

TILAPIA FARMING:

Seed Production, Grow-out, and Health Management


11 – 17 October 2026


Asian Institute (AIT), Thailand



PROGRAM BACKGROUND

Nile tilapia (*Oreochromis niloticus*) is one of the most widely farmed fish species in the world, valued for its rapid growth, dietary adaptability, and resilience across diverse production systems. In Thailand and across Southeast Asia, tilapia aquaculture has evolved from small-scale pond culture into a commercially significant industry integrating hatchery-based seed production, advanced grow-out systems, and rigorous health and biosecurity protocols.

Despite its promise, tilapia farming at both smallholder and commercial scales continues to face challenges in seed quality, disease management, and the adoption of efficient grow-out technologies such as Biofloc and Recirculating Aquaculture Systems (RAS). This training program is designed to bridge knowledge and practical skill gaps, drawing on the expertise of AIT's Aquaculture and Aquatic Resources Management (AARM) faculty and Thailand's leading commercial tilapia farms and hatcheries.



PROGRAM OBJECTIVES AND LEARNING OUTCOMES

This training program aims to build the technical capacity of participants in all aspects of Nile tilapia aquaculture from hatchery seed production and nursery management to grow-out system design and health management. By the end of the program, participants will be able to:

- Understand the biology, reproductive cycle, and strains of Nile tilapia relevant to commercial production.
- Apply broodstock management, breeding techniques, egg collection, incubation, and sex-reversal practices.
- Design and manage nursery and grow-out systems including pond, cage, Biofloc, and RAS-based approaches.
- Implement water quality monitoring, feed optimization, and feeding strategies for different production stages.
- Apply disease diagnostics, biosecurity protocols, and health management practices in tilapia farming.
- Evaluate farm management economics and develop evidence-based farm action plans.



PROGRAM CONTENTS

The training integrates classroom lectures, hands-on laboratory and hatchery sessions at AIT's Aquaculture Demonstration Hatchery and RAS Greenhouse facilities, and field visits to commercial tilapia hatcheries and grow-out farms in Thailand. Key thematic areas include:

- Nile tilapia strains, culture systems, and aquaculture trends in Asia
- Broodstock selection, hatchery management, and seed production including sex-reversal and mono-sex fry production
- Larval rearing, nursery management, and fry transportation
- Grow-out systems: pond culture, cage culture, Biofloc technology, and RAS
- Water quality management and pond/tank preparation
- Fish health management, disease diagnostics (including PCR-based methods), and biosecurity
- Farm design: hatchery tanks, incubation units, nursery and grow-out pond/tank layout
- Farm management economics: cost structure, profitability, record-keeping, and farm action planning
- Field visits to commercial hatcheries (including Manit Farm, Phetchaburi) and cage culture sites (Kanchanaburi)
- Group Action Plan (GAP): participants develop and present farm-level action plans for peer review and discussion

Training Design: 2.5 days of expert-led classroom sessions; 2 days of field visits to shrimp farms and research facilities; half-day of Group Action Plan (GAP) development and experience-sharing workshop.

Medium of Instruction: English (Thai interpretation available during field visits)

Training Fee: Please register or contact us to receive the information on the training fee and other related expenses.



TARGET PARTICIPANTS

This program is designed for professionals and organisations working across the aquaculture and fisheries value chain, including:

- Tilapia and freshwater fish farmers and aquaculture practitioners
- Officers from fisheries, agriculture, and environmental departments
- Researchers, academicians, and extension workers
- Private sector investors and agribusiness entrepreneurs
- NGO and development professionals working in food security and aquaculture



PROGRAM DETAILS

Duration	11 – 17 October 2026 (7 days, including arrival and departure)
Venue	Asian Institute of Technology (AIT), Pathum Thani, Thailand
Program Fee	Please register or contact us to receive the information on the training fee and other related expenses.
Language	English (Thai interpretation during field visits)
Certificate	Certificate of Completion awarded by AIT Extension
Registration Deadline	13 September 2026 (International) 20 September 2026 (Thai and Visa on Arrival)



ORGANISED BY

Organised by AIT Extension in collaboration with the Aquaculture & Aquatic Resources Management (AARM) Programme at AIT, and FutureFish.


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