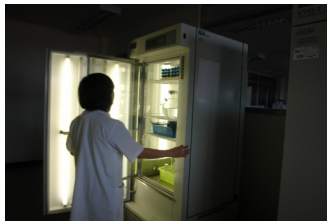
Algal Production Laboratory

- Develop improved seedstocks for seaweed industry (e.g. tissue culture techniques)
- Optimize use of algae for industrial and medical applications
- Find algae for pollution control and wastewater treatment



(L-R) Seaweed tissue culture facility; Plant growth chambers

Infection Building and Enclosed Wet Laboratory Complex

- For infection experiments and other research on disease prevention and control
- For the containment of infected and exotic stocks
- Serves as experimental facility for isolated confinement of hormone-treated or genetically manipulated fish, crustaceans, and algae

(Clockwise from top left) aerial view of enclosed wet lab complex; shrimp broodstock rearing tanks; infection building

Vision

A global leader in the generation and transfer of appropriate and sustainable tropical aquaculture technologies for food security and holistic human development

Mission

To provide dynamic and competent leadership in the generation and promotion of science-based responsible technologies to strengthen stakeholder capabilities in aquaculture and aquatic resources management.

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Laboratory Facilities for Advanced Aquaculture Technologies (LFAAT)

Aquaculture Department

Southeast Asian Fisheries Development Center

Tigbauan, Iloilo
Philippines 5021

Nutrition building, Research Division

The Laboratory Facilities for Advanced Aquaculture Technologies (LFAAT) is a grant-in-aid facility from the government of Japan to the government of the Philippines that aims to support and promote research, development, and dissemination of new aquaculture technologies. LFAAT is a group of laboratories established in SEAFDEC/AQD composed of

Molecular Microbiology Laboratory

- Develop rapid and sensitive techniques for detection and identification of pathogens of farmed aquatic organisms
- Establish fish cell lines for use in the diagnosis of viral diseases
- Develop vaccines and immunostimulants against aquatic pathogens
- Find alternatives to antibiotics
- Find microbes for treatment of aquaculture wastewater

(L-R) DNA extraction room; PCR machine for fish and shrimp virus detection

Fish Feed Technology Laboratory 1

- Find alternative protein sources to reduce feed costs
- Develop low-pollution or environment-friendly feeds
- Improve feed conversion and growth of farmed species
- Develop feeds for genetically superior breeds

(Clockwise from top left) main working area; gas chromatograph; high performance liquid chromatograph; fume hoods for organic solvent extraction and a rotary evaporator

Molecular Endocrinology and Genetics Laboratory

- Develop strategies to enhance the reproduction and growth of aquaculture species
- Examine genetic variation among wild and domesticated stocks of animals and plants in aquaculture
- Find molecular markers for parental pedigree analysis to facilitate selective breeding and genetic improvement

(L-R) RNA extraction room; flow cytometer and fast performance liquid chromatograph room

Centralized Analytical Laboratory

- Proximate analysis of experimental animals, feeds and feed ingredients
- Soil and water analysis for monitoring of water quality in experimental ponds, cages and tank set-up
- Conducts microbiological analysis of water, food and aquaculture products

(Clockwise from top left) Soxtec: automated soxhlet extraction and acid hydrolysis; pH measurement of water samples; culture media for microbiological analysis of food products; main working area

Electron Microscopy Laboratory

- Conducts morphological analysis using transmission and scanning electron microscopy
- Optimizes EM sample processing protocols for different types of biological and nin-biological samples

(L-R) Transmission electron microscope; Scanning electron microscope