

PHILIPPINE NATIONAL STANDARD

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Code of Good Aquaculture Practices (GAqP) for Seaweed



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

BPI Compound Visayas Avenue, Diliman, Quezon City 1101 Philippines

Phone (632) 920-6131; (632) 455-2856; (632) 467-9039; Telefax (632) 455-2858

E-mail: bafpsda@yahoo.com.ph

Website: www.bafps.da.gov.ph

Foreword

The Philippine National Standard (PNS) on the Code of Good Aquaculture Practices (GAqP) for Seaweed intends to provide practices to prevent or reduce the risk of hazards occurring during aquaculture production, harvesting, postharvest handling of seaweed. This contains practices adopted from the Code of Good Aquaculture Practices (PNS/BAFS 135:2014), ASEAN Good Aquaculture Practices for Food Fish and Good Aquaculture Practice Farmers Guidance Workbook of BFAR developed under European Union (EU) Trade Related Technical Assistance (TRTA) Program.

This Code was accomplished by the Bureau of Agriculture and Fisheries Standards (BAFS) in collaboration with a multi-stakeholder Technical Working Group composed of representatives coming from the Bureau of Fisheries and Aquatic Resources (BFAR), Department of Science and Technology – Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD), Seaweed Industry Association of the Philippines (SIAP), Tambuyog Development Center Incorporated and from the private sectors, with BAFS as secretariat. The Technical Working Group was created as per Department of Agriculture Special Order No. 848 series of 2016.

This document shall serve as an official reference for the Philippine Good Aquaculture Practices for Seaweed with the aim of providing greater confidence in consumers' expectations that the Philippine Seaweed products are safe, sound and fit for human consumption.

1 Scope

This Code of Good Aquaculture Practices (GAqP) for Seaweed covers practices that aim to prevent or minimize the risk associated with aquaculture production either land-based or sea-based in brackish and marine waters. This Code covers the aspects of aquaculture production addressing food safety and quality, environmental integrity and socio-economic welfare.

This Code applies to aquaculture farms and/or production area intended for seaweed farming and consists of minimum compliance requirements.

2 Normative References

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

- a) Code of Good Aquaculture Practices (PNS/BAFS 135:2014)
- b) ASEAN Good Aquaculture Practices (GAqP) for Food Fish Part 1
- c) Good Aquaculture Practice Farmers Guidance Workbook

3 Definition of Terms

3.1

seaweed

refers to macroscopic, multicellular, marine algae such as class Chlorophyta (green algae), Phaeophyta (brown algae) Rhodophyta (red algae). It also applies to species both with food and non-food applications

3.2

seaweed farm

refers to an aquaculture production unit (either land- or water-based such as but not limited to brackish and marine waters; usually consisting of culture systems (on/off bottom, floating, long-line, raft), holding facilities (tanks, pens, ponds, raceways, cages), structures (on-site farm shelter, nursery, sorting, drying buildings, storage,), service equipment and propagules/cultivars

3.3

competent authority

refers to a bureau or agency mandated by law, with responsibility for the implementation of sanitary and phytosanitary (SPS) measures.

3.4

production area refers to off or on shore sites/locations where seaweeds are cultured, propagated or naturally grown.

4 Site Selection

4.1 Location

4.1.1 Production area should be located in an environmentally suitable area and should comply with the existing environmental regulations issued by the competent authority.

4.1.2 Production area declared by the owner should have a proof of legal right or privileges (license to operate or business permit from the local government unit) indicating the farm location through coordinates and effectivity period.

4.2 Lay-out and design

4.2.1 Seaweed farm design and layout shall prevent cross contamination from seaweed natural diseases, emergence of environmental hazards and damage to existing marine habitats.

4.2.2 Production area should be designed with proper space allocation for its structures to ensure ease of navigation, unimpeded current flow and species segregation.

4.2.3 Seaweed farm shall be designed and constructed with materials causing minimal negative environmental impact and physical damage to seaweed during grow-out and harvesting.

5 Facilities and sanitation

5.1 Facilities

5.1.1 Solid and/or non-biodegradable wastes should be kept in confined area and its disposal should be compliant with existing regulations.

5.1.2 Water contaminants such as but not limited to fuel, oil and lubricants should be kept at onshore structures and stored separately and in safe condition.

5.1.3 Regular repairs and maintenance should be undertaken to preserve the good physical condition of the facility.

5.2 Sanitation

5.2.1 Production area, culture facilities and its surroundings should be maintained in a clean and hygienic condition.

5.2.2 Containers, equipment and farm facilities should be maintained at all times in good condition for ease in cleaning and sanitizing.

5.3 Wastes removal

5.3.1 Wastes should be identified as to source whether onshore or offshore, segregated as biodegradable and recyclable.

5.3.2 Wastes should be removed and disposed regularly in accordance with applicable sanitation regulations.

5.3.3 Waste containers and the waste storage premises should be cleaned and sanitized on shore after each use.

5.3.4 Wastes prior to disposal should be properly stored such that it is not a source of contamination.

5.3.5 Disposal of natural off shore waste like epiphytes, discarded or worn out planting implements, flotsam and disease infected seaweeds should be properly disposed of.

6 Management

6.1 Production management

6.1.1 Propagation practices in the seaweed farm should minimize risk for cross-contamination and conform to the existing applicable standards.

6.1.2 Planting materials/seaweed seedlings should be sourced from varieties proven to be endemic or adaptable in the area, good yielding species, healthy and resistant to disease.

6.2 Water quality

6.2.1 Basic water quality parameters (e.g. pH, turbidity, salinity, temperature) of the seaweed farm should be regularly monitored to determine its suitability for seaweed culture or adjustment in farming procedures to ensure seaweed survival.

6.2.2 Water in production area should be far from sources of pollution, and in optimum level throughout the year.

6.2.3 Current flow should be suited for seaweed farming and no obstruction should impede the movement of the water.

7 Diseases

7.1 Production area should follow existing protocol on seaweed disease prevention and management.

7.2 Incidence of disease infestation in the production area and nearby localities/sites should be monitored and reported to competent authority, when necessary, for proper remedial measures. Early manifestations of diseases on seaweed should be controlled and eliminated.

7.3 In the event of imminent massive disease outbreak, the competent authority should be immediately notified for appropriate disposition.

7.4 Contaminated or disease infected seaweed should be removed, disposed properly and should not be sold.

8 Harvesting and transport

8.1 Harvesting

8.1.1 Seaweeds should be harvested when its required maturity has been reached in accordance with the existing seaweed specifications.

8.1.2 Timing of harvest should coincide with the period of favorable weather pattern and tidal conditions.

8.1.3 Proper harvesting practices and procedures should be followed.

8.2 Post-harvest handling and Transport

8.2.1 Post-harvesting structures, equipment and paraphernalia should be easy to clean and kept in sanitary and good operating condition.

8.2.2 Operations such as sorting, weighing, washing, draining, drying and packing should be carried out properly and hygienically to maintain the good quality of the product.

8.2.3 For seaweed intended for drying, proper procedure should be followed to meet existing product standard.

8.2.3 Transport container and other implements should be properly cleaned and stored in appropriate facilities.

8.2.4 Seaweed should be transported under physical conditions which do not adversely affect their marketability and consumer acceptability.

9 Personnel health and hygiene

9.1 All workers should be fit to work.

9.2 Workers should be trained on farm level hygienic practices to ensure they are aware of their roles and responsibilities for protecting aquaculture products from contamination and deterioration throughout the production cycle.

9.2 Personnel who could contaminate products should not be allowed to work and handle the seaweed products.

9.3 Workers should wear suitable and appropriate working clothes and protective gears.

9.4 Workers should observe hygienic practices during postharvest work.

10 Traceability and record keeping

10.1 Adequate records for the origin and species, planting and harvest dates, total weight of propagules used, number of culture/planting lines, size of ponds or pens and actual wet weight harvested should be kept in the production area.

10.2 Records on harvest and movement of seaweed should be maintained and reported for traceability

10.3 Adequate records on the buyers of final products should be kept (one-step-forward traceability).

10.4 All relevant records should be updated, kept, maintained and made accessible during culture and for at least 24 months after harvesting.

10.5 Record should be made available to the competent authority when required.

11 Labor and community

11.1 Child labor

Anti-child labor laws, policies and practices should be observed.

11.2 Anti-discrimination/ unequal treatment of employee policy

Workers should not be discriminated against on the basis of gender, race, religion, culture, age, etc.

11.3 Training on safety

Training on safety procedures should be conducted for the workers.

11.4 First aid

11.4.1 First aid kit should be available in adequate quantity and conveniently accessible at the production area.

11.4.2 Workers should be able to demonstrate awareness and application of different first aid measures.

11.5 Wages and working hours

11.5.1 Workers should receive fair and decent salary in consistent with existing laws and regulations.

11.5.2 Working hours or piece wage rates should be based on the existing labor laws and regulations.

11.6 Living conditions for workers

11.6.1 Living quarters of stay-in labor should be safe, clean and in good habitable condition and comfortable.

11.6.2 Potable water in adequate supply and appropriate suitable toilets facilities should be available and properly maintained.

11.7 Social Aspects

11.7.1 Farms operation should observe the rights of host local community on the use of public land and infrastructures, fishing grounds, and water resources following existing laws and regulations.

11.7.2 Harmonious, productive and mutually beneficial relationship with local community should be maintained to foster [responsible] business social responsibility.

References

The following reference documents are indispensable for the application 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.

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Department of Agriculture
Bureau of Agriculture and Fisheries Standards

**Technical Working Group on the Development of
Philippine National Standard on the Code of Good Aquaculture Practices for Seaweeds**

Maria Abegail Albaladejo
BFAR-AQD

Dr. Simeona E. Regidor
BFAR-NFLD

Dr. Sonia Somga
BFAR-NFLD

Ms. Irma Ortiz
BFAR-NSDP

Mr. Demosthenes F.S. Tugonon
BFAR-IFAD

Dr. Nelson A. Lopez
BFAR-CO

Mr. Tiburcio C. Donaire
BFAR-RFO VII

Dr. Mari-Ann Acedera
DOST-PCAARRD

Alfredo Pedrosa III
SIAP

Ms. Dinna Umengan
Tambuyog Dev't. Center Inc.

Adviser:

Dr. Vivencio R. Mamaril/

Ms. Karen S. Bautista/

Ms. Karen Kristine A. Roscom

Bureau of Agriculture and Fisheries Standards

BAFS Secretariat:

Dr. Gari Pellinor Hernandez

Mr. Jaypee G. Trinidad

Mr. Marco R. Abilar

Ms. Camille B. Baraquiél

Bureau of Agriculture and Fisheries Standards



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

BPI Compound Visayas Avenue, Diliman, Quezon City 1101 Philippines
T/ (632) 928-8741 to 64 loc. 3301-3319
E-mail: Info.dabafs@gmail.com
Website: www.bafs.da.gov.ph