

REDUCING DISEASE TRANSMISSION

Control the pathways. Protect fish health.

PRACTICAL GUIDANCE • FISH HEALTH • BIOSECURITY

INTERRUPT TRANSMISSION AT EVERY STAGE

Infectious agents can enter a facility, spread between production groups and leave the site in stock, water or waste. Biosecurity reduces these risks throughout the production cycle. Combine it with good husbandry, water quality management, appropriate vaccination and veterinary care; no single barrier provides complete protection.

INFECTION DOES NOT ALWAYS MEAN VISIBLE DISEASE

Fish may carry and shed pathogens before signs appear or without becoming visibly ill. Whether exposure leads to disease depends on the agent, exposure level, fish susceptibility and environmental conditions. Do not rely on appearance alone when assessing the health status of incoming stock or planning movements.

IDENTIFY THE MAIN TRANSMISSION PATHWAYS

Consider live fish and eggs, transport and intake water, shared equipment, people, vehicles, vessels, wildlife, feed and waste. Pathways differ among pathogens and production systems. Map the routes that connect susceptible groups, including drainage and shared water, then prioritize the risks most relevant to your facility.

VERIFY INCOMING STOCK AND SEPARATE GROUPS

Use appropriate health documentation and reliable sources. Plan quarantine or isolation according to the disease risk and local requirements, with an aquatic animal health professional. Separate production groups where feasible and manage their equipment, water and waste to limit cross-contamination. Egg surface disinfection does not remove every risk, including infection within eggs.

PLAN MOVEMENTS BY HEALTH STATUS AND RISK

Minimize unnecessary transfers and avoid moving potentially infected stock into unaffected groups. Organize staff and equipment workflows from lower-risk groups toward higher-risk or affected groups, with hygiene controls at each transition. Age alone does not establish health status; define movement rules for the site rather than assuming a universal one-way production sequence.

CONTROL WATER AND SHARED CONNECTIONS

Assess intake water, upstream activities, recirculation and effluent pathways. Use suitable source protection, filtration or treatment where justified and feasible, and maintain the systems that provide those controls. Shared water can connect otherwise separate groups or sites. Account for these links when planning stock movements, transport and disease response.

PUT BARRIERS INTO PRACTICE

Clean carefully. Monitor and respond promptly.

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DEDICATE EQUIPMENT AND MANAGE ACCESS

Dedicate nets, grading tools and protective clothing to designated units where practical. Manage visitors, contractors, vehicles and vessels through clear routes and access requirements. Before transferring equipment, clean and disinfect it appropriately and prevent recontamination.

MAKE FOOTWEAR AND HAND HYGIENE EFFECTIVE

Provide dedicated footwear or an effective boot-cleaning and disinfection station. Remove soil first, then use the labeled concentration and contact time. Maintain and replace solutions as directed. A brief step through a dirty footbath is not reliable disinfection.

Provide handwashing facilities and suitable gloves. Wash visibly soiled hands and manage gloves between tasks. Select hygiene methods for the hazard; alcohol-based sanitizers do not reliably inactivate every pathogen.

CLEAN BEFORE DISINFECTING

Remove debris and clean surfaces with appropriate mechanical action and a compatible cleaner. Rinse as required before disinfection. Include seams, drains and hoses. Keep contaminated wash water and spray away from unaffected groups.

Choose a disinfectant with evidence relevant to the target organism and intended use. Follow the current local label for dilution, coverage, contact time, water conditions, rinsing and disposal. Never mix incompatible products. Disinfectants can harm fish and aquatic environments; use with fish or eggs only when specifically authorized for that application.

SELECT PRODUCTS USING CURRENT EVIDENCE

Compare the formulation, intended use, efficacy evidence, compatibility and safety requirements. Historical laboratory dilutions and broad claims about a chemical family do not establish a safe or effective application rate.

MONITOR HEALTH AND CHECK THE BARRIERS

Track mortality, feeding, behavior and water quality. Define investigation triggers and check movement and hygiene procedures. Plan targeted sampling with a laboratory and aquatic animal health professional. A negative sample alone does not demonstrate freedom from infection.

CONTAIN AND INVESTIGATE SUSPECTED DISEASE

Restrict nonessential movements, separate affected groups where feasible and contact the aquatic animal health professional promptly. Follow applicable reporting requirements. Manage mortalities, waste and effluent to limit further spread. Treatment, emergency harvest, depopulation or fallowing require case-specific decisions and appropriate veterinary or regulatory direction.

Investigate entry and spread pathways after an incident. Correct failures, verify controls, update procedures and train staff before returning to routine operations.

IMPORTANT: General educational guidance only. Follow site-specific procedures, applicable regulations and current product labels and safety data sheets. This sheet does not provide product dosing instructions.

REFERENCES: WOAHA Aquatic Animal Health Code, biosecurity, disinfection and transport chapters; FAO, Procedures for the quarantine of live aquatic animals. Updated October 2026.