

PHILIPPINE NATIONAL STANDARD

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Code of Practice for Cage-free Egg Production



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Foreword

In 2020, the Bureau of Agriculture and Fisheries Standards (BAFS) initiated the development of the Philippine National Standard (PNS) on the Code of Practice (COP) for Cage-free Egg Production following the proposal of the Animal Kingdom Foundation (AKF) to improve the health and welfare of layers and produce quality and safe eggs. A Technical Working Group (TWG) was created through Special Order (SO) No. 442, series of 2020 (Creation of Technical Committees and its TWG for the Development of PNS for Agriculture and Fisheries Products, Machinery, and Structures) and SO No. 81, series of 2021 (Creation of TWG for the development of PNS for Agriculture and Fishery Products and Machinery Tools and Equipment). The TWG was composed of representatives from relevant government agencies, academe, non-government organization (NGO), and private sector organization. The PNS COP for Cage-free Egg Production aimed to provide guidance to regulatory agencies, technical personnel, farmers, and other relevant stakeholders on cage-free egg production and promote animal welfare for layers. The draft standard underwent a series of consultations and TWG meetings conducted face-to-face and through online platforms before it was finalized and endorsed for approval of the Department of Agriculture Secretary.

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

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1 Scope

This standard covers the minimum requirements for cage-free egg production, including farm management, harvesting, and marketing of eggs labeled as cage-free eggs used for human consumption. This standard applies to eggs produced by smallholder poultry farmers including native chicken farmers. Breeder/incubator/fertilized/unfertilized eggs from commercial farms are not included in the standard.

This standard may be used in the succeeding certification scheme for cage-free egg production of the competent authority.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Bureau of Agriculture and Fisheries Product Standards (BAFPS) – Department of Agriculture (DA). (2005). Code of hygienic practice for table eggs (PNS/BAFS 209:2017).

http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS%20BAFS%20209-2017%20COHP%20Eggs.pdf

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3 Terms and Definitions

For the purpose of this standard, the following terms and definitions shall apply.

3.1

biosecurity

measures designed to reduce the risk of introduction, establishment, and spread of animal diseases, infections, or infestation to, from, and within an animal population

3.2

cage-free eggs

eggs produced in a cage-free system, which meets the standards stated herein

3.3

cage-free system

system where the hens are not confined in cages, which may vary from single or multi-tier

3.4

competent authority

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

3.5

curtain

material such as but not limited to, cloth and empty feed sack, used to cover the opening of the nest box and usually in color red

3.6

defects

characteristics of the egg whose shell has, but not limited to, calcium-coated or with calcium deposits, ridged or corrugated, pimpled, misshapen, slab-sided, soft, thin, thick, and doubled

3.7

environmental enrichment

anything added to the hen's environment, which improves the hen's welfare and reduces the harmful behaviors like feather pecking

3.8

forage

foraging

behavior pattern involved in searching for and consuming food

3.9

hen

female domestic fowl that has reached sexual maturity

3.10

litter

combination of bedding and/or hen excreta, feathers, feed, dust, and other materials on the floors of hen housing systems

3.11

multi-tier

non-cage system where nest, perching, food, and water resources are located on multiple elevated tiers; also referred to as aviary system or aviaries

3.12

pecking

feather pecking

behavior problem in domestic hen characterized by pecking (or plucking) the feathers of the flock mates or self-pecking/plucking

3.13

perch

elevated structure usually in the form of narrow cylindrical or squarish rod, bamboo, or wood, allowing hens to wrap their toes around it, which is used for sitting and roosting

3.14

ramp

ladder or narrow piece of wood, bamboo, plastic, or wire mesh affixed to a tier frame at varying heights and at angles that do not exceed 45°

3.15

single-tier

non-cage system where nests, perches, feed, and water resources are located on only one level

3.16

substrate

bedding

loose material such as but not limited to rice hulls, hays, shredded paper, wood shavings, chopped dried straw, and other locally available materials that is added to the housing environment

3.17

usable space

includes the main floor and litter area, plus any elevated floor areas/tiers with a height of at least 45 cm to which hens have continual access. It excludes nest areas and any outdoor area, if applicable

4 General Principles

Cage-free refers to a system of animal production or husbandry that rears animals in a building, room, or enclosed area, allowing for free/unrestricted access to feed and water and providing the animal the freedom to roam. This type of animal farming

addresses both the physiological and behavioral needs of the animals, thereby minimizing stress and promoting the health and welfare of the animals.

In the case of hens, they should have access to nests, perching space, litter to allow walking, running, climbing, stretching, preening, pecking, and scratching. They should also have unrestricted access to feed and water during the egg-laying cycle.

5 Overarching Principles of Good Animal Husbandry Practice (GAHP) for Chickens

The relevant or applicable general principles and minimum requirements stated in the Code of GAHP for Chickens – Broilers and Layers (PNS/BAFS 184:2016) including biosecurity, vaccination, relevant environmental laws, and regulations should be complied with. The PNS/BAFS 184:2016 should be used as complementary document to this standard.

Particular attention should be made on the following provisions:

- a) Animal Housing (Section 5.1.4): “Chickens should be provided with the sufficient floor space/size suitable for their age, body weight, and size to ensure comfort to the chickens. Chickens should be provided with appropriate space to feed and drink comfortably. The feeding and drinking equipment and facilities should conform with the standards/requirements for each species and should be constructed and conspicuously placed such that chickens are allowed to feed and drink freely, allowing them to behave normally and contamination with chicken feces and urine is prevented”;
- b) Feeds and Veterinary Inputs (Section 5.2.1): “Feeds and veterinary inputs should be used in accordance with the label instructions, paying special attention to the withdrawal period of each specific drug being administered before the chickens and/or eggs are sold to market”; and
- c) Structural Design of Animal Housing for Barn Type and Aviary/Multi-Tiered Facility: Farm owners/operators may also refer to the standards on animal housing established by competent authorities when building layer housing facility such as the PNS related to agricultural structures, existing Philippine Agricultural Engineering Standards (PAES), and other internationally recognized references.

6 Minimum Requirements

Minimum requirements specific to cage-free egg production are as follows:

6.1 Breeds

The selection of strains or breeds of hen should be based on market requirements and preferences. Locally available strains or breeds are indicated in Annex A for general reference.

6.2 Space Requirements

The space requirement should not be less than the following:

- a) 0.14m²/bird for single-tiered housing; and
- b) 0.1m²/bird for multi-tiered housing.

6.3 Locomotion

The hen house should encourage and provide hens with adequate space to engage in locomotory behaviors such as, but not limited to, walking, running, climbing, stretching, and preening.

6.4 Flooring and Litter

6.4.1 The usable space in all hen houses should comprise of at least 250 cm² of litter per hen and should at least occupy one-third of the ground surface.

6.4.2 The litter area should be in a cool and shady area.

6.4.3 Where slatted areas or mesh floor is used, it should provide the following:

- a) adequate support for inspections to be carried out; and
- b) minimum of 1m depth for the build-up of droppings underneath.

6.4.4 The litter should:

- a) be made of suitable material and particle size;
- b) be managed to maintain it in a dry and friable condition (recommended to be replaced every 45 days or whenever necessary);
- c) provide sufficient depth for dilution of feces;
- d) allow hens to dust-bathe and forage;
- e) be managed hygienically; and
- f) be stored in dry, hygienic, and rodent-proof premises.

6.4.5 The recommended litter materials are as follows, but not limited to fresh rice hulls (or carbonized rice hulls), wood shavings, saw dust, hay, loose sand, dried leaves, shredded paper, chopped dried straw, and whatever is available in the locality.

6.5 Nesting

6.5.1 Nesting boxes should be provided.

6.5.2 Nest boxes should be:

- a) a minimum of 35 cm length x 35 cm width x 35 cm height per hens for individual boxes, or 1m² of nesting substrate per 120 hens for group nesting; and
- b) enclosed and draught-free.

6.5.3 Nest boxes should be provided with a suitable floor substrate that:

- a) encourages nesting behavior;
- b) minimizes the risk of build-up of parasites and disease;
- c) is managed hygienically; and

d) does not consist of wire or plastic-coated wire that can come into contact with the hens.

6.5.4 Usage of new innovated nest box floor substrate, such as nest pad, is recommended as long as it satisfy the requirements in 6.5.3.

6.5.4 Nest boxes should be placed in cool and shady area.

6.5.5 Nest boxes should have curtains on its opening. The curtain should cover the nest box's opening with an overlap of at least 1cm from the floor of its opening.

6.6 Perches

6.6.1 Each hen should be provided with a minimum linear length of 15 cm of useable, purpose-designed, and elevated perch space.

6.6.2 Perches should be positioned to minimize fecal fouling of other hens, feeders or drinkers located below them.

6.6.3 Perches should be constructed using materials that can be easily cleaned and will not harbor mites.

6.6.4 Perches should be designed to minimize injury to hens that are mounting or dismounting as well as to any hens nearby.

6.6.5 Perches should not extend into nests.

6.6.6 Perches should be at least 1.9 cm in width or diameter to allow hens to wrap their toes around the perch and balance evenly on it in a relaxed perching posture.

6.6.7 At least 20% of the perch space should be elevated at a minimum of 40 cm from any level or tier.

6.6.8 The height of elevated perches should be a minimum of 15 cm above the closest floor or perch.

6.6.9 Perches should be at least 19 cm from walls and from the top of the perch to the ceiling, stacked vertical perches, or other structures.

6.6.10 Adjacent perches separated by less than 19 cm of vertical space should be at least 30 cm apart horizontally to allow hens to perch simultaneously.

6.7 Lighting

Where artificial lighting system is used, it should meet the following provisions:

6.7.1 The lighting system in the hen house should provide the following for every 24-hour cycle period:

a) minimum period of 8-hour continuous light, by the provision of either artificial light or access to daylight; and

b) minimum period of 6-hour continuous darkness for every 24-hour cycle.

6.7.2 Lighting patterns in all houses should be recorded and documented.

6.7.3 The lighting system in hen houses should:

- a) be designed and maintained in order to give a minimum illumination of 20 lux in the open areas of the house (e.g. over litter and feed tracks); and
- b) only be reduced temporarily, as a last resort, where:
 - i) there are signs of an outbreak of injurious pecking or cannibalism; and
 - ii) other solutions to prevent injurious pecking have been employed.

6.7.4 Artificial light should be switched off in a stepped or gradual manner to allow the hens to prepare for darkness.

6.8 Temperature

6.8.1 Temperatures inside housing systems should be monitored on a regular basis.

6.8.2 Temperatures inside housing systems should be maintained within a range that contribute to good health and welfare of the hens.

6.9 Ventilation

6.9.1 Adequate ventilation should be provided in order to prevent the build-up of heat, humidity, dust, and noxious gases to levels that are harmful or can cause pain or distress to the hens.

6.9.2 Immediate and appropriate action should be taken to reduce ammonia levels if it exceeds 20 ppm at layers' head height.

6.9.3 In case of ventilation system failure, an immediate and appropriate action should be undertaken to restore the system and mitigate the situation.

6.10 Special Considerations for Multi-tier Systems

This section should be in accordance with PNS Code on GAHP – Animal Welfare and Environmental Sustainability for Chickens and Ducks (PNS/BAFS 296:2020). In addition:

6.10.1 The hens should be placed on the system near feed and water sources when moving hens to multi-tier systems.

6.10.2 A minimum height of 45 cm should be provided between all tiers, including the floor level.

6.10.3 Tiers should be arranged to prevent droppings from falling directly on tiers below, excluding perches, terraces, and ramps/ladders.

6.10.4 Ramps of ladders used should have angles that are less than 45° to facilitate movement between levels.

6.10.5 The number of tiers should not exceed four (4) where the ground level is one (1) tier.

6.10.6 Raised tiers should have a system for removal of manure that does not interfere with the hens or cause injury.

6.11 Environmental Enrichment

6.11.1 For every 1,000 hens there should be at least two (2) items of environmental enrichment inside the house which should:

- a) be permanently available to the hens; and
- b) include some destructible forms of enrichment.

6.11.2 The environmental enrichments should not pose a threat to the safety and health of the chickens. It is recommended to use locally available environmental enrichments in the farm and its surroundings such as, but not limited to the enumerated items in Annex B.

6.12 Beak Trimming (Optional)

This section shall be in accordance with the latest version of the Bureau of Animal Industry (BAI) Administrative Order No. 12, series of 2002 (Code of Practice and Minimum Standards for the Welfare of Chicken). In addition:

6.12.1 When planned on-farm, the beak trimming of the new flock should be performed prior to 10 days of age.

6.12.2 Beak trimming should not be performed on hens that are older than 10 days of age, unless deemed necessary for emergency welfare reasons after all other measures to control cannibalism have been exhausted. In such cases, the beak trimming should be carried out with veterinary consultation and oversight.

6.12.3 Beak trimming should be performed only by competent persons using industry approved methods that minimize hen discomfort and equipment that is properly maintained.

6.12.4 The producer or a competent person's designated representative should be readily available throughout the beak trimming process.

6.12.5 The operator should not remove more than one-quarter of the upper or lower beaks. This means for:

- a) one (1) to three (3)-day old chicks - no more than 2 mm of the beak; and
- b) adult hens - no more than the blunting of upper and lower tips.

6.13 Contingency Planning

6.13.1 The person/s in charge of layer hens should have contingency plans to address any event which could result in a potentially significant welfare impact on the hens.

6.13.2 Alternative means of maintaining ongoing environmental control and provision of food and water should be available in case of emergencies, including power or computer failure or mechanical breakdown.

6.13.2 Appropriate fire prevention measures and a documented emergency plan should be in place.

6.14 Farm Management

Farm management practices should be in accordance with the PNS on the Code of GAHP for Chickens – Broilers and Layers (PNS/BAFS 184:2016). In addition:

6.14.1 The farm should refer to relevant regulations of the competent authority for vaccination program.

6.14.2 The use of veterinary drugs shall be in accordance with the latest version of the BAI Administrative Order No. 12, series of 2002 (Code of Practice and Minimum Standards for the Welfare of Chicken).

6.14.3 The farm should use veterinary drugs prescribed by the licensed veterinarian.

6.14.4 Hens should be monitored for signs of cold or heat stress. Upon discovering that hens show signs of cold or heat stress, remedial action should be taken immediately.

6.15 Harvesting

Harvesting of cage-free eggs should be in accordance with PNS on the Code of Hygienic Practice for Table Eggs (PNS 209:2017). In addition:

6.15.1 Egg collection workers should sanitize their hands prior to handling eggs and between handling floor eggs and nest eggs.

6.15.2 All eggs found to be dirty, have cracks, and/or have defects should be labeled and appropriately sorted and packed for proper disposal. All eggs collected from the floor should be placed in separate trays and labeled for disposal.

6.15.3 All eggs should be stored in a clean, well-ventilated, and cool area after sorting.

6.15.4 Eggs should be transported in appropriate transport vehicles (insulated, refrigerated and/or ventilated), and delivered to their destination as quickly as possible to maintain their freshness.

6.15.5 Plastic egg trays should be cleaned and sanitized after each use while carton egg trays should be disposed of appropriately after use.

6.15.6 Records of eggs collected and sold/shipped should be kept and maintained properly.

6.16 Labeling

6.16.1 Labels should adhere to the relevant provisions of the PNS Table Eggs – Specifications (PNS/BAFS 35:2005).

6.16.2 Only eggs coming from farms or production units certified by the competent authority should be labeled as ‘cage-free’.

6.16.3 Labeling requirements shall comply with the relevant provisions of RA 7394 (Consumer Act of the Philippines of 1991) and RA 10611 (Food Safety Act of the Philippines of 2013) on labeling and fair packaging.

6.17 Traceability and record keeping

6.17.1 The record-keeping of farms should be in accordance with PNS Code of GAHP for Chickens – Broilers and Layers (PNS/BAFS 184:2016).

6.17.2 All relevant records should be updated, kept, maintained, and made accessible during egg-laying cycle and for at least 24 months after the laying cycle.

6.17.3 Records should be made available to the competent authority when required.

Annex A
(informative)
Locally available breeds for cage-free egg production

The following strains or breeds that are locally available for cage-free egg production are the following but not limited to those listed in Table A.

Table A – Breeds for cage-free egg production that are locally available

Chicken	Breeds
Layers	Heritage Line: Rhode Island, Barred Plymouth Rock, Sussex Hybrid: Leg horns, Dominant, Delkalb, Hy-line , Shaver , Bovans , Lohmann , ISA , Babcock, Hisex Novo and H&N
Native-type	Paroakan, Banaba, Darag, Joloanon, Camarines, Bolinao, Boholano, Zampen

Annex B
(informative)

Environmental enrichment for locally available cage-free egg production

Environmental enrichment that are locally available for cage-free egg production are but not limited to the following:

1. Corn cob;
2. Banana;
3. Hay;
4. Madre de agua leaves;
5. Rice hulls; and
6. Talinum.

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**Department of Agriculture (DA)
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