

## Summary – Bio Suisse Standards: Aquaculture

### Disclaimer:

This document is to be used as a simplified information note only and does not replace the more comprehensive and complete requirements in the Bio Suisse Standards. In case of any discrepancies between this document and the official standards, the information in the standards will prevail.

Requirements not relevant to imported species have been omitted.

For processing, storage and trade, separate requirements apply.

### 1 Farm Level – finfish

In aquaculture, the ecological balance may not be disturbed, natural populations may not be threatened and the basic principles of sustainability must be upheld. Fish must be reared for long periods in order to achieve high-quality fish and to prevent intensive farming.

- **Basic certification:** The operation must be certified according to the EU organic regulation.
- Outside of Europe, both EU organic certification and Naturland certification are recognised as a basis for BIOSUISSE ORGANIC certification.

#### 1.1 Feed

- Aquaculture operations are permitted to purchase all of their feed.
- Feed must be certified according to Soil Association or Naturland. Theoretically, feed could also be certified according to Bio Suisse, however, in practice this rarely applies to feed outside of Switzerland.
- The use of synthetic antioxidants, e.g., ethoxyquin, BHA, and BHT, are prohibited in feed and fishmeal/fish oil.
- Note that Bio Suisse has set up the following orientation levels:
  - 3 mg/kg in feed, fish meal or fish oil (all synthetic antioxidants, alone or in combination)
  - 0.01 mg/kg SOX (synthetic antioxidants) and 0.02 mg/kg Ethoxyquin dimer in fish

#### 1.2 Species selection

- Genetically modified or triploid fish are prohibited.
- Only species adapted to regional conditions and naturally occurring in the region may be farmed, no introduction of exotic species.
- The specific requirements of the fish species concerned must be met (e.g., culture system, habitat structure, stocking density, water quality). The fish may not be exposed to unnecessary strain or stress during rearing, transport or slaughter.

#### 1.3 Medication/treatments, fish health and hygiene

- Veterinary medicines, vaccines and other immunological veterinary medicinal products, which contain GMOs, may not be used.
- The possibility of vaccinating the fish as a preventive measure is permitted.
- Limited use of medication (e.g., antibiotics, parasiticides) is permitted and follows the current provisions in the EU organic regulations.
- Waiting period: the number of degree-days for the active substances must be doubled. If no waiting period is indicated, then a generic 1,000 degree-days apply.
- Dead fish must be removed from the pond or cage without delay.

#### 1.4 Water quality during production

- Inflow: The inflow may not be anthropogenically polluted or if so, water sample analyses must show that the water is safe to use.
- Outflow: water quality must meet local requirements. Where appropriate, suspended particles must be collected in a sedimentation basin or mechanical filter and removed.
- Water for production: temperature and the pH, oxygen and ammonia levels of the water must meet the specific requirements of the fish species concerned, and must be measured at regular, appropriate intervals (at least once a month) and at sensitive times of day.
- For finfish other than salmonids: artificial aeration with liquid oxygen is not permitted except during extreme weather conditions or during transport. Mechanical movement of water to increase aeration is permitted.
- For salmonids: the use of liquid oxygen is permitted to reach optimal conditions in every day farming, as long as liquid oxygen was produced using renewable energy sources.
- Unconsumed feed and fish faeces sedimentation/sludge, if removed, must be utilized by the operation itself or delivered to another organic farming operation within a 20 km radius. If there are no other organic farming operations within this radius, exceptions can apply.

#### 1.5 Stocking density

Stocking densities follow the current provisions in the EU organic regulations e.g. 10 kg/m<sup>3</sup> for salmon raised in ocean net-cage farms, 15 kg/m<sup>3</sup> for gilthead seabream/sea bass, and 10 kg/m<sup>3</sup> for pangasius. Maximum densities refer to values reached at any point during production, rather than an average over the entire production unit or an average over the entire life cycle.

#### 1.6 Artificial illumination

- Artificial illumination is prohibited.

#### 1.7 Transport

- Live fish must be supplied with sufficient oxygen during transport; artificial aeration with liquid oxygen is permitted.
- Live fish must be transported unfed.
- Transport duration: maximum 10 hours. An exception up to a maximum of 36 hours can be granted by ICB, if the following information is provided: well-boat transfers ensure good water quality through continuous water exchange.
- Transport density:
  - maximum of 200 kg fish/1000 liters of water or
  - 125 kg fish/1000 liters if the transport is longer than 2 h
- Sorting, handling and the time fish spend outside of water must be kept to a minimum.

#### 1.8 Stunning/slaughtering

- It must be ensured that all fish of the BIOSUISSE ORGANIC production unit are stunned prior to slaughter.
- It must be ensured that stunning remains effective up until slaughtering i.e., the onset of death.
- The following stunning methods are permitted: percussive (mechanical), electrical, and the use of natural plant-based products such as clove oil. Deviations from this apply where species-specific recommendations exist.
- Species-specific requirements:
  - Percussive or electrical stunning methods are used for salmonids, followed by slaughtering by the means of gill incision and bleeding.

- Electrical stunning is used for pangasius, followed by slaughtering by the means of gill incision and bleeding.
- Electrical stunning is used for seabass and seabream\*, preferably within the medium water, followed by slaughtering by the means of gill incision and bleeding, or asphyxiation in ice slurry.
- Stunning may also be carried out using natural plant-based products such as clove oil. In such cases, slaughtering shall not be carried out by asphyxiation in ice water (asphyxiation in ice or slaughtering by gill incision and bleeding would be permissible).

\* For initial applications, if structural adjustments are still necessary, a 2-year conversion plan must be available, which explains how a compliant stunning method will be introduced within two years. The fish can be sold "in conversion" during this conversion phase.

- A detailed slaughter protocol describing the steps pre-slaughter fasting, crowding, pumping, transport, stunning, and killing must be submitted to ICB AG. For each step, the protocol includes the following information:
  - The slaughter protocol defines responsibilities and its implementation is monitored by specifically trained personnel.
  - the slaughter protocol describes the entire process, from preparation, fasting, crowding, pumping, transport, stunning, to killing
  - to ensure minimum stress and effective stunning, critical control points, maximum values (threshold) and associated corrective measures are defined for each step, and their recording is regulated.

## 1.9 Facility structure

- An aquaculture operation may have production units producing organic and production units producing non-organic fish. If this is the case, the following applies to the individual production unit producing organic fish:
  - The entire production unit must produce only fish in compliance with the Bio Suisse Standards. Parallel production within the same production unit is prohibited, i.e.:
    - organic and non-organic fish
    - organic and BIOSUISSE ORGANIC fish
  - The production unit must have a flow of goods (e.g., aquaculture products, feeds, auxiliary inputs, etc.) that is separate from other, non-organic units.
  - The production unit must be headed by an autonomous and proficient farm operations manager who may not hold a managerial position at a non-organic farming operation, a non-organic custom farming operation or a non-organic agricultural production site.
  - The production unit must have its own clearly recognisable and distinctive image (production unit name, logo, product labelling, social media).
  - The organic production unit has its own distinctive business center
  - The organic production unit has a permanently assigned workforce.
- Closed indoor facilities such as RAS i.e., <10% water replenishment/day are prohibited, except for broodstock, juveniles and for the production of live feed.
- The production facility (e.g., pond, cages) must protect against escapes or invasion by unwanted fish species.
- Fish may not be exposed to unnecessary strain or stress.
- Additional for ponds: operations must reserve 7% of their operational acreage as areas dedicated to the enhancement of biodiversity.
- Additional for ponds: At least 10% of the water surface of each pond must be kept in constant shade (except during winter or if the water column is deeper than 2 m).
- Additional for ponds: there are sufficient places of retreat and cover to encourage the natural behaviour of the fish (such as schooling and territorial behaviour).

- Additional for ponds: If water is diverted from a stream, legal requirements regarding residual water volumes must be met. The stream must remain passable for fish.
- Nets may not be treated with antifouling agents containing toxic substances (such as copper or zinc).
- Clearing and destroying of forests and high conservation value areas is prohibited for agricultural and aquaculture use. These areas include primary and secondary forests, mangrove forests, marshlands and swamps, steppes, savannahs and alpine vegetation, as well as places of worship of indigenous peoples.
- farming of BIOSUISSE ORGANIC fish without all necessary land titles is not permitted (prevention of land grabbing)
- Disinfection and **cleaning**
- Approved products and their application follow the current provisions in the EU organic regulations.

### 1.10 Conversion period

- Fish must spend at least the final 2/3 of their life on an organic operation.
- The conversion period follows the current provision in EU organic regulations (usually 3, 6, 12 or 24 months, depending on the production system)
- If for seabass and seabream structural adjustments are still necessary to achieve compliance with the stunning and slaughtering requirements, fish can only be sold "in conversion" during this conversion phase (see also 1.8)

### 1.11 Additional requirements for salmonids

- The required minimum culture duration for salmonids depends on the harvest weight and is measured in degree days or months, whichever is achieved first. For producers using degree days, water temperature must be recorded daily.
- The culture duration is calculated from the day of hatching to harvest, recorded, e.g., in a fish CV.
- Minimum culture duration for salmonids:

Harvest weight	Degree days	or	Months
1'000 – 1'500 g	7'000		22
>1'500 g	7'500		24

## 2 Farm Level – shrimp and mussels

### 2.1 Naturland certification

The operation must be certified according to the standards of Naturland e.V., DE-Gräfelfing.

### 2.2 Facility structure

- An aquaculture operation may have production units producing organic and production units producing non-organic shrimp/mussel. If this is the case, the following applies to the individual production unit producing organic shrimp/mussel:
  - The entire production unit must produce only shrimp/mussel in compliance with the Bio Suisse Standards. Parallel production within the same production unit is prohibited, i.e.:
    - organic and non-organic shrimp/mussel
    - organic and BIOSUISSE ORGANIC shrimp/mussel.
  - The production unit must have a flow of goods (e.g., aquaculture products, feeds, auxiliary inputs, etc.) that is separate from other, non-organic units.

- The production unit must be headed by an autonomous and proficient farm operations manager who may not hold a managerial position at a non-organic farming operation, a non-organic custom farming operation or a non-organic agricultural production site.
- The production unit must have its own clearly recognisable and distinctive image (production unit name, logo, product labelling, social media).
- The organic production unit has its own distinctive business center
- The organic production unit has a permanently assigned workforce.
- Closed indoor facilities such as RAS i.e., <10% water replenishment/day are prohibited, except for broodstock, juveniles and for the production of live feed.

### 2.3 Producer groups

- Producer groups must meet the Bio Suisse requirements for inspections as set forth in the Bio Suisse Standards Part V.

## 3 Juvenile fish / post-larvae – finfish, shrimp and mussels

This applies to the first 3<sup>rd</sup> (or less) of the life-cycle.

### 3.1 EU or Naturland organic certification

ICB AG does not certify this stage. Juvenile stock (e.g., spat, post larvae) must be certified EU or Naturland organic unless juveniles are not available in organic quality.

### 3.2 Where organic juveniles are not available:

- there must be a statement from the auditing body confirming the status of non-availability
- there must be a statement from the supplier confirming juveniles meet “organic requirements” by completing and signing the form Appendix 1 to Part II, Section 5.7, respectively the Annex to the BIOSUISSE ORGANIC Checklists for Aquaculture. This confirmation must be available for each batch delivered and submitted to ICB AG as an annex to the checklist.
- Prohibited properties/treatments of non-organic juvenile fish and eggs:
  - genetically modified eggs or eggs derived from polyploidization, ray treatment (monosexing) or gynogenesis
  - Juvenile fish from outside of neighbouring countries
  - prophylactic treatment with synthetic drugs, antibiotics or hormones
  - fed with antibiotics, growth promoters, hormones, genetically modified feed, feed components or additives

### 3.3 Live transport

- Transport duration: maximum 10 hours. An exception up to a maximum of 36 hours can be granted by ICB, if the following information is provided: organic juvenile fish are not available within a 10h distance, and well-boat transfers ensure good water quality through continuous water exchange.
- Transport density:
  - maximum of 200 kg fish/1000 liters of water or
  - 125 kg fish/1000 liters if the transport is longer than 2 h

### 3.4 Parent fish

- Parent fish may not be treated with antibiotics, growth promoters or hormones.
- Artificial illumination may not exceed 16 hours in length and is only permitted for breeding purposes.
- ICB AG does not certify this stage.

### **3.5 Relevant sections in the Bio Suisse Standards for fish, shrimp, and mussels**

The following references relate to version 2024.

#### **Part II**

- Chapter 5.7:
  - including Appendix 1 to Part II
  - excluding 5.7.2

#### **Part V**

- Chapter 3.2 Market presence
- Chapter 3.3 Social responsibility
- Chapter 3.5 Clearing and destroying forests and high conservation value areas
- Chapter 3.7 Land grabbing
- Chapter 3.8 Policy on residues
- Chapter 4.1.3 Whole-farm approach and definition of a farming operation
- Chapter 4.4.2 Aquaculture