



CODE OF HYGIENIC PRACTICE (COHP) FOR MEAT

PNS/BAFS 168 : 2015
EXPLANATORY MANUAL



Code of Hygienic Practices for Meat (PNS/BAFS 168:2015)

Contributors: Dr. Alpha M. Lanuza, Ms. Aubrey Katreena L. Ramos,
Ms. Katrina L. Maminta, Ms. Jenny Lee M. Cambe
Edited By: Dr. Vivencio R. Mamaril, Ms. Mary Grace R. Mandigma
Layout and Design: Ms. Aubrey Katreena L. Ramos, Ms. Katrina L. Maminta,
Ms. Georlene P. Orbista
Manual Cover Photo: Ms. Katrina L. Maminta

BAFS encourages the reproduction and dissemination of material in this knowledge product. Non-commercial uses will be authorized free of charge upon request. Applications for the permission to reproduce or disseminate these materials and all other queries shall be addressed to the publisher.

Published by:
Bureau of Agriculture and Fisheries Standards
BAFS Building, BPI Compound, Visayas Avenue, Diliman, Quezon City
(+632) 8928 8756 to 65 local 3301 – 3325
info.dabafs@gmail.com | bafsa.gov.ph

ISBN 978-621-455-372-3 (PDF)

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Bureau of Agriculture and Fisheries (BAFS) Secretariat concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Mention of company names or commercial products does not imply endorsement by the Bureau.

Introductory Note

This Philippine National Standard (PNS) for Code of Hygienic Practice for Meat adopts the Codex Alimentarius Commission Code of Hygienic Practice for Meat (CAC/RCP 58- 2005) with some modifications to adapt to the local production practices in the Philippines. The Standard 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. 177, Series of 2015. The Standard applies to handling meat from chicken, dairy cattle, water buffalo, beef cattle, buffalo, goats, sheep, swine, and ducks.

Consequently, the Explanatory Manual on COHP Meat was developed to harmonize the interpretations of the provision of the Standard, thereby facilitating a better appreciation and adoption of its requirements. It also further explains the Standard by presenting images and documents as additional references. In addition, this provides the rationale behind the requirements through the explanatory notes.

This EM, however, does not cover or provide information specific to a regulatory requirement. The explanatory notes are a guide only and shall not be construed as mandatory requirements unless otherwise the basis is an updated regulation or it is as specified by the regulatory agency implementing the said standard.

For more information, please visit our website at www.bafs.da.gov.ph and Facebook page at www.facebook.com/da.bafs.

Director's Message



The Bureau of Agriculture and Fisheries Standards (BAFS), as the standard-setting agency under the Department of Agriculture, develops and promotes different Philippine National Standards (PNS) to ensure that food is safe for human consumption and can compete in the world market.

Specifically for this manual, the Bureau aims to help the readers better understand the requirements stated in the provisions of the Philippine National Standard (PNS) Code of Hygienic Practice (COHP) for Meat which covers hygiene measures for fresh meat and meat preparations from the farm of origin up to point of distribution, including the pre-slaughter, slaughter and post-slaughter handling of meat.

This Explanatory Manual offers supplemental explanation through examples, current regulatory information being implemented, and supplementary images. Through these information, better appreciation and harmonized level of interpretation are expected, contributing to its ease of adoption and implementation.

Nevertheless, we would like to remind everyone that explanatory notes are meant to serve as a reference and should not be seen as mandatory requirements unless otherwise specified by the regulatory agency implementing the said requirement.

Through this Manual, we also aim to support the Department of Agriculture's initiatives in strengthening the meat industry.

Vivencio R. Mamaril, PhD
Director IV

Table of Contents

Section 1	Scope, Objectives and References	1
Section 2	Minimum requirements: Pre- slaughter	3
Section 3	Minimum requirements: Slaughter	23
Section 4	Post- slaughter	89
Section 5	Personal hygiene	102
Section 6	Product Information and Consumer Awareness	106
Section 7	Training	109
Section 8	References	112
	Technical Working Group	125



Scope, References and Objectives



1 Scope

This document provides standard for hygiene measures for fresh meat and meat preparations from the farm of origin up to the point of distribution, including the preslaughter, slaughter, and post-slaughter handling of meat.

2 References

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

3 Objectives

The purpose of this Code is to ensure that hygienic practices are observed during animal production up to slaughter and distribution of meat while ensuring animal welfare compliance as well as environmental management practices in meat establishments. This Code also presents specific hygienic measures that apply to different species of food animals.



Minimum Requirements for: **Pre-slaughter**

The provisions of the standard are written in black font color. The explanatory notes are indicated in red font color inside a yellow box. Photos and images are also found in succeeding pages.



5.1.1 Farm production

5.1.1.1 Principles of Meat Hygiene Applying to Primary Production

- a. Animals should be raised according to Good Animal Husbandry Practices to reduce the likelihood of introduction of food safety hazards.

Explanatory note:

Philippine National Standards on the Code of Good Animal Husbandry Practices (GAHP) that are species-specific are listed as follows:

1. Code of Good Animal Husbandry Practices GAHP (PNS/BAFS 60-2008)
2. Good Animal Husbandry Practices (GAHP) for Chickens: Broilers and Layers (PNS/BAFS 184:2016)
3. Code of Good Animal Husbandry Practices for Dairy Cattle and Water Buffalo (PNS/BAFS 199-2017)
4. Code of Good Animal Husbandry Practices for Beef Cattle and Buffalo (PNS/BAFS 200-2017)
5. Code of Good Animal Husbandry Practices for Goats (PNS/BAFS 201-2017)
6. Code of Good Animal Husbandry Practices for Sheep (PNS/BAFS 202-2017)
7. Code of Good Animal Husbandry Practices (GAHP) for Swine (PNS/BAFS 267-2019)
8. Code of Good Animal Husbandry Practices (GAHP) for Ducks (PNS/BAFS 271-2019)

- b. Good animal husbandry practice (GAHP) should involve the health and hygiene of animals, records of treatment, feed and feed ingredients, and relevant environmental factors, and should include application of HACCP principles to the greatest extent practicable.
- c. There should be a system to identify animals that would allow traceability, to allow regulatory investigation where necessary

Explanatory note:

Maintaining a registry of movement or keeping documents that will facilitate trace-back of animals to the place of origin are examples of systems that will help identify animals. Examples of identification methods used in animals are hot or cold branding, tattooing, visual tagging, bar-coded tags, and radio frequency identification (RFID) devices such as implants and boluses (FAO/WHO, 2004).



Image 1.
Ear tag on cattle
(Source: BAI-APDC, n.d)



Image 2.
Use of ear tags to identify hogs for slaughter
(Source: NMIS, n.d)



Image 3.
Proper insertion of ear tag using pliers
(Source: ATI-ITCPH, 2021)



Image 4.

Identification using food grade marking pen (Source: BAI-APDC, n.d)



Image 5.

Food grade marking pen (Photo taken at ATI-ITCPH)



Image 6.

Hot branding (Source: Canva, n.d)

As one of the identification methods, hot branding can be considered permanent identification. However, it should be done quickly, using proper equipment and an expert. More information on identification methods are available in the OIE Terrestrial Animal Health Code: Chapter 7.9.- Animal welfare and beef cattle production systems (OIE, 2021).



Image 7.
Tattooing (Source: British whites, 2017)



Image 8.
Radio Frequency Identification (RFID) (Source: ATI-ITCPH, 2021)

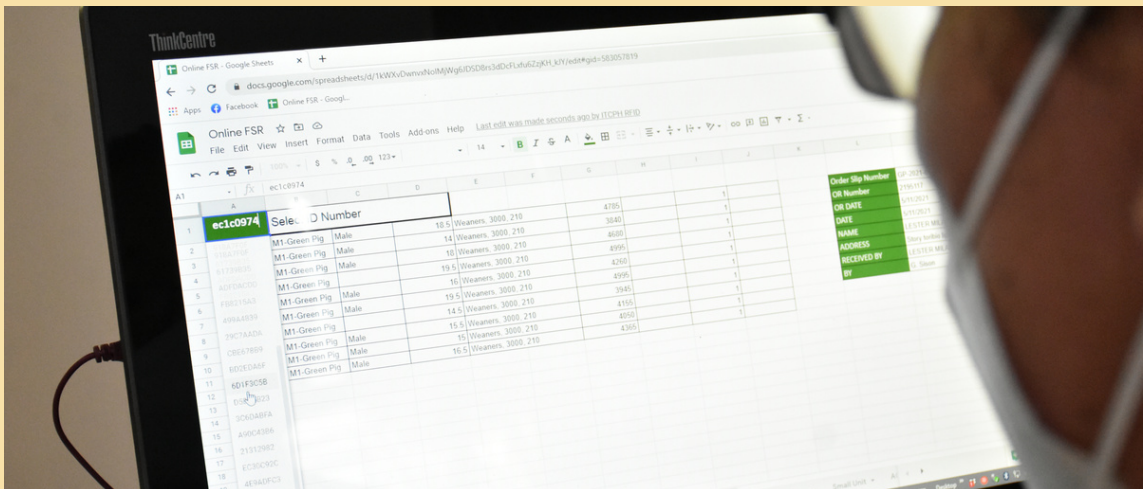


Image 9.
RFID transcribed to system (Source: ATI-ITCPH, 2021)

5.1.1.2 Hygiene of Slaughter Animals

- a. The primary producers should have records for the general health status of slaughter animals and implement practices that maintain or improve that status.

Explanatory note:

Record keeping is central to any effort to trace the source of the problem. Farmers should keep records focusing on:

- populations of all animals;
- the arrival of animals (includes identification marks or devices, origin, and date);
- movements of animals;
- changes to feeding or health regimes, and any management changes that may occur;
- origin and use of all feeds, drugs, disinfectants, herbicides, and other consumable items used on the farm; and
- known diseases/infections, diseased/infected animals, and mortalities, as far as possible, giving details such as dates, diagnoses (where known), animals affected, treatments, and results (OIE, 2009).



Image 10.

Record information of pigs
(Photo taken at ATI-ITCPH)

Pig ID: 25159														
BREED: PIC 67 614 1020					ORIGIN: PIC					DATE: 13 JAN. 2019				
DATE BORN: 03 AUG. 2018					DATE PROCESSED: 13 JAN. 2019									
LITTER	NO.	DATE	BORN	DATE	BORN	DATE	ACTUAL	BORN	DATE	ACTUAL	WEIGHT	WEIGHT	WEIGHT	WEIGHT
1	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
2	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
3	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
4	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
5	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
6	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
7	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
8	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
9	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
10	10/10/18	PIC	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18

- b. The primary producers should have programs for control of zoonotic agents, chemical hazards and contaminants. This should be coordinated with the competent authorities that have responsibilities in public and animal health.

Explanatory note:

Notifiable diseases are found in Administrative Circular No. 3 Series of 2018, declaring the list of Notifiable Animal Diseases. Examples of which are foot-and-mouth (FMD) disease and Bovine tuberculosis (bTB).

Foot-and-mouth disease is a highly contagious viral disease that causes liquid-filled blisters to develop on the feet, tongue, in and around the mouth, nose or snout, and on the teats of cattle, buffaloes, pigs, sheep, goats, and wildlife species.

On the other hand, bovine tuberculosis (bTB) causes a general state of illness, pneumonia, weight loss, and eventual death in infected animals. The occurrence of any of the animal diseases listed is to be appropriately coordinated with the Bureau of Animal Industry (BAI).



Image 11.

Lesions from bTB infection (Source: Michigan Department of Natural Resources, n.d)

Image 12.
Foot and Mouth Disease
on hooves
(Source: Dr. Rosslyn
Biggs, 2020)



Image 13.
Cattle infected with FMD (Lesion margination and extensive fibrin infilling).
(Source: Defra UK, 2007)

Image 14.
Avian Influenza (AI)
(Source: Field Vet, 2019)



Image 15.
African Swine Fever (ASF)
(Source: NMIS, n.d)



Image 16.
**Acute Contagious
Caprine
Pleuropneumonia (CCPP)**
(Source: Dr. Robin
Nicholas, 2016)



- c. Programs for chemical hazards and contaminants should include measures to control the registration and use of veterinary drugs and biologicals, approved by the competent authority for use in slaughter animals, so that residues do not occur in meat at levels that make the product unsafe for human consumption

Explanatory note:

List of registered veterinary drugs and importation biologics can be accessed through BAI's website at www.bai.gov.ph.

Banning and withdrawal of olaquinox, carbadox and nitrofurans in food producing animals are specified in DOH Administrative Order No. 4-A, Series of 2000 and DA AO No. series of 2001, and DOH and DA Joint Administrative Order No. 2 s.2000.

Chloramphenicol

It is banned per DA Administrative Order 60 series of 1990 and DOH Administrative Order 91 series of 1990. The Codex Alimentarius was not able to establish any maximum residue limit as bioaccumulation is observed. It may cause hemotoxicity to humans in the form of bone-marrow depression (dose-related and reversible) and severe aplastic anemia (non-dose-related and irreversible).

Nitrofurans

It is banned per DA-DOH Joint Administrative Order No. 2 series of 2000. The Codex Alimentarius was not able to establish a "No observable effect level (NOEL)," which is a requirement in establishing a maximum residue limit (MRL). Nitrofurazone is also found carcinogenic, while Furazolidone is observed to be carcinogenic and genotoxic.

Olaquinox and Carbadox

It was banned per DA AO 1 series of 2000 and DOH AO 4-A series of 2000. Both drugs have a lengthy withdrawal period of about 70 days; as such, no MRLs were established. They were also observed to be genotoxic to humans.

Beta-agonist

It was banned per DA AO 14 series of 2003. Similar to Nitrofurans, NOEL was not established for this drug. Tremors, shakiness, and food poisoning were among the effects seen in these drugs.



Registered veterinary drugs and biologicals, including the banned chemicals, may be updated from time to time. Updated information should be regularly checked with the competent authority such as the Bureau of Animal Industry (BAI) and Department of Health (DOH).

5.1.1.3 Hygiene of Feed Ingredients, Feed, and Drinking Water

- a. Animals should not be given feed and feed ingredients that are likely to introduce zoonotic agents to the slaughter population; or contain chemical substances or contaminants that could result in residues in meat at levels that make the product unsafe for human consumption.

Explanatory note:

The Philippine National Standards (PNS/BAFS 48-2015) for Veterinary Drug Residues in Food: Maximum Residue Limits (MRLs) specify the permissible residue level allowed in food sourced from animals.

The permitted/registered feeds list is posted on the BAI website at <https://bai.gov.ph/index.php/feeds-product-registrations>.

Zoonotic diseases are transmissible between animals and humans (WHO, 2020). It is caused by viruses, bacteria, parasites, and fungi and can be introduced to animals through feed ingredients, feeds, and drinking water. The most common foodborne diseases are caused by *Campylobacter*, *Salmonella*, *Yersinia*, *E. coli*, and *Listeria* (EFSA .n.d).

Swill feeding of food scraps that may contain contaminated meat products should be avoided. This can cause the spread of Transboundary Animal Diseases (TADs) such as foot-and-mouth disease (FMD) and African Swine Fever (ASF), swine vesicular disease, and Classical Swine Fever (CSF) (FAO, 2009).

- b. Any processed feed and feed ingredients should be subjected to appropriate microbiological and other criteria.

Explanatory note:

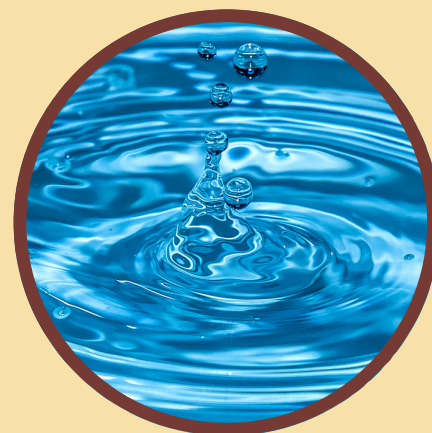
Quality and safety parameters of feed ingredients, including their classification, descriptions, and purchase specifications, being used in animal feeds intended for domesticated livestock, and poultry animals are specified in PNS Animal Feed Ingredients (PNS/BAFS 163:2015). Maximum and guideline levels for contaminants and toxins in feeds are specified in PNS General Standard for Contaminants and Toxins in Food and Feed (PNS/BAFS 194:2017).

- c. Drinking water should be potable in accordance with existing relevant guidelines.

Explanatory note:

The parameters for evaluating the potability of water are defined in DOH Administrative Order No. 10 series of 2017 Philippine National Standard for Drinking Water.

Generally, drinking water must be clear and not have an objectionable taste and odor. It must be pleasant to drink and free from all harmful organisms, chemical substances, and radionuclides in amounts that could constitute a hazard to the animal's health.



5.1.1.4 Hygiene of the Primary Production Environment

- a. Animals should be raised in an environment free of hazards that could compromise the safety of meat.

Explanatory note:

According to PNS/BAFPS 60:2008 Code of Good Animal Husbandry Practices (GAHP), the farm should be strategically located and compliant with related laws and regulations of the competent authority, including local government units. This covers the management of environmental issues, farm location, animal welfare requirements, disease control, wholesome food production, and occupational hazards in animal farming.

Suppose there is available data/information from relevant government agencies or organizations on the prior land use. In that case, it should be used to establish that the site is not a possible source of physical, chemical, and microbiological hazards. However, when this data is not available, and uncertainty exists as to the suitability of the land for agricultural use, it is recommended to have the soil analyzed for heavy metal contamination, and others.

- b. Facilities and procedures should be in place to ensure compliance with animal health and welfare requirements.



Image 17.

Vehicle disinfection at the farm entrance (Photo taken at ATI-ITCPH)



Image 18.

Farm facility with proper ventilation (Photo taken at ATI-ITCPH)



Image 19.

Assessment of hog and piglets for any abnormalities (Source: ATI - ITCPH, 2021)

5.1.2 Transport of food animals for slaughter

- a. Transportation of slaughtered animals should be in accordance with existing relevant regulations.

Explanatory note:

According to DA Administrative Order 19 series of 2006 *Rules and Regulations on the Transport of Live Animals by Land*, there are considerations in transporting/traveling live animals. These are:

Loading/ unloading requirements

For livestock and exotic animals:

Every ramp and gangway used by a carrier in loading or unloading animals shall have sidings of sufficient height and strength to prevent animals from falling.

Prohibited acts during loading, unloading and transport:

1. No animals shall be moved by suspension using mechanical means (sling or cable), nor lifted or dragged by the head, horns, legs, nose, ears, tail, or fleece.

2. No animals shall be made to jump from the transport vehicle.



Image 20.
Unloading ramp (Source: NMIS, n.d)

Methods of restraint and containment of animals

Methods of restraining animals shall be appropriate to the species involved.

Protecting the animal from extreme hot or cold conditions

1. In warm and hot weather, the duration of journey stops shall be minimized, and vehicles shall be parked under shade, with maximum ventilation.
2. Urine and feces shall be removed from the floors of the vehicle and disposed of properly.

Unloading and Post Journey handling

1. Animals shall be unloaded into appropriate facilities immediately upon arrival.
2. Sufficient time for unloading the animals shall be allocated.
3. Unloading of the animals shall proceed quietly and without unnecessary noise, harassment, or force.
4. Vehicles, cages, container vans and crates used to transport the animals shall be thoroughly cleaned through the physical removal of manure and bedding. This shall be followed by disinfection and disinfection before reuse.

5. Small animals (goats, sheep, and pigs) shall be unloaded using a ramp at an incline of no more than 30 degrees with floor grids, or they can be carried one by one from the transport vehicle to the ground.
6. No animal shall be unloaded by throwing them from the transport vehicle to the ground.
7. No animal shall likewise be thrown about within the transport vehicle during unloading.



Image 21.

Use of ramp for unloading of animals (Source: BAI-APDC, n.d)

- b. Transport of slaughter animals should be in a manner that does not have an adverse impact on the safety and wholesomeness of meat.

Explanatory note:

Transport process may be very stressful to animals and can lead to significant losses in meat quality or the final product. Proper handling during transport should be carried out with care to avoid animal stress that leads to possible illnesses, fatigue, bruising, trauma, and the like (Frimpong S et. al., 2014)

In addition to the measures enumerated in the explanatory note in the above section, the following factors should be considered:

1. **Transport duration** It should be kept to a minimum, and the slaughterhouse should be as close to where they have been produced as much as possible.
2. **Loading and unloading** People handling animals should be skilled and knowledgeable on how to move the animals.
3. **Shelter** Animals should be protected from extreme weather conditions during transport. Breed and type, body condition and environmental conditions should be taken into account in determining the need for shelter (Agriculture Victoria, 2022)

In addition, one of the critical components of the Food Animal Welfare (FAW) Plan in facilities is providing an unloading ramp for live animal truck haulers, both for regular and regular double decked.

Transport of live animals in clean vehicles should be provided with a roof to protect the animals from direct sunlight and rain and should be transported during the cooler time of the day. High temperature and humidity can be detrimental, especially to pigs.

Animal truck vehicle (with appropriate layout necessary for the well-being of animals for efficient transport and unloading of food animals) should be registered to a competent authority and equipped with communication gadgets and other contingency measures necessary for emergencies (Rules on procedures in the implementation and enforcement of food animal welfare laws in NMIS licensed to operate slaughterhouses and poultry dressing plants [NMIS MC No. 03-2017-006]).



Image 22.
Interior of clean vehicle for transport of live animals
(Source: NMIS, n.d)



Image 23.
Exterior of clean vehicle for transport of live animals
(Source: NMIS, n.d)



Image 24.
Animal transport vehicle (Source: NMIS, n.d)



Image 25.

Transport vehicle (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

According to the Department of Agriculture Administrative Order No. 19 series of 2006 and Republic Act 8485 or also known as "Animal Welfare Act", vehicles and containers used for the transport of animals shall be designed, constructed, and fitted as appropriate to the species, size, and weight of the animals to be transported.

Vehicles and containers shall be:

1. designed with the structures necessary to provide protection from adverse weather conditions and minimize the opportunity for animals to escape;
2. designed to permit thorough cleaning, disinfection, disinsection and the containment of feces and urine during the journey to minimize the likelihood of the spread of pathogenic agents during transport; and
3. designed so that feces or urine from animals on upper levels shall not soil the animals on the lower levels, nor their feed and water.



Image 26.
Proper transport vehicle (Source: NMIS, n.d)



Image 27.
Transport vehicle with overcrowded and unkept live animal (Source: PhilStar, 2019)

Minimum Requirements for: **Slaughter**

The provisions of the standard are written in black font color. The explanatory notes are indicated in red font color inside a yellow box. Photos and images are also found in succeeding pages.



5.2.1 Responsibilities of the Meat business operator

5.2.1.1 Receiving of Animals for Slaughter

- Animals should be accompanied by documents as required by competent authorities.

Explanatory note:

The documents that are to be presented upon the receipt of the animal to be slaughtered is found also in the Section 8 of the Department of Agriculture Administrative Order No. 19, Series of 2010 *Guidelines on Good Hygienic Slaughtering Practices for Locally registered Meat Establishments*. These documents are:

- ✓ Veterinary Health Certificate
- ✓ Certificate of Ownership/Transfer (for large animal), and
- ✓ Shipping Permit (for animals transported across provincial boundaries).

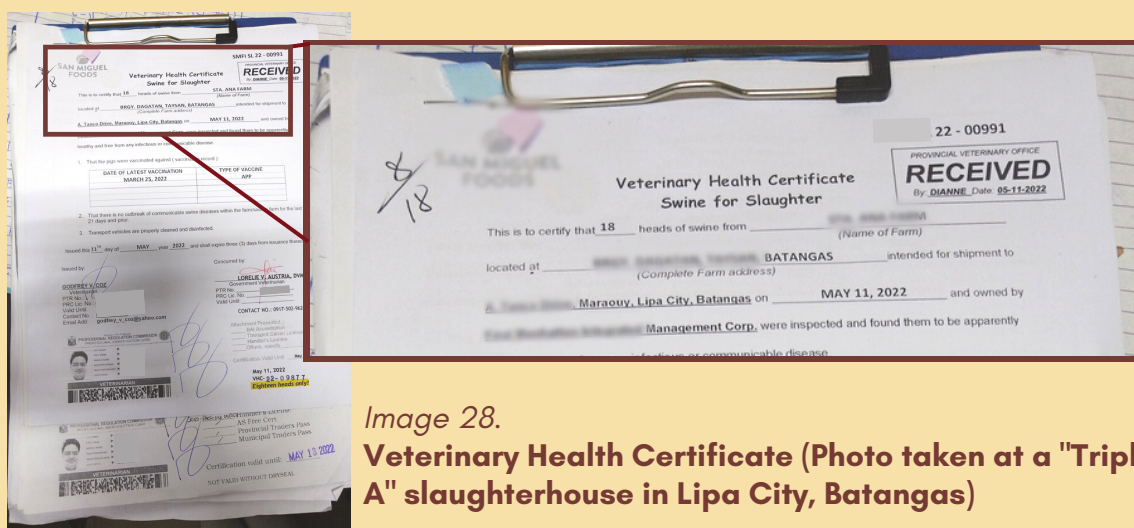


Image 28.
Veterinary Health Certificate (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

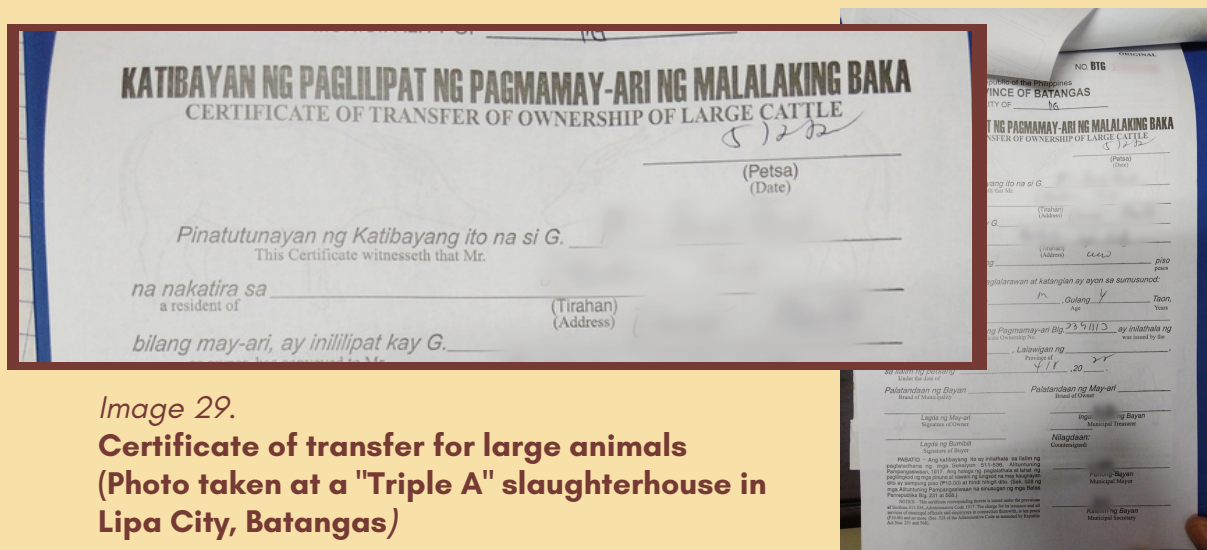


Image 29.
Certificate of transfer for large animals
(Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF ANIMAL INDUSTRY
Visayas Ave. Diliman, QC
www.bai.da.gov.ph

SHIPPING PERMIT

PERMIT INFORMATION
SHIPPER'S NAME : RSRH Livestock Corp

SHIPPER'S ADDRESS : 3019

DATE 09/22/2021
ISSUED :
VALID DATE 09/29/2021

APPLICATION NO. : 210922141534907
PURPOSE : For slaughter
CATEGORY : Live

NO.	ITEM	DESCRIPTION	SEX	AGE	COLOR	QUANTITY	UNIT
1	Cattle	Brahman	Mixed	2 - Year/s		7	Hd/s

***** NOTHING FOLLOWS *****

The above animals, animal products and by products has complied with the quarantine requirements.
Upon arrival of the said animal/s or commodities at destination, they shall be subjected to such quarantine and test as the Director of the Bureau of Animal Industry deemed necessary.
This permit is subject to cancellation should any dangerous communicable animal disease breaks out at the place of origin or may be revoked at any time before the said date if the interest of the government requires.
Any assurance, alterations shall render this document void and punishable by law.
Note: Subject to final inspection, disinfection and all original copy of the attached documents should be presented at the point of entry.

BY THE AUTHORITY OF THE DIRECTOR
Reynante Mendoza Agustin
Veterinary Quarantine Officer
(Digital Signature over Printed Name)

*THIS PERMIT IS NOT FOR SALE
09/29/2021 3:47:00 PM
Page 1 of 1

Image 30.
Shipping Permit (Source: BAI-APDC, n.d)

Ctrl #: 202109211

Philippines
MAGALANG
Pampanga
OFFICE OF THE AGRICULTURAL SERVICES

VETERINARY HEALTH CERTIFICATE

Date: September 21, 2021

the cattle owned by _____
and this animal was apparently healthy

upon inspection.

This certification is being issued for the purpose of transporting CATTLE (7 heads)
for slaughter, from MAGALANG to VALENZUELA CITY.

This certificate shall expire after 3 days from the date of issue.

DR. REYMOND N. TAPNIO
Veterinarian
License No. 8148
Tin No. 431-230-265-000

Image 31.
Veterinary Health Certificate (Source: BAI. n.d)

Image 32.

Local Shipping Permit (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

The BAI- National Veterinary Quarantine Services Division (NVQSD) is mandated to issue local shipping permits (SP) for the intra-regional (within the region) and inter-regional (between regions) and inter-island (between island provinces or regions) movement of live animals, animal products and by-products.

Issuing Office

**Intra-provincial
(within the province)**

Local Government Unit Veterinarian (LGU)
(Provincial Veterinary Office)

**Intra-regional
Inter-regional
Inter island**

BAI-NVQSD (Central Office or Veterinary
Quarantine Stations)

Key notes:

1. The SP must be signed by authorized Veterinary Quarantine Officers (VQOs) or Animal Quarantine Inspectors (AQIs). There shall be no signing on behalf of authorized VQOs/AQIs.
2. Issuance may be referred from AQIs to Agriculturists or livestock inspectors (permanent personnel under BAI's employment).
3. No pre-signed or ante-dated SP shall be allowed.
4. In areas without BAI VQO, deputized LGU veterinarians shall be allowed to issue SP.
5. The Veterinary Health Certificate (VHC) is a requirement prior to the issuance of a shipping permit.
 - It shall be valid for three days.
 - It shall be issued by a licensed veterinarian.

- For a list of BAI's notifiable diseases, the farm veterinarian/private practitioner shall concur with the LGU veterinarian or DA RFO veterinarian.

6. The SP shall be valid for seven calendar days upon its date of issuance and must comply with **ONE VHC, ONE DESTINATION, ONE SHIPMENT POLICY** (BAI Memorandum Circular No.26 series of 2017 – Guidelines on the issuance of shipping permits for the local transport of live animals, animal products, and by-products.)

- b. Animals presented for slaughter should be apparently healthy and clean. Screening for abnormalities in behavior and appearance should be performed upon arrival of animals at the establishment.

Explanatory note:

A competent meat inspector should perform ante-mortem inspection upon arrival of animals at the establishment.



Image 33.

Ante-mortem inspection of cattle (Source: NMIS, n.d)

LIVESTOCK INSPECTION FEE - FORM 003

Republic of the Philippines
Province of Batangas
MUNICIPALITY OF PADRE GARCIA
OFFICE OF THE MUNICIPAL TREASURER
LIVESTOCK INSPECTION CLEARANCE

Control No.: 415
Name of Shipper: _____
Address: _____
Origin: LAM: _____
Vehicle Plate No.: _____
Livestock Handler's License No.: _____

Date: 5/12/22
Time of Issuance: 8:32
Destination: Lipa City

Kind of Animal	No. of Heads	Sex	Classification (Breeder/Slaughter etc.)	Remarks
CHICKEN				APPARENTLY
GOAT				HEALTHY
CATTLE	1	M		
CARABAO				
HORSE				
SWINE				

Inspected by: _____
AGRICULTURAL TECHNOLOGIST
Examining Personnel
(Signature over printed name)

*Chapter IV: Art. H, Section 4H01
(LIVESTOCK INSPECTION FEE)
Padre Garcia Revenue Code of 2005
Padre Garcia, Batangas

Image 34.
Sample Livestock Inspection Clearance
(Photo taken at a "Triple A" slaughterhouse in Lipa City)



Image 35.
Healthy pigs for slaughter
(Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



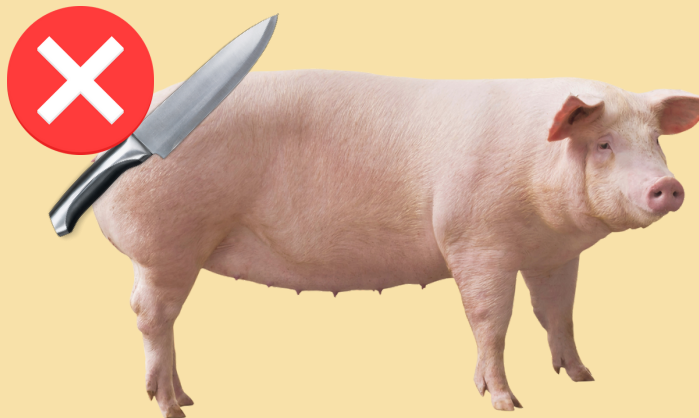
Image 36.
Healthy and clean pigs for slaughter
(Source: BAI-APDC, n.d)

c. Animals should have proper identification.

Explanatory note:

Animal welfare should also be observed when receiving animals for slaughter, such as the absence of skin or "Zorro" markings following relevant laws and guidelines.

As stated in NMIS MC No. 03-2017-006 and DA AO 18 s. 2008 *Rules and Regulations on Humane Handling in the Slaughter of Animals for Food*, it is prohibited to use sharp or pointed instruments such as but not limited to blade or knife, to mark livestock for identification.



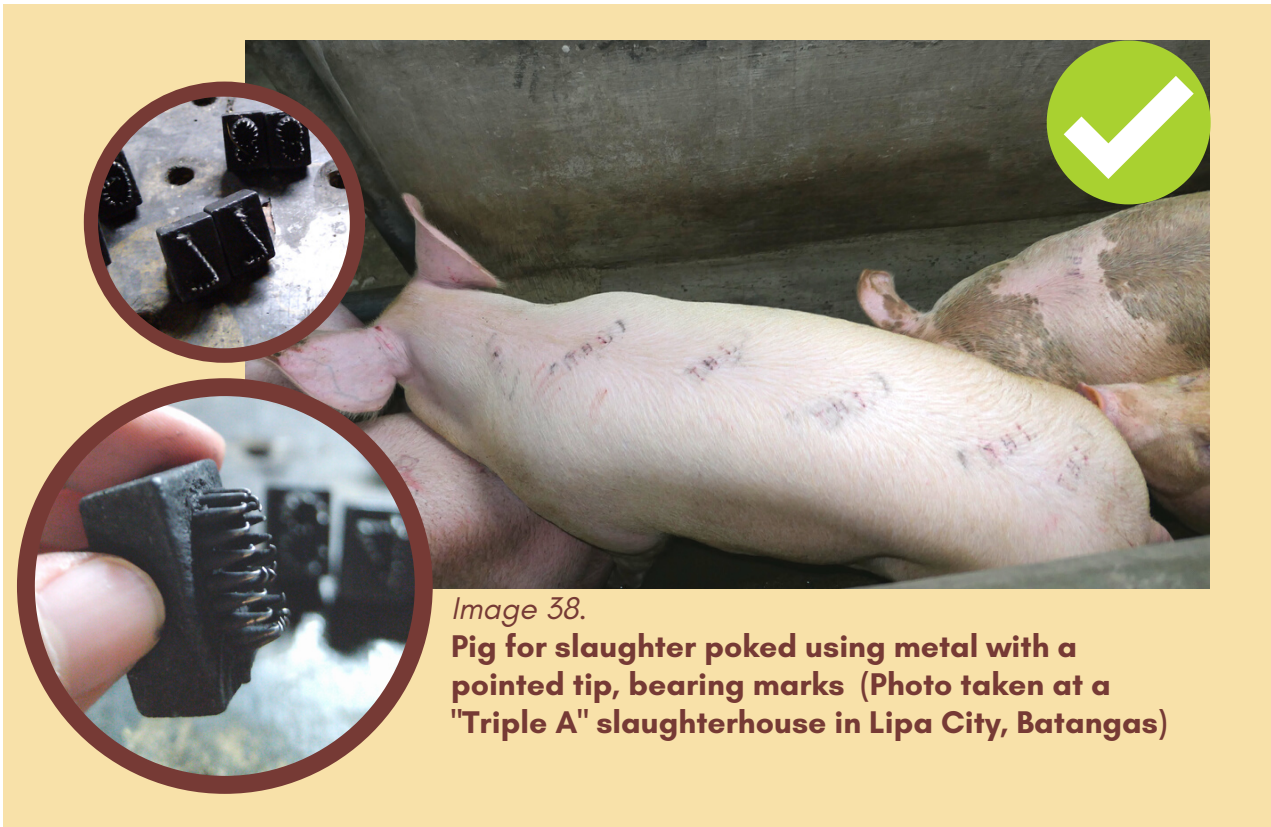
A pig bearing 'Zorro' marks to indicate the owner's name. Knife was used to mark the back of a live pig causing pain and stress to the animal before slaughter.



Image 37.
"Zorro" markings on skin (Source: NMIS-Reg.12, 2018)

All hogs with inhumane skin markings shall be considered suspects for possible abscesses or ecchymosis and shall be slaughtered last.

On some farms, they use metal with a pointed tip to poke the back of the pigs. This is used to provide marks/identification, thus, preventing meat (after slaughter) from mixing.



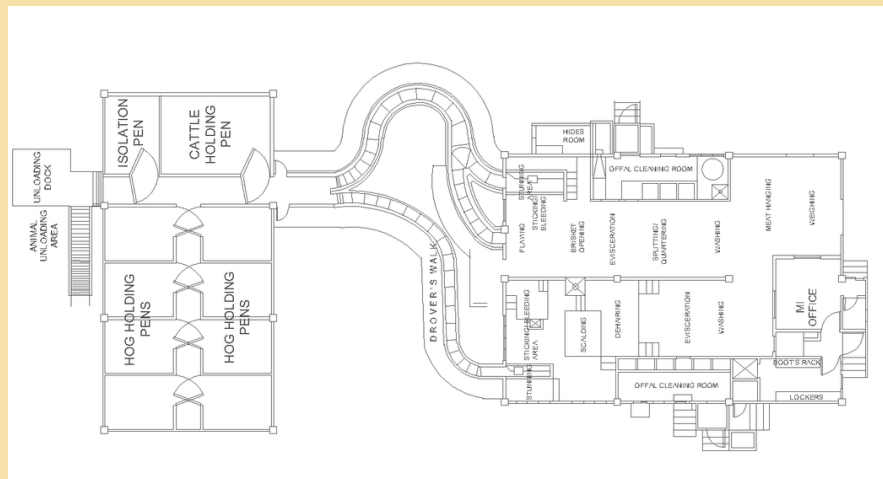
- d. Animals that are not qualified for slaughter must be identified and given proper handling.

5.2.1.2 Design and Construction of Establishment, Facilities, and Equipment

- a. Establishments, facilities, and equipment should be designed, constructed and maintained so that contamination of meat is minimized while allowing personnel to carry out their activities in a hygienic manner.

Explanatory note:

Image 39.
**Floor plan of
slaughterhouse
(landscape)
(Source: NMIS,
illustrated by BAFS.
n.d)**



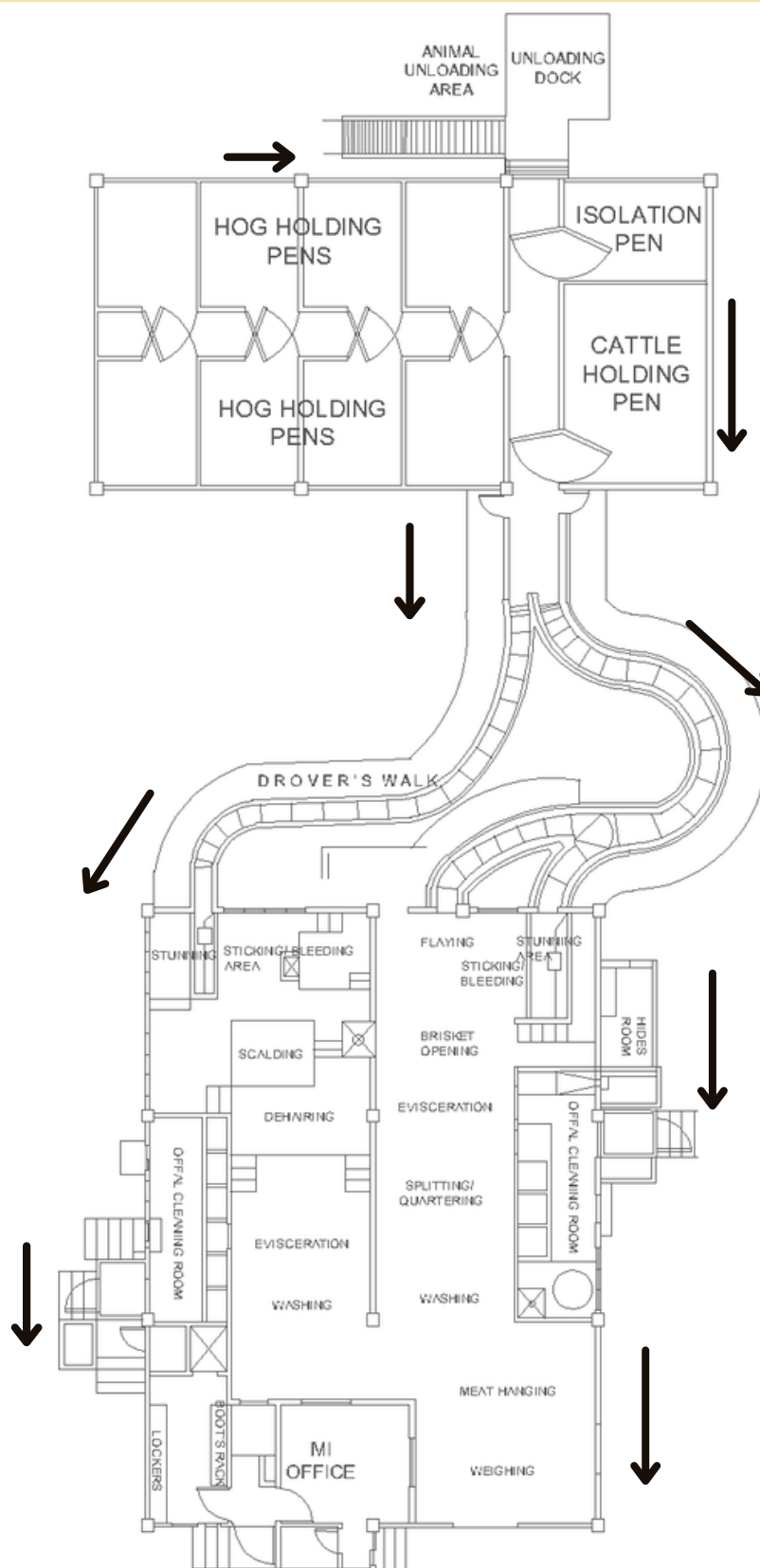


Image 40.

One way flow of floor plan of the slaughterhouse (portrait) (Source: NMIS, illustrated by BAFS, 2022)



Image 41.

Separate area for the clean and dirty areas to minimize contamination (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- b. Facilities and equipment that are in direct contact with edible parts of animals and meat should be designed and constructed so that they can be effectively cleaned and monitored for their hygiene status.

Explanatory note:



Image 42.

Functional and easy to clean splitting saw (Source: BAI-APDC, n.d)

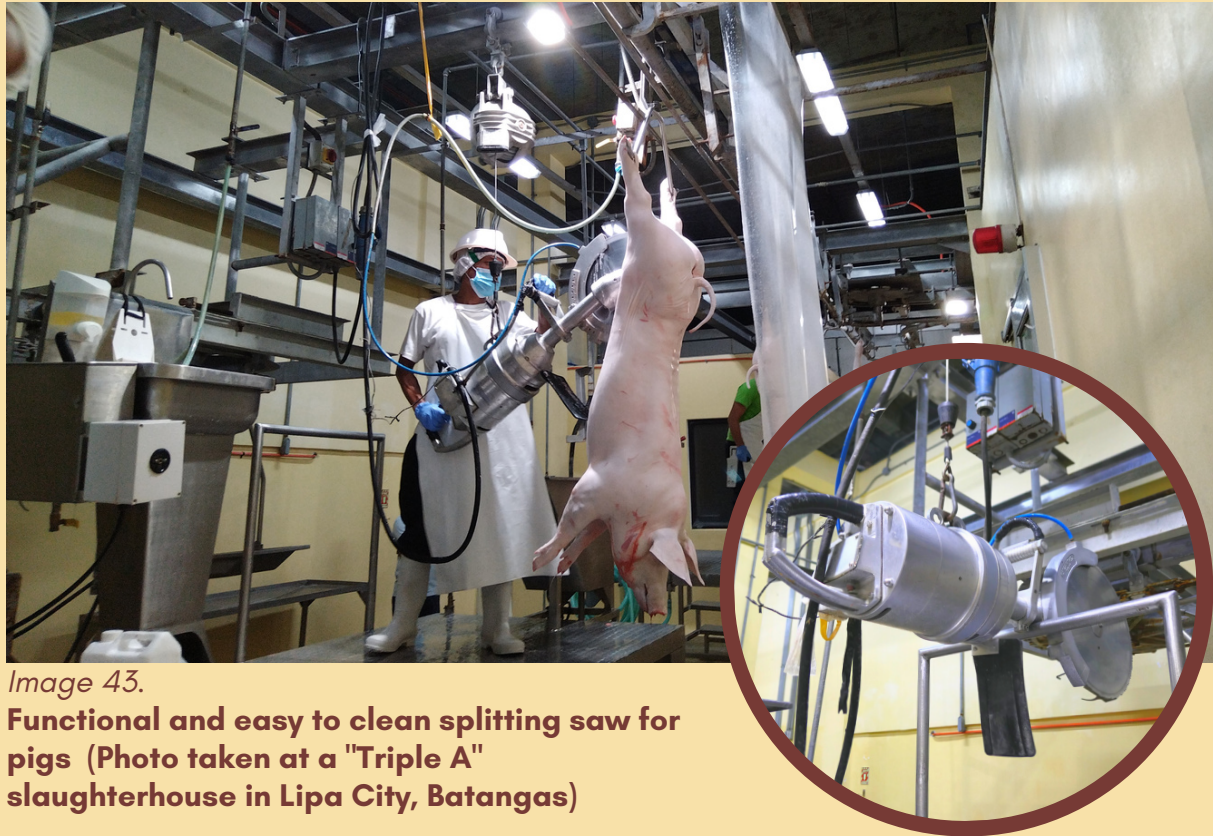


Image 43.
Functional and easy to clean splitting saw for pigs (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 44.
Functional and easy to clean brisket saw for cattle (Source: BAI-APDC. n.d)



Image 45.
Scalding vat/scalder (Source: NMIS, n.d)



Image 46.
Scalding vat (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

Scalder/scalder vat/scalder tank

slaughterhouse equipment that can contain heated water at 60°C to 70°C for 3 to 5 minutes to loosen the animal's hair from the follicles



Image 47.
Meat hooks (Source: BAI, n.d)

Image 48.
Proper storage area for meat hooks (Source: NMIS, n.d)



Image 49.
Hangers for poultry (Source: BAI-APDC, n.d)



Image 50.
Gambrel for pork carcass
(Source: BAI-APDC, n.d)

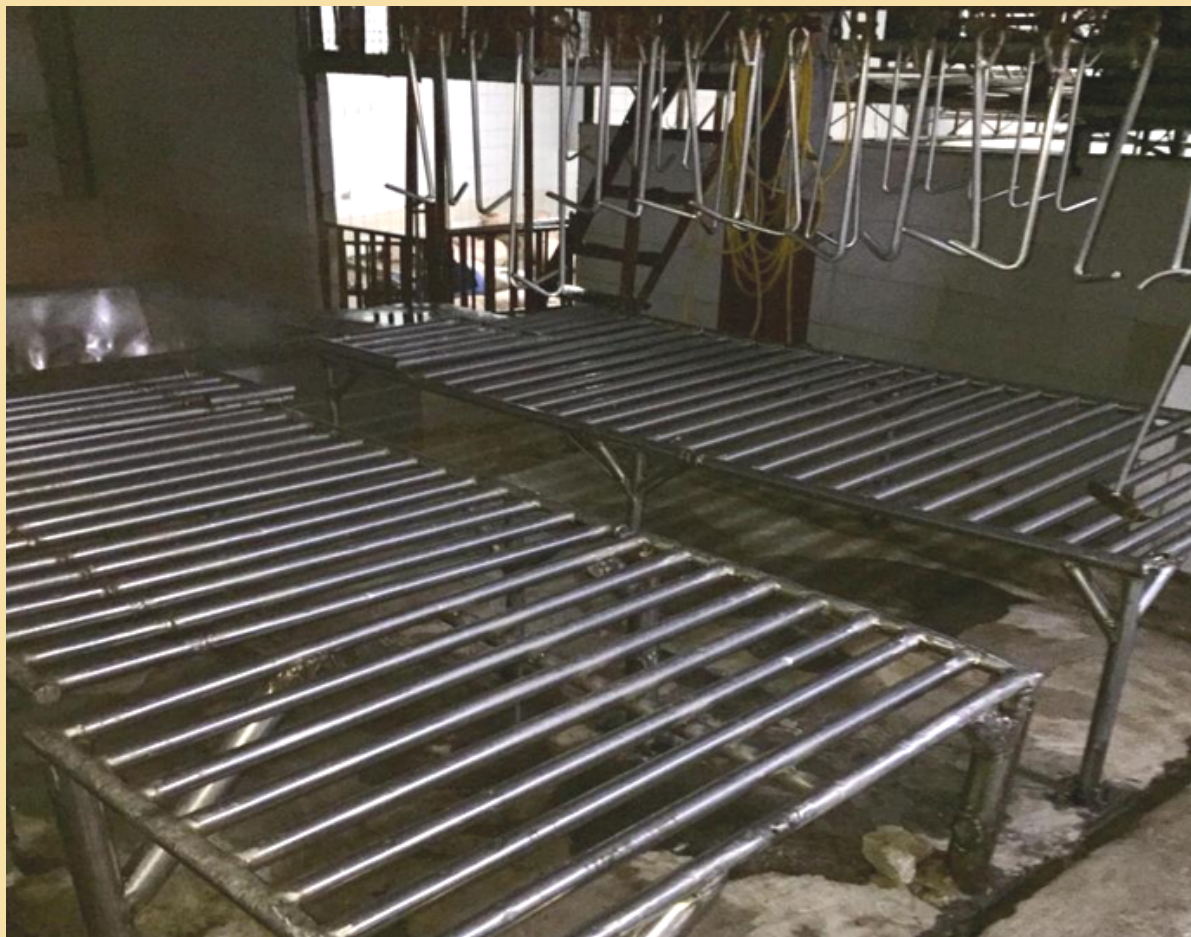


Image 51.
Hazard-free facilities for hogs (Source: NMIS, n.d)



Image 52.
Offal cleaning area (Source: NMIS. n.d)



Image 53.
Offal hanger (Source: NMIS. n.d)

- c. Suitable equipment should be available for control of temperature, humidity and other factors as appropriate to the particular processing system for meat.
- d. Water should be potable except where water of a different standard can be used without leading to contamination of meat

5.2.1.2.1 Design and construction of animal holding area

- a. The meat business operator should ensure that the animal holding area minimizes soiling and contamination of animals.
- b. The meat business operator should ensure that the animal holding area is compliant with animal welfare concerns.
- c. There must be appropriate separation of different species and ages of slaughter animals.

Explanatory note:

Specific requirements for lairage of swine and ruminants are available in the following Philippine National Standards:

1. Agricultural Structures – Lairage – Swine (PNS/BAFS 308:2021)
2. Agricultural Structures – Lairage – Ruminants (PNS/BAFS 309:2021)

These standards provide the following:

- General requirements for site selection, design and constructions;
- Essential requirements for its eventual operation;
- Protection and convenience of the slaughterhouse personnel; and
- Protection and promotion of animal welfare.



Image 54.

A properly constructed facility that ensures the safety of animals before slaughter (Photo taken at a "Triple A" slaughterhouse in Tanauan City, Batangas)



Image 55.
Lairage area for cattle
(Source: NMIS, n.d)

Image 56.
Cattles resting in lairage before slaughter
(Source: BAI-APDC, n.d)



Image 57.
Chicken holding area (Source: NMIS, n.d)



Image 58.
Lairage for resting animal (Source: BAI-APDC, n.d)

- d. The meat business operator should ensure that the method of animal identification conveys relevant information until the time of slaughter.

Explanatory note:

LIVESTOCK INSPECTION CLEARANCE

Republic of the Philippines
Province of Batangas
MUNICIPALITY OF PADRE GARCIA
OFFICE OF THE MUNICIPAL TREASURER
LIVESTOCK INSPECTION CLEARANCE

Control No.: 415
Name of Shipper: Elmer Baet
Address: LANS PADRE GARCIA BARS
Vehicle Plate No.:
Livestock Handler's License No.:
Date: 5/12/22
Time of Issuance: 8:32
Destination: Lipa City

Kind of Animal	No. of Heads	Sex	Classification (Breeder/Slaughter etc.)	Remarks
CHICKEN				APPARENTLY
GOAT				HEALTHY
CATTLE	1	M		
CARABAO				
HORSE				
SWINE				

*Chapter IV, Art. H, Section 4H01 (LIVESTOCK INSPECTION FEE)
Padre Garcia Revenue Code of 2005
Padre Garcia, Batangas

Image 59.

Livestock inspection clearance (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- e. The meat business operator should ensure that the animal holding area is designed and operated in a way that facilitates the conduct of ante-mortem inspection.

Explanatory note:



Image 60.

Cattle holding area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 61.
Pigs holding area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 62.
Cattle holding area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- f. There should be facilities in place for the handling and slaughter of animals with special conditions (e.g. injured animals, heat-stressed animals, etc) and these facilities should be easily accessible from their holding pens.

5.2.1.2.2 Design and construction of slaughter areas

- a. Kill floor areas should be designed and constructed so that stunning, bleeding, scalding, dehairing/defeathering/dehiding, scraping, singeing, and whole-carcass washing areas have a physical separation (or barrier) from dressing areas to prevent cross-contamination.

Explanatory note:

Image 63.
**Separation of different
stations (Photo taken
at a "Triple A"
slaughterhouse in Lipa
City, Batangas)**

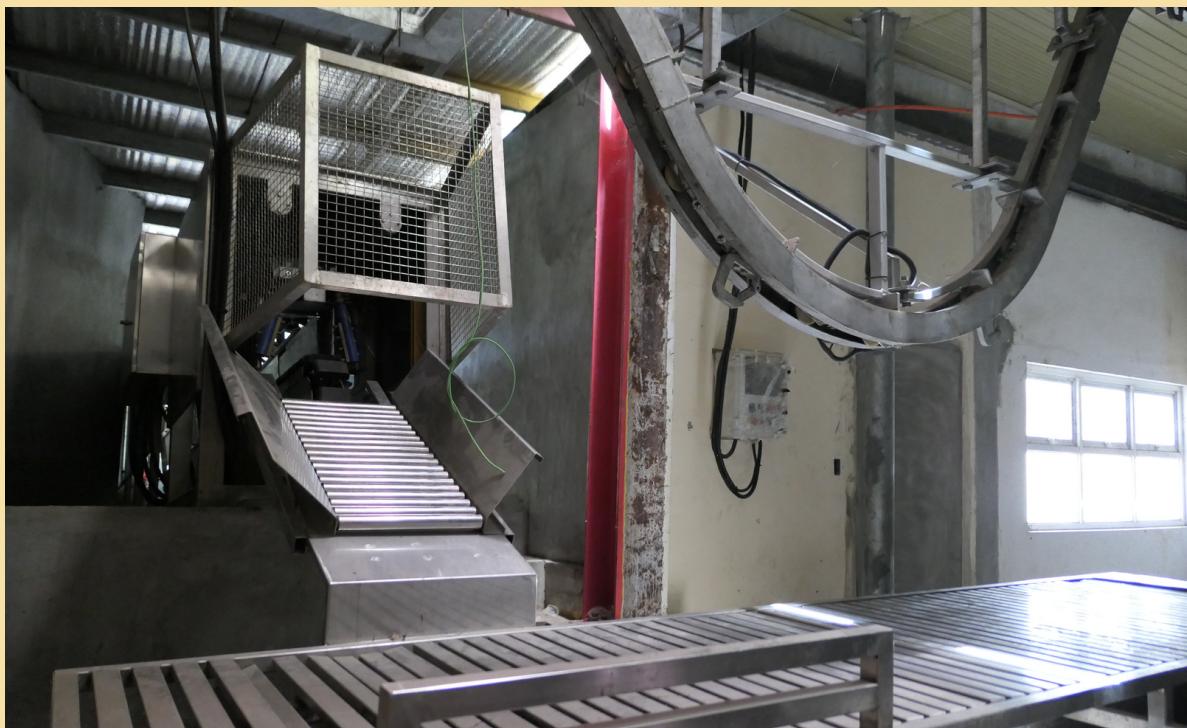


Image 64.
**Stunning area (Photo taken at a "Triple A" slaughterhouse in Lipa City,
Batangas)**

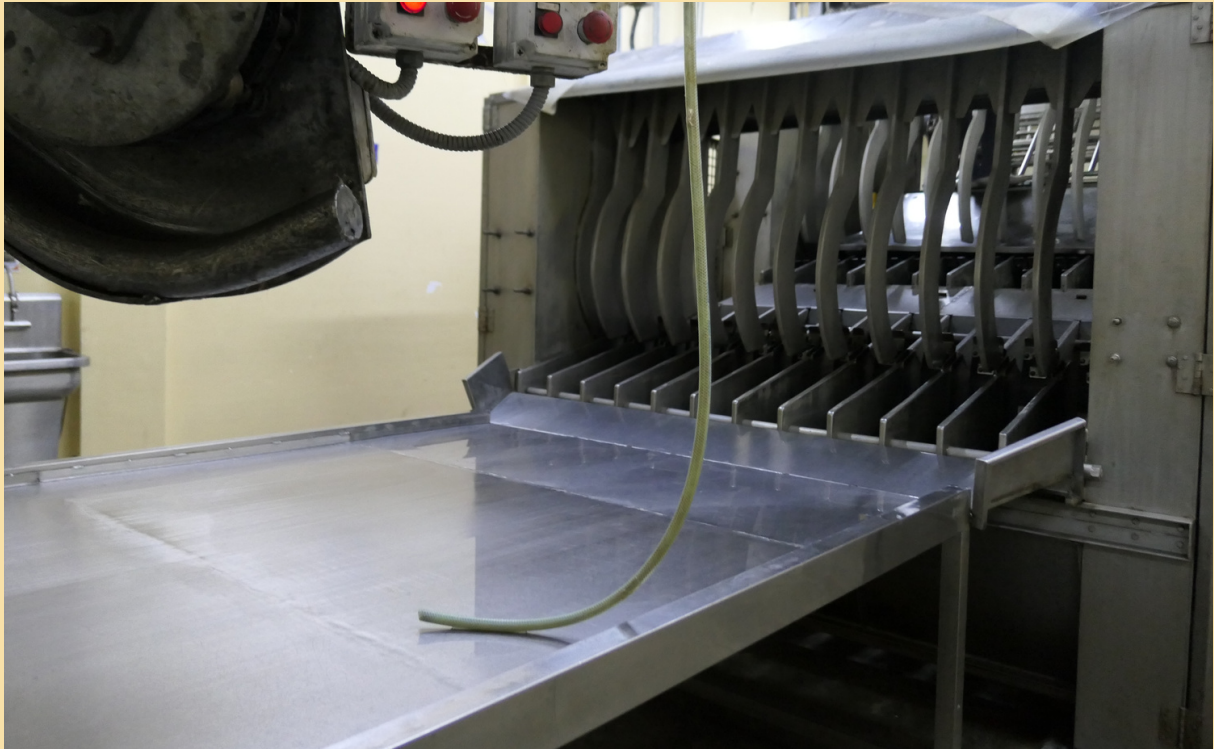


Image 65.

Dehairing area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 66.

Polishing area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 67.

Splitting area/offal removal area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- b. Slaughter line should be designed so that the direction of the operation is always towards the cleaner area, i.e. kill floor area to dressing area.

Explanatory note:



Image 68.

Electric stunning (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 69.

Dehairing area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 70.

Dehairing area towards polishing machine (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 71.

Polishing area towards evisceration area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 72.

Evisceration area towards final washing area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

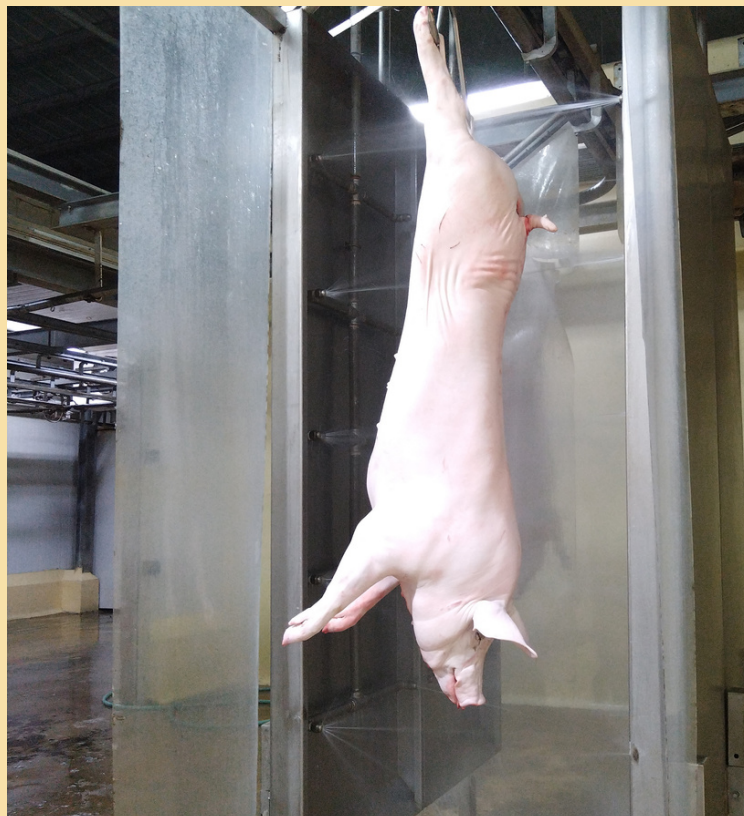


Image 73.
Final washing area towards weighing area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- c. The meat business operator should provide a means to present edible parts of bodies of animals for post-mortem inspection.
- d. There must be a separate area for condemned parts and provisions for its quick removal.

Explanatory note:

Image 74.
Separate area for condemned parts (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



- e. Entry of personnel should be separated between clean (dressing and fabrication) and dirty (kill floor) areas. Unauthorized persons should not be allowed to enter slaughter areas

Explanatory note:

Image 75.

Clean entrance area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 76.

Dirty entrance area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- f. Areas and facilities where carcasses and meat are handled should be designed and constructed so that hygienic practices are facilitated and contamination is minimized to the greatest extent practicable.

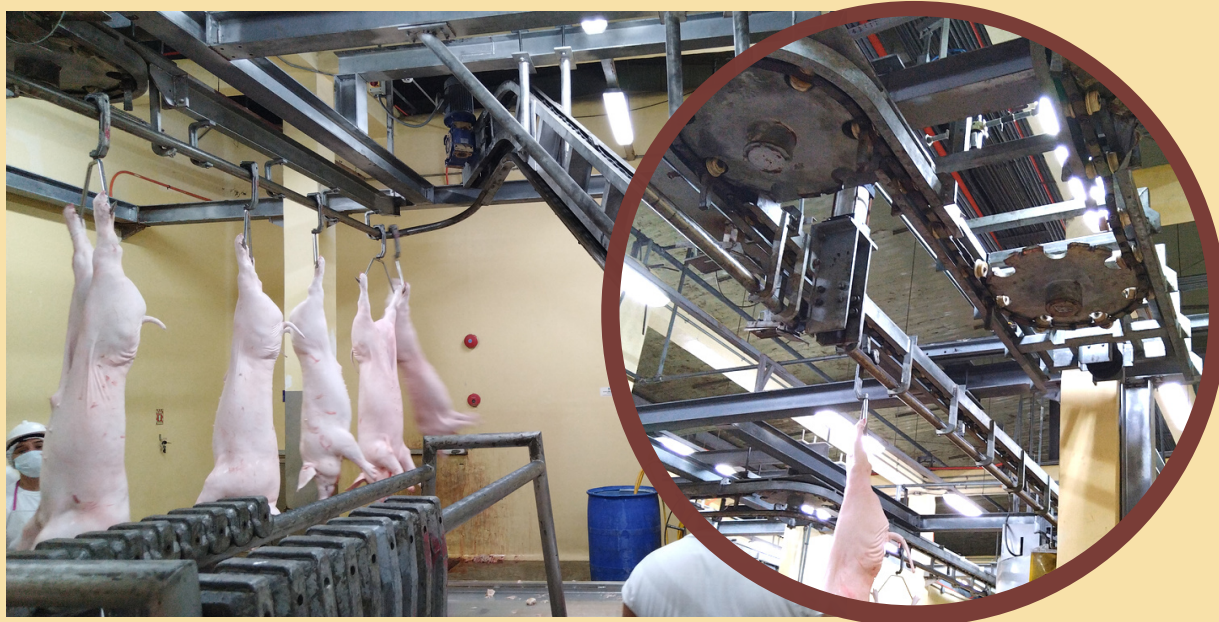
Explanatory note:

Image 77.

Pigs being hanged in shackle from dehairing to singeing (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 78.

Overhead rail system with regularly cleaned sanitized gambrel hooks (Source: NMIS, n.d)

- g. Areas where carcasses and meat are handled should be designed and constructed so that:
- (1) Cross-contamination during operations is minimized;
 - (2) Effective cleaning, sanitation and maintenance can be carried out during and between periods of operation;

Explanatory note:

Image 79.

Personnel frequently cleaning the area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 80.

Personnel washing knife under running water and sanitizing in tool dip (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- (3) Floors in areas where water is present slope sufficiently to ensure continual drainage;

Explanatory note:



Image 81.

Sloping drainage inside the slaughter area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- (4) Exterior doors do not open directly into the area;

Explanatory note:



Image 82.

Plastic curtain before entering offal cleaning area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- (5) Separate rooms are used for emptying and cleaning of alimentary tracts; handling of meat and inedible parts of animals; and storage of inedible animal parts;
 - (6) There is adequate lighting for hygienic process control;
 - (7) Pests are effectively controlled; and
 - (8) There are adequate facilities for secure storage of chemicals and other hazardous substances to prevent accidental contamination of meat.
- h. Insulated rooms should be available for cooling, chilling and freezing of meat, where applicable.

Explanatory note:

Image 83.

Chilling area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



- i. Establishments that have fabrication facilities should have temperature-controlled room or rooms and should ensure separation of cutting, boning, and primary wrapping area from the packing area.

- j. Establishments should have proper and functional drainage and waste disposal system.

Explanatory note:



Image 84.
Drainage inside the slaughter area
(Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 85.
Drainage system outside of a slaughterhouse
(Source: Universal Robina Corp., n.d)



Image 86.
Pit for waste disposal (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- k. Adequate hand washing and sanitizing facilities for personnel and implements should be available.

Explanatory note:



Image 87.

Handwashing facility inside the slaughterhouse (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 88.

Hand washing area before entering the slaughter area with instructions (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



- l. Equipment and implements used for edible and inedible parts of animals should be properly identified to avoid cross-contamination.

Explanatory note:

Image 89.

Tools for slaughtering (Left to right): 1) Sticking knife (black handle), 2) Skinning knife (white handle), 3) Steel sharpener (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



- m. Establishments should have adequate ventilation to prevent excessive heat, humidity and condensation.
- n. Airflow from contaminated areas to clean areas should be controlled.

5.2.1.2.3 Water supply

- a. Water used in the slaughterhouse/poultry dressing plant should be potable in accordance with existing relevant guidelines except for steam production, fire control and other similar purposes not connected with meat production.

Explanatory note:

According to the Philippine National Standards for Drinking Water of 2017, the standards for quality drinking-water are the following:

- a. Clear and does not have objectionable taste, odor or color. It must be pleasant to drink and free from all harmful organisms, chemical substances, and radionuclides in amounts that could constitute a hazard to the health of the consumer.

- b. The drinking water quality shall be measured in terms of its microbiological, physical, chemical, and radiological constituents.
- c. The parameters of drinking-water quality shall be classified as mandatory, primary, and secondary.
 - i. Mandatory parameters are legally enforceable. It shall be required for examination by all drinking-water service providers
 - ii. Primary parameters are site-specific. These are chemical impurities in water that directly affect health through acute or chronic exposure.
 - iii. Secondary parameters are those that render the water unacceptable for drinking.

- b. There should be sufficient and accessible supply of hot and potable water where needed.
- c. Non-potable water should be properly identified and used for other purposes except for meat production.

5.2.1.2.4 Temperature control

- a. There should be facilities and equipment for the cooling, chilling and/or freezing of meat, if applicable, and systems for monitoring temperature, humidity, airflow and other environmental factors to assure that process control regimes are achieved.

Explanatory note:



Image 90.
Entrance to the hog chiller (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 91.
Entrance to the blast freezer (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 92.
Cold storage temperature monitoring system (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 93.

Inside of a blast freezing area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 94.

Inside of a cold storage area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- b. Steam should be vented out to minimize potential for condensation and to prevent permeation into adjoining rooms.

5.2.1.2.5 Perimeter fencing

A secure perimeter fencing should be built to prevent the entry of unauthorized persons and stray animals in the establishment premises.

Explanatory note:



Image 95.
Perimeter fence (Source: NMIS, n.d)



Image 96.
Perimeter fence as seen from the inside of the slaughterhouse (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

5.2.1.2.6 Facilities and equipment for personal hygiene

- a. Establishments should have appropriate personal hygiene facilities to minimize cross-contamination of meat by meat handlers.

Explanatory note:

To prevent cross-contamination of meat and meat products, meat handlers should have:

- separate restroom/changing room with shower for males and females;
- foot/pedal/knee operated hand washing facility (located near work stations) with sufficient supply of water at an appropriate temperature which includes hand liquid soap dispensers and sanitizers, and hand dryer and/or paper towels with a receptacle for its disposal; and
- PPE that can be easily cleaned; and
- separate eating places from working/production area for personnel working in clean and dirty areas.



Image 97.

Foot bath located at the entrance of the slaughter area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 98.

Foot bath located at the entrance of the offal area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

*Image 99.*

Foot bath concentration
(Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

140	H2O	-	580 ML	DDS	-	200 PPM
80	H2O	-	360 ML	DDS	-	200 PPM
120	H2O	-	490 ML	DDS	-	200 PPM

- b. Facilities for personal hygiene include gender-specific changing rooms, showers, and flush toilets.
- c. Hand washing and hand drying facilities should be:
- located convenient to workstations;
 - have faucets not operable by hand;
 - supply water at an appropriate temperature, fitted with dispensers for liquid soap or other hand-cleansing agents;
 - include hand drying equipment and/or paper towels, and receptacles for discarded paper towels; and
 - have waste water routed to drains.

Explanatory note:

Image 100.

Appropriately designed and functional hand-washing facility with complete amenities such as water supply, liquid soap and sanitizer, hand drying device, sink, and non-hand operated faucets and bins (Source: NMIS, n.d)



Image 101.

Handwashing facility non-hand operated (Source: BAI-APDC, n.d)

- d. Appropriate protective clothing that can be effectively cleaned should be required.

Explanatory note:

Image 102.

Personnel with Personal Protective equipment (PPE)
(Source: NMIS, n.d)



Image 103.

Personnel with incomplete PPE
(Source: NMIS, n.d)

- e. There should be a separate canteen or mess area from the working area; and separate areas for personnel working in clean and dirty areas, where applicable.

5.2.1.3 Process Control Systems Under the Responsibility of the Meat Business Operator

- The meat business operator has the primary responsibility for implementing systems for process control.
- Effective process control is necessary to produce meat that is safe and suitable for human consumption.
- Process control systems should limit microbial cross-contamination and other chemical and physical contaminants and reflect its proportional contribution in reducing meat-borne risks to human health.
- HACCP should be applied as the system of choice for process control, and should be supported by GHP/GMP that includes sanitation standard operating procedures (SSOPs).

Explanatory note:

Hazard Analysis and Critical Control Points (HACCP) system is an internationally accepted food safety management system that ensures the slaughtering of animals and handling of meat pose minimal public health risks. Prerequisites of this system include Good Animal Husbandry Practices (GAHP), Good Hygienic Practices (GHP) or Good Manufacturing Practices (GMP), and Standard Operating Procedures (SSOP).

The Codex General Principles of Food Hygiene (CXC 1-1969 Revised in 1997, 2003, 2020) provides the general guidelines for applying the HACCP System to identify and enhance the control of significant hazards.

**5.2.1.3.1 Sanitation Standard Operating Procedures (SSOPs)**

- a. A properly implemented SSOP system should ensure that facilities and equipment are clean and sanitized before the operations and that hygiene is maintained throughout the operation.
- b. Attributes of sanitation standard operating procedures (SSOPs) are:
 - a) a written SSOP program developed by the establishment describing the procedures involved and the frequency of application;
 - b) recognition of establishment personnel with the responsibility of implementing and monitoring SSOPs;
 - c) records of monitoring and any corrective and/or preventative action taken;
 - d) corrective actions that include appropriate disposition of product; and
 - e) regular evaluation of the effectiveness of the system by the meat business operator.

5.2.1.3.2. Hazard Analysis Critical Control Points (HACCP)

HACCP program or equivalent international accepted guidelines should be developed and applied as a proactive means of process control for food safety purposes.

5.2.1.3.3 Outcome-based parameters for process control

- a. Establishment of performance criteria for the outcome of specified activities strengthens the verification of process control.
- b. The establishment should have a documented process control system for implementing corrective actions to consistently meet performance criteria.
- c. Organoleptic parameters may also be established.

5.2.1.3.4 Quality Assurance (QA) systems

The meat business operator should establish and implement quality assurance (QA) systems.

5.2.1.4 Maintenance and Sanitation: Establishment, Facilities, and Equipment

- a. Establishments, facilities and equipment should be maintained and sanitized to minimize contamination of meat.

Explanatory note:



Image 104.

Properly maintained facility and equipment (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 105.

Properly maintained gambrels (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 106.

Properly maintained cold storage area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 107.

Tool sanitizer (Source: BAI-APDC. n.d)



Image 108.

Tool dip for sanitation (Source: NMIS. n.d)

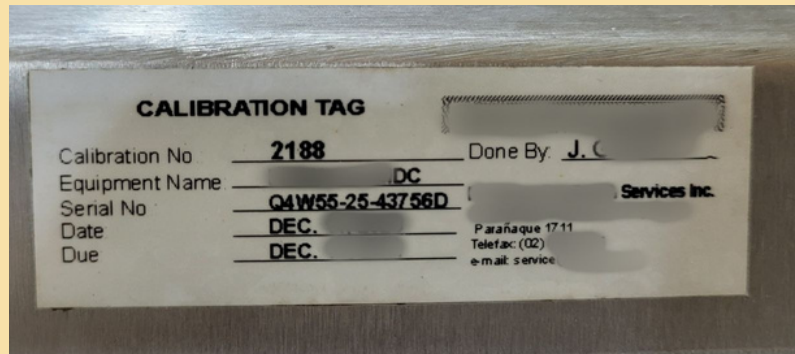
Image 109.

Tool dip for sanitation located in the splitting area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Explanatory note:*Image 110.*

Regular calibration for equipment maintenance (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



- b. The guidelines for the maintenance and sanitation of establishments should be in accordance with existing relevant guidelines.
- c. A basic component of meat hygiene programs should be the monitoring and documentation of the effectiveness of maintenance and sanitation.
- d. Slaughter and dressing of animals with special conditions should have special sanitation requirements.
- e. Establishments, facilities and equipment should be in good condition to facilitate all sanitation procedures and prevent contamination of meat.
- f. The scope of the cleaning program, cleaning specifications, persons responsible and monitoring and record keeping requirements should be specified in sanitation standard operating procedures (SSOPs).
- g. Cleaning chemicals and lubricants should be properly used, handled, labeled and stored.
- h. Specific cleaning programs are required for equipment and tools that come in contact with meat intended for food.
- i. Containers and equipment should be cleaned and sanitized before passing from a "dirty" area to a "clean" area.
- j. Pest control programs should be implemented and in accordance with Good Hygienic Practices/Good Manufacturing Practices described in existing relevant guidelines. In particular the meat business operator:
 - a) Should properly document and verify the program;
 - b) Follow conditions for the usage of the approved pesticide; and
 - c) Keep pest control chemicals in secure storage and limit access to authorized persons

5.2.2 Responsibilities of the Meat Control Officer/Competent Authority

The competent authority should encourage development and adoption of innovative technologies and procedures that reduce cross-contamination, improve food safety and animal welfare

5.2.2.1 Ante-mortem Inspection

- a. All slaughter animals should be subjected to ante-mortem inspection by an official inspector.

Explanatory note:

Ante-mortem examination shall be made in holding pens on the premises of the establishment at the time of slaughter, and the food animals shall be inspected by an inspector on arrival as soon as practicable after delivery to the establishment (DC No. 1 series of 2014 Rule 17.4 of the Republic Act 9296 "Meat Inspection Code of the Philippines as amended by RA 10536 and its implementing rules").

Control No: TN 22307

Republic of the Philippines
Province of Batangas
MUNICIPALITY OF TAYSAN
OFFICE OF THE MUNICIPAL AGRICULTURIST

ANIMAL INSPECTION CERTIFICATE
Swine for Slaughter

This is to certify that 15 (Fifteen) heads of swine from (farm name) DA GAYAN located at DA GAYAN, TAYSAN, BATANGAS
Intended for shipment to DA GAYAN, TAYSAN, BATANGAS and owned by DA GAYAN, TAYSAN, BATANGAS on 14 MAY 2022
were inspected and found to be apparently free from any infectious or communicable disease.

1. That the pigs were vaccinated against (vaccination record):

DATE OF LATEST VACCINATION	TYPE OF VACCINE

Noted by: [Signature]
Municipal Agriculturist

Contact No:
Email Add:

Attachments presented:
☒ BAI Accreditation
☒ Transport Carrier License
☒ Handler's License

Certification valid until 14 MAY 2022
Not valid without Dry Seal

Image 111.
Livestock inspection
clearance (Photo taken at
a "Triple A" slaughterhouse
in Lipa City, Batangas)



Image 112.

Pig holding area (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- b. The competent authority, based on risk-based approach or current scientific knowledge and practice, should perform ante-mortem inspection, establish official procedures and conduct necessary laboratory tests, if needed.
- c. Ante-mortem inspection of food animals should be made as soon as practicable and should be conducted in the holding pens within the premises of the slaughterhouse after the prescribed rest period of the animals. Food animals should be inspected not later than 24 hours from the time of arrival or at least two hours before animals are slaughtered.

Explanatory note:

No animals shall proceed to slaughter until an inspector has carried-out ante-mortem inspection and has passed it as suitable for slaughter (DA DC No. 1 series of 2014 Rule 17.5).

Food animals shall be inspected to allow the inspector to detect deviations from normality, whether of demeanor, behavior, appearance, or other clinical signs that might indicate a disease or defect requiring special handling or closer examination. The temperature of food animals suspected of disease conditions shall be taken as an added gauge (DA DC No. 1 series of 2014 Rule 17.6).

- d. Animals with presentations described below should be subjected to special procedures imposed by the competent authority:
 - a) Excessively dirty animals
 - b) Dead on arrival animals
 - c) Apparently sick or injured animals
 - d) Apparently pregnant animals
 - e) Lack of required documentation accompanying the slaughter animals
- e. Additional measures to routine ante-mortem inspection may be required when indicated by public health concerns.
- f. The official inspector performing the ante-mortem should instruct the meat business operator to remove the animals that have died in the lairage/holding pen and dispose of them accordingly.
- g. Ante-mortem judgement categories include:
 - a) passed for slaughter;
 - b) passed for slaughter subject to second ante-mortem inspection after an additional holding period;
 - c) passed for slaughter under special considerations/as 'suspect'
 - d) passed for emergency slaughter;
 - e) condemned for public health reasons;
 - f) condemned for meat suitability reasons; and
 - g) condemned for animal health reasons

Explanatory note:

According to rules and regulations governing meat inspection in the Philippines, Amending Animal Industry AO No. 9, series of 1954, any animal showing disease during ante-mortem inspection or condition that shall cause condemnation of its carcass shall be marked "CONDEMNED." It shall be isolated immediately and disposed of under the inspector's supervision following Animal Industry Administrative Order No. 5 (NMIC AO No.6 series of 1975).

According to AC No. 03 series of 2018, the following are the OIE-listed diseases or conditions that shall be included for condemnation:

- Anthrax
- Black-leg
- Hog cholera
- Swine plague (acute)
- Leptospirosis
- Swine erysipelas
- Rinderpest
- Rabies
- Foot-and-mouth disease
- Tetanus
- Glanders and,
- Hemorrhagic septicemia (acute)

Image 113.

Swine erysipelas
(Source: NMIS, n.d)



5.2.2.2 Post-mortem Inspection

- a. The competent authority is responsible for the establishment of inspection procedures, tests, and judgment criteria as well as verification of the post-mortem inspection system. All aspects of the post-mortem inspection should be science-based and tailored to relevant risks.

Explanatory note:

A post-mortem examination and inspection shall be done carefully. The inspection shall be done for carcasses and parts of the animals. This examination shall be conducted by an inspector. The inspection shall include examining all parts of the carcasses (palpated or incised, or both), all the lymph nodes, and organs. Any other examination or tests, such as incising the muscle, etc., may be necessary for the rigid and thorough determination of disease. Carcasses and parts thereof shall be properly cleaned and dressed to facilitate inspection (NMIC AO No.6 series of 1975).

- b. The competent authority should determine: how to implement post-mortem inspection, the required training, knowledge, skills and ability of personnel involved and the frequency of verification activities.
- c. All carcasses and other relevant parts intended for human consumption should be subjected to post-mortem inspection. Post-mortem inspection should be performed as soon as the animals are slaughtered. All relevant information from the primary production and ante-mortem inspection should be considered during the inspection.
- d. Condemned carcasses and parts should be properly identified and handled to avoid cross-contamination of meat from approved/ 'passed' carcasses and parts. The reason for condemnation should be recorded and laboratory tests may be taken if necessary.
- e. Tests other than organoleptic inspection may be required when indicated by public health concerns.
- f. The competent authority should notify the owner in cases of condemnation and non-compliance to residues or contaminants regulatory limits.
- g. Post-mortem judgment categories include:
 - a) safe and suitable for human consumption;
 - b) safe and suitable for human consumption, subject to application of a prescribed process;
 - c) held on suspicion of being unsafe or unsuitable, pending the outcome of further procedures and tests;
 - d) unsafe and unsuitable for human consumption but able to be used for some other purpose, providing there are adequate hygiene controls to prevent any transmission of hazards, or illegal re-entry to the human food chain;
 - e) unsafe and unsuitable for human consumption, and requiring condemnation and destruction; and
 - f) unsafe for animal health reasons, and disposed accordingly

Explanatory note:



Image 114.

Post-mortem inspection (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 115.

Post-mortem inspection of viscera (Source: BAI-APDC. n.d)



Image 116.

Proper hanging of offal after post-mortem inspection (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 117.
Post-mortem inspection of hog's carcass (Source: BAI-APDC. n.d)



Image 118.
Post-mortem inspection of c (Source: NMIS. n.d)

5.2.2.3 Proper Marking of Carcasses

- a. Carcasses and other relevant parts found fit for human consumption should be marked, stamped, tagged or labeled by the meat inspector as "Inspected and Passed". Carcasses and other relevant parts found to be unfit for human consumption should be marked, stamped, tagged or labeled by the meat inspector as "Inspected and Condemned".

Explanatory note:



Image 119.
Carcass bearing proper markings (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 120.

Personnel placing "passed & inspected" markings in carcass (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

b. Characteristics of marking ink to be used:

- a) should be certified food grade ink and safe for human consumption;
- b) should be strongly identifiable and will not wash off under ordinary conditions; and
- c) should not interfere with monitoring equipment used to detect contamination on meat.

Explanatory note:



Image 121.
Carcass of cattle bearing proper markings
(Source: BAI-APDC. n.d)



Image 122.
Carcass of hogs bearing proper markings
(Source: NMIS. n.d)

Explanatory note:

Image 123.

Proper markings in carcass after weighing (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

5.2.2.4 Process Control Systems under the Responsibility of the Competent Authority

5.2.1.4.1 Regulatory systems

- a. The competent authority should have the legal power to establish and enforce regulatory meat hygiene requirements and has the final responsibility for ensuring that all regulatory requirements are met.
- b. The competent authority should:
 - (1) Establish regulatory systems and requirements;
 - (2) Undertake specified meat hygiene controls that are designated activities of the competent authority;
 - (3) Verify that process control systems implemented by the meat business operator meet regulatory require
 - (4) Verify that accredited bodies are carrying out functions as required; and
 - (5) Carry out enforcement actions as necessary.

- c. Where the meat business operator does not comply with regulatory requirements, the competent authority should carry out enforcement actions that may include:
 - a) slowing of production while the operator regains process control;
 - b) stopping production, and withdrawing certification for meat deemed to be unsafe or unsuitable for its intended use;
 - c) withdrawing official supervision, or meat inspection service of official inspectors;
 - d) ordering specified treatment, recall or destruction of meat as necessary; and
 - e) withdrawing or suspending all or part of the approval/registration of the establishment if process control systems are invalid or repeatedly non-compliant.

Explanatory note:

Competent authorities such as National Meat Inspection Services (NMIS), Bureau of Animal Industry (BAI), and Local Government Units (LGUs) ensure that food safety principles are practiced from livestock production up to meat handling.

**5.2.3 General Hygiene Requirements for Process Control**

- a. Process control should meet the general hygiene requirements of existing relevant regulations.
- b. The competent authority should use the services of accredited/recognized laboratories when carrying out meat hygiene activities. Laboratory testing may be required for: verification of process control; monitoring achievement of performance criteria; residue monitoring; diagnosis of disease conditions affecting individual animals; and monitoring of zoonoses.

5.2.3.1 Hygiene Requirements for Slaughter and Dressing

- a. Only live animals intended for slaughter and animals that have undergone emergency slaughter outside the slaughterhouse with complete veterinary documents may be allowed to be brought into a slaughterhouse or poultry dressing plant, in accordance to existing meat inspection regulations.
- b. No animal other than those intended for slaughter should enter a slaughterhouse/poultry dressing plant, with the exception of sentinel animals used for disease surveillance and animals used for researches and similar purposes.
- c. An animal should only be slaughtered in a slaughterhouse/poultry dressing plant if an official inspector is available to undertake inspection process. In cases of emergency slaughter where an official inspector is not available, special measures provided by the competent authority will apply to ensure that the meat is safe and suitable for human consumption.

Explanatory note:

Emergency slaughter is an immediate slaughter caused by injuries such as but not limited to bone fracture, heat stroke, and danger of suffocation. This reduces the suffering provided the animal is still alive (NMIS MC No. 03-2017-006).

- d. All animals brought to the kill floor should be slaughtered without delay, with proper observance of stunning, sticking, and bleeding intervals and procedures, and in consideration of animal welfare concerns.
- e. During initial slaughter operations, and with due consideration to minimizing contamination:
 - (1) Slaughtered animals that are scalded, flamed or similarly treated should be scoured of all bristles, hair, scurf, feathers, cuticles and dirt;

Explanatory note:



Image 124.
Dehairing (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 125.
Second dehairing using knife or scraper (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 126.

Singeing (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

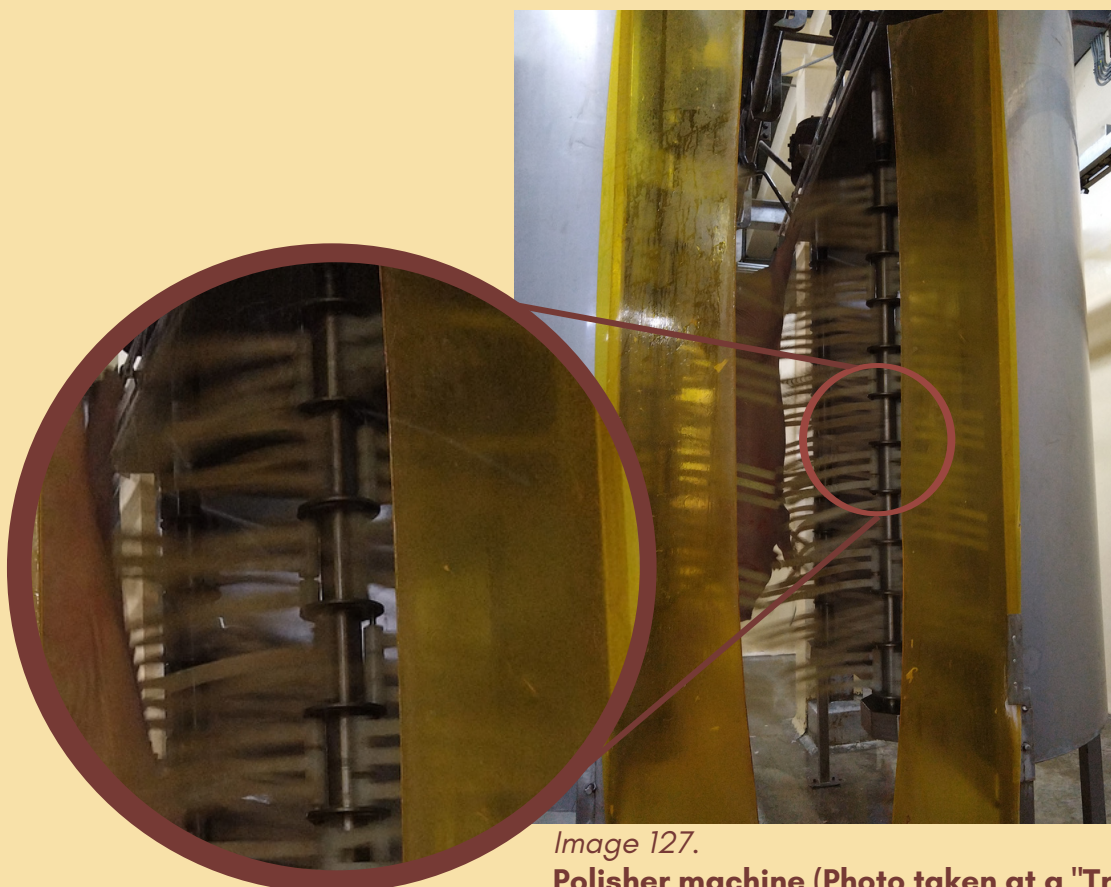


Image 127.

Polisher machine (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- (2) The trachea and esophagus should remain intact during bleeding, except in the case of ritual slaughter;
- (3) Bleeding should be as complete as possible; if blood is intended for food, it should be collected and handled in a hygienic manner;

Explanatory note:

Image 128.
Manual slitting of poultry
(Source: NMIS, n.d)



Image 129.
Manual slitting of pigs (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Image 130.

Collection of blood after slitting (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

- (4) Tonsils should not be cut when exposing the tongue;
- (5) Skinning of the head may not be required for some classes of animals e.g. goats, calves, sheep, or as required by the competent authority, provided that heads are handled in such a way as to avoid undue contamination of meat;
- (6) Before the removal from the head of any parts intended for human consumption, the head should be cleaned to facilitate inspection and the hygienic removal of specified parts;
- (7) Lactating or obviously-diseased udders should be removed from animal bodies at the earliest opportunity;
- (8) Removal of udders should be done in a way that the contents do not contaminate the animal bodies; and
- (9) Hides/fleeces should not be washed, de-fleshed or left to accumulate in any part of a slaughterhouse.

- f. Poultry, after de-feathering, can only be effectively cleaned of dust, feathers and other contaminants by washing with potable water.
- g. Once the hide/fleece or hair has been removed, animal bodies should be separated from each other to avoid contact, and this should be maintained until each carcass has been inspected and judged by an official inspector undertaking post-mortem inspection.
- h. During slaughter, and with due consideration to minimizing contamination:
 - (1) Skinning, if performed, should be completed before evisceration;

Explanatory note:

Image 131.

Manual flaying (Source: NMIS, 2014)



Image 132.

Dehiding or removal of hide in cattle using cradle (Source: RSRH Livestock Corp, 2017)

- (2) Water in scalding tanks should be managed and changed regularly, as needed, so that it is not excessively contaminated;
- (3) Evisceration should be carried out without delay;

Explanatory note:



Image 133.

Evisceration (Photo taken at a Triple "A" slaughterhouse facility in Lipa City , Batangas

- (4) Discharge or spillage of any material from the esophagus, crop, stomach, intestines, cloaca or rectum, or from the gall bladder, urinary bladder, uterus or udder, should be prevented;
 - (5) Intestines should not be severed from the stomach during evisceration and no other opening should be made into an intestine, unless the intestines are first effectively tied to prevent spillage, except in the case of poultry;
 - (6) Stomachs and intestines and all inedible material derived from the slaughtering and/or dressing of bodies of animals or poultry should be removed as soon as possible from the dressing area, and processed in a manner that does not cause cross-contamination of meat;
 - (7) Methods used to remove visible and microbial contamination should be demonstrated to be effective and meet other requirements as specified by the competent authority; and
 - (8) Fecal and other material should be removed from carcasses in a manner that does not result in further contamination.
- i. The official inspector, undertaking post-mortem inspection, should enforce necessary measures if the manner of slaughtering/ handling of meat will adversely affect the safety and suitability of meat.
 - j. The offal should remain identifiable as belonging to a single carcass when required for postmortem judgement.

5.2.3.2 Hygiene Requirements for Parts of Animal Deemed Unsafe or Unsuitable for Human Consumption

- a. There should be special hygiene measures in operations involving animal parts deemed unsafe or unsuitable for human consumption. These measures should ensure that cross-contamination and substitution is prevented.
- b. Carcass or carcasses deemed unsafe or unsuitable for human consumption should be disposed properly in accordance with existing rules.

- c. Animal parts deemed unsafe or unsuitable for human consumption should be:
- a) placed immediately into specifically identified containers that is secured and only the official inspector is able to open;

Explanatory note:*Image 134.*

Condemnation bin (Source: BAI-APDC, n.d)

- b) identified according to the type and end-use of the tissue; and
- c) in case of condemned materials approved for rendering, handle in rooms for that purpose and transfer in a secure manner to a recognized place of disposal.

Explanatory note:*Image 135.*

Condemn dispatch (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)

Minimum Requirements for: **Post-slaughter**

The provisions of the standard are written in black font color. The explanatory notes are indicated in red font color inside a yellow box. Photos and images are also found in succeeding pages.



5.3.1 Hygiene Requirements for Process Control after Post-Mortem Inspection

a. Meat passed as safe and suitable for human consumption should be:

- (1) Removed immediately from the dressing area and transferred to the holding area;
- (2) Handled, stored and transported properly to prevent contamination and deterioration;
- (3) Held under conditions that reduce its temperature and/or water activity, unless cut up or de-boned pre-rigor; and
- (4) Held at temperatures that achieve safety and suitability objectives.

Explanatory note:

The environment contributes to or may determine the shelf-life of meat. One of the problems is the occurrence of microorganisms -- temperature-dependent-- on meat surfaces. To address this, cooling or reducing temperature after post-mortem inspection must be done to avoid the growth of microorganisms.

Types of cold preservation

Chilling	It is done on a newly slaughtered animal. The temperature is brought down to a minimum product temperature higher than 0 C or to a temperature at which the meat will not freeze. The maximum product temperature for chilled meat shall be 10C.
Frozen Meat	It is done on a newly slaughtered animal. The temperature is brought down to a maximum product center temperature of 0 C during which most of the water in the meat is converted to ice.
Thawed Meat	It is done on frozen meat and where the product temperature is allowed to rise to a level higher than 0 C but no higher than 5 C under temperature-controlled conditions.
Newly slaughtered Meat	It refers to meat obtained from animals slaughtered within the day and sold to the consumer within a specified time from slaughter. It retains a fresh-like character in terms of odor, color, and texture and with no signs of spoilage (DA AO No.6 series of 2012).

When the preservation period is longer than that acceptable for chilled meat, freezing must be done to minimize any physical, biochemical, and microbiological changes affecting quality in storage (Cano-Munoz, 1991)



Image 136.



Image 137.

**Carcasses are properly hanged in chilling rooms before freezing
(Source: Canva, n.d)**



Image 138.



Image 139.

Facility compliant with animal health and welfare requirements (Source: BAI-APDC, n.d)

b. In the case of poultry undergoing immersion chilling:

- (1) The immersion chilling process should meet hygiene criteria specified by the competent authority;
- (2) Rapid reduction in carcass temperature; and
- (3) Sanitation requirements should include complete emptying, cleaning and sanitation of tanks as appropriate.

c. Where carcasses, parts of carcasses or other meat is placed in a holding room:

c. Where carcasses, parts of carcasses or other meat is placed in a holding room:

- (1) All requirements for hygienic control of operations must be followed;
- (2) Carcasses and parts of carcasses should be held in a manner permitting adequate circulation of air;
- (3) Prevention of potential cross-contamination from dripping fluids; and
- (4) Control of condensation and water dripping from overhead facilities.

d. When fresh meat is cut or deboned:

- (1) It should be transported directly from the dressing area to the chilling room and then to the fabrication area;
- (2) Temperature should be controlled in the fabrication area; and
- (3) Cutting up, deboning and packing should be done in the fabrication area and should meet all requirements for hygienic process control.

e. When raw meat is comminuted/ground/minced:

- (1) It should be obtained only from parts of animals as approved by the competent authority;
- (2) It should not contain bone fragments or skin;
- (3) It should not contain any grossly abnormal tissues and/or post-dressing contamination; and
- (4) The competent authority may specify compositional criteria.

Explanatory note:

Table 1. Compositional criteria using color of carcass

Meat	Color
Beef	Bright cherry red
Goat meat	Light to pink red
Lamb	Light to pink red
Pork	Greyish pink
Veal	Light to pink red
Venison	Dark red

(Source: FAO, 1991)

Physical appearance of meat



Image 140.
Beef (Source: Canva. n.d)



Image 141.
Chevon/Goat (Source: Canva. n.d)



Image 142.
Mutton/Lamb meat (Source: Canva. n.d)

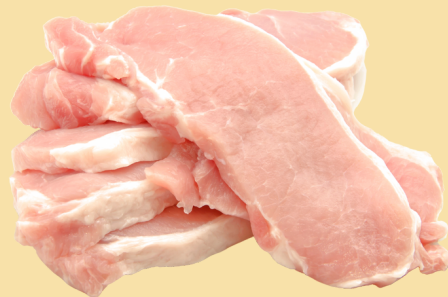


Image 143.
Pork (Source: Canva. n.d)



Image 144.
Veal (Source: Canva. n.d)



Image 145.
Venison (Source: Canva. n.d)



Image 146.
Chicken meat (Source: Canva. n.d)

The general methods used to detect diseases, abnormalities, and contamination will involve your senses. These include:

- Sight - observing a disease lesion (abscess, tumor).
- Feel - palpating (feeling an abnormal lump in tissues, feeling abnormal firmness in an organ).
- Smell - smelling the urine odor of uremia, smelling the contents of a broken abscess). (Source: USDA-FSIS, 2019)

f. When raw meat is mechanically separated, the competent authority should:

- (1). Regulate the parts and species of animal that can be used;
- (2) Set compositional standards for maximum calcium content; and
- (3) Require specific labeling of the final product.

g. When raw meat is minced, mechanically separated or used in meat preparations:

- (1) The competent authority can specify maximum time/temperature schedules
- (2) It should be immediately wrapped and/or packaged followed by refrigeration when not used as an ingredient for meat preparations and manufactured meat;
- (3) The competent authority may specify microbiological criteria for raw materials and final product;
- (4) Establishments should have means of detecting contamination with metal fragments as appropriate; and
- (5) Thawed meat should not be re-frozen.

Explanatory note:

Thawing causes ice crystals to change into melted water. The change in temperature and humidity conditions can reactivate microbes in meat as water is reabsorbed. (FAO, 1991)

Although freezing prolongs the shelf life of meat during storage, the exudation of fluid or the “drip” is evident during thawing. The “drip” primarily contains proteins, peptides, amino acids, lactic acid, purines, Vitamin B complex, and various salts. Protein denaturation, lipid and protein oxidation, and discoloration are the other adverse effects on quality (Xiong, 2017).

h. Where meat is packed or wrapped:

- (1) Use suitable packaging material and store in a hygienic manner; and
- (2) Cases or cartons should have a suitable inner liner or other means of protecting the meat if pieces of meat are not individually wrapped before packing.

Explanatory note:

Suitable packaging includes plastic films, papers, and cardboard lined with plastic film. The followings list the plastics of commonly used for cold storage:

- Polyamide (PA)
- Polyethylene (PE)
- Polyester (polyterephthalic acid ester) (PET/PETP)
- Polyvinylchloride (PVC)
- Polyvinyl chloride (PVDC) (Cano-Munoz, 1991)



Image 147.

Fabricated meats in individually wrapped packaging contained in carton boxes (Source: NMIS. n.d)

i. Where meat is placed in a room for freezing:

- (1) Meat that are hung or in racks or trays should be in a manner that does not obstruct air circulation;
- (2) Meat that is not in cartons should be stored properly to prevent cross contamination via dripping of liquids;
- (3) Cartons with meat should be stacked to permit adequate circulation of air; and

- (4) Meat stored on trays should be placed properly to avoid contact with the base of an upper tray.

Explanatory note:

Image 148.

Proper packaging of poultry meat (Source: NMIS, n.d)



Image 149.

Meat appropriately stacked in clean trays (Source: Sunstar, 2019)

j. Where meat is held in a freezer facility:

- (1) The temperature of meat should be reduced to acceptable level before placement;
- (2) Exposed meat must be stored properly so that its hygiene is not compromised by the presence of packaged meat and packaging material;
- (3) Meat should not be stacked directly on the floor and should be placed so that there is adequate air circulation;
- (4) The freezer storage should be operated and maintained appropriately to maintaining the safety and suitability of meat; and
- (5) Temperatures should be constantly recorded and monitored.

Explanatory note:



Freezer facility should be maintained at **-18°C to -25°C**. However, each type of meat requires specific conditions (Source: Cano-Munoz G. 1991)

Image 150.

Chest freezer is used to keep the frozen product at recommended temperature of -18°C (0°F) or lower (Source: Canva .n.d)

- k. Thawing of raw meat for further fabrication should not result in growth of microorganisms or the formation of toxins that may be a risk to human health.
- l. A procedure for determining and validating the shelf life of warm, chilled and frozen meat should be established and implemented by the meat business operator.
- m. Establishments approved for slaughter and processing of different animal species should ensure that operations are controlled in terms of space or time so that there is no possibility of accidental mixing of meat from different animal species and no misidentification at the time of packaging.

5.3.2 Transportation of Meat

- a. The guidelines for the transportation of meat should be in accordance with existing relevant guidelines.
- b. Vehicles for transportation of meat should:
 - a) should be accredited/registered by the competent authority;

Explanatory note:



Image 151.

NMIS accredited transport vehicle
(Photo taken at a "Triple A"
slaughterhouse in Lipa City,
Batangas)



Image 152.
**Accredited meat
transport vehicle**
(Source: NMIS, n.d)

Enclosed vehicles for transportation shall always be kept clean and regularly disinfected. The vehicle should not have been used for transporting live animals or any other cargo that may adversely affect the safety and quality of the meat to be transported (Administrative Order No. O5. series of 2012).

b) be designed that the meat does not contact the floor;

Explanatory note:



Image 153.
Interior of transport vehicle with hanger hook (Source: Canva, n.d.)

- c) have door seals for the prevention of entry of sources of contamination; and

Explanatory note:

Image 154.

Transport vehicle with door seals to help maintain the temperature and prevent entry of contamination (Photo taken at a port in Metro Manila)



- d) be equipped to maintain and monitor temperature.

- c. Meat should be transported at recommended temperatures that do not promote growth of harmful bacteria. Temperature should be constantly monitored and recorded. Additionally, there should be adequate protection from external contamination and damage.

Explanatory note:

According to DA Administrative Order No. 6, s. 2012, Section 2.5.1 to 3 or the Rules and Regulations on Hygienic Handling of Chilled, Frozen, and Thawed meat in meat markets:

- Chilled Meat shall not be frozen and shall be maintained at a minimum product temperature higher than **0°C and a maximum of 10°C**.
- Frozen Meat should be maintained at a **maximum product temperature of 0°C** and should be stored in a **meat cold storage at less than -18°C**.
- Thawed meat should be maintained at a **maximum product temperature of 5°C**

- d. If meat is exposed to adverse temperature or sources of contamination that may affect safety and suitability, a re-inspection may be done by an official inspector before distribution is allowed.

5.3.3 Systems for Removing Products that are in Circulation

- a. Meat business operators should have adequate systems for the removal of products that are in circulation. The competent authority, consumer and other interested parties should be notified when a meat business operator removes product for public health reasons.
- b. Product removal systems designed by the meat business operator should:
 - (1) Include identification, management and operational procedures that facilitate the rapid and complete removal of affected products;
 - (2) Provide records for the traceability to the origin of the problem;
 - (3) Provide records that facilitate investigation of implicated processing inputs;
 - (4) Be reviewed and tested periodically; and
 - (5) Include provision for communication to the competent authority, consumers and other interested parties when public health issues are involved.
- c. The systems for the removal of products in circulation should be capable of:
 - (1) Withdrawal, where measures are applied by the establishment operator/meat business operator to prevent the distribution, display or offer of a product that is not safe or suitable for human consumption
 - (2) Recall, where measures are applied to return unsafe or unsuitable product that has already been supplied or made available to consumers;
 - (3) Detention, where measures are applied by the competent authority to ensure that the product is not moved or tampered with pending a decision on its disposition
- d. Systems that are enacted in relation to withdrawal of products removal will depend on the specific situation and the likely risks to human health.

Minimum Requirements for: **Personal Hygiene**

The provisions of the standard are written in black font color. The explanatory notes are indicated in red font color inside a yellow box. Photos and images are also found in succeeding pages.



5.4 Personal Hygiene

Movement of persons from dirty areas, e.g. kill floor, to clean area, e.g. dressing and fabrication areas, should not be allowed. If movement is needed, movement should be from cleanest area to less sanitized areas. If movement is reversed, complete change of clothing and sanitation protocols should be complied with.

Explanatory note:



Image 155.

Personnel with Personal Protective equipment (PPE)

(Source: NMIS, n.d)



Color-coded personal protection equipment (PPE) may be used to distinguish sections in the work area.



Image 156.

Personnel with incomplete PPE
(Source: NMIS, n.d)

5.4.1 Personal cleanliness

- a. Persons who come into contact with meat for human consumption should:
- (1) maintain personal cleanliness and behavior;
 - (2) wear prescribed protective clothing and ensure that non-disposable protective clothing is cleaned before and during work;

Explanatory note:

Image 157.

Personnel wearing color coded Personal Protective equipment (Photo taken at a "Triple A" slaughterhouse in Lipa City, Batangas)



Color-coded personal protection equipment (PPE) may be used to distinguish sections in the work area.

- (3) if gloves are worn during the slaughter and dressing of animals and handling of meat, ensure that they are the approved type for the activity and they are used according to specifications;
- (4) immediately wash and sanitize hands and protective clothing when there has been contact with abnormal animal parts;
- (5) cover cuts and wounds with waterproof dressings; and
- (6) store protective clothing and personal effects in locations separate from areas where meat is stored.

- b. Persons working in the fabrication area should have a complete set of uniform allowing least exposure of skin, i.e. head cover, face mask, and proper footwear.
- c. Uniforms and boots should not be allowed to be taken out of the working areas, or changing/sanitation rooms.

5.4.2 Personal Health Status

- a. The establishment should have a record of relevant personal health records of personnel.
- b. Persons who come into direct or indirect contact with edible parts of animals or meat should have a medical examination prior to and during employment and not work while clinically affected by, or suspected to be carrying, communicable agents likely to be transmitted through meat.

Minimum Requirements for: **Product Information and Consumer Awareness**

The provisions of the standard are written in black font color. The explanatory notes are indicated in red font color inside a yellow box. Photos and images are also found in succeeding pages.



5.5 Product Information and Consumer Awareness

- a. Packed meat should be labeled with clear instructions to enable the next person in the food chain to handle, display, store and use the product safely.

Explanatory note:



ITEM CODE: 00000332
PACKED ON: JUN.08.22
EXPIRY DATE: JUN.08.23
KEEP FROZEN
STORE AT -18°C AND BELOW

Image 158.

Meat labeled with clear instructions

- b. Handling and storage instructions should be in the label of packed meat for consumers' guidance.

Explanatory note:

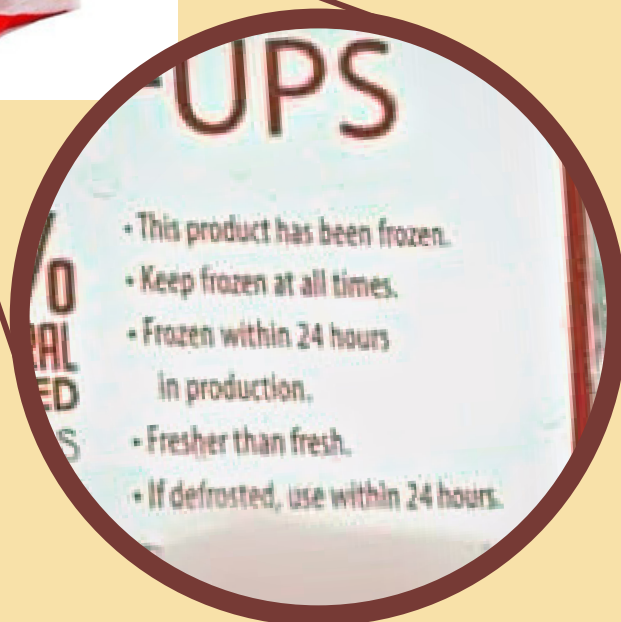


Image 159.

Properly packed chicken with storage instructions (Source: Shen's Addiction. n.d)



Image 160.
Packed meat with instructions for proper handling (Source: FrozenMNL, 2022)



- c. Meat business operators should conduct information dissemination on proper handling, storage, and use of their products.

Minimum Requirements for: **Training**

The provisions of the standard are written in black font color. The explanatory notes are indicated in red font color inside a yellow box. Photos and images are also found in succeeding pages.



5.6 Training

- a. Persons engaged in meat hygiene activities should be trained and/or instructed to a required level of training, knowledge, skills and ability.
- b. Training programs should:
 - i. provide personnel with the training, knowledge, skills and ability to carry out specified meat hygiene tasks;
 - ii. provide practical training to the extent required;
 - iii. ensure that personnel involved in supervisory roles have appropriate skills;
 - iv. recognize and build on professional qualifications; and
 - v. provide for the continuing education of persons involved with meat hygiene.

Explanatory note:



Image 161.
Training on carcass inspection
(Source: NMIS. n.d)



Image 162.
Training on viscera inspection
(Source: NMIS. n.d)

ACKNOWLEDGMENT

We would like to acknowledge the Lipa City Veterinary Office for accompanying the Bureau and the following slaughterhouse personnel for the assistance during the slaughterhouse visits:

<u>Station</u>	<u>Personnel</u>
Lairage/Race way	Amadeo Garcia and Bobby Año
Stunning/Pulling	Rammel Garcia and John Lloyd Garcia
Sticking/Bleeding	Raymart Garcia
Shackling	Alfred Punio/Archie Padua
Operator	Samuel Mailig
Dehairing	Jayson Garcia
Detoeing/Gambreling	Genesis Bongabong
Finishing/Singeing/2nd washing	Ranilo Dimaculangan and Enrico Vergara
Marking/Bunging/Body Opening	Jaime Litan
Evisceration	Jhunmar Calingacion and Mario Adan
Offal Cleaning	Edielito Arabejo and Luisito Opiana
Body Splitting	Joseph Maming
Weighing/ Marking	Paulo Azares

References



Document References

Agriculture Victoria. (2022). *Caring for Animals during Extreme Heat*. <https://agriculture.vic.gov.au/livestock-and-animals/livestock-health-and-welfare/caring-for-animals-during-extreme-heat#h2-3>

Bureau of Animal Industry. (n.d.) *List of Feed Product Registration Indentor*. <https://bai.gov.ph/index.php/feeds-product-registrations/summary/23-feeds-product-registrations/95-list-of-feed-product-registration-indentor>

Bureau of Agriculture and Fisheries Standards. (2015). *Philippine National Standards for Veterinary Drug Residues in Food: Maximum Residue Limits (MRLs) (PNS/BAFS 48-2015)*. http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS+BAFS+48.2016+Veterinary+Drug+Residues+in+Food.MRLs.pdf

Bureau of Agriculture and Fisheries Standards. (2015). *Philippine National Standards Animal Feed Ingredients (PNS/BAFS 163:2015)*. http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/2021-02-24-PNS%20BAFS%20163_2015%20Animal%20Feed%20Ingredients.pdf

Bureau of Agriculture and Fisheries Standards. (2016). *Philippine National Standards Code of Halal slaughtering practices for ruminants (PNS/BAFS 102:2016)*. [http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNSBAFS1022016HalalSlaughteringPracticeforRuminants%20\(1\).pdf](http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNSBAFS1022016HalalSlaughteringPracticeforRuminants%20(1).pdf)

Bureau of Agriculture and Fisheries Standards. (2017). *Philippine National Standards General Standard for Contaminants and Toxins in Food and Feed (PNS/BAFS 194:2017)*. http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS%20BAFS%20194%20-%202017%20-%20General%20Standard%20for%20Contaminants%20and%20Toxins%20in%20Food%20and%20Feed.pdf

Bureau of Agriculture and Fisheries Standards. (2021). *Philippine National Standards Agricultural structures-Lairage- Swine (PNS/BAFS 308:2021)*. http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS%20BAFS%20308-2021.pdf

Bureau of Agriculture and Fisheries Standards. (2021). *Philippine National Standards Agricultural structures-Lairage- Ruminants (PNS/BAFS 309:2021)*. [http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/2021-05-04-PNS%20BAFS%20309_2021%20for%20Agricultural%20\(PNS\)%20for%20Agricultural%20Structure%20-%20Lairage%20Ruminants.pdf](http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/2021-05-04-PNS%20BAFS%20309_2021%20for%20Agricultural%20(PNS)%20for%20Agricultural%20Structure%20-%20Lairage%20Ruminants.pdf)

Bureau of Animal Industry. (n.d.). *Veterinary Biologics Importation in Dose from 2009 to 2017*. <https://bai.gov.ph/index.php/license-to-operate-lto-registered-products-importation-biologics/send/26-license-to-operate-lto-registered-products-importation-biologics/123-veterinary-biologics-importation-in-dose-from-2009-to-2016>

Codex Alimentarius Commission (2011). *General Principles of Food Hygiene*. https://www.fao.org/fao-who-codexalimentarius/sh-proxy/fr/?lnk=1&url=https%253A%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%20BI-1969%252FCXC_001e.pdf

Department of Agriculture. (2018). *Administrative Order No. 03 series of 2018 Amendment to Administrative Order No. 01 Series 2012 on Declaring the List of Notifiable Animal Diseases*. https://www.da.gov.ph/wp-content/uploads/2018/05/ac03_s2018.pdf

Department of Agriculture. (2008). *Administrative Order No. 18 series of 2008 Rules and Regulations on Humane Handling in the Slaughter of Animals for Food*. <https://www.nmis.gov.ph/images/pdf/ao-18-2008.pdf>

Department of Agriculture. (1990). *Administrative Order No. 60 Declaring a Ban on the Use of Chloramphenicol in Food-Producing Animals*. <https://www.bai.gov.ph/index.php/laws-issuances/administrative-order/category/77-ao-1990>

Department of Agriculture. (2000) *Administrative Order No. 1 Series of 2000 Banning and withdrawal of Olaquinox and Carbadox from the Market*. http://spsissuances.da.gov.ph/attachments/article/636/DOH4A_DA_1.pdf

Department of Agriculture. (2003). *Administrative Order No. 15 Ban on the Use in Food Animals of Beta-agonist Drugs Used in Humans as Bronchodilators and Tocolytic agents*. <https://www.bai.gov.ph/index.php/laws-issuances/administrative-order/category/83-ao-2003>

Department of Agriculture. (2012). *Administrative Order No.5 Series of 2012 Rules and Regulations on Hygienic Handling of Newly Slaughtered Meat in Meat Markets*. <https://www.officialgazette.gov.ph/2012/01/12/da-administrative-order-no-5-s-2012/>

Department of Agriculture and Department of Health (2000). *Joint Administrative Order No. 2 Series of 2000 Declaring a Ban/Phase-out of Nitrofurans in Food-Producing Animals*. <http://spsissuances.da.gov.ph/attachments/article/638/joint%20Administrative%20order%20%20s.2000.pdf>

Department of Health. (1998). *Implementing Rules and Regulations of Chapter IV-"Markets and Abbatoirs" of the Code on Sanitation of the Philippines*. https://doh.gov.ph/sites/default/files/publications/Chapter_4_Markets_and_Abattoirs.pdf

Department of Health. (2017). *Administrative Order No. 10 Philippine National Standards for Drinking Water of 2017*. <https://www.fda.gov.ph/wp-content/uploads/2020/10/Administrative-Order-No.-2017-0010.pdf>

European Food Safety Authority. (n.d.). *Foodborne Zoonotic Diseases*. <https://www.efsa.europa.eu/en/topics/topic/foodborne-zoonotic-diseases>

Food and Agriculture Organization of the United Nations. (1991). *Manual on Meat Cold Store Operation and Management*. <https://www.fao.org/3/t0098e/T0098E00.htm#TOC>

Food and Agriculture Organization of the United Nations. (2009). *Preparation of African Swine Fever Contingency Plans. FAO Animal Production and Health Manual No. 8*. <https://www.fao.org/3/i1196e/i1196e.pdf>

Frimpong, S., Gebresenbet, G., Bobabee, E., Aklaku, E., & Hamdu, I. (2014, November 19). Effect of Transportation and Pre-Slaughter Handling on Welfare and Meat Quality of Cattle: Case Study of Kumasi Abattoir, Ghana. www.mdpi.com/journal/vetsci. Retrieved November 2021, from <https://www.mdpi.com/2306-7381/1/3/174/pdf>

Forcinio, H. (2016, April 26). *The total package: Weigh-label systems*. The National Provisioner Independent Processor. <https://www.provisioneronline.com/articles/103141-the-total-package-weigh-label-systems>

National Meat Inspection Services. (2010). *Administrative Order No.19 series of 2010 Guidelines on Good Hygienic Slaughtering Practices for Locally Registered Meat Establishments (GHSP-LRMEs)*. <https://www.nmis.gov.ph/images/pdf/ao-19-2010.pdf>

National Meat Inspection Services. (2017). *Rules on Procedures in the Implementation and Enforcement of Food Animal Welfare Laws in NMIS Licensed to Operate Slaughterhouses and Poultry Dressing Plants (NMIS MC No. 03-2017-006)*.

- World Health Organization (2020). *Zoonoses*. <https://www.who.int/news-room/fact-sheets/detail/zoonoses>.
- World Organization for Animal Health. (2021). *Terrestrial Code Online Access*. <https://www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/?id=169&L=1&htmlfile=index.htm>
- United States Department of Agriculture. (2019). *Animal Disposition/Food Safety: Post-mortem Inspection*. https://www.fsis.usda.gov/sites/default/files/media_file/2020-08/PHVt-Post_Mortem_Inspection.pdf
- Xiong, Y. L. (2017). *The Storage and Preservation of Meat*. Lawrie's Meat Science, 205-230. doi:10.1016/b978-0-08-100694-8.00007-8

Photo References

Page 5 (Top to bottom, left to right)

- Bureau of Animal Industry- Animal Products Development Center (BAI-APDC) [Photograph]. (n.d). Ear tag on cattle
- National Meat Inspection Services (NMIS) [Photograph]. (n.d). Use of ear tag as identification tool on hogs for slaughter
- Agricultural Training Institute- International Training Center for Pig Husbandry (ATI-ITCPH) [Photograph]. (2021). Proper insertion of ear tag using pliers

Page 6 (Top to bottom)

- BAI-APDC [Photograph]. (n.d). Identification using food grade marking pen
- ATI-ITCPH [Photograph]. (n.d). Food grade marking pen
- Canva [Photograph]. (n.d). Hot branding

Page 7 (Top to bottom, left to right)

- British whites [News]. (2017). How to Tattoo Cattle . <https://www.britishwhitecattleaustralia.com.au/how-to-tattoo-cattle-with-pictures/>
- ATI-ITCPH FB Page [Photograph]. (2021). *Radio frequency Identification. "RFID Chips Improve Data Accuracy"* [Post]. <https://www.facebook.com/InternationalTrainingCenteronPigHusbandry/photos/pcb.4262158633828459/4262151957162460>
- ATI-ITCPH FB page [Photograph].(2021). *RFID transcribed to system. "RFID Chips Improve Data Accuracy"* [Post]. Retrieved from: <https://www.facebook.com/InternationalTrainingCenteronPigHusbandry/photos/pcb.4262158633828459/4262152850495704>

Page 8 (Top to bottom)

- Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Record information of pigs

Page 9 (Top to bottom)

- Michigan Department of Natural Resources. [Photograph]. (n.d). Bovine Tuberculosis in wild white-tailed deer: background and frequently asked questions [FAQs]. Retrieved from: <https://www.purdue.edu/fnr/extension/bovine-tb/>.

Page 10 (Top to bottom)

- Biggs R., [Photograph]. (2020). *Foreign Animal Diseases of Concern: Foot and Mouth Disease* [Article]. Retrieved from: <https://news.okstate.edu/articles/communications/2020/foreign-animal-diseases-of-concern-foot-and-mouth-disease.html>.
- Defra, UK. [Photograph]. (2007). Clinical signs of Foot and Mouth Disease Plate 6-Note progressive loss of lesion margination and extensive fibrin infilling [Article]. Retrieved from: <https://www.thedairysite.com/articles/1093/clinical-signs-of-foot-and-mouth-disease/>.

Photo References

Page 5 (Top to bottom, left to right)

Bureau of Animal Industry- Animal Products Development Center (BAI-APDC) [Photograph]. (n.d). Ear tag on cattle
 National Meat Inspection Services (NMIS) [Photograph]. (n.d). Use of ear tag as identification tool on hogs for slaughter
 Agricultural Training Institute- International Training Center for Pig Husbandry (ATI-ITCPH) [Photograph]. (2021). Proper insertion of ear tag using pliers

Page 6 (Top to bottom)

BAI-APDC [Photograph]. (n.d). Identification using food grade marking pen
 ATI-ITCPH [Photograph]. (n.d). Food grade marking pen
 Canva [Photograph]. (n.d). Hot branding

Page 7 (Top to bottom, left to right)

British whites [News]. (2017). How to Tattoo Cattle . <https://www.britishwhitecattleaustralia.com.au/how-to-tattoo-cattle-with-pictures/>
 ATI-ITCPH FB Page [Photograph]. (2021). *Radio frequency Identification. "RFID Chips Improve Data Accuracy"* [Post]. <https://www.facebook.com/InternationalTrainingCenteronPigHusbandry/photos/pcb.4262158633828459/4262151957162460>
 ATI-ITCPH FB page [Photograph].(2021). *RFID transcribed to system. "RFID Chips Improve Data Accuracy"* [Post]. Retrieved from: <https://www.facebook.com/InternationalTrainingCenteronPigHusbandry/photos/pcb.4262158633828459/4262152850495704>

Page 8 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Record information of pigs

Page 9 (Top to bottom)

Michigan Department of Natural Resources. [Photograph]. (n.d). Bovine Tuberculosis in wild white-tailed deer: background and frequently asked questions [FAQs]. Retrieved from: <https://www.purdue.edu/fnr/extension/bovine-tb/>.

Page 10 (Top to bottom)

Biggs R., [Photograph]. (2020). *Foreign Animal Diseases of Concern: Foot and Mouth Disease* [Article]. Retrieved from: <https://news.okstate.edu/articles/communications/2020/foreign-animal-diseases-of-concern-foot-and-mouth-disease.html>.
 Defra, UK. [Photograph]. (2007). Clinical signs of Foot and Mouth Disease Plate 6-Note progressive loss of lesion margination and extensive fibrin infilling [Article]. Retrieved from: <https://www.thedairysite.com/articles/1093/clinical-signs-of-foot-and-mouth-disease/>.

Page 11

Field Vet. [Video].(2019). Avian Influenza. "Bird Flu Sign in Chicken, Virus H5 Infection & Biosecurity Problem in Poultry Farm. Retrieved from: <https://www.youtube.com/watch?v=VZxIRZXgZHU&t=24s>.
 National Meat Inspection Services (NMIS) [Photograph].(n.d). African Swine Fever.
 Nicholas R. [Photograph].(2016). Acute Contagious Caprine Pleuropneumonia (CCPP). Veterinary manual. Retrieved from: <https://www.merckvetmanual.com/respiratory-system/respiratory-diseases-of-sheep-and-goats/contagious-caprine-pleuropneumonia>.

Page 15

Photo taken at Tanauan city Triple "A" facility in Lipa City, Batangas [Photograph]. (2022). Vehicle disinfection at the farm entrance

Photo taken at Tanauan city Triple "A" facility in Lipa City, Batangas [Photograph]. (2022). Farm facility with proper ventilation

Page 16

ATI-ITCPH. [Photograph].(2021). Assessment of hog and piglets if there any abnormalities. Retrieved from: <https://www.facebook.com/InternationalTrainingCenteronPigHusbandry/photos/pcb.4083726555005002/4083690268341964>

Page 17

NMIS. [Photograph].(n.d). Unloading ramp

Page 18

BAI-APDC. [Photograph]. (n.d). Use of ramp for unloading of animals

Page 20 (left to right)

NMIS. [Photograph].(n.d). Interior of clean vehicle use for transport of live animals

NMIS. [Photograph].(n.d). Exterior of clean vehicle use for transport of live animals

NMIS. [Photograph].(n.d). Animal transport vehicle

Page 21 (Top to bottom)

Photo taken at Tanauan city Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Transport vehicle.

Page 22 (Top to bottom)

NMIS. [Photograph].(n.d). Proper vehicle

Philstar. [Photograph].(2019). Overcrowded and unkept live animal transport vehicle

Page 24 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Veterinary Health Certificate

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Certificate of transfer for large animals

Page 25 (Top to bottom)

BAI-APDC. n.d. Shipping permit. [Document]. Retrieved from: <https://nvqsd.bai.gov.ph/Admin/ONE%20TIME%20LOCAL%20PDF.pdf>

BAI. [Document]. (n.d). Veterinary health certificate.

Defra, UK. [Photograph]. (2007). Clinical signs of Foot and Mouth Disease Plate 6-Note progressive loss of lesion margination and extensive fibrin infilling [Article]. Retrieved from:

<https://www.thedairysite.com/articles/1093/clinical-signs-of-foot-and-mouth-disease/>.

Page 26

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Local Shipping Permit

Page 27

NMIS. [Photograph].(n.d). Ante-mortem inspection for cattle.

Page 28

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Sample Livestock Inspection Clearance

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Healthy pigs for slaughter

BAI-APDC. [Photograph].(n.d) Healthy and clean pigs for slaughter

Page 29

NMIS Regional Field Office- 12. [Photograph]. (2018). "Zorro" markings on skin

Page 30 (top to bottom)

Photo taken at Triple "A" facility.[Photograph]. (2022). Pigs for slaughter bearing marks

NMIS illustrated by BAFS [Sketch]. (n.d). Floor plan of Slaughterhouse (landscape)

Page 31

NMIS illustrated by BAFS. [Sketch]. (n.d). One-way flow of floor plan of slaughterhouse (portrait)

Page 32

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Separate area for the clean and dirty areas to minimize contamination

Page 33

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Functional and easy to clean splitting saw for pigs

BAI-APDC. [Photograph].(n.d). Functional and easy to clean splitting saw for cattle

Page 34 (top to bottom)

NMIS. [Photograph].(n.d). Scalding vat/scalding

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Scalding vat

Page 35 (top to bottom)

BAI. [Photograph]. (n.d). Meat hooks

NMIS. [Photograph]. (n.d). Proper storage area for meat hooks

BAI. [Photograph]. (n.d). Hangers for poultry

Page 36 (Top to bottom, Left to right)

BAI. [Photograph]. (n.d). Gambrel for pork carcass

NMIS. [Photograph]. (n.d). Hazard-free facilities for hogs

BAI-APDC. [Photograph]. (n.d). Facility compliant with animal health and welfare requirements

Page 37 (Top to bottom)

NMIS. [Photograph]. (n.d). Offal cleaning area

NMIS. [Photograph]. (n.d). Offal hanger

Page 33

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Functional and easy to clean splitting saw for pigs

BAI-APDC. [Photograph].(n.d). Functional and easy to clean splitting saw for cattle

Page 34 (top to bottom)

NMIS. [Photograph].(n.d). Scalding vat/scalder

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Scalding vat

Page 35 (top to bottom)

BAI. [Photograph]. (n.d). Meat hooks

NMIS. [Photograph]. (n.d). Proper storage area for meat hooks

BAI. [Photograph]. (n.d). Hangers for poultry

Page 36 (Top to bottom, Left to right)

BAI. [Photograph]. (n.d). Gambrel for pork carcass

NMIS. [Photograph]. (n.d). Hazard-free facilities for hogs

BAI-APDC. [Photograph]. (n.d). Facility compliant with animal health and welfare requirements

Page 37 (Top to bottom)

NMIS. [Photograph]. (n.d). Offal cleaning area

NMIS. [Photograph]. (n.d). Offal hanger

Page 38 (Top to bottom)

Photo taken at a Triple "A" facility. [Photograph]. (2022). A properly constructed facility that ensures the safety of animals before slaughter

Page 39 (Top to bottom)

NMIS. [Photograph].(n.d). Lairage area for cattle

BAI-APDC. [Photograph]. (n.d). Cattles resting in lairage before slaughter

NMIS. [Photograph].(n.d). Chicken holding area

BAI-APDC. [Photograph]. (n.d). Lairage for resting animal

Page 40 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Livestock inspection clearance

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Cattle holding area

Page 41 (Top to bottom, Left to right)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Pigs holding area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Cattle holding area

Page 42 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Separation of different stations

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Stunning area

Page 43 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Dehairing area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Polishing area

Page 44

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Splitting area/offal removal area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Electric stunning

Page 45 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Dehairing area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Dehairing area towards polishing machine

Page 46 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Polishing area towards evisceration area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Evisceration area towards final washing area

Page 47

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Final washing area towards weighing area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Separate area for condemned parts

Page 48 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Clean entrance area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Dirty entrance area

Page 49 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Pigs being hanged in shackle from dehairing to singeing

NMIS. [Photograph]. (n.d). Overhead rail system with regularly cleaned sanitized gambrel hooks

Page 50

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Personnel frequently cleaning the area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Personnel washing knife under running water and sanitizing in tool dip

Page 51

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Sloping drainage inside the slaughter area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Plastic curtain before entering offal cleaning area

Page 52

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Chilling area

Page 53 (Top to bottom, Left to right)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Drainage inside the slaughter area

Universal Robina Corp. [Photograph]. (n.d). Drainage system outside of a slaughterhouse

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Pit for waste disposal

Page 54 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Handwashing facility inside the slaughterhouse

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Hand washing area before entering the slaughter area with instructions

Page 55

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Tools for slaughtering (Left to right): 1) Sticking knife (black handle), 2) Skinning knife (white handle), 3) Steel sharpener

Page 57 (Top to bottom, Left to right)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Entrance to the hog chiller

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Entrance to the blast freezer

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Cold storage temperature monitoring system

Page 58 (Top to bottom)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Inside of a blast freezing area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Inside of a cold storage area

Page 59 (Top to bottom)

NMIS. [Photograph]. (n.d). Perimeter fence

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Perimeter fence as seen from the inside of the slaughterhouse

Page 60 (Left to right)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Foot bath located at the entrance of the slaughter area

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Foot bath located at the entrance of the offal area

Page 61

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Foot bath concentration

Page 62 (Top to bottom)

NMIS. [Photograph]. (n.d). Appropriately designed and functional hand-washing facility with complete amenities such as water supply, liquid soap and sanitizer, hand drying device, sink and non-hand operated faucets and bins.

BAI-APDC. [Photograph]. (n.d). Handwashing facility non-hand operated

Page 63

NMIS. [Photograph]. (n.d). Personnel with Personal Protective equipment (PPE)

NMIS. [Photograph]. (n.d). Personnel with incomplete PPE

Page 65

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Properly maintained gambrels

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Properly maintained cold storage area

Page 67 (Top to bottom)

BAI-APDC. [Photograph]. (n.d). Tool sanitizer

NMIS. [Photograph]. (n.d). Tool dip for sanitation

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Tool dip for sanitation located in the splitting area

Page 68

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Regular calibration for equipment maintenance

Page 69

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Livestock inspection clearance

Page 70

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Pig holding area

Page 74 (Top to bottom; Left to right)

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Post-mortem inspection BAI-APDC. [Photograph]. (n.d) Post-mortem inspection of viscera
 Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Proper hanging of offal after post-mortem inspection

Page 75

BAI-APDC. [Photograph]. (n.d). Post-mortem inspection of hog's carcass
 NMIS. [Photograph]. (n.d). Post-mortem inspection of cattle's carcass
 Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Carcass bearing proper markings

Page 76

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Personnel placing "passed & inspected" markings in carcass

Page 77

BAI-APDC. [Photograph]. (n.d). Carcass of cattle bearing proper markings
 NMIS. [Photograph]. (n.d). Carcass of hogs bearing proper markings

Page 78

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Proper markings in carcass after weighing

Page 81

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Dehairing
 Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Second dehairing using knife or scraper

Page 82

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Singeing
 Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Polisher machine

Page 83

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Manual slitting.
 Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Manual slitting of pigs.

Page 84

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Collection of blood after slitting

Page 85

NMIS. [Photograph]. (2014). Manual flaying

Page 86

RSRH Livestock Corporation. [Photograph]. (2017). Dehiding or removal of hide in cattle using cradle
 Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Evisceration

Page 88

BAI-APDC. [Photograph]. (n.d). Condemnation bin
 Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Condemn dispatch
 NMIS. [Photograph]. (n.d). Manual slitting on poultry carcass
 NMIS. [Photograph]. (n.d). Thorough cleaning of carcasses as part of slaughtering practices

Page 91 (Left to right)

Canva. [Photograph]. (n.d). Carcasses are properly hanged in chilling rooms before freezing
 BAI-APDC. [Photograph]. (n.d). Facility compliant with animal health and welfare requirements

Page 92 (Top to bottom; Left to right)

Canva. [Photograph]. (n.d). Mutton/Lamb meat
 Canva. [Photograph]. (n.d). Pork
 Canva. [Photograph]. (n.d). Veal
 Canva. [Photograph]. (n.d). Venison
 Canva. [Photograph]. (n.d). Chicken meat

Page 96

NMIS. [Photograph]. (n.d). Fabricated meats in individually wrapped packaging contained in carton boxes.
 Sunstar. [Photograph]. (2019). Meat appropriately stacked in clean trays

Page 97

Canva. [Photograph]. (n.d). Chest freezer used to keep frozen product at recommended 0C or lower.

Page 98

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). NMIS accredited transport vehicle

Page 99

NMIS. [Photograph]. (n.d). Accredited meat transport vehicle
 Canva. [Photograph]. (n.d). Interior of transport vehicle with hanger hook

Page 100

Photo taken at a port in Metro Manila. [Photograph]. (2022). Transport vehicle with door seals to help maintain the temperature and prevent entry of contamination

Page 103 (top to bottom)

NMIS. [Photograph]. (n.d). Personnel with Personal Protective equipment (PPE)
 NMIS. [Photograph]. (n.d). Personnel with incomplete PPE

Page 104

Photo taken at a Triple "A" facility in Lipa City, Batangas. [Photograph]. (2022). Personnel wearing color coded Personal Protective equipment.

Page 107

Photo taken by BAFS. [Photograph]. (2022). Meat labeled with clear instructions
Shen's Addiction. [Photograph]. (n.d). Properly packed chicken. Retrieved from:
<http://www.shensaddiction.com/2017/07/our-magnolia-fried-chicken-recipe-yes-i.html>

Page 108

FrozenMNL [Photograph]. (2022). Packed meat with instructions for proper handling

Page 111

NMIS. [Photograph]. (n.d). Training on carcass inspection
NMIS. [Photograph]. (n.d). Training on viscera inspection

Technical Working Group



**Department of Agriculture
Technical Working Group (TWG) on the Development of the
Explanatory Manual for Code of Hygienic Practices (COHP) for Meat**

Advisers: **Dr. Vivencio Mamaril**
 OIC-Director, BAFS

Ms. Mary Grace Mandigma
 Assitant Director, BAFS

Members: **Ms. Bibian Regala**
 Bureau of Animal Industry

Mr. Christian Renz Jacob
 Bureau of Animal Industry

Dr. Cherrie Ann Javier
 National Meat Inspection Service

Dr. Mariel Rebosura
 National Meat Inspection Service

Dr. Mae Nimfa Cruz
 National Meat Inspection Service

Ms. Roberta Riguer
 National Meat Inspection Service

Dr. Jonathan Sabiniano
 Office of the Undersecretary for Livestock

Ms. Shiela Mae Binas
 Office of the Undersecretary for Livestock

Dr. Loinda Baldrias
 College of Veterinary Medicine
 University of the Philippines Los Banos

Mr. Ryan Gonzaga
 Independent Practitioner

Secretariat: **Bureau of Agriculture and Fisheries Standards**

Dr. Alpha Lanuza
 Ms. Katrina Maminta
 Ms. Georlene Orbista
 Ms. Jenny Lee Cambe
 Ms. Aubrey Katreena Ramos

**Department of Agriculture
Technical Working Group (TWG) on the Development of the
Philippine National Standard Code of Hygienic Practices (COHP) for Meat**

Chair: Ma. Elizabeth D. Callanta, DVM
Chief Meat Control Officer,
National Meat Inspection Service

Vice-Chair: Ryan R. Gonzaga
South Luzon Quality Control Head
San Miguel Foods, Inc.

Members: Clarita M. Sangcal, DVM
Chief Meat Control Officer,
National Meat Inspection Service

January M. Nones, DVM
Chief Meat Control Officer,
National Meat Inspection Service

Jonathan V. Sabniano, DVM, MSc
Chief Planning Officer,
National Meat Inspection Service

Dr. Mae Nimfa Cruz, MPA
Supervising meat Control Officer
National Meat Inspection Service

Nenita R. Estante
Senior Agriculturist,
Animal Products Development Center
Bureau of Animal Industry (APDC-BAI)

Dr. Loidna Baldrias, MVS, Ph.D
Professor, College of Veterinary Medicine
University of the Philippines Los Banos

Ronie E. Malvataan
External Consultant for Meat Science,
Elanco Animal Health

Secretariat: Bureau of Agriculture and Fisheries Standards

Alpha M. Lanuza, DVM
Senior Science Research Specialist

Gari Pellinor U. Hernandez, DVM
Science Research Specialist


Abbie Stephanie Uy, DVM
Science Research Assistant

This Explanatory Manual (EM) serves as a supplementary learning material for the Philippine National Standard (PNS) Code of Hygienic Practices (COHP) for Meat (PNS/BAFS 168:2015). The EM aims to aid stakeholders by promoting uniform understanding and interpretation of the PNS to ensure efficient adoption and implementation of the Standard.


PNS/BAFS 168:2015 was developed to guide people involved in pre-slaughter, slaughter and post-slaughter of animals.

 fb.com/da.bafs

 instagram.com/da.bafs

 [www. bafs.da.gov.ph](http://www.bafs.da.gov.ph)

 bafs@da.gov.ph

 (+632) 8273-2474 loc. 3303