.

**Residues of veterinary drugs** include the parent compounds and/or their metabolites in any edible portion of the animal product, and include residues of associated impurities of the veterinary drug concerned.

**Pesticide** means any substance intended for preventing, destroying, attracting, repelling, or controlling any pest including unwanted species of plants or animals during the production, storage, transport, distribution and processing of food, agricultural commodities, or animal feeds or which may be administered to animals for the control of ectoparasites. The term includes substances intended for use as a plant-growth regulator, defoliant, desiccant, fruit-thinning agent, or sprouting inhibitor and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport. The term normally excludes fertilizers, plant and animal nutrients, food additives, and animal drugs.

**Pesticide Residue** means any specified substance in food, agricultural commodities, or animal feed resulting from the use of a pesticide. The term includes any derivatives of a pesticide, such as conversion products, metabolites, reaction products, and impurities considered to be of toxicological significance.

**Contaminant** means any substance not intentionally added to food, which is present in such food as a result of the production (including operations carried out in crop husbandry, animal husbandry and veterinary medicine), manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food or as a result of environmental contamination. The term does not include insect fragments, rodent's hairs and other extraneous matter.

- 2.28 **“Slaughter animal”** means any animal brought into an abattoir for slaughter.

### **3 REQUIREMENTS CONCERNING SLAUGHTER ANIMALS**

- 3.1 Where a person has reason to believe that, as a result of any accident or by reason of any defect or disease, or by the administration of any drug or chemical, or any treatment the meat derived from any animal might not, be suitable for human consumption, he should not send the animal to an abattoir unless the animal is certified by an inspector so that the animal in his opinion is suitable to be slaughtered for human consumption.
- 3.2 There should be in place, applying to areas where slaughter animals are produced and through which they pass en-route to an abattoir, a government administered regulatory programme mandating measures related to the health of animals and the safety and wholesomeness of meat derived from those animals. The regulatory programme should be soundly based in law and should include measures to:
- (a) prevent the entry of exotic diseases of public health or animal health importance; and
  - (b) provide surveillance for endemic diseases of significant public health or animal health importance, and apply control and/or eradication programmes as appropriate.
- 3.3 There should be in place, applying to areas where slaughter animals are produced and through which they pass en-route to an abattoir, a government administered regulatory programme mandating measures to control the use of chemical substances (such as veterinary drug, pesticides, and other agricultural chemicals) or contaminants that may give rise to harmful levels of residues or contaminants in fresh meat. Systematic monitoring and surveillance to test the effectiveness of the regulatory programme is an essential component.

### **4 TRANSPORT OF SLAUGHTER ANIMALS**

#### **4.1 Construction of conveyance**

4.1 .1 Livestock transport vehicles should be so constructed that:

- (a) animals can be loaded and unloaded easily with minimal risk of injury;

- (b) animals of different species are physically separated during transport;
- (c) soiling by excreta deposited on the vehicle floor is minimized by the use of floor gratings or similar devices;
- (d) ventilation is adequate;
- (e) where there is more than one deck, animals conveyed on the lower deck should be protected by an impervious floor below the grating of the upper deck; and
- (f) it is easy to clean and disinfect.

#### **4.2 Maintenance of conveyance**

4.2.1 Vehicles used to transport animals to any abattoir should be maintained in a sound state of repair. They should also be maintained in a clean and sanitary condition and if necessary disinfecting as soon as practicable after the animals have been unloaded.

## **5 ESTABLISHMENT, FACILITIES AND OPERATING REQUIREMENTS**

### **5.1 Establishment Construction and Lay-out**

#### **5.1.1 Construction**

- (a) be located in areas not subjected to regular and frequent flooding and free from objectionable odours, smoke, dust or other contaminants.
- (b) have adequate working space for the satisfactory performance of all operations.
- (c) be soundly constructed and ensure adequate ventilation, good natural or artificial lighting and easy cleaning;
- (d) with respect to both the building and the facilities it contains, be kept in good repair at all times;
- (e) be laid out and equipped so as to facilitate proper supervision of meat hygiene, including the carrying out of meat inspection.

- (f) be constructed so as to protect against the entrance and harbouring of insects, birds, rodents or other vermin.
- (g) have a physical separation between departments in which edible material is handled and departments set aside for the handling of inedible material;
- (h) have a physical separation between departments in which edible material is handled and places where animals are held;
- (i) in all rooms, other than rooms provided for the accommodations of workers and inspectors have:
  - (i) floors that are of water-proof, non-toxic, non-absorbent materials and that are easy to clean and disinfect. They should be non-slip and without crevice and, except in the case of rooms where meat is frozen or stored, should slope sufficiently for liquids to be drained off to trapped outlets protected by a grill.
  - (ii) walls that are of waterproof, non-toxic, non-absorbent material, light coloured, easy to clean and disinfect, smooth, and of a height appropriate to the operation conducted;
  - (iii) ceilings should be so designed and constructed as to prevent the accumulation of dirt and condensation and should be easy to clean.
- (j) Abattoirs and establishments should have an efficient effluent and waste disposal system which should at all times be maintained in good order and repair. All effluent lines (including sewer systems) shall be large enough to carry peak loads. All lines shall be water-tight and have adequate traps and vents. Catch-basins, traps, save-alls and sumps should at all times be kept separate and apart from any department in which meat is prepared, handled, packed or stored. Disposal of waste should be effected in such a manner as to avoid contamination of potable water supplies. The effluent lines and the manner of waste disposal should be approved by the Public Health Bureau and the Department of Environment.

**5.1.2 *Abattoirs should include the following:***

- 5.1.2.1 Adequate and well equipped areas reserved for the use of the meat inspection service.
- 5.1.2.2 Suitable accommodation for animals that:
- (i) is large enough to house all animals that are to be held;
  - (ii) is covered, except where climate permits otherwise;
  - (iii) is so arranged and fitted out as to permit the proper inspection of animals before slaughter;
  - (iv) has a sufficient number of pens to facilitate ante- mortem inspection;
  - (v) is suitably constructed and maintained;
  - (vi) is paved or slatted and is well drained;
  - (vii) is provided with an adequate water supply;
  - (viii) is so provided with hose connection points as to enable lairages, yards, races, unloading ramps and livestock transport vehicles to be cleaned; and
  - (ix) has suitable restraining devices for the close examination of animals.
- 5.1.2.3 Separate facilities for the physical isolation of sick animals or animals suspected of being sick. These facilities should be covered if climatic conditions require this and should be lockable. The drains of these pens should not connect with any of the open drains running through the remaining lairages and yards.
- 5.1.2.4 Slaughter and dressing rooms, which enable the work to be performed in a satisfactory manner. A special area should be reserved for pigs where appropriate. If other classes of animals are slaughtered or dressed at the same time as pigs,

facilities for scalding and dehairing of pigs should be situated in an area separate from other areas.

- 5.1.2.5 Equipment in slaughter and dressing area being constructed of impermeable, corrosion-resistant materials, capable of being easily cleaned, and designed, constructed and installed such that meat will not touch the floor.
- 5.1.2.6 A separate room for emptying and rinsing the digestive organs.
- 5.1.2.7 A separate room for the further preparation of emptied and rinsed digestive organs, where these are to be prepared for human consumption.
- 5.1.2.8 If necessary separate facilities for the preparation of edible fats and if not removed daily from premises, proper facilities for their storage.
- 5.1.2.9 A separate room for the storing of hides, horns and hooves and inedible animal fats unless these are removed daily from the abattoir.
- 5.1.2.10 Refrigerated rooms suitable for the effective cooling and storage of meat. The chill room shall be maintained at a temperature not less than 0°C (32°F) and not more than 5.5°C (42°F) and the freezing room for storage at temperature not higher than -18°C (0°F).
- 5.1.2.11 The slaughter of suspect animals shall be in accordance with national legislation. Special facilities capable of being locked solely for the slaughter of such animals and the holding of meat derived therefrom shall be required. These facilities should be located within easy reach of the pens reserved for isolation of such animals. Meat passed as being fit for human consumption in this room should be conveyed to the edible section of the abattoir or establishment in such a manner as to prevent contamination. These special facilities should not be required in abattoirs where the killing of such animals is prohibited by the rules of the Public Health Bureau.

- 5.1.2.12 Separate facilities in the form of a separate room or portion of a room capable of being controlled and capable of being locked, as required, for storing suspect meat and designed so as to prevent the risk of contaminating other meat and the risk of substitution.
- 5.1.2.13 Room capable of being locked and suitable for the secure holding of condemned meat, unless other adequate arrangements for disposal exist.
- 5.1.2.14 Facilities for the control of the entrances and exits.
- 5.1.2.15 Suitably located facilities for the adequate cleaning and disinfecting of vehicles.
- 5.1.2.16 Suitable facilities for the hygienic collection and subsequent disposal of manure.

**5.1.3 *Boning and Cutting Up Areas:***

Establishments in which meat is boned-out and cut-up should include the following:

- 5.1.3.1 Adequate and well equipped areas reserved for the use of the meat inspection services.
  - 5.1.3.2 Refrigerated room or rooms for the holding of meat.
  - 5.1.3.3 Rooms for boning and cutting physically separated from other rooms. The packing of boned-out and cut-up meat should take place in the same room where it is boned and cut-up, but where this is not possible the packing may take place in a separate room. These rooms should be maintained at a temperature of about -10°C (14°F).
- 5.1.4 ***Refrigeration facilities:-*** The construction and lay-out of any chilling room or freezer should satisfy the requirements of this Code.
- 5.1.5 ***Sanitary facilities and Controls***
- 5.1.5.1 Those operations which carry a risk of contamination of meat suitable for human

consumption should be sufficiently separated from meat to avoid the risk of such contamination

- 5.1.5.2 Rooms, equipment and utensils provided for slaughtering and dressing should be used for that purpose only and not for boning-out, cutting-out cutting-up, holding or other handling of meat.
- 5.1.5.3 Abattoirs and establishments should be laid-out and equipped so as to ensure that meat does not come into contact with floors, walls or other fixed structures, except those which are specifically designed for contact with meat.
- 5.1.5.4 Slaughtering rooms should preferably be fitted with equipment enabling animals to be bled and carcasses to be dressed in a hanging position; if however, metal cradles are used for flaying, they should be high enough to ensure that the meat cannot touch the floor.
- 5.1.5.5 Abattoir and establishments should be equipped with an over-head rail for transporting meat so installed as to prevent contamination of the meat.
- 5.1.5.6 An ample supply of potable water under adequate pressure should be provided with adequate facilities for its storage and distribution and with adequate protection against contamination and pollution.
  - (a) Except as provided in (b) all water used in abattoirs and establishments should be potable.
  - (b) Non-potable water may be used for such purposes as producing steam refrigeration and fire control. Such water should be carried in completely separate lines, identified preferably by colour and with no cross connection or back-siphonage with the lines carrying potable water.
- 5.1.5.7 An adequate supply of hot potable water at not less than 82°C (180°F) should be available at all times during working hours.

5.1.5.8 Adequate natural or artificial lighting which does not alter colours should be provided throughout the abattoir or establishment. The intensity should not be less than:

540 lux (50 foot candles) at all inspection points;

220 lux (20 foot candles) in work rooms;  
and

110 lux (10 foot candles) in other areas.

Light bulbs or light fixtures located over meat should be of the safety type or otherwise protected to prevent contamination of meat in case of breakage.

5.1.5.9 Adequate ventilation should be provided to prevent excessive heat, steam and condensation and ensure that the air of premises is not contaminated with odours, dust, vapour or smoke. Ventilation openings should be screened. Windows should be fitted with whole panes and those which open should be screened. The screens should be made so as to be easily movable for cleaning. Internal window sills, if present, should be sloped to prevent use as shelves.

5.1.5.10 All doors should be sufficiently wide and those opening from departments where edible materials is handled, unless provided with an effective and operating air screen, should be solid, as far as practicable, self-closing, or snug-fitting and of the double action doors.

5.1.5.11 All stairs located in any room used in any department where edible material is handled should be so constructed that:

(a) They can be easily cleaned and no contamination can be caused by material falling from them;

- (b) They should have side curbs that are at least 10 cm in height measured at the leading edge of the treads.
- 5.1.5.12 Lift cages should be so constructed as to afford adequate protection of the meat against contamination and it and its shafts are capable of being effectively cleaned.
- 5.1.5.13 Platforms, ladders, chutes and similar equipment in any room used for the preparation of meat should be constructed so as to be capable of being effectively cleaned and should consist of material which is resistant to fracture abrasion or corrosion and which can be effectively cleaned. Where chutes are provided they should be constructed with inspection and cleaning hatches.
- 5.1.5.14 All rooms used for slaughtering, dressing, deboning, preparation, packing or other handling of meat should be equipped with adequate facilities for washing hands, furnished with waste water lines leading to drains and conveniently located for the use of personnel during operations. Taps of hand-washing facilities should be of a non-hand operable type. An adequate supply of odourless liquid soap or other cleansing agents should be provided.
- 5.1.5.15(a) All rooms used for slaughtering and dressing, boning, preparing, packing or other handling of meat should be equipped with adequate facilities for cleaning and disinfecting implements, conveniently located for the use of personnel during operations. These facilities are for use exclusively in the cleaning and disinfection of knives, steels, cleavers, saws and other implements.
  - (b) All facilities for cleaning and disinfecting implements should be of such nature and size as to permit proper cleaning and disinfection of implements. These facilities should be constructed of corrosion-resistant materials and should be capable of being easily cleaned.
  - (c) All facilities for cleaning and disinfecting of implements should be fitted with suitable means of

supplying water in a sufficient quantity at a temperature of not less than 82°C (180°F) at all times while animals are being slaughtered or dressed or meat is being handled in that part of the abattoir or establishment.

**5.1.6 *Every abattoir and establishment should include the following amenities:***

- (a) Facilities for employees: adequate changing room accommodation, drying room, lunch room, toilets with flushing water closets, showers and hand-washing facilities to any work areas. Hand-washing facilities with hot and cold water with taps of a non-hand operable type and suitable hygienic means of drying the hands should be provided adjacent to every toilet. Where paper towels are used, a sufficient number of dispensers with paper towels and receptacles for used towels should be provided adjacent to each washing facility. Waste from these facilities should not join the plant effluent system prior to the final save-all; and
- (b) Facilities for meat inspection personnel: adequate changing room accommodation, drying room, lunch room, toilets which flush, showers and hand-washing facilities. The amenities reserved for the meat inspection service, and toilets, and shower and hand-washing facilities should have adequate lighting, ventilation and heating. Hand-washing facilities with hot and cold water with taps of a non-hand operable type and suitable hygienic means of drying the hands should be provided adjacent to every toilet. Where paper towels are used, a sufficient number of dispensers with paper towels and receptacles for used towels should be provided adjacent to each washing facility.

5.1.7 Office accommodation should be provided for the use of the meat inspectors service. Laboratory facilities should be readily available for the purpose of meat inspection and meat hygiene.

**5.2 *Equipment and Utensils***

5.2.1 All equipment, implements and utensils used in abattoirs or establishment which come in contact with meat should present a smooth impervious surface and be resistant to corrosion and should be made of a material which is non-toxic, does not transmit odour or taste, smooth, free from pits, crevices, non-absorbent and

capable of withstanding repeated exposure to normal cleaning and disinfection. Stationary equipment should be installed in such a manner as will permit easy access and thorough cleaning and disinfection. Such equipment should be so constructed that it may be easily cleaned.

- 5.2.2 Equipment and utensils used for inedible or condemned materials should be distinctively identified.
- 5.2.3 Equipment and utensils for slaughtering and dressing should be used for this purpose only and not for cutting-up or boning-out or further preparation of the meat.
- 5.2.4 No containers, particularly wooden crates, wooden boxes or cartons, should be assembled and no containers, equipment, or utensils should be stored in any part of an abattoir or establishment in which animals are slaughtered or dressed or where meat is cut-up or boned-out, prepared, handled, packed or stored unless the container, equipment or utensils are required for use in that part.

### **5.3 Hygienic Operating Requirements**

#### **5.3.1 *General***

- 5.3.1.1 Amenities provided for the use of employees and the meat inspector(s) service including the meat inspection office space should be kept clean at all times.
- 5.3.1.2 All equipment, implements, tables, utensils including knives, cleavers, knife pouches, saws and containers should be cleaned at frequent intervals during the day, and immediately and thoroughly cleaned and disinfected whenever they come in contact with diseased material, infective material or become contaminated. They shall also be cleaned and disinfected at the beginning and conclusion of each working day.
- 5.3.1.3 The manager should ensure that washing down, cleaning and disinfection are carried out in compliance with this Code.
- 5.3.1.4 Carcasses or meat should not be contaminated during cleaning or disinfection of rooms, equipment or utensils.

- 5.3.1.5 Where any skip or trolley or any container used in a department where edible material is handled enters an area where in edible material is handled, it should be cleaned and disinfected before re-entering any edible department.
- 5.3.1.6 Detergents, sanitizing agents and disinfectants should conform to public health requirements and should not be allowed to come into contact with meat. Any residue of these cleaning agents used for the washing of floors, walls or edible product equipment should be removed by thoroughly rinsing with potable water before the area or equipment is again used for handling meat
- 5.3.1.7 No cleaning preparation or material, or any paint likely to contaminate meat is used in any part of an abattoir or establishment where animals are slaughtered or dressed or meat is prepared, handled, packaged or stored.
- 5.3.1.8 Except as required for purpose of hygiene no substance which may contaminate meat should be handled or stored in any part of any abattoir or establishment in which animals are slaughtered or carcasses dressed or in which meat is prepared, handled, packed or stored. However, material employed in the construction or maintenance of an abattoir or establishment may be used at any time when an inspector is satisfied that there would be no danger of contamination of meat.

**5.3.2 *Pest Control***

- 5.3.2.1 An effective and continuous programme for the control of insects, birds, rodents or other vermin within the abattoir or establishment should be maintained.
- 5.3.2.2 Abattoirs or establishments and surrounding areas should be regularly examined for evidence of infestation with insects, birds, rodents or other vermin.

- 5.3.2.3. If pests are in evidence, approved eradication measures should be carried out under skilled supervision and with the full knowledge of the inspector.
- 5.3.2.4 Only pesticides approved for use in an abattoir or establishment by the Public Health Bureau should be used in an abattoir or establishment and the greatest care should be exercised to prevent any contamination of the meat. Pesticides should only be employed if other precautionary methods cannot be used effectively.
- 5.3.2.5 Before pesticides are applied all meat should be removed from the room and all equipment and utensils covered. After spraying, the equipment and utensils should be thoroughly washed prior to being used again.
- 5.3.2.6 Pesticides or other toxic substances should be stored in separate locked rooms or locked cabinets and dispensed or handled only by authorized and properly trained personnel. Every precaution should be taken to avoid contaminating meat.
- 5.3.3 No animals other than animals for slaughter should be allowed to enter in any part of an abattoir, except those animals which are used for transporting and delivering animals for slaughter or delivering meat. No animals are allowed to enter establishments.
- 5.3.4 **Hygiene and Health of Personnel**
  - 5.3.4.1 Managers of abattoirs and establishments should arrange for adequate and continuing training of every employee in hygienic handling of meat, clean habits and the basic Principles of HACCP, so that the employees are able to take the necessary precautions to prevent contamination of meat. Instructions should include relevant parts of this Code.
  - 5.3.4.2 National legislation provides for a medical examination of food handlers, meat inspectors, and other persons who come in contact with meat in abattoirs and establishments. This medical examination should be carried out just prior to

employment and should be repeated when clinically or epidemiologically indicated. The medical examination should pay particular attention to

- (1) infected wounds and sores;
- (2) enteric infections including parasitic disease and carrier states especially with respect to salmonellae; and
- (3) respiratory disease.

5.3.4.3 The management should take care to ensure that no employee, while known or suspected to be suffering from or to be a carrier of a disease capable of being transmitted through meat, or while afflicted with infected wounds or sores or diarrhoea, is permitted to work in any area of an abattoir or establishment in a capacity in which there is a possibility of such a person directly or indirectly contaminating meat with pathogenic micro-organisms.

5.3.4.4 Any person who is cut or injured should discontinue working with meat and until he is suitably bandaged should not engage in any abattoir or establishment in the preparation, handling, packaging or transportation of meat. No person working in any abattoir or establishment should wear any exposed bandage unless the bandage is completely protected by a waterproof covering which is conspicuous in colour and is of such a nature that it cannot become accidentally detached.

5.3.4.5 The manager of any abattoir or establishment should, if required to do so by an inspector, produce for perusal by the inspector any medical certificate produced to the manager by an employee of the abattoir or establishment.

5.3.4.6 Every person engaged in an abattoir or establishment should wash his hands frequently and thoroughly with soap or detergents under running potable water while on duty. Hands should be washed before commencing work, immediately after using lavatory, after handling contaminated material, and whenever else necessary. After

handling diseased or suspect material hands must be washed and disinfected immediately. Notices requiring hand washing should be displayed.

- 5.3.4.7 Every person engaged in an area in an abattoir or establishment where meat is handled should maintain a high degree of personnel cleanliness while on duty, and should at all times while so engaged wear suitable protective clothing including head and beard (if applicable) covering and footwear, all of which articles should be washable unless designed to be disposed of and which should be maintained in a clean condition consistent with the nature of the work in which the person is engaged. Aprons and similar items should not be washed on the floor. Jewellery and other similar accessories should not be worn in the abattoir.
- 5.3.4.8 Every person who visits an area in an abattoir or establishment where carcasses or meat are handled should wear clean protective clothing.
- 5.3.4.9 No part of an abattoir or establishment used for slaughter of animals, dressing of carcasses, preparation, handling, packaging or storing of meat should be used for deposit of personal effects or clothing.
- 5.3.4.10 Protective clothing, knife pouches, belts and working implements should be deposited in a place provided for the purpose where they will not contaminate any carcass or meat.
- 5.3.4.11 Any behaviour which can potentially contaminate the meat, such as eating, excessive talking, use of tobacco, chewing gum or spitting should be prohibited in any part of an abattoir or establishment used for slaughtering or dressing of carcasses or for the preparation, handling, packaging or transportation of meat.
- 5.3.4.12 Gloves if used in the handling of meat should be maintained in a sound, clean and sanitary condition. The wearing of gloves does not exempt the operator from having thoroughly washed hands. Gloves should be made of an impermeable material except

where their usage would be inappropriate or incompatible with the work involved.

- 5.3.4.13 Management should arrange for sufficient supervision to ensure that provisions 5.3.4.3, 5.3.4.4, 5.3.4.6 to 5.3.4.12 are maintained.

**5.4 Operating Practices and Production Requirements**

**5.4.1 *Principles to be observed during slaughtering, dressing and preparation of meat:***

- 5.4.1.1 Every slaughter animal must undergo ante- and post- mortem inspection
- 5.4.1.2 No animal should be slaughtered or dressed in any abattoir or establishment except when an inspector is present.
- 5.4.1.3 All animals presented for slaughter should be in a state of cleanliness to the satisfaction of the inspector before it is allowed to enter the killing floor, so as to lessen the risk of contamination.
- 5.4.1.4 All animals brought into rooms for slaughtering should be slaughtered without delay.
- 5.4.1.5 The bleeding should be as complete as possible. If blood is intended to be used in food preparation, it should be collected and handled hygienically and should in no case be stirred with the hand but only with hygienically acceptable implements. No blood should be used until the carcass from which it was taken has passed the post-mortem examination.
- 5.4.1.6 Stunning, sticking and bleeding of any animals should not be allowed to proceed at a rate faster than that at which the carcasses can be promptly accepted for dressing.
- 5.4.1.7 The sticking, bleeding and dressing should be carried out with care so as to ensure the production of a clean carcass, head and edible offals. None of the parts should come in contact with the floor and all contamination should be avoided.

- 5.4.1.8 Carcases should be separated from each other to avoid contact and contamination once the removal of the hide, skin or pelt has commenced. Separation of carcases, heads and viscera should be maintained until they have been examined and passed by the inspector. Carcases should come in contact only with surfaces or equipment essential to handling, dressing and inspection.
- 5.4.1.9 Before the removal from any head of any meat or brain intended for human consumption, the head should, except in the case of pigs, be skinned then thoroughly washed and rendered clean with running potable water to the satisfaction of the inspector.
- 5.4.1.10 Where the tongue is dropped it should be done in such a way that the tonsils are not cut.
- 5.4.1.11 The following points should be noted in skinning operations:
- (a) All species, except pigs, should be skinned and this should be done before the carcase is eviscerated in such a manner as to avoid contamination of the carcase. Pumping of air between the skin and the carcase to facilitate skinning should be forbidden. Pigs should be scoured of all bristles, scurf and dirt and may be skinned or partly skinned. The water in the scalding tanks should be changed as frequently as practicable.
  - (b) Skinned carcase should not be washed in a manner, which will allow water to enter either the abdominal or thoracic cavities prior to evisceration.
  - (c) Lactating or obviously diseased udders should be removed from all classes of animals. Removal of such udders should take place at the earliest appropriate time during dressing. No secretion should be allowed to contaminate the carcase and therefore udders should be removed in such a manner that teat and udder substance

remains intact and without any milk duct or sinus being opened.

- 5.4.1.12 Evisceration should be effected without delay.
- 5.4.1.13 During dressing the following should be observed:
- (a) The discharge of any material from the oesophagus, paunch, intestines, or rectum or from the gall bladder, urinary bladder, uterus or udder should be effectively prevented.
  - (b) Any offals intended for human consumption should be removed from the carcass in a manner that will prevent contamination of the organ removed.
  - (c) Intestines should not be severed from the stomach during evisceration and no other opening should be made during evisceration into any intestine, except as necessarily required by a dressing procedure. In such a case, the intestines should be tied before severing. In the case of sheep, lambs and pigs, the removal of stomach and intestines should be carried out without separation.
  - (d) Spermatic cords and pizzles should be removed from the carcass.
- 5.4.1.14 No carcass, meat or edible offal should be washed in any abattoir other than with running potable water.
- 5.4.1.15 No paper, cloth, wad, sponge or brush should be used in the washing of any carcass. However, this will not apply with respect to the use of brushes in the dressing of singed pig carcasses.
- 5.4.1.16 No person should, whether by mechanical or any other means, inflate with air any carcass, meat or edible offal unless ritual procedures require the inflation of lungs.
- 5.4.1.17 No hides, skin or pelts should be washed or defleshed or left in any part of the abattoir or

establishment used for the slaughtering or dressing of animals or the preparation or holding of any meat intended for human consumption.

5.4.1.18 All stomachs, intestines and inedible material derived from the slaughtering or dressing of animals should be removed as soon as possible but in accordance with the inspection procedure from the dressing room in such a manner as to avoid contaminating the floor and walls or any carcass, meat or edible offal.

5.4.1.19 All stomachs, intestines and inedible material should subsequently be treated in parts of the abattoir or establishment destined for this purpose in accordance with recognized practices, which should pay attention to cleanliness and hygiene.

5.4.1.20 Fecal and other objectionable matter contaminating carcasses during dressing should be carefully trimmed off.

5.4.1.21 Where the inspector considers that the manner in which animals are being slaughtered or dressed or under which the carcass or meat are being handled, prepared or packaged, will adversely affect-

- (a) the cleanliness of the carcass or meat; or
- (b) the hygiene of production; or
- (c) the efficiency of meat inspection,

he may require the manager to take action to correct the deficiency or to reduce the rate of production or to suspend operations for the time being in any specified section of the abattoir or establishment.

5.4.1.22(a) In abattoirs, post-mortem inspection should be performed immediately after slaughter.

(b) Prior to the final examination, all parts required for inspection of the slaughtered animal should remain identifiable with the carcass.

- (c) Prior to the final examination, no part must be removed without consent of the inspector.

**5.4.2 *Branding of meat passed for human consumption***

- 5.4.2.1 Meat, which has been passed by the inspector as fit for human consumption should be branded according to the requirements contained in national legislation.
- 5.4.2.2 Brands and stamps bearing the marks of inspection should be kept clean while in use. They should be held in the custody of the inspector and used only under his supervision.
- 5.4.2.3 Only firebrands or branding ink approved by the official authority should be applied to the meat.

**5.4.3 *Operating practices following post-mortem inspection including storage***

- 5.4.3.1 Meat passed as fit for human consumption should be handled stored or transported in a manner that will protect the meat from contamination and deterioration.
- 5.4.3.2 Meat passed as fit for human consumption should be removed without undue delay from the dressing area. It should be placed under refrigeration under close supervision of the inspector. However, it is permitted to carry out pre-rigor cutting-up and boning. In this event, the meat should be transported directly from the slaughter-hall to the cutting-up and boning rooms. These rooms should be temperature controlled and situated near to each other in the same establishment. Cutting-up, boning and packing should be done without delay and immediately thereafter the meat should be transported to chilling rooms or to processing rooms.
- 5.4.3.3 The following provisions should apply where carcasses, parts of carcasses or edible offals are placed in chilling rooms, freezing rooms or frozen storage as the case may be:

- (a) Entry should be restricted to personnel necessary to carry out operations efficiently.
- (b) Doors should not be left open for extended periods and should be closed immediately after use.
- (c) No chilling room, freezing room or freezer store should be loaded beyond its designed capacity.
- (d) Where refrigerating equipment is not manned, automatic temperature recorders should be installed.
- (e) If no automatic device is installed temperatures should be read at regular intervals and the readings recorded in a logbook.
- (f) A record should be maintained of all meat placed in or taken out of the chilling room, freezing room or freezer store.

5.4.3.4

Where carcasses, parts of carcasses or edible offals are placed in a chilling room for chilling, the following provisions should be observed in addition to those in sub-paragraph 5.4.3.3 of this paragraph:

- (a) There should be a reliable method of monitoring the chilling of carcasses or edible offals, which are placed in a chilling room for chilling.
- (b) Meat should be hung or placed in suitable corrosion-resistant trays, in a manner permitting adequate circulation of air around the meat.
- (c) Meat should be held in a manner, which precludes drip from one piece falling on to any other piece.
- (d) Temperature, degree of relative humidity and airflow should be maintained at a level suitable for the preservation of meat.

- (e) Condensation should be prevented by the efficient operation of refrigerating facilities combined with proper insulation of walls and ceilings, the application of heat near the ceilings, or by any other suitable method. If overhead refrigerating coils are installed, insulated drip pans should be placed beneath them. All floor type refrigerating units should be placed within curbed and separately drained area unless located adjacent to floor drains.

5.4.3.5 Where carcasses, or parts of carcasses, or edible offal is placed in a freezing room for freezing, the following provisions should be observed in addition to those in sub-paragraph 5.4.3.3 of this paragraph:

- (a) Meat which is not in cartons should be hung or placed on suitable corrosion-resistant trays in a manner permitting adequate circulation of air around the meat. Cartons should be stacked to permit adequate circulation of air around each carton.
- (b) Meat, which is not in cartons, should be held in a manner, which precludes drip from one piece of meat falling on to any other piece.
- (c) Where meat is held on trays care should be taken to avoid contact between the base of any tray and meat stored beneath.
- (d) Refrigerating coils should be defrosted frequently to prevent excessive accumulation of ice and loss of refrigerating efficiency. Provisions should be made for removal, without the product, of water resulting from defrosting.

5.4.3.6 Where carcasses, or parts of carcasses, or edible offal to be stored are placed in a freezer store, the following provisions should be observed in addition to those in sub-paragraph 5.4.3.3 of this paragraph:

- (a) No meat should be placed in a freezer store until the mean temperature of the meat has been reduced to an acceptable level.
- (b) Meat should not be stacked directly on the floor but should be placed on pallets or on dunnage. Stacks of meat in carcase form or in cartons should be placed so that there is adequate air circulation around the stacks.
- (c) The freezer store should be operated at a temperature, which will give adequate protection to the type of product. Temperature fluctuations in the freezer store should be kept to a minimum. Where unpackaged meat is stored, the temperature difference between the evaporator and the meat should be kept to a minimum.
- (d) Refrigerating coils should be defrosted as required to prevent excessive accumulation of ice and loss of refrigerating efficiency. Provision should be made for removal, without affecting the product, of water resulting from defrosting.

#### **5.4.4 *Packaging and Packing Material***

5.4.4.1 If the meat is packaged or wrapped, the following considerations should be taken into account:

- (a) Packaging material should be stored and used in a clean and sanitary manner.
- (b) The wrapping should be sufficient for the purpose of protecting the meat from contamination in the conditions under which it is to be handled, transported or stored.
- (c) The wrapping should be non-toxic and should not leave harmful deposits of any kind on the meat, or otherwise contaminate it.
- (d) The wrapping or covering of warm or cold meat transported within an establishment or

from one establishment to another should be optional, but care should be taken that the meat is not contaminated.

- (e) Cases or cartons used for the packing of meat should be provided with a suitable inner liner. However, the liner may not be required if individual pieces of meat, such as cuts or boneless meat, are individually wrapped before packing.

#### **5.4.5 *Transportation***

5.4.5.1 Meat should not be carried in any means of transport, which is used for conveying live animals.

5.4.5.2 Meat should not be carried in the same means of transport as other goods or passengers in a way, which may adversely affect the meat.

5.4.5.3 Meat should be transported under refrigeration unless the period of transport is less than one hour when an insulated container may be used.

5.4.5.4 Stomachs should only be transported when thoroughly cleaned, or scalded, and heads and trotters only when skinned or scalded, or debarred.

5.4.5.5 Meat should not be placed in any means of transport, which has not been cleaned before loading and if necessary also disinfected with a product or method approved by the official authority.

5.4.5.6 Carcases, sides and quarters, other than those, which are adequately wrapped and frozen, should be hung during transport or placed in a suitable manner on racks or similar equipment.

5.4.5.7 Means of transport of containers should comply with the following conditions:

- (a) All internal finishes should be made of corrosion-resistant material, be smooth, impervious and easy to clean and disinfect. Joints and doors should be sealed so as to

prevent the entry of pests and other sources of contamination.

- (b) The design and equipment should be such that refrigeration temperature can be maintained throughout the whole period of transportation.
- (c) Vehicles intended for the transport of meat should be equipped in such a manner that the meat does not come into contact with the floor.
- (d) Suitable closed containers should be used for the transport of unwrapped edible offals. Offal should be transported under refrigeration unless the period of transport is less than one hour when an insulated container may be used.

5.4.5.8 Every effort should be made to prevent changes in temperature of frozen meat at any time during storage and transport but where accidental thawing takes place the meat should be examined and evaluated by the inspector before any further step is taken.

**5.4.6 *Meat unsuitable for human consumption***

5.4.6.1 Meat being condemned or otherwise unfit for human consumption should forthwith be placed in clearly identified chutes, containers, trucks, trolleys, skips, or rooms, or other adequate arrangements provided for these purposes and held under the supervision of the inspector. For the purpose of clear identification, cuts or bran may be made to show that this meat is condemned or unfit for human consumption. The transport of such meat to the rendering station or other place of disposal should be performed to the satisfaction of the inspector to ensure that no removal of such meat is possible and no contamination could be caused by such meat.

5.4.6.2 No person should remove or cause to be removed from any abattoir or establishment, any carcass,

meat, organ, viscera or fat that has been condemned or retained by the inspector, except under his direction and supervision.

5.4.6.2 Where in any abattoir or establishment any carcass, meat, organ, viscera or fat is found to be unsuitable for human consumption, it should be the duty of the manager to cause the carcass, meat, organ, viscera or fat to be removed to a by-products plant or other place of disposal in accordance with the rules of the Public Health Bureau.

## **5.5 Programme for Hygiene Control**

5.5.1 It is desirable that each abattoir or establishment in its own interest designate a single individual, whose duties are preferably divorced from production, to be held responsible for the cleanliness of the abattoir or establishment. His staff should be a permanent part of the organization or employed by the organization and should be well trained in the use of special cleaning tools, methods of dismantling equipment for cleaning and in the significance of contamination and the hazards involved. He should be knowledgeable in the principles of HACCP. A permanent cleaning schedule should be drawn up to ensure that all parts of the abattoir or establishment are cleaned appropriately and that critical areas, equipment and material are designated for cleaning and/or disinfection daily or more frequently if required.

## **5.6 Laboratory Control Procedures**

In addition to the routine control carried out by the meat inspection services, it is desirable that each establishment in its own interest should have access to laboratory control. Analytical procedures used should follow recognized or standard methods in order that the results be readily interpreted.