



Aquaculture and Fish Farming Management Course: Production Planning, Water Quality and Farm P&L



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Introduction:

Aquaculture and fish farming management, covering production planning, water quality and farm P&L, is a 5-day course for farm, hatchery, investment and fisheries authority teams that ends with a Production Plan and Business Case for a case fish farm. Fish and shrimp farms lose margin when stocking, oxygen supply, feeding and harvest timing are set by habit, so mortalities rise, feed is wasted and cash runs short before the first sale. Nominees already run, finance or oversee grow-out operations and work through a modelling build on biomass, feed and cost data. CoreConcept Training Center delivers this aquaculture management course.

Course Objectives:

- Select an aquaculture production system, site and finfish or shrimp species using scored criteria for water, land, energy and market value
- Plan stocking density, growth and harvest cohorts so that farm biomass stays within system carrying capacity across the production cycle
- Control dissolved oxygen, ammonia, nitrite, pH, temperature and salinity through monitoring routines and corrective action thresholds
- Design feeding regimes and track feed conversion ratio and feed cost per kilogram of harvested fish or shrimp
- Implement farm biosecurity, stock health surveillance, harvest handling, cold chain and environmental controls at management level
- Build a fish farm production plan, operating budget, P&L and investment case tested against price, feed and survival scenarios

Target Audience:

- Farm management teams accountable for grow-out production, stock survival and operating costs on pond, cage, raceway or recirculating sites
 - Hatchery management teams responsible for broodstock, fingerling or postlarvae output and supply to grow-out farms
 - Investment and project development teams that appraise, fund or build new aquaculture ventures
 - Agricultural and fisheries authority teams that license, inspect or support fish and shrimp farms
 - Aquaculture feed, processing and supply teams that plan volumes and quality with farm clients
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Course Outline:

Day 1: Aquaculture Production Systems, Site Selection and Species Choice

- Aquaculture Production System Types From Earthen Ponds to Sea Cages
- Raceway Flow-Through and Recirculating Aquaculture System Layouts Compared
- Site Selection Scoring for Water Source, Soil and Access
- Finfish and Shrimp Species Selection Matrix by Market Value
- Fish Farm Current-State Assessment Using a Production Audit Checklist

Day 2: Production Planning, Stocking Density and Growth Modelling

- Stocking Density Limits by Species, System and Oxygen Supply
- Growth Curve Modelling With Specific Growth Rate Calculations
- Biomass Projection and Harvest Cohort Scheduling for Continuous Supply
- Hatchery Fingerling and Postlarvae Sourcing and Quality Acceptance
- Integrated Multi-Trophic Aquaculture Design Options for Nutrient Recovery

Day 3: Water Quality Management and Feeding Efficiency

- Dissolved Oxygen Monitoring, Aeration and Pure Oxygen Injection
- Ammonia, Nitrite and pH Control Through Biofilter Nitrification
- Temperature and Salinity Management for Finfish and Shrimp Ponds
- Feeding Regime Design With Feed Tables and Ration Adjustment
- Feed Conversion Ratio Tracking and Feed Cost per Kilogram

Day 4: Fish Health, Biosecurity, Harvest and Sustainability Controls

- Farm Biosecurity Plan With Zoning, Disinfection and Quarantine
- Stock Health Surveillance, Mortality Records and Escalation Triggers
- Harvest Planning, Purging, Slaughter Handling and Cold Chain Logistics
- Effluent, Escapes and Benthic Impact Controls for Fish Farms
- Aquaculture Stewardship Council Farm Standard Requirements at Overview

Day 5: Modelling Build: Production Plan and Business Case for a Case Fish Farm

- Case Fish Farm Data Pack Review and Capacity Assumptions
 - Production Plan Build With Stocking, Growth and Harvest Schedule
 - Fish Farm Operating Budget and Profit and Loss Model
 - Capital Expenditure, Cash Flow and Sensitivity on FCR and Price
 - Production Plan and Business Case Completion and Peer Review
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Skills You Will Gain:

- Aquaculture Site Evaluation
- Species and System Matching
- Biomass and Growth Forecasting
- Pond and Tank Water Chemistry Control
- Feed Efficiency Analysis
- Farm Biosecurity Planning
- Post-Harvest Cold Chain Coordination
- Fish Farm Financial Modelling

Why Attend This Course:

- Deliver a Production Plan and Business Case for a case fish farm to the farm director, investment committee or licensing team for approval
- Decide stocking numbers, feeding rates and harvest timing from biomass and oxygen data rather than past habit
- Avoid mass mortality events, wasted feed and cash shortfalls caused by unplanned water quality failures and overstocking
- Share production templates, water quality logs, feed tables and FCR trackers with supervisors and technicians on site

Conclusion:

Back at work, the participant gives the farm director, investors or the licensing team a Production Plan and Business Case that sets species, system, stocking, feeding, harvest and budget assumptions in one model. Management uses it to approve stocking cycles, feed purchasing, oxygen and biosecurity investment, and financing requests, while site supervisors use its water quality and feed targets in daily routines. After the first harvest, the farm should compare actual survival, feed conversion ratio, harvest weight and cost per kilogram against the plan and revise the model.

Frequently Asked Questions FAQ:

What should participants know before an aquaculture and fish farming management course?

Participants should already work with fish or shrimp farms as managers, investors or authority staff and understand basic production records. Bringing stocking, feed or cost data from a farm they know helps them apply the modelling build to a real operation.

How does aquaculture and fish farming management differ from agribusiness or marine conservation courses?

It concentrates on running fish and shrimp farms: systems, stocking, water quality, feeding, biosecurity, harvest and farm P&L. General agribusiness courses cover crop and livestock value chains, while marine conservation courses address wild habitats rather than farmed stock.

Why does feed conversion ratio matter so much in aquaculture and fish farming management?

Feed is usually the largest operating cost on a fish farm, so feed conversion ratio links husbandry directly to profit. Tracking feed given against biomass gained shows overfeeding, poor water quality or health problems early, before they erode margin.

What do participants take back from the aquaculture and fish farming management course?

Participants take back a Production Plan and Business Case for a case fish farm, with stocking and growth schedules, water quality thresholds, feed tables, an FCR tracker, an operating budget, a P&L and a sensitivity table they can adapt to their own site.
