

# **PHILIPPINE NATIONAL STANDARD**

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## **Code of Good Animal Husbandry Practice (GAHP) for Swine**



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**Foreword**

The Philippine National Standard (PNS) Code of Good Animal Husbandry Practice (GAHP) for Swine has been prepared by the Technical Working Group (TWG) for GAHP for Swine as per Department of Agriculture Special Order No. 776 series of 2016 and approved by the Secretary of the Department of Agriculture.

The main objective of this code is to ensure that the farms' farming practices shall provide consumers with products that are safe and fit for distribution and/or human consumption. It shall also ensure safety and comfort to farm workers and animals without any degradation to the environment.

Any development of industry's specific requirements for swine production system should satisfy the minimum requirements set out in this Code.

This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2.

## 1 Scope

This code sets out the general principles of good practice and minimum requirements in breeding, commercial and backyard rearing/farming of swine for breeding and food use.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Republic Act 8485, *Animal Welfare Act*, 1998

Republic Act 10631, *Amended Animal Welfare Act of 2013*

## 3 Terms and definitions

For the purpose of this document, the following terms and definitions apply:

### 3.1

#### **abnormal behavior**

any changes developed as a response to improper management practice causing stress, discomfort, pain and uneasiness to the animal leading to reduced productivity/diseases

### 3.2

#### **backyard farm**

any farm or household raising any of the following conditions: a) 1 – 20 heads of adult and zero young; b) 1 – 40 heads of young animals; c) 1 – 9 heads of adult and 1 – 21 heads of young animals

### 3.3

#### **commercial livestock farm/operator**

any livestock operator or farm which operation satisfies at least one of the following conditions: a) at least 21 head of adults and zero young; b) at least 41 head of young animals; c) at least 10 head of adults and 22 head of young animals

### 3.4

#### **competent authority**

an entity/agency which has the knowledge, expertise and authority as designated by law

### 3.5

#### **conventional house**

#### **opened house**

a pig house where conditions vary according to its surrounding

**3.6**

**enclosed house**

**environmentally controlled house**

a pig house where conditions such as temperature, humidity, ventilation, and light are appropriately controlled

**3.7**

**feed additives**

any intentionally added ingredients not normally consume as feed by itself, whether or not it has nutritional value which affects the characteristics of feed or animal products

**3.8**

**fomites**

any nonliving object or substance capable of carrying infectious organisms or parasites which may be transferred from one animal to another.

**3.9**

**hazard**

a biological, chemical, or physical agent, in or condition of, food with potential to cause adverse effect

**3.10**

**metaphylactic treatment**

administration of antimicrobial agents to group of animals containing sick and healthy individuals (presumed to be infected), to minimize or resolve clinical signs and to prevent further spread of the disease

**3.11**

**pig**

**swine**

animals in the family of Suidae with the scientific name *Sus domesticus*

**3.12**

**pig farm**

any establishment where pigs are raised. This covers pig house, feed storage and preparation area, carcass disposal area, waste water and waste treatment, and other relevant structures

**3.13**

**prophylactic treatment**

administration of antimicrobial agents to an individual or a group of animals at risk of acquiring a specific infection or in a specific situation where infectious disease is likely to occur if the antimicrobial agent is not administered

**3.14**

**swill feeding**

feeding of food scraps/food waste/leftovers to pigs

**3.15**

**therapeutic treatment**

administration of antimicrobial agents for the treatment, control/metaphylaxis and prevention/prophylaxis of disease

**3.16**

**vector**

animal and/or insect that can transmit pathogenic agents to pigs

**3.17**

**vermin**

animals which are believed to be harmful to farm animals or which carry disease such as but not limited to rats and insects and does not include those worms produced for natural feeding

**5 Farm establishment, location and facilities**

**5.1 Establishment**

The establishment of the farm should be compliant with related laws and regulations of competent authority, including local government units. This covers the management of environmental issues, farm location, animal welfare requirements, disease control, production of wholesome food and occupational hazards in animal farming.

**5.2 Location**

**5.2.1** The farm should be located in an appropriate area for pig raising.

- a. The farm should be strategically located within the approved land use of the local government and compliant with the DENR regulations and other regulations as prescribed by law (e.g. Laguna Lake Development Authority).
- b. The distance of the farms from the center of the national highway shall be three (3) kilometers for commercial swine farms. However, with the application of advanced waste management technology, exceptions may be granted.
- c. The farm shall have a distance of at least one (1) kilometer from each other and from the boundary of built-up areas.
- d. The farm should have a continuous supply of adequate electrical power.

**5.2.2** The farm should be located in an area away from physical, chemical and biological hazards.

- a. The farm should be located in areas away from physical, chemical and biological hazards that may pose threat to both farm workers and pigs.

- b. The farm should be located at least 5 km away from slaughterhouse and animal holding facilities. Otherwise the farm shall have proper disease control measures in place.
- c. The farm must not be prone to flooding. Perimeter canals connected to a closed lagoon may be constructed to prevent runoff from contaminating bodies of water and/or adjacent farms.
- d. If there is available data/information from relevant government agencies or organizations on the prior land use, then they should be used as references to ensure that the site is not a possible source of physical, chemical and microbiological hazards. However, when these data are not available and uncertainty exists as to the suitability of the land for agricultural use, it is recommended to have the soil and/or water analyzed for heavy metal contamination, etc.

### 5.3 Layout and infrastructure of farm

5.3.1 The farm should be well designed by locating and arranging areas, such as areas for pig raising, feed storage, isolation and treatment of sick pigs, carcass disposal, and pig selling.

- a. The farm should have enough area to facilitate the design of farm layout, such as the distance between pig houses and the arrangement of working areas. The appropriate farm layout shall provide good ventilation; serve as a preventive measure for disease spread between pig houses and other areas; and promote farm sanitation as well as the control, prevention and eradication of diseases within the farm.
- b. The farm should be well designed and all working areas should be clearly located in order to facilitate the efficiency of farm managements on pig raising, transportation and pig selling and to prevent cross-contamination between working areas.
- c. The farm should have proper routes to transport equipment, feed, and pig products within farm; with appropriate width, and without any obstruction for the convenience of practice.
- d. The following working areas should be included but not limited to:
  - Office building, parking area, and dormitory
  - Changing and shower room
  - Water resource
  - Pig houses
  - Feed storage, feed mixing
  - Pig quarantine pen
  - Area for sick pigs
  - Area for destruction and disposal of pig carcasses
  - Area for waste and trash collection
  - Area for waste water and solid waste treatment
  - Area for selling pigs

5.3.2 The farm should have perimeter fences or natural barrier to prevent entry of stray animals.

The fence, including its posts and gates, should be effectively designed to prevent entry of stray animals (e.g. cattle, buffaloes, dogs, cats, etc.), and escape or injury of the farm animals. If electric fence is used, it should be operated as per manufacturer's instructions.

#### 5.4 Pig Houses

5.4.1 The farm building should be designed and constructed appropriately for the intended purpose, and should provide proper ventilation, easy maintenance and cleaning.

- a. The building intended for keeping animals should be constructed in the orientation that minimizes the adverse effects on animal performance and eliminates possible hazards to its surroundings.
- b. The building should be designed and constructed using materials that:
  - should not cause any injury or impart hazard to the welfare of the animal;
  - provide comfort;
  - can be easily cleaned and disinfected;
  - can be easily replaced when damaged;
  - create efficient stock management; and
  - enhance biosecurity.
- c. Painting materials used for the building and facilities should not be hazardous to the animals.
- d. There should be an effective drainage system in place at the building.
- e. Pens and pathways should:
  - be designed and constructed to prevent animals from escaping;
  - be free from protruding objects or structures (e.g. nails and bolts) that may cause injury to the animals and farm operators and farm workers.
- f. Housing design (particularly roof height and sides) should provide proper ventilation (whether natural or artificial) to maintain a comfortable environment.
- g. Animal buildings should have adequate lighting to ensure that animals can be thoroughly inspected as required.
- h. Electrical installations and wirings should be protected and should not be accessible to the animals.
- i. Floors and pathway used by the animals should be made from non-slippery materials, safe, stable and well-lighted to prevent injury or abnormal gait to the animals.



- j. The design of alleys and chutes should allow effective management of the animals
  - Floors of alleys and chutes should be properly built to provide good footing, preventing slippage and injuries.
  - Alleys and chutes should have sides of sufficient height to prevent animals from jumping off or falling.
- k. The farm should provide effective and appropriate facilities to restrain or handle animals without causing undue stress and injury to both animals and farm workers.
- l. The premises should be kept clean at all times to prevent disease occurrence, establishment of breeding ground for pests and avoid environmental degradation.
- m. Pig housing should be secured from stray animals and birds.

5.4.2 Pig house should have sufficient space for pig raising and should have good condition of environment inside the houses, and should correspond to pig breed, size and age.

Animals should be provided with sufficient floor space suitable for their age and condition, body weight and size to allow animals to feed and drink comfortably.

- a. The feeding and drinking equipment and facilities should conform with the standards/requirements for swine and should be constructed and conspicuously placed such that:
  - animals are allowed to eat and drink freely, allowing them to behave normally; and
  - contamination with animal feces and urine is minimized.

5.4.3 Controlled environment housing must have an alarm system in case of power failure and/or significant temperature variance. An alternative ventilation system must be available.

## **6 Feeds and Nutrition**

6.1 The farm operator should:

- a. Ensure that animals are provided with optimum level of nutrition at all times, as required for their respective functions and well-being.
- b. Provide the animals with safe, clean, and adequate rations or feeding materials suited for pigs.
- c. If animals are provided with commercial feed, ensure that the source or feedmill has been officially registered with the Animal Feeds, Veterinary Drugs and Biologicals Control Division (AFVDBCD) of the Bureau of Animal Industry (BAI).
- d. Keep feed mixing equipment clean at all times and with regular preventive maintenance schedule.

- e. Provide a daily feeding management or schedule.
- f. Swill feeding should not be allowed. However, if it can't be avoided, the swill feed shall be heated to 90°C for 60 minutes with continuous stirring or the swill should be maintained at a temperature of at least 121°C for at least 10 minutes at an absolute pressure of 3 bar.
- g. Procurement documents of feed concentrates should be kept and updated properly to include:
  - supplier or source of feed concentrate and its registration number;
  - type of feed and supplements;
  - quantity;
  - declaration of ingredients;
  - document of feed analysis;
  - date of delivery; and
  - date of manufacturing and batch number.
- h. Record the type and quantity of ration being fed to the animals.

6.2 The use of medicated feed should be under the supervision of a licensed veterinarian and should be stored separately from non-medicated feed with clear label/signage.

- a. In case of farm-mixed feed formulation, farm operators should only use ingredients from reputable and traceable suppliers. Records of purchases should be kept.
- b. Not use banned drugs, feed additives, supplements and any form of medication in the diet of the animals, including those disallowed by the authorities or importing countries.
- c. For medicated feed, strictly follow instructions of medication, paying special attention to the withdrawal period of each specific drug being administered before the animals are sent to market.

6.3 Feeds and raw materials should be kept in the way to prevent contamination and deterioration.

- a. Feed storage facilities should be kept clean at all times.
- b. Feed storage should have adequate ventilation, adequate protection from moisture to prevent development of molds, and should be vermin-proof.
- c. "First in – first out" rule should be practiced.
- d. Machinery, equipment and other toxic chemicals should be stored separately from feeds to prevent contamination.

## **7 Water for pig**

7.1 Water shall be clean, potable, sufficient, and free from any hazardous substances.

- a. The farm should have a continuous supply of clean and potable water.
- b. Water quality should be tested at least once at the beginning of production and during the time when water quality is suspicious. Test results should be recorded and maintained.

7.2 Water should be adequate for all pigs to drink.

- a. The drinking equipment and facilities should be properly designed, constructed and conspicuously placed to allow animals to drink freely, prevent contamination with animal feces and urine and conform with the standards/requirements for each species.
- b. In case of nipple drinkers, the water pressure should be set at appropriate level and no sediment exist to cause pipes obstruction. Water pipes should be routinely cleaned to avoid biofilm and sediment build-up.

## **8 Farm management**

8.1 Manual for farm management

The farm manual should demonstrate the details of important farm operations such as pig husbandry, feeding and watering, cleaning of houses and equipment.

Procedures for disease prevention and control like quarantine procedure for newly purchased and/or transferred pigs prior to entry and contingency plans for disease outbreak should also be included in the manual.

8.2 Personnel

8.2.1 Farm operators and owners

- a. The farm operator/owner should be responsible for the welfare of the personnel giving adequate provisions so that they are able to perform at their responsibilities efficiently.
- b. In cases of housed staff, the farm owner/operator should provide adequate accommodation for the workers.
- c. The farm operator/owner should always promote a safe and healthy working condition in the farm. Accident and emergency procedures should be available with clear instructions for all workers. First aid kits and fire extinguishers should be easily available at all times, and placed conspicuously in strategic locations.

### **8.2.2 Training**

- a. Farm personnel should be continuously trained on the necessary knowledge and skills about basic procedures of farm management including the correct handling of animal, routine management practices and usage of farm tools or equipment.
- b. Training certificate of farm personnel should be kept and properly recorded.

### **8.2.3 Farm personnel hygiene**

- a. All persons entering the farm should take a shower, have hair washed and wear protective clothing supplied by the farm. The procedure for shower– cloth changing should be shown at the entrance of the farm.
- b. The farm owner/operator should provide farm workers with appropriate attire and footwear for protective measures.
- c. Appropriate working uniform/attire and footwear should be provided to visitors who need to be at the production area, as may be deemed necessary.
- d. The owner/operator should ensure that all farm operators and farm workers undergo annual routine health check-up/medical examination.
- e. Personnel who have been sick such as fever, respiratory or gastrointestinal infection should not be allowed to enter the farm unless they have been recovered.

## **8.3 Biosecurity and Farm Sanitation**

### **8.3.1 Biosecurity measures**

- a. The farm should have a written protocol of biosecurity measures. Proper warning signage should be provided.
- b. Biosecurity procedures should be well implemented and continuously monitored to prevent introduction of disease into the farm and/or to control its spread within the farm.
- c. The biosecurity measures should take into consideration the relevant diseases identified by local regulations/authority.
- d. The farm should have the appropriate and functional lay-out and infrastructure to ensure effective implementation of the biosecurity measures. This should include facilities for disinfection at entry/exit point of the farm and the building.
- e. All incoming animals should undergo the appropriate quarantine measures.
- f. Stray animals should not be allowed within the premises.

- g. Imported live animals and animal by-products should be accompanied by official documentation from the competent authority.

### **8.3.2 Farm Sanitation and Environmental Management Program**

- a. The farm should have a written hygiene and sanitation program that includes integrated pest management.
- b. The farm should have a proper and functional drainage system towards a water treatment facility. Solid and liquid waste should be managed and disposed according to existing relevant guidelines imposed by competent authorities.
- c. The farm operator should take necessary measures to ensure that activities related to livestock farming do not contribute to the degradation of the environment (i.e., land, water, air) and cause destruction to bio-diversity.
- d. Farm premises should be kept clean and free of potential conditions conducive to breeding of pests, animal parasites and disease outbreak. This is to avoid negative effects on the landscape, environment and animal welfare.
- e. The farm operator should maintain and display clear instructions on procedure for disposal of farm solid wastes and farm chemical wastes (e.g. expired pesticide/weedicide and containers, paint, etc.)
- f. Organic materials, like pig manure or leftover feeds, should be removed as necessary from contact surfaces (i.e., floors, pen partitions). Where bedding is used, it should be replaced as necessary.
- g. Garbage and trash should be collected and stored in closed containers and disposed of using appropriate methods for each type of garbage. Hazardous or infected waste should be kept and disposed separately from general garbage to avoid contamination.
- h. The farm should take appropriate measures to minimize excessive odor coming from the farm which may be associated with waste decomposition.
- i. The air quality inside the building should be maintained at acceptable levels.
- j. Measures should be in place to keep noise from barns to acceptable levels, particularly if the farm is located close to urban centers.
- k. The farm operator should be familiar with the proper procedure for disposal and schedule of actions to be taken, especially at times of emergency.
- l. The farm should have proper handling and disposal system for sick, injured and dead animals, and should be in accordance to existing regulations of the authority.
  - In the case of using burial method, there should be enough space, non-flooding, and away from water sources. Dead animals should be buried at

least 50 centimeters in depth, pouring with limestone or disinfectant, and adding soil over burial area for at least 50 centimeters in height for prevention of animal digging.

- In the case of mortality/carcass pit, dead animal should be dropped in a specific mortality/carcass pit with good hygienic practices.
- For other methods, it should be done in accordance with instruction from competent authority.

### **8.3.3 Post-harvest cleaning**

- a. After removing pigs, the house should be cleaned by using proper methods that can effectively remove all manure and dirty debris out of the floor in such a way that does not become a source of pathogens.
- b. The cleaning and disinfection of pig house and its equipment should be conducted prior to the introduction of new batch of pigs into the house. If disease outbreak occurs, the measures specified by competent authority should be followed.
- c. The detergents and disinfectants registered with competent authority should be used, under the supervision of farm veterinarian. Moreover, the use of such chemical should be in accordance with procedural manual.

## **9 Recording**

9.1 The farm should keep and maintain complete records of farm operations, management protocols, and animal health records like disease monitoring and medication. These records should be easily retrievable and readily available for inspection.

9.2 Records include, but are not limited to, the following:

- a. Animal identification including applicable data such as sex, breed, date of birth, marking number, birth weight, weaning weight, and sow and boar identification number;
- b. In case of boar and sow, breeding information like age, weight at mating, time, heat testing, parturition, weaning;
- c. Entry and exit of pigs;
- d. Vehicles and visitors entry and exit;
- e. Animal health records including disease detection and surveillance (e.g. post-mortem findings, mortality and morbidity reports, test results, diagnosis, etc.), and intervention or treatment done (e.g. veterinary products and supplies used in medication, vaccination, deworming, medicated feeds, and other chemical usage

including batch number, quantity, number of animals treated, name of person who administered medicine with recommendation from veterinarian on authorized persons, date and route of administration, withdrawal period, and identification of animals treated, etc.)

- f. Feed management such as feed receiving, mixing, and feeding;
- g. Procurement records containing date of purchase, product name, batch number, expiry date, name of supplier, and quantity purchased; and
- h. Health examination and training records of farm personnel.

9.3 All pertinent documents such as but not limited to farm operations, management protocols and animal health records should be kept for at least 3 years.

## **10 Animal health**

### **10.1 Responsibility of the licensed veterinarian**

- a. The licensed veterinarian should be the overall responsible person for animal health and welfare management and shall update license from competent authority.
- b. The health status of the animals in the farm should be monitored and recorded regularly by the farm, and veterinary assessment of the establishment should be carried out annually by a licensed veterinarian and/or by a competent authority.
- c. There must be a written animal health program in place, including vaccination and deworming, that is updated regularly and in accordance with the requirement adopted against the diseases specified by the competent authorities.
- d. Sick, injured or disabled animals should be isolated from herd and kept in a specific area for treatment and prevention of transmitting disease to other pigs.

### **10.2 Use of veterinary products**

- a. Drugs, medicines, and vaccines should be administered appropriately by a licensed veterinarian or trained personnel under the supervision of a licensed veterinarian.
- b. Drugs or medicines should only be used for prophylactic, metaphylactic and treatment reasons.
- c. The use of illegal and banned medication and vaccines should be prohibited (use vaccines registered with BAI; the same with controlled drugs.)
- d. Drugs, medicines, and vaccines should be stored and identified properly; proper disposal of these items should be followed to prevent contamination to the environment.

- e. The use of needle during injection should be done in such a way that no part of broken needle remains in the pig's body. There should be determining practices for preventing needle remnant in pigs, e.g. measures to control the number of needle used in farm, checking needle number before and after use, and total number of needles used in farm. Farm should have corrective action for embedded needle in the pig's body.

### **10.3 Disease outbreak or suspicion of epidemic disease**

- a. In the case of outbreak of disease or suspicion of epidemic disease, farm should strictly follow the related law or regulation by competent authority.
- b. The farm operator and/or veterinarian should report immediately or within 24 hours to relevant authorities if morbidity or mortality rate of pigs in the farm is found to be abnormally high or clinical signs or symptoms are indicative of notifiable disease as mandated by the competent authority.

## **11 Animal Welfare**

- a. Proper techniques should be applied to handle and restrain animals.
- b. Animals should always be handled and restrained in such a way to protect them from fear, stress, pain and injury.
- c. Appropriate facilities, equipment and tools should be provided and used in handling or restraining the animals.
- d. Appropriate tools, techniques and skills should be used for the purpose of effective animal management. Operators should have appropriate tools, techniques and skills for effective animal management.
- e. Tools should be used in a manner that minimize stress and injury to the animals.
- f. Tools should be functional for efficient application on the animals by the operators.
- g. Sick, injured or disabled should be given the necessary veterinary attention, including humane euthanasia if necessary.

## **12 Animal Transport**

- a. Animals should be transported in appropriate vehicles and in a manner that does not cause stress throughout the travel and does not predispose them to injury and disease.
- b. Animals being transported should be in a good state of health. However, stressed, sick and pregnant animals, may be transported but with extra-precautionary measures.



- c. Vehicles used for the transport of animals should be according to the following specifications:
- Allow easy loading and unloading;
  - Has communication equipment and first aid kit;
  - Ensure safety of the animals and personnel during transport;
  - Clean and sanitized;
  - Equipped with floors that provide secure footing;
  - Have proper drainage for collection of urine;
  - Have a decal/label “live animal onboard” at the sides and front/back;
  - Should be registered to BAI as Transport Vehicle Carrier and accompanied by registered livestock handler; and
  - Water should be available during transport.

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