

**UNOFFICIAL TRANSLATION**



**THAI AGRICULTURAL STANDARD**

**TAS 7401-2019**

**GOOD AQUACULTURE PRACTICES  
FOR MARINE SHRIMP FARM**

**National Bureau of Agricultural Commodity and Food Standards  
Ministry of Agriculture and Cooperatives**

**ICS**



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FOR MARINE SHRIMP FARM**

**National Bureau of Agricultural Commodity and Food Standards**

**Ministry of Agriculture and Cooperatives**

**50 Phaholyothin Road, Chatuchak, Bangkok 10900**

**Tel. (662) 561 2277 Fax. (662) 561 3357**

**[www.acfs.go.th](http://www.acfs.go.th)**

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**Technical Committee on the Elaboration of the Thai Agricultural Standard  
on Good Aquaculture Practices for Marine Shrimp Farm**

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| 1.  | Director General of the Department of Fisheries or the representative<br>Mr. Chamnan Pongsri, Deputy Director General<br>Mr. Bunchong Chumnongsittathum, Deputy Director General | Chairperson |
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| 8.  | Representative of the National Farmers Council<br>Mr. Decha Barnluedech<br>Mr. Surasak Wanichkij   | Member      |
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| 11. | Representative of the Thai Shrimp Association<br>Mr. Pongsak Nitatkanjananont<br>Mr. Khomgrit Saenarug   | Member      |
| 12. | Representative of the Thai Frozen Foods Association<br>Ms. Nanthiya Unprasert  | Member      |

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| 13. | Mr. Decha Barnluedech<br>Expert on Marine Shrimp Aquaculture  | Member                  |
| 14. | Ms. Narintorn Soontornsatit<br>Expert on Aquaculture Auditing System  | Member                  |
| 15. | Representative of the Office of Standard Development,<br>National Bureau of Agricultural Commodity and Food Standards<br>Mr. Manat Larpphon | Member and<br>Secretary |

(4)

The Ministry of Agriculture and Cooperatives issued the Notification on Establishment of Thai Agricultural Standard entitled, “Good Aquaculture Practices for Marine Shrimp Farm”, (TAS 7401-2014). In view of the changing trade situation and technical information, the Committee of Agricultural Standards therefore deems it necessary to amend such standard to cope with such challenges and gain domestic and international recognitions.

This standard is based on the following documents:

TAS 7401-2014. Thai Agricultural Standard: Good Aquaculture Practices for Marine Shrimp Farm.

Standard on ASEAN Good Aquaculture Practices for Shrimp Farming (ASEAN Shrimp GAP). 2012.

Global Sustainable Seafood Initiative (GSSI). Version 1, October 2015. Global Benchmark Tool. Available Source: <http://www.ourgssi.org>, Viewed June 3, 2019.



**NOTIFICATION OF THE MINISTRY OF AGRICULTURE AND COOPERATIVES  
ON THE ESTABLISHMENT OF THAI AGRICULTURAL STANDARD:  
GOOD AQUACULTURE PRACTICES FOR MARINE SHRIMP FARM  
UNDER THE AGRICULTURAL STANDARDS ACT B.E. 2551 (2008)**

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Whereas it deems necessary to amend the Thai Agricultural Standard on Good Aquaculture Practices for Marine Shrimp Farm under the Agricultural Standards Act B.E. 2551 (2008) so as to make it suitable to the present situation,

By virtue of Sections 5, 15 and 16 of the Agricultural Standards Act B.E. 2551 (2008) and the decision of the First Session of the Agricultural Standards Committee on 22 April B.E. 2562 (2019), the Minister of Agriculture and Cooperatives hereby issues this Notification as follows:

1. The Notification of the Ministry of Agriculture and Cooperatives on the establishment of Thai Agriculture Standard: Good Aquaculture Practices for Marine Shrimp Farm under the Agricultural Standards Act B.E. 2551 (2008) dated 21 October B.E. 2557 (2014) is repealed.

2. The Thai Agricultural Standard on Good Aquaculture Practices for Marine Shrimp Farm (TAS 7401-2019) is established as a voluntary standard, details of which are attached herewith.

3. All certificates issued by Conformity Assessment Service Providers according to Section 1 of this Notification shall remain valid until the dates of expiry, withdrawal or cancellation, but not more than 2 years from the following day of its publication in the Royal Gazette.

This Notification shall enter into force after 180 days from the date of its publication in the Royal Gazette.

Notified on B.E. 2562 (2019)

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Minister of Agriculture and Cooperatives

**THAI AGRICULTURAL STANDARD**  
**GOOD AQUACULTURE PRACTICES FOR MARINE SHRIMP FARM**

**1. SCOPE**

1.1 This Thai Agricultural Standard covers good aquaculture practices (GAqP) for farming of marine shrimp of the following genera:

- *Penaeus* (*Penaeus* spp.) such as black tiger shrimp (*Penaeus monodon*)
- *Litopenaeus* (*Litopenaeus* spp.) such as white shrimp (*Litopenaeus vannamei*)
- *Metapenaeus* (*Metapenaeus* spp.) such as jinga shrimp (*Metapenaeus affinis*)

The practices include all stages of production, starting from culturing, harvesting to post-harvest handlings before transportation in order to produce marine shrimp of good quality which is safe for consumption. This standard takes into account animal health and welfare, as well as environmental and social responsibilities.

1.2 This standard does not cover practices at the stages of hatching and nursing.

**2. DEFINITIONS**

For the purpose of this standard:

2.1 **Marine shrimp farm** means an establishment for marine shrimp culturing, consisting of ponds, feed preparation and/or storage areas, buildings, and necessary sanitation facilities.

2.2 **Veterinary drug** means any substance applied or administered to any food-producing animal, whether used for therapeutic, prophylactic or diagnostic purposes or for modification of physiological functions or behaviour.

2.3 **Residues of veterinary drugs** means the veterinary drugs as described in 2.2 including the parent compounds, metabolites and/or associated impurities that are left over in edible portion of animal.

**3. REQUIREMENTS****3.1 Farm location****Principle**

Select appropriate farm location in order to:

- avoid farming in an illegal area,
- enhance good production system, and
- produce safe shrimp for consumption.

3.1.1 Farm shall not be located in prohibited areas as stipulated by relevant laws and regulations.

3.1.2 Farm shall not be located in an environment that has any risk of contamination which affects shrimp health and safety of consumers, otherwise preventive measures shall be in place.

### **3.2 Farm management**

#### **Principle**

Provide good farm management in order to increase efficiency of farm operation, resulting in:

- shrimp growth and good health,
- reducing risk of infection and disease transmission,
- preventing contamination affecting shrimp health and consumer safety,
- preventing and reducing impacts to the environment.

#### **General preparation**

3.2.1 Farm management manual in compliance with this standard should be made available and implemented.

3.2.2 Workers should be trained on animal health and welfare management as well as prudent use of chemicals.

#### **Pre-culturing management**

3.2.3 Ponds should be left fallow and/or prepared prior to restocking.

3.2.4 Prior to the use of water from any sources for rearing, quality of such water should be tested on a regular basis.

3.2.5 Water to be filled in the ponds should be filtered to prevent the access of any aquatic animals from outside.

3.2.6 Access of predators and disease carriers into the ponds during pond preparation, water preparation and shrimp culturing should be prevented without destroying any endangered species, except for worker safety where euthanization shall be conducted.

#### **Fry**

3.2.7 Fry shall be obtained from a certified farm on Good Aquaculture Practices for Marine Shrimp Hatchery and Nursery to ensure that the fry are healthy and free from any major pathogens.

#### **Feed and feeding**

3.2.8 The formulated feed to be used shall be registered, of good quality, with traceable information on the sources of feed ingredients and shall not be expired.

3.2.9 In case the mixed feed is prepared on farm, feed ingredients and their sources shall be recorded, whereas prohibited substances as stipulated by the relevant law shall not be used.



- 3.2.10 Feeding should be efficiently managed. Amount of feed should be appropriate according to the requirements of shrimp.
- 3.2.11 Direct feeding of fresh food should not be practiced.
- 3.2.12 Marine shrimp of the same genus and species as the ones being farmed should not be used as the source of protein in feed.
- 3.2.13 Feed should be stored in a place where contamination and deterioration can be prevented.

### **Culturing management**

- 3.2.14 Suitable condition for the growth of shrimp should be managed e.g.
- release appropriate stocking density of larvae,
  - monitor and treat water quality in the rearing ponds,
  - install aerators adequately and appropriately,
  - observe shrimp behaviour regularly.

### **Shrimp health management**

- 3.2.15 Shrimp health should regularly be monitored. Dead and moribund shrimp during non-outbreak situation should be managed according to the Aquatic Animal Health Management Plan. Records should be made on mortalities and moribund shrimp. Weak shrimp, once found, shall be immediately removed.
- 3.2.16 Shrimp health management shall comply with relevant national laws and regulations, and OIE<sup>1/</sup> Aquatic Animal Health Code.
- 3.2.17 Movement of live shrimp and produce should comply with relevant national laws and regulations and OIE Aquatic Animal Health Code, Chapter...<sup>2/</sup> in order to prevent the problems of aquatic animal health and welfare as well as of the environment.
- 3.2.18 In case where shrimp shows any signs of sickness, diagnosis, causation analysis and corrective actions should be carried out and recorded.
- 3.2.19 Effective disease outbreak prevention and control measures should be in place to prevent spreading of disease within the farm, to surrounding areas and to the environment.
- 3.2.20 In case of a disease outbreak, effective management procedures to prevent the spread of the disease should be in place, including ability to quarantine, where feasible, and immediately inform the competent authority.

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<sup>1/</sup> The World Organisation for Animal Health (OIE) is the intergovernmental organisation responsible for improving animal health worldwide.

<sup>2/</sup> The OIE Aquatic Animal Health Code (the Aquatic Code) provides standards for the improvement of aquatic animal health worldwide. It also includes standards for the welfare of farmed fish and use of antimicrobial agents in aquatic animals. The sanitary measures in the Aquatic Code should be used by the Competent Authorities of importing and exporting countries for early detection, reporting and control of pathogenic agents in aquatic animals (amphibians, crustaceans, fish and molluscs) and to prevent their spread via international trade in aquatic animals and their products, while avoiding unjustified sanitary barriers to trade.

3.2.21 Carcass disposal should properly be handled in accordance with the farm management manual to prevent potential risk of disease spreading.

3.2.22 In case where polyculture is conducted, effective measures should be in place to reduce potential disease transmission between species.

### **3.3 Use of veterinary drugs, chemicals, and microbial products**

#### **Principle**

Do not use veterinary drugs and chemicals prohibited by laws. Only when needed, use veterinary drugs, chemicals and microbial products in a prudent and responsible manner to prevent contamination and residues in the produce and the farming system that may affect consumers' safety and the environment. Properly store such veterinary drugs, chemicals and microbial products to maintain their effectiveness and prevent hazard.

3.3.1 Veterinary drugs, chemicals and microbial products prohibited by laws shall not be used. In case veterinary drugs, chemicals and microbial products are to be used, use only those registered with the competent authority, if required by laws.

3.3.2 In case where any veterinary drugs permitted by law are to be used, instructions on the labels including an appropriate withdrawal period shall be followed to prevent contamination to the produce and the environment.

3.3.3 The application of antimicrobial agents shall be in compliance with national laws and regulations and shall be consistent with the Principles for Responsible and Prudent Use of Antimicrobial Agents in Aquatic Animals of the OIE Aquatic Animal Health Code under supervision of an aquatic animal health professional.

3.3.4 In case where any chemicals are used, instructions on the label shall be followed to prevent the contamination to the produce and the environment.

3.3.5 Veterinary drugs, chemicals and microbial products should appropriately be stored in a place where deterioration and hazard can be prevented.

### **3.4 Waste water and sediment**

#### **Principle**

Manage waste water and sediment in compliance with laws and regulations to prevent the environmental impacts.

3.4.1 Quality of waste water to be discharged shall be in compliance with relevant laws and regulations.

3.4.2 Prevention of saline water from rearing pond to diffuse into freshwater area shall be conducted to minimize impact to the environment.

3.4.3 Sediment shall not be disposed of into public and non-permitted private areas.

### **3.5 Fuel and lubricants**

**Principle**

Properly store and dispose of fuel and lubricants in a responsible manner for safety and prevention of the environmental impacts.

- 3.5.1 Fuel and lubricants should be stored separately from feed and residential area .
- 3.5.2 Warning signs and notice should be displayed at the fuel and lubricant storage area to prevent any potential hazard.
- 3.5.3 Waste disposal of fuel and lubricants should properly be managed in a responsible manner.

**3.6 Hygienic conditions of the farm****Principle**

Design, operate and manage the farm in a hygienic manner to prevent contamination from pathogens, veterinary drugs, and chemicals into farming system and produce affecting shrimp health and consumer safety.

- 3.6.1 Farm facilities such as roads, toilets, wash basins, garbage collection areas, fuel and lubricant storage areas should be designed and operation procedures should be in place to prevent contamination to rearing ponds and produce.
- 3.6.2 Garbage, rubbish, veterinary drugs and chemical containers should be sorted out, collected and managed appropriately to prevent contamination to rearing ponds, produce and farm environment.
- 3.6.3 Production inputs, materials and equipment should be stored properly as appropriate so as to prevent contamination and not to encourage animal harborage. .
- 3.6.4 Bathrooms and toilets shall be hygienic to prevent contamination to rearing ponds, irrigation canals and/or water sources. Sewage shall be disposed of in a hygienic manner.
- 3.6.5 Manure shall not be used at any stages of production.
- 3.6.6 Pets shall not be allowed to enter the rearing pond area.
- 3.6.7 Workers should be trained on good hygienic practices.

**3.7 Harvest and post-harvest handlings prior to transportation****Principle**

Operate the harvest and post-harvest in a hygienic manner prior to transportation to prevent contamination that may affect the safety of produce for human consumption.

- 3.7.1 Facilities should be provided to facilitate hygienic harvesting such as sorting area, conveyer and transfer vehicle used on farm.

- 3.7.2 Workers who operate harvesting should be healthy and are not carriers of any diseases likely to be transmitted through food or have any objectionable diseases. In case any workers having signs of such diseases, they shall temporarily stop the harvesting work and get medical treatment until full recovery before getting back to work.
- 3.7.3 Water and ice used shall be clean with adequate quantity to preserve the produce at an appropriate temperature.
- 3.7.4 Containers and equipment shall be clean and the harvesting shall be conducted in a hygienic manner without causing any impacts on shrimp quality and contamination affecting food safety.

### **3.8 Labor and welfare**

#### **Principle**

Employ workers in compliance with labor laws, taking into account welfare and safety of workers.

- 3.8.1 Welfare for workers shall be provided appropriately and adequately.
- 3.8.2 Migrant workers shall have passports and legal working permits shall be available.
- 3.8.3 Employment contract should be made.
- 3.8.4 Workers under 18 years of age should not be hired.
- 3.8.5 Personal protective equipment should be provided.
- 3.8.6 Workers should be trained on occupational safety and health.

### **3.9 Social and environmental responsibilities**

#### **Principle**

Take responsibilities on community, social and environmental integrity in every stage of operation to maintain ecosystem and biodiversity as well as sustainability of marine shrimp farming.

#### **Social responsibilities**

- 3.9.1 Farm site shall not obstruct customary access of local communities that may have an impact on their livelihood.
- 3.9.2 Priority should be given to hire workers from local communities.
- 3.9.3 Benefits to local communities should be taken into consideration, particularly, in the stages of planning, development and operation.
- 3.9.4 Communication mechanism shall be in place to engage local communities to participate in solving any problems incurred or likely to be incurred that may have an impact on such local communities.

### **Environmental responsibilities**

- 3.9.5 Environmental impact assessment shall be conducted before farm construction as stipulated by laws.
- 3.9.6 Farm infrastructure should be maintained appropriately to prevent pollutions from expansion, maintenance, demolition or raising. Unused or damaged tools and equipment should also be stored and disposed of in a responsible manner.
- 3.9.7 Formulated feeds should not be composed of fish meal or fish oil derived from endangered species or from Illegal, Unreported and Unregulated Fishing (IUU). If fish meal or fish oil are used in formulated feeds, name of the feed mill and the lot number should be recorded for traceability.
- 3.9.8 A use of groundwater, if any, shall comply with relevant laws and be efficient to minimize impact to underground water sources.
- 3.9.9 Wild seed should not be used to prevent impact to ecosystem and biodiversity.
- 3.9.10 For any exotic species, only those that have passed a risk-analysis and thus have a permission granted by the competent authority can be raised.
- 3.9.11 In case of importing fry, they shall be permitted and quarantined as stipulated by law.
- 3.9.12 Raising of genetically modified marine shrimp is prohibited.
- 3.9.13 Measures to appropriately control the escape of shrimp should be in place in order not to affect biodiversity.
- 3.9.14 If farm is located near a mangrove area damaged by a previous shrimp farming, reforestation should be carried out as replacement, either within the farm or outside, in such a proportionate scale for the ecological restoration.
- 3.9.15 In case shrimp farming causes any damages to natural habitats of animals or the environment, effective remedial measures should be in place.

### **3.10 Recording**

#### **Principle**

Record and keep important data/information at all stages of production to be used as a guide for improvement of marine shrimp farming. Also keep documents as evidence for traceability.

- 3.10.1 Evidence on source of fry and shrimp movement document shall be available upon request.
- 3.10.2 Use of veterinary drugs and chemicals in shrimp farming as well as the rationale for their uses shall be recorded.
- 3.10.3 Operation records and other necessary information on shrimp farming should be made available upon request, such as:

- sickness or death,
- diagnosis, in case shrimp showing signs of sickness,
- water quality of the water sources/raising ponds,
- source, lot number and purchasing date of formulated feed,
- feed conversion ratio (FCR) and
- harvesting.

3.10.4 Records should be kept for at least 3 years.