

PHILIPPINE NATIONAL STANDARD

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Code of Slaughtering Practices for Goats



BUREAU OF PHILIPPINE STANDARDS (BPS)

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Foreword

The Philippine National Standard (PNS) for Chevron Cuts was developed by the Technical Working Group (TWG) organized by the Bureau of Agriculture and Fisheries Standards (BAFS) through a Department of Agriculture (DA) Special Order No. 109, Series of 2015.

The development of this PNS built upon the results of various projects funded by the Department of Science and Technology - Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD), and implemented by the Cagayan Valley Small Ruminants Research Center - Isabela State University (CVSRRC-ISU) in collaboration with the Bureau of Animal Industry - Animal Products Development Center (BAI-APDC), such as Value-adding of chevon thru processing and packaging (2009-2011) and Process standardization of goat slaughtering and chevon cutting scheme (2013-2014). The initiative to provide goat its own standard on slaughtering was conceptualized under the National S&T Program on Slaughter Goat (2013-2015) with the aim to improve marketing of chevon.

The TWG is composed of members representing the National Meat Inspection Service (NMIS), BAI-APDC, CVSRRC-ISU, and Federation of Goat and Sheep Producers Association of the Philippines, Inc. (FGASPAPI), with BAFS as Secretariat.

The proposed standard was presented and reviewed during the consultative meetings with the concerned stakeholders conducted in the cities of Baguio (CAR), Cebu (Region 7), and Davao (Region 11). Comments gathered during the consultations were carefully evaluated by the TWG and included accordingly in the final version of this standard.

Code of Slaughtering Practices for Goats

1 Scope

This document provides standards for meat establishments conducting goat slaughter processes and minimum requirements in slaughtering goat intended for local and international food trade.

2 References

The titles of the standard publications and other references of this Code are listed on the inside back cover.

3 Objective

The purpose of this Code is to ensure that the slaughter practices of the establishment provide greater confidence in consumer expectations that the final goat products are safe and fit for human consumption.

4 Definition

For purposes of this standard, the following definitions shall apply:

4.1**ante-mortem inspection**

procedure or test conducted by an authorized/competent person on live animals for the purpose of judgment of safety and suitability and disposition

4.2**carcass**

the body of goat after bleeding and dressing

4.3**contaminant**

any physical, biological or chemical substance not intentionally added to food that may compromise food safety or suitability

4.4**contamination**

the introduction or occurrence of a contaminant in food or food environment

4.5**controlling/competent authority**

the official authority charged by the government with the control of meat inspection and meat hygiene

4.6

dressing

progressive separation of the body of an animal into a carcass and other edible and inedible parts

4.7

flaying

also known as skinning, it is the slaughtering procedure wherein the skin is totally removed and used to produce other products

4.8

Good Animal Husbandry Practices (GAHP)

general principles of good practice and minimum requirements in the commercial and backyard rearing/ farming of animals for food use

4.9

meat establishment

premises such as slaughterhouse, poultry dressing plant, meat processing plant, meat cutting plant, cold storage warehouse and other meat outlets that are approved and accredited/registered by the controlling/competent authority in which food animals or meat products are slaughtered, prepared, processed, handled, packed, or stored

4.10

post mortem inspection

conduct of inspection of head, carcass, and visceral organs of slaughtered animal for possible disease

4.11

scalding

the slaughtering procedure wherein the carcass is treated with hot water using scalding vat to loosen hairs

4.12

singeing

the slaughtering procedure wherein the carcass is subjected to flame or blow torch to burn hairs

4.13

slaughterhouse

premises that are approved and accredited/registered by the controlling/competent authority in which food animals are slaughtered and dressed for human consumption

4.14

sticking

severance of blood vessels in the neck or in the chest

4.15

stunning

the process of causing immediate loss of consciousness to an animal through the use of stunners (e.g. electrical, mechanical or gas)

5 Minimum requirements

5.1 Goats for slaughter

5.1.1 Animals intended for slaughter should be raised in accordance with Good Animal Husbandry Practices (PNS 60:2008).

5.1.2 The age of goat for slaughter is 12-month old for Native and at least 8-month old for upgrades and crossbreeds to attain high dressing percentage and good meat cut conformation.

5.1.3 Animals should be healthy, without any indication of external parasite infestation and diseases; of good body appearance; and without any sign of pain.

5.2 Humane handling of goats

5.2.1 Transport of live animals

In accordance with the Animal Welfare Act, the following measures should be observed during the transport of animal:

- a. Minimize soiling and cross-contamination with fecal material;
- b. Carry records to include animal identification and place of origin;
- c. Avoid undue stress and/or risk from injury during loading, transport and unloading;
- d. Separate each animals whenever necessary to avoid injury during transport;
- e. If the transport vehicle has more than one deck, animals should be protected from cross-contamination;
- f. Maintain adequate ventilation of the animals;
- g. Clean and sanitize transport vehicles and crates as soon the animals have been unloaded;
- h. To mitigate the abrupt changes in weather condition, fit the transport vehicle with supplies for, but not limited to containers with water, truck blanket or cover, and other tools to include water hose, sprinklers, pail, and shovel, whichever is needed;
- i. Provide transport vehicles with supplies necessary for emergencies such as tools, spare tires, etc.;
- j. Transport vehicles should be registered with the Animal Health and Welfare Division of the Bureau of Animal Industry.

5.2.2 Requirements for acceptance include maintenance of the cleanliness of pen/animal

5.2.2.1 Ensure that the following documents are available before slaughtering:

- a. Veterinary Health Certificate;

- b. Shipping Permit (if animals were transported across provincial boundaries) from Department of Agriculture or Bureau of Animal Industry;
- c. Barangay clearance or other relevant document (i.e. Certificate of Ownership/Transfer)

5.2.2.2 Weigh the goat before slaughter using weighing scale. The record keeper should take note of all other required data of the animal.

5.2.2.3 The cleanliness of the animals should be considered as it has effect in the level of microbiological cross- contamination of the carcass and other edible parts during slaughtering and dressing. Hence, the slaughterhouse operator should ensure the following considerations for the physical condition of the holding pen, including but not limited to the following:

- a. Facilities are operated in a way that soiling and cross-contamination are minimized;
- b. Animals should be adequately rested, not overcrowded, and protected from unfavorable weather condition;
- c. Separation of different classes and types of slaughter animals;
- d. Systems to ensure that only animals that are sufficiently clean are slaughtered;
- e. Systems to ensure that feed has been appropriately withdrawn before slaughter; and
- f. Maintenance and identification of animals either individually or as lots (eg poultry) until the time of slaughtering and dressing.

5.2.3 Slaughter animals shall not be subjected to the following inhumane acts, including but not limited to:

- a. Making unnecessary noises;
- b. Kicking the animals in any of its body parts;
- c. Lifting and/or twisting ears and/or tails;
- d. Poking the animal's eye, genital and anal orifice;
- e. Splashing hot water;
- f. Marking/incising the skin of the animal using knife, blade or razor;
- g. Drenching or forced oral administration of water and feed; and
- h. Engaging in other acts inflicting undue pain.

6 Ante-Mortem Inspection

6.1 Before the slaughtering procedure, evaluation of the physical attributes of the animal should be carried out. This activity is also known as Ante-Mortem Inspection. This is conducted prior to slaughtering to protect slaughterhouse personnel and consumers from zoonotic and/or meat-borne diseases, to promote animal health by monitoring animal diseases and promote animal welfare practices.

6.2 The following should be observed during the Ante-mortem evaluation:

6.2.1 The animal should be adequately fasted and rested before slaughtering;

6.2.2 The following abnormalities should be noted:

- a. Abnormal breathing
- b. Abnormal behavior
- c. Abnormal gait
- d. Abnormal posture
- e. Abnormal discharge or protrusion from body openings
- f. Abnormal color
- g. Abnormal appearance
- h. Abnormal odor

6.2.3 As a rule, only healthy and clean animals shall be allowed for slaughter.

7 Hygienic Slaughter Procedures

7.1 Stunning

7.1.1 Before entering the stunning area, the goat should be clean.

7.1.2 Stunning is done to bring the goat unconscious before sticking and bleeding is done. Animals should be stunned before slaughter by an appropriate and acceptable stunning method. When using an electric stunner, 1.0A is recommended current level for both head only and head-to-body stunning (AO 18, series of 2008). Once stunned, the goat is positioned vertically or hanged to facilitate sticking and later on bleeding.

7.2 Sticking

7.2.1 Sticking should be done immediately after stunning.

7.2.2 Sticking is done by making an incision or stab into the large vessels located at the base of the neck. The knife to be used must be clean, sharp and of sufficient length for the species and size of the animal. Using chest stick, incision is made at this area to drain as much blood from the tissues as possible. It should be small to avoid contamination in the area during scalding and dehairing.

7.3 Bleeding

7.3.1 Bleeding is done to remove blood from the tissues of the animal, and it should be done immediately after stunning to prevent blood splash. A vertical or hanging position is achieved by shackling below the hock of one hind leg and hoisting the animal (head down) to a convenient height.

7.3.2 In the presence of bleeding trough, allow the animal to lay down to facilitate blood discharge. The incision or stab is place directly within the trough to ensure that the blood is properly collected, thus ensuring appropriate disposal.

7.3.3 Bleeding should be as complete as possible. For purebred stocks, blood volume is about 12% of the body weight.

7.3.4 If necessary, washing should be done immediately after bleeding.

7.4 Removal of the hair

7.4.1 Removal of the hair by scalding

7.4.1.1 Scalding is done when the carcass is immersed into the scalding vat with a temperature of 60°C to 70°C, until the hair is loose enough for easy dehairing.

7.4.1.2 Dehairing is done manually on scraping table.

7.4.2 Removal of the hair by singeing

7.4.2.1 Follow the procedures from pre-slaughter until bleeding (7.1 to 7.3).

7.4.2.2 Hang the slaughtered goat upside down. A blow torch is used to apply flame and heat to the skin of the animal so that the hair is burned.

7.4.2.3 After singeing, scrape off the black deposits and ash to clean the carcass thoroughly. Use clean scraping equipment such as scrapers or brushes to avoid a source of carcass recontamination.

7.5 Removal of the feet, skin and the head

Follow the procedures from pre-slaughter until bleeding (7.1 to 7.4).

7.5.1 Removal of the feet

7.5.1.1 Cut the hind feet at the hock joint.

7.5.1.2 Remove the front feet after removing the head.

7.5.2 Removal of the skin

7.5.2.1 In removing the skin, initially cut along the middle line from the tail to the stick wound. Using long firm strokes while keeping the knife up to prevent cuts on the carcass, skin the abdomen and remove the testicles (male) or udder (female).

7.5.2.2 Clear the skin carefully from around the vent (anus) without puncturing it and cut the abdominal wall carefully around the rectum.

7.5.2.3 Remove the skin towards the base of the head.

7.5.3 Removal of the head

7.5.3.1 Remove the head by cutting at the junction of the base of the head and the first neck bone.

7.5.3.2 Prior to evisceration, the esophagus and the rectum should be separated from the surrounding tissues and properly tied.

7.5.3.3 Once the head and the entire skin is removed, evisceration follows.

7.6 Evisceration

7.6.1 The breastbone is split down the middle.

7.6.2 An incision is made in the abdominal cavity wall just above the cud fat or udder, and the fingers of the other hand are inserted to guard the viscera as the cut is continued to the brisket.

7.6.3 Care should be taken in doing evisceration to avoid puncturing certain parts, such as viscera, urinary bladder, gall bladder or uterus. If this happens, the contaminated portion should be removed.

7.6.4 The omentum is withdrawn, the tied-off rectum is loosened, and the viscera are taken out. The tied-off esophagus is pulled down with the diaphragm including the heart, lungs and the liver.

7.7 Final Trimming and Washing of Carcass

7.7.1 Trimming should be done to remove damaged, soiled or unwanted tissues.

7.7.2 Abnormal and/or diseased parts should not be trimmed off until they have been seen by an inspector.

7.7.3 Washing of carcass should be done to remove the remaining blood on cut surfaces, as well as any adhering hairs and unwanted tissues.

7.7.4 Carcass should not be smeared with blood or coloring agent.

8 Post-mortem Inspection

8.1 Post mortem inspection is carried out by a competent authority or personnel as prescribed by the NMIS. Their duty is to examine the slaughter products for evidence of disease and abnormality, thus preventing their entry to the public meat supply. Aside from the carcass, other parts of the animal body to be inspected include tongue, head, pluck, and liver.

8.2 The carcass and its parts shall be passed for human consumption when post-mortem examinations have revealed no significant abnormal condition or disease, and if the slaughter operation has been implemented in accordance with hygienic requirements.

8.3 The carcass and its parts shall be condemned for human consumption when post-mortem examinations have revealed that they are hazardous to meat handlers, consumers and other animals; when there are severe organoleptic deviations from normal meat; and when laboratory tests indicate that they contain contaminants or residues.

9 Chilling (optional)

9.1 Carcasses should go into the cooler as soon as possible to delay bacterial growth and extend its shelf-life. The carcass is chilled from 40 °C down to 0 °C. Keeping it cold will give a shelf-life of up to three weeks, provided high standards of hygiene were observed during slaughter and dressing.

9.2 Carcasses should be placed in the cooler, hanged on rails and never touch the floor.

9.3 After several hours the temperature outside of a carcass might be sufficiently lowered, however, the goal is to attain a lower temperature deep inside the carcass or muscles. A probe thermometer (not glass), is used as a guide to efficiently monitor the rate of cooling. The rate of cooling at the deepest point will vary according to many factors, which includes the efficiency of the cooler, the load, and carcass size and fatness. As a general guide, a deep muscle temperature is achieved after 24–30 hours for sheep and goat carcasses. Failure to bring down the internal temperature quickly will result in rapid multiplication of bacteria deep in the meat, resulting in off-odors and bone-taint.

9.4 The cooler should not be overloaded beyond the maximum load specified by the manufacturer and spaces should be left between carcasses for the cold air to circulate. Otherwise, cooling will be inefficient and the carcass surface will remain wet, favoring rapid bacterial growth. Once filled, a cooler should be closed and not be frequently opened to avoid sudden rises in temperature

10 Markings and Issuance of Meat and Meat Product Inspection Certificate

Carcasses found to be fit for human consumption should be properly marked “Inspected and Passed” and issued with Meat Inspection Certificates by the meat inspector. The brands and stamps used to apply the marks of inspection must be kept clean, and should be under the control and supervision of the meat inspector.

Ababa, A. 2010. Hygiene, dressing and carcass handling guideline (for municipal abattoirs). Ethiopia.

Administrative Order No.18, Series of 2008. Rules and regulations on humane handling in the slaughter of animals for food.

Administrative Order No. 19 series of 2010. Guidelines on Good Hygienic Slaughtering Practices for Locally Registered Meat Establishments (HGSP-LRMEs).

Administrative Circular No., Series of 2014. Guidelines on good hygienic practices for “kambingan” (GHKP)

Haenlein, A. and Ace R. 2010. All About Goats. Extension Goat Handbook. South African Boer Goats. DOCN 000000002. Pennsylvania State University

Nayga, JN, EA Lopez, AM Guno, MR Andres, BB Estrada, EB Valdez and RB Tamayo. Value-adding of goat meat products thru processing and packaging. 2011. Terminal project, PCAARRD-DOST funded

Nayga, JN, AM Guno, MR Andres, BB Estrada. 2013. Evaluation of carcass recovery using different slaughtering procedures for goat. On-going project, PCAARRD-DOST funded

Republic Act No. 9296: the Meat Inspection Code of the Philippines



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