

**Shrimp and Crab Hatchery — Code of Practice
— Good Aquaculture Practices**

*Working Draft
As of April 25, 2025*

Scope

This Code of Good Aquaculture Practices (GAqP) covers the culture practices in Penaeid shrimp and mangrove crab hatchery including harvesting, collecting, packaging and handling of larvae and post larvae or crablet up to transportation and distribution. This Code addresses animal health and welfare, environmental integrity, and socio-economic welfare, and consists of compliance with legal requirements.

1 Normative References

The following documents are referred to in the text in such a way that some or all their contents constitute the requirements of this document. The latest edition of the referenced documents (including any amendments) applies.

Bureau of Agriculture and Fisheries Standards (BAFS)-Department of Agriculture (DA). (2022). Veterinary Drug Residues in Food — Maximum Residue Limits (PNS/BAFS 48:2022).

DENR. (2019). DENR Administrative Order No. 2019-09: Updated national list of threatened Philippine fauna and their categories. https://bmb.gov.ph/downloads/WRD/WC/WC2020/stat_and_lists_of_wildlife/fauna/dao-2019-09.pdf

2 Terms and Definitions

For the purposes of this Standard, the following terms and definitions apply:

3.1**biosecurity**

set of management and physical measures designed to reduce the risk of introduction, establishment and spread of animal diseases, infections or infestations to, from and within an animal population (World Organization for Animal Health [WOAH], 2018). It is also defined as an overall program that uses a combination of physical barriers and directed actions in a specific way that should prevent the introduction of, or limit the spread of infectious disease (ASEAN Sectoral Working Group for Livestock; DA-BAFS, 2024)

3.2**competent authority**

official government agency having jurisdiction (Codex Alimentarius Commission [CAC], 2006). Also refers to the bureau or agency mandated by law with responsibility and competence for ensuring and supervising the

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implementation of sanitary and phytosanitary (SPS) measures, regulations, or standards (DA-BAFS, 2023) (DA-BAFS, 2024)

3.3**disease**

any adverse condition due to biotic (living or infectious) agents or abiotic (non-living) agents that adversely affects culture performance

3.4**feed**

any single or multiple edible plants or animal materials, whether processed, semi-processed or live and raw, which is intended to be fed to domesticated animals to meet the nutrient requirements in order to maintain life, promote growth, production and reproduction without any additional substance except water (BAFS-DA, 2015; *modified*)

3.5**larvae**

newly hatched from eggs which consist of nauplii, zoea, and mysis for shrimp; and zoea and megalopa for crabs

3.6**post larvae (PL)**

stage of development of shrimps and crab upon metamorphosing into fry or juvenile shrimp, and crab instar (crablet) stage, respectively. In shrimp, it may be also be referred to as fry. (BFAR-DA, 2009)

3.7**broodstock**

sub-adult or adult animal either male or female to be used for breeding purposes (BFAR-DA, 2009)

3.8**hatchery**

facility consisting of areas for broodstock conditioning, maturation, spawning, hatching and larval rearing facilities, feed preparation/production and storage, life support systems, waste water treatment and packing area

3.9**veterinary drug**

any substance applied or administered to any food producing animal, such as meat or milk producing animals, poultry, fish, or bees, whether used for therapeutic, prophylactic, or diagnostic purposes or for modification of physiological functions or behavior (CAC, 2020)

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4 Use

This Standard adheres to the principles outlined in PNS/BAFS 135:2024 (Good Aquaculture Practices — Code of Practice). It specifically establishes requirements for shrimp and crab hatchery. This document shall be used independently and serves as the basis for inspecting—shrimp and crab hatcheries for GAqP certification under relevant regulations of the competent authority.

Other farmed species shall be assessed against existing species-specific GAqP standards. In the absence of such standards, the general provisions of PNS/BAFS 135:2024 shall apply.

5 Site Selection**5.1 Location**

5.1.1 Certificate of Non-Coverage (CNC) or Environmental Compliance Certificate (ECC) shall be made available prior to the establishment of hatchery.

5.1.2 Hatchery should be located in environmentally suitable and sustainable areas where the risk of contamination is minimized or where sources of pollution can be controlled or mitigated according to national law and regulations.

5.1.3 Proof of legal rights, privileges, or ownership of the hatchery area (License To Operate [LTO] or business permit from the Local Government Unit [LGU]) and its location map shall be available.

5.1.4 Hatchery shall be registered or accredited with the competent authority.

5.1.5 Hatchery should have access to transportation both inside and outside the site, for quick operations and transport of larvae, post larvae, and crablets.

5.1.6 New hatchery shall not be located inside or beside the grow-out pond, for biosecurity reasons. For aquaculture facilities with existing hatchery, there shall have a distinct separation from the grow-out ponds and shall integrate biosecurity measures to prevent cross contamination.

5.2 Lay-out and design

5.2.1 Hatchery facilities should be used primarily for aquaculture purposes only.

5.2.2 Wild and domesticated animals should not be allowed in the hatchery facility or production area or its vicinity to prevent fecal and other hazardous contaminations. However, they may be permitted under strict conditions, provided that measures are in place to prevent contamination.

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- 5.2.3** Hatchery design and layout should prevent cross-contamination and damage to existing aquatic habitats.
- 5.2.4** Drainage system of septic tanks and toilet facilities should be well installed and constructed to prevent contamination of hatcheries.
- 5.2.5** Equipment should be designed to ensure minimal physical damage to shrimp and crabs during growing and harvesting and to allow for adequate cleaning and disinfection.
- 5.2.6** Paraphernalia, equipment, and vehicles for feed, seed, and harvested crustaceans, should be designed to allow for adequate cleaning and disinfection.
- 5.2.7** Hatchery lay-out should be designed with proper space for its establishment and should integrate biosecurity measures to prevent cross-contamination and disease outbreak.
- 5.2.8** Reservoir ponds and tanks for incoming water should be available to ensure sufficient water supply especially during heavy rainfall when seawater pumping may not be advisable due to turbidity.
- 5.2.9** Settling ponds for effluent shall be available.
- 5.2.10** Buffer zones should be observed in accordance with existing regulation.
- 5.2.11** Hatchery should be designed, operated and maintained in ways that prevent contamination from workers, sewage/toilets, domestic animals, machinery oil/fuel, and other possible sources in order to maintain hygienic conditions.

6 Facilities, Sanitation, and Waste Management**6.1 Facilities**

- 6.1.1** Disposal facilities for solid and liquid wastes should be in suitable and confined area, and waste disposal shall be in compliance with existing regulations.
- 6.1.2** Fuel and chemical substances (sanitizer, fertilizer, and reagents), veterinary drugs should be stored in a storage facility and separated according to manufacturer's instructions and as specified on the label.
- 6.1.3** Regular repair and maintenance should be undertaken to preserve the good physical condition of the facility.
- 6.1.4** Diseased broodstock or larvae should be disposed immediately and properly.

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6.1.5 Machines used in the hatchery shall be in good condition and used lubricants shall be placed in an appropriate container and discarded properly.

6.1.6 There shall be a safe electrical system on the farm.

6.2 Sanitation

6.2.1 Hatchery and its surroundings should be maintained in a clean and hygienic condition.

6.2.2 Containers, equipment, and facilities should be maintained in good condition to avoid contamination.

6.2.3 Adequate procedures for cleaning and disinfection of transport vehicles, containers, equipment and facilities should be in place and implemented.

6.2.4 Cleaning materials and disinfectants should be properly handled and disposed to prevent contamination or pose no environmental hazards.

6.2.5 Proper disposal of garbage, veterinary drug containers, and hazardous substances shall be implemented in order to prevent cross-contamination and animal scavenging. Also, preventive measures against disease carrier animals shall be in place.

6.2.6 All production inputs, materials, and tools should be kept properly to prevent deterioration or contamination.

6.2.7 Bathrooms and toilets shall be hygienically maintained to prevent contamination to the hatchery facilities.

6.2.8 Wild and domesticated animals shall not be allowed in the hatchery production areas.

6.3 Waste Management

6.3.1 Waste disposal should be conducted daily and responsibly in accordance with applicable sanitation regulations. The farm should take appropriate measures to:

- a) dispose of solid wastes and garbage in an environmentally sound way; and
- b) dispose of dead shrimp and crabs in a hygienic manner especially after the disease outbreak.

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6.3.2 Waste should be properly stored, and segregated (i.e., biodegradable, recyclable), and disposed to avoid contamination in accordance with local regulations.

6.3.3 Waste containers and the waste storage premises should be cleaned and sanitized after each use.

7 Personnel Health and Hygiene

7.1 Workers should be trained on farm level hygienic practices to ensure awareness of their roles and responsibilities for protecting aquaculture products from contamination and deterioration throughout the production cycle. This includes the following protocol:

7.1.1 Workers shall undergo an annual medical examination to ensure they are fit to work.

7.1.2 Workers who have shown signs of medical problems or conditions that may pose health risks shall be excluded from handling fishery products until deemed certified fit to resume work.

7.1.3 Workers should wear suitable and appropriate working clothes and protective gears. In areas and conditions where risk is high, protective gears shall be used.

7.1.4 Workers shall wash their hands each time before commencing work.

7.1.5 Wounds should be covered with waterproof bandages and clean, waterproof gloves or boots.

7.1.6 Smoking, spitting or drinking alcoholic beverages in the working and storage premises shall not be allowed.

8 Hatchery Management

8.1 Hatchery preparation

8.1.1 Practices for the preparation of hatchery facilities should minimize risk for cross-contamination.

8.1.2 Prohibited chemicals or biological substances listed in Annex A (List of banned antimicrobials in food-producing animals) shall not be used in hatchery preparation.

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8.1.3 Fertilizers, prebiotics, and probiotics should be used in accordance with the manufacturer's instruction and/or recommendation of the competent authority.

8.2 Water Management

8.2.1 Water used for hatchery land-based aquaculture should be properly filtered, settled, disinfected, aerated, and maintained as suitable culture for the production of shrimp and crab which is safe for human consumption.

8.2.2 Basic water quality parameters (i.e., temperature, salinity, pH, dissolved oxygen etc.) should conform with the existing standards set by the competent authority and be regularly monitored to ensure suitability and safety. The optimum water quality parameters/requirements for shrimp and crabs are presented in Annex B.

8.2.3 Water inlets shall have installed screens to prevent the entry of undesirable species.

8.2.4 Water quality should be examined for hazards (chemical, biological, microbial and other contaminants) periodically

8.3 Broodstock Management

8.3.1 good quality, captive broodstocks should be used for breeding and seed propagation.

8.3.2 When wild-sourced stocks are used, they should be collected using responsible practices or in accordance with national laws and regulations where they exist.

8.3.3 Broodstock shall be healthy and disease-free or non-disease carrier.

8.3.4 Broodstock collected from the wild or pond (for crabs) should be held in a quarantine facility upon arrival and be screened for diseases prior transfer to breeding and spawning facilities.

8.3.5 Health certificate shall be issued by the competent authority for in-country transboundary movement of live broodstock.

8.3.6 Stocking density for broodstock that are not yet ready for spawning should be optimum as specified in Annex

8.4 Feeds and Feeding (For larvae and broodstock)

8.4.1 If commercial feed is used, hatchery operations should include procedures for avoiding feed contamination.

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- 8.4.2** Commercial feeds, feed ingredients, additives, premixes and compound feeding stuff should be obtained from a company registered and monitored by the competent authorities.
- 8.4.3** Samples of commercial feeds should be inspected, monitored, and tested for aflatoxin and chloramphenicol by the competent authority.
- 8.4.4** Imported formulated feeds shall be obtained from a company registered by the competent authority in compliance with existing regulations and in conformity with the existing standards.
- 8.4.5** Feeds should be stored properly in a separate facility, which is cool and dry to prevent spoilage, mold growth and contamination. It should be organized to facilitate a first-in, first-out (FIFO) release and use.
- 8.4.6** Medicated and non-medicated feeds should be stored separately to minimize the risk of feeding to non-target animals.
- 8.4.7** The content of additives and veterinary drugs should comply with the existing regulations and conforms with the existing standards.
- 8.4.8** Feeding practices should minimize the risk for biological, chemical, and physical contaminations of feeds and animals.
- 8.4.9** Feeding practices should prioritize the maintenance of water and sediment quality to prevent nutrient overloading and minimize waste.
- 8.4.10** Non-commercial feeds such as but not limited to live fresh, and frozen, farm-formulated feeds, and natural food should be of good quality and suitable for the species.
- 8.4.11** If non-pelleted feeds or fresh feeds are used, the protocol on the preparation and administration of such shall be provided.
- 8.4.12** Probiotics and other biological inputs shall be registered with, and approved by, the relevant competent authorities.
- 8.4.13.** Feeds prepared in the hatchery should meet the nutrient requirements of shrimp and crabs as presented in Annex C (Nutrient requirements for shrimp and crabs). The feed ingredients used for formulation should be identified and recorded.
- 8.4.14** Hatchery operators should administer the appropriate type of feeds according to the culture system used and conduct periodic sampling of the stocks for proper feed management.

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8.4.15 Live feeds and natural food should comply with the health certification from in-country trans-boundary movement from the competent authority.

8.4.16 Feed packaging should be properly labeled with the description of composition, storage conditions, manufacturing date, expiry date, feeding rate and other necessary information and guidance in adequate language.

8.4.17 Live feed and natural food should be free of pathogen and contaminants.

8.4.18 Only approved and registered commercial feeds, feed ingredients, and additives shall be used.

8.4.19 Efficient feeding management should be provided to meet the nutritional requirement of the larvae, post larvae and crab instar (crablet)

8.4.20 Feed shall be stored in an area that can prevent the contamination and apply the first-in, first-out (FIFO) policy to maintain the quality of feed.

8.5 Harvest, Postharvest, and Transport

8.5.1 Harvest and postharvest

8.5.1.1 Harvesting and postharvesting equipment and paraphernalia should be cleaned and sanitized. Such equipment should be stored properly.

8.5.1.2 Harvesting (total or selective) should be planned in advance and should be done early in the morning or during the cooler time of the day to avoid stress and mortality of the shrimp and crabs.

8.5.1.3 Harvested shrimp and crabs should be quickly and hygienically handled, using practices that do not cause contamination and physical damage to the product.

8.5.2 Postharvest

8.5.2.1 Postharvest wastes should be collected in designated areas and disposed of properly to minimize risk of cross contamination.

8.5.2.2 Clean and uncontaminated water should be available and used in sufficient amount for handling and cleaning operations.

8.5.2.3 Larvae and post larvae shall be hygienically managed and handled to prevent contamination during the postharvest.

8.5.3 Transport

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8.5.3.1 Shrimp and crabs should be transported and handled under conditions which recognize their welfare specifically to prevent physical damage, stress, or other factors that could adversely affect their viability and quality.

8.5.3.2 For post larvae and early crab instars, hatchery operators should use oxygenated bags during transport. For larvae, use of containers (e.g., jerrycans) filled with seawater is recommended.

8.5.3.3 Packing methods, containers, equipment and packing density shall be appropriate to the size of larvae, post larvae, and crablets, and the duration of transport.

8.5.3.4 Local Transport Permit (LTP) accompanied by health certificate and laboratory result for post larvae shall be secured from the issuing competent authority prior to transport.

9 Animal Health and Welfare

9.1 Farm operators should adopt and implement an aquatic animal health plan, following the existing protocols of the competent authorities for the health and management of aquatic animals.

9.2 Disposal of shrimp and crabs for disease control purposes should be authorized by the competent authority, and measures for the notification and control of diseases of aquatic animal origin should be effectively implemented.

9.3 Farm operators shall adhere to the risk-based animal health surveillance program, which includes both passive and active or /targeted schemes conducted by the competent authority, to ensure effective monitoring and management of aquatic animal health.

9.4 wild-sourced or captive shrimp and crab propagated by registered hatcheries, should be of good quality and clinically healthy, as confirmed through screening and testing by the competent authority and its recognized laboratories before stocking.

9.5 Imported stocks shall be quarantined and tested free of disease before use.

9.6 All veterinary drugs and chemicals for use in aquaculture shall comply with national regulations, as well as international guidelines, if applicable. If veterinary drugs and chemical treatment is necessary, farm operators shall follow the instructions on the manufacturers label or as advised by competent authority.

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- 9.7** Substances requiring prescription shall only be used under supervision by a qualified expert. Non-prescription substances should be used according to manufacturer's instructions and as specified on the label.
- 9.8** Veterinary drugs, medicated feeds, chemicals and biological substances should be properly stored according to instructions.
- 9.9** Veterinary drugs should be used in a responsible manner and in accordance with applicable national legislation or relevant international agreements/guidelines that ensure effectiveness for animal health with consideration of public safety and protection of the environment.
- 9.10** Treatment and control of diseases with authorized veterinary drugs shall be carried out only on the basis of a proper diagnosis.
- 9.11** A quarantine protocol should be established and implemented to tanks with suspected outbreaks for the treatment and containment of diseased aquatic animals.
- 9.12** Proper handling and disposal procedures for diseased aquatic animals shall be implemented to ensure effective disease control and prevent the spread of pathogens. A designated quarantine facility should be maintained for treatment of all diseased shrimp and crab. Handling and disposal of diseased shrimp, crab and eggs for disease control purposes shall follow existing protocol of competent authority.
- 9.13** In cases where the larvae and post larvae show any sign of disease and/or poor health, the disease diagnosis and corresponding quarantine protocols shall be carried out.
- 9.14** For hatcheries administering chemicals, withdrawal period shall be followed. Veterinary drug residues shall be within the limits set in the PNS/BAFS 48:2022 (Veterinary Drug Residues in Food — Maximum Residue Limits).
- 9.15** Movement of shrimp and crabs should take place in accordance with existing national regulations to prevent introduction or transfer of diseases and infectious agents pathogenic to aquatic animals while avoiding unwarranted sanitary measures.
- 9.16** Hatchery operators should formulate and implement biosecurity measures, in adherence to the recommended protocol of the competent authority, to prevent entry of disease into the farm and/or control its spread within the farm.

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- 511 **9.17** Hatchery operators should maintain a suitable culture environment
512 throughout the production cycle of the species being raised to promote
513 aquatic animal welfare.
514
- 515 **9.18** Hatchery operators should develop and implement handling protocols
516 during sampling, harvesting, quarantine, and disease treatment to promote
517 aquatic animal welfare.
518
- 519 **9.19** Hatchery operation should implement management practices (e.g. OIE
520 Aquatic Animal Health Code) for aquatic animal health management.
521
- 522 **9.20** Larvae and post larvae health shall be monitored regularly at least twice
523 before harvest. Health certificates and laboratory results issued by the
524 competent authority shall be presented to the buyer or grower.
525
- 526 **9.21** Preventive measures and control of disease outbreak shall be in place
527 including proper waste disposal of diseased shrimp and crabs.
528
- 529 **9.22** In cases of disease outbreak, hatchery operators shall disinfect the affected
530 tank prior to release to their effluent/ treatment pond. A dry up period should
531 be observed to break the cycle of disease.
532
- 533 **9.23** In cases of disease outbreak, hatchery operators shall immediately inform
534 the competent authority.
535
- 536 **9.24** Diseased shrimp shall be discarded and recorded appropriately.
537
- 538 **9.25** Biosecurity protocol for hatchery operations shall be established and
539 implemented accordingly.
540
- 541 **9.26** Hatchery facilities shall be disinfected after every operation and prepared
542 properly prior to stocking.
543
- 544 **9.27** Stocking density for hatchery should be appropriate.
545
- 546 **9.28** Preventive measures against the entry of undesirable species and disease
547 carrier animals shall be undertaken during the preparation and operations.
548
- 549 **9.29** Appropriate life support systems shall be provided in the hatchery tanks.
550
- 551 **9.30** Substances requiring prescription shall be procured under adequate
552 supervision of a qualified expert and used by a trained technician
553 authorized by the competent authority.
554
- 555 **9.31** Non-prescription substances should be used according to manufacturer's
556 instructions and as specified on the label.
557

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9.32 Veterinary drugs, medicated feeds, chemical and biological substances shall only be those permitted and registered according to national regulations and obtained from registered manufacturers and suppliers.

9.33 Veterinary drugs, chemicals, hazardous substances, and probiotics shall be stored appropriately to prevent deterioration and unnecessary use.

10 Environmental Integrity and Sustainability

10.1 The site of aquaculture facilities shall be evaluated and permitted based on its proximity to ecologically sensitive or protected areas such as mangrove forests, coral reefs, and other biodiversity hotspots. The farm shall also adhere to zoning laws set by local government units (LGUs). Secure SAPA from EMB.

10.2 Measures should be adopted to promote efficient water management and use, as well as proper management of effluents to reduce impacts on surrounding land, and water resources.

10.3 Where possible, good quality, high health hatchery-bred stocks for use in seed production should be sourced out from Specific Pathogen Free (SPF) facilities. When wild-sourced brood stocks are used, they should be collected using responsible practices or in accordance with national laws and regulations where they exist.

10.4 Where genetic material of an aquatic organism is to be altered in a way that does not occur naturally, science-based risk assessment shall be done to address possible risks on a case-by-case basis.

10.5 Hatchery workers and managers should be trained in environmental management and mitigation of impact to ensure they are aware of their responsibilities in protecting the environments.

10.6 Quality of discharge water from hatchery shall be held in effluent treatment pond/tank and shall comply with relevant laws and regulations.

10.7 In cases of disease occurrences, treatment of effluent water prior to release shall be implemented and recorded.

11 Socio-Economic Aspect

11.1 Workers should receive fair treatment, salaries, mandatory benefits, and incentives consistent with national rates and in accordance with existing laws, regulations, and any related agreements or arrangements between the employer and the workers.

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- 11.2** Living quarters of stay-in labor should be safe, clean, good habitable condition and convenient.
- 11.3** Potable water in adequate supply and appropriate suitable toilet facilities should be available and properly maintained.
- 11.4** Hatchery facility operations should observe the rights of host local community minimizing potential adverse impacts on public land, infrastructures, fishing grounds, and water resources following existing laws and regulations.
- 11.5** Workers should not be discriminated against on the basis of gender, race, religion, culture, age, etc.
- 11.6** Training on Occupational Health and Safety (OH&S) should be conducted for the workers to ensure safer farm work conditions.
- 11.7** An adequate quantity of first aid kits should be available and easily accessible at the production area, and laborers should be able to demonstrate awareness of and apply various first aid measures.
- 11.8** Harmonious, productive, and mutually beneficial relationship with the local community should be maintained to foster business and social responsibility.
- 11.9** Proactive anti-child labor policy should exist in the farm and shall be compliant with the existing regulation and other applicable regulations.
- 11.10** Electrical connections, hazardous materials, farm inputs and implements which may pose danger, toxification, untoward accidents or eventual deaths to workers should strictly undergo regular inspections, inventory, check-up, repairs and replacements as necessary.
- 12 Traceability and Record Keeping**
- Records of the following should be maintained for at least 24 months for traceability purposes: (Double check the list of documents
- a) quarantine procedure;
 - b) broodstock origin and management protocol;
 - c) hatchery management protocol including feeding and water quality management;
 - d) estimated production volume/quantity distributed to farms;
 - e) disease history of the production run; ;
 - f) preventive measures against and control of disease outbreak;

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- g) purchase and use of veterinary drugs, chemicals, hazardous substances, probiotics and other inputs;
- h) employment and wage payment;
- i) potential clients;
- j) health certificates with LTP,
- k) *effluent treatment*;
- l) *mortality records*; and
- m) laboratory results of stocks

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**Annex A
(Normative)**

List of banned antimicrobials in food-producing animals

Regulations	
BFAR Administrative Circular No. 256, series of 2015	Declaring malachite green and gentian violet as health hazards and prohibiting their use in food fish production and trade
DA Administrative Order (AO) No. 14, series of 2003	Ban on the use in food animals of beta-agonist drugs used in humans as bronchodilator and tocolytic agents
Department of Health (DOH) and DA Joint AO No. 2, series of 2000	Declaring ban/phase out of the use of nitrofurans in food-producing animals
DOH AO No. 4-A and DA AO No. 1, series of 2000	Banning and withdrawal of olaquinox and carbadox from the market
DOH AO No. 91 and DA AO No. 60, series of 2000	Declaring ban on the use of chloramphenicol in food-producing animals

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Annex C
(Informative)

**Recommended range stocking density for crab and shrimp grow-out
farms**

Species	Culture System Stocking	Density ^a
1. Mangrove Crab		
. <i>Scylla serrata</i> ; . <i>S. olivacea</i> ; . <i>S. tranquebarica</i> ; and . <i>S. paramamosain</i>	Extensive ^b	500–1000 pcs/ha
0. Shrimp		
. <i>Penaeus monodon</i>	Extensive	1–5 PL/m ²
	Semi-intensive	6–15 PL/m ²
	Intensive	16–30 PL/m ²
b. <i>Penaeus vannamei</i>	Extensive ^c	5–10 PL/ m ²
	Semi-intensive ^d	11–30 PL/ m ²
	Intensive ^e	31–60 PL/ m ²
^a depending on the culture practices and other parameters for aquaculture ^b aquasilviculture and polyculture with fish ^c polyculture with 5,000 pcs/ha of tilapia ^d greenwater technology with 650-1000 pcs @50g of Tilapia in a middle pen ^e reservoir with greenwater technology		

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Bibliography

- Association of Southeast Asian Nations. (2022). *ASEAN standard on ASEAN good aquaculture practices for food fish*. <https://asean.org/wp-content/uploads/2022/11/10.-ASEAN-Standard-on-ASEAN-Good-Aquaculture-Practices-for-Food-Fish-Adopted.pdf>
- Bureau of Agriculture and Fisheries Standards (BAFS)-Department of Agriculture (DA). (2022). *Veterinary Drug Residues in Food — Maximum Residue Limits* (PNS/BAFS 48:2022).
- Bureau of Agriculture and Fisheries Standards (BAFS)-Department of Agriculture (DA). (2015). *Animal feed ingredients* (PNS/BAFS 163:2015)
- Bureau of Agriculture and Fisheries Standards (BAFS)-Department of Agriculture (DA). (2024). *Live and raw bivalve molluscs – Code of Practice* (PNS/BAFS 236:2024)
- Bureau of Fisheries and Aquatic Resources (BFAR)-Department of Agriculture (DA). (2009). *Allowing the importation and culture of the broodstock and post-larvae of Specific Pathogen Free I Specific Pathogen Resistant (SPF/SPR) Black Tiger Shrimp, *Penaeus monodon* and the culture of the offspring thereof* (Fisheries Administrative Order [FAO] No. 230, series of 2009). <https://www.bfar.da.gov.ph/wp-content/uploads/2021/04/FAO-No.-230-s.-2009.pdf>
- Codex Alimentarius Commission. (2006). *Principles for traceability/product tracing as a tool within a food inspection and certification system* (CXG 60-2006). https://www.fao.org/fao-who-codexalimentarius/sh-proxy/tr/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXG%2B60-2006%252FCXG_060e.pdf
- Codex Alimentarius Commission (CAC). (2020). *Code of Practice (COP) for fish and fishery products* (CXC 52-2003, rev. 2020). https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B52-2003%252FCXC_052e.pdf
- Department of Environment and Natural Resources. (2019). *DENR Administrative Order No. 2019-09: Updated national list of threatened Philippine fauna and their categories*. https://bmb.gov.ph/downloads/WRD/WC/WC2020/stat_and_lists_of_wildlife/fauna/dao-2019-09.pdf
- Food and Agriculture Organization of the United Nations. (n.d.). *Fishery management. ASFA: Thesaurus of aquatic sciences and fisheries terminology*. https://agrovoc.fao.org/skosmosAsfa/asfa/en/page/c_cbafa2e3?clang=vi

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World Organization for Animal Health. (2018). *Biosecurity*.

https://www.woah.org/fileadmin/Home/eng/Health_standards/tahc/2018/en_glossaire.htm#:~:text=biosecurity,and%20within%20an%20animal%20population.