

Resources for Fish Health on the Farm: What Can I Do and Resources When It's Beyond Me

Training and Educational Programs for Producers

Biosecurity

Part of the Aquaculture Webinar Series, a joint effort of the US Aquaculture Society and National Aquaculture Association with support from NCRAC (University of Florida Tropical Aquaculture Laboratory; Dr. Roy Lanong)

Part 1: What You Need to Know About Biosecurity

[youtube.com/watch?v=nMOZ466urJc](https://www.youtube.com/watch?v=nMOZ466urJc) What it takes to implement good biosecurity practices to help minimize fish loss and curb the spread of disease on and off the farm.

Part 2: How to Design Your Health and Biosecurity Plan

[youtube.com/watch?v=ZG2eUjQ5oB0](https://www.youtube.com/watch?v=ZG2eUjQ5oB0) What goes into a good biosecurity plan and how to put one together?

Fish Health and Water Quality

vimeo.com/channels/958980/377891276

Six short and concise videos providing information on fish disease, diagnostics, biosecurity, water quality and more (University of Minnesota College of Veterinary Medicine and Center for Animal Health and Food Safety; Dr. Alex Primus and Dr. Amy Kinsley; University of Minnesota College of Fisheries, Agricultural and Natural Sciences; The Ohio State University)

Fish Health for Producers

uwsp.edu/cols-ap/nadf/Pages/Fish-Health-Training-Modules-Free-Registration.aspx

This program's six learning modules provide producers with relevant risk assessment and management principles and practices to reduce losses due to fish diseases. (University of Wisconsin-Stevens Point Northern Aquaculture Demonstration Facility; Dr. Chris Hartleb; Wisconsin Department of Agriculture, Trade and Consumer Protection; Dr. Myron Kebus).

Fish Health: What You Need to Know as an Aquaculture Producer

[youtube.com/watch?v=KjDGDxAMH0w](https://www.youtube.com/watch?v=KjDGDxAMH0w)

Provides aquaculture producers with a broad overview of fish health topics, including signs of distress and disease, DIY diagnostics, when to call the veterinarian, and the process and policy of fish health inspections (University of Minnesota; Minnesota Aquatic Invasive Species Research Center; Dr. Nick Phelps)

Fish Skin Scrape and Gill Biopsy

[youtube.com/watch?v=Haxa-Ver0kk&list=PLH5POcx2xQx5pkfI6ILhnKITdLQULbWJT](https://www.youtube.com/watch?v=Haxa-Ver0kk&list=PLH5POcx2xQx5pkfI6ILhnKITdLQULbWJT)

Dr. Tim Miller-Morgan of Oregon State University and Oregon Sea Grant Extension's Aquatic Animal Health Program shows how to perform a skin scrape and gill biopsy on a sedated fish.



go.osu.edu/fishhealth

Finding an Aquatic Vet

American Association of Fish Veterinarians (AAFV)

fishvets.org/find-a-fish-vet AAFV Find a Vet locator

fishvets.org/courses/fish-health-medicine-program AAFV is home to Dr. Kebus and Dr. Collins' Fish Health Medicine Certificate Program

World Aquatic Veterinary Medicine Association (WAVMA)

wavma.org/find-a-fish-vet WAVMA Find a Fish Vet locator

wavma.org/CertAqV-Pgm WAVMA Certified Aquatic Vet (CertAqV) Program

wavma.org/WebCEPD Webinars for Global Aquatic Veterinary Education, WAVMA educational webinars for aquatic practitioners and veterinary students

USDA Animal and Plant Health Inspection Service

vsapps.aphis.usda.gov/vsps/public/VetSearch.do Category II Accredited vet locator (only Category II can assist with aquaculture)

aphis.usda.gov/aphis/ourfocus/animalhealth/nvap/ct_aast National Veterinary Accreditation Program information and educational modules

Finding an Aquatic Diagnostic Lab

Before sending samples to a diagnostic lab, consider these points:

- It is strongly recommended to work with a veterinarian before sending samples.
- Make sure you are with a lab that specializes in aquatic animal disease.
- Know what lab tests you need to order.
- Test options, fees, and instructions for sample collection and shipping may vary by lab.
- For regulator testing, such as for Viral Hemorrhagic Septicemia (VHS), you will most likely need a third party to submit samples for your farm.

Fish Diagnostic Laboratories in the United States

onlinelibrary.wiley.com/doi/pdf/10.1002/9781119259886.app3 Appendix 3 (Pages: 594-595) from *Clinical Guide to Fish Medicine*

University-Run Aquatic Diagnostic Labs in the Great Lakes Region

Cornell University College of Veterinary Medicine Aquatic Animal Health Program 607-253-3400

vet.cornell.edu/departments/microbiology-and-immunology/research-areas/aquatic-animal-program/fish-disease-diagnostic-laboratory

Michigan State University Veterinary Diagnostic Laboratory 517-353-1683

cvm.msu.edu/vdl

University of Minnesota Veterinary Diagnostic Laboratory 612-625-8787

vdl.umn.edu/services-fees (search "aquaculture/fisheries" in the service field)

Pennsylvania State University PADLS- Penn State Animal Diagnostic Laboratory 814-863-0837

padls.agriculture.pa.gov

Purdue University Indiana Animal Disease Diagnostic Laboratory (ADDL) 765-494-7440

vet.purdue.edu/addl/Aquaculture.php

University of Wisconsin-Madison, Wisconsin Veterinary Diagnostic Laboratory 608-252-5432

wvdl.wisc.edu

USDA Animal and Plant Health Inspection Service

aphis.usda.gov/animal_health/lab_info_services/downloads/ApprovedLabs_Aquaculture.pdf *Laboratories Approved to Conduct Diagnostic Testing in Support of Export Health Certification of Aquaculture Species*

aphis.usda.gov/aphis/ourfocus/animalhealth/export/international-standard-setting-activities-oie/regionalization/live-animal-exports/live-animal-export-resources aquatic animal export resources

Aquatic Animal Health Standards

American Fisheries Society Fish Health Section Bluebook

units.fisheries.org/fhs/fish-health-section-blue-book-2020

OIE (World Organisation for Animal Health) Aquatic Animal Health Code

oie.int/en/what-we-do/standards/codes-and-manuals/aquatic-code-online-access

USDA Animal and Plant Health Inspection Service

aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/aquaculture Comprehensive Aquaculture Health Program Standards (CAHPS) and National Aquaculture Health Plan and Standards (NAHPS) program information

aphis.usda.gov/animal_health/monitoring_surveillance/nlrاد-system-standards.pdf U.S. National List of Reportable Animal Diseases (NLRAD) System Standards (proposed draft)

US Fish and Wildlife Service, Aquatic Animal Drug Approval Partnership

fws.gov/fisheries/AADAP/home.htm

fws.gov/fisheries/AADAP/PDF/3rd-Edition-Quick-Reference-Guide-to-Approved-for-Use-in-Aquaculture-Drugs.pdf Quick Reference Guide to Approved Drugs for Use in Aquaculture

Additional Resources

American Fisheries Society Fish Health Section

units.fisheries.org/fhs

***Fish Disease: Diagnosis and Treatment* by Edward J. Noga**

onlinelibrary.wiley.com/doi/book/10.1002/9781118786758 available in print and online through Wiley's Online Library

Food and Agriculture Organization of the United Nations (FAO)

fao.org/fishery/culturedspecies/search/en Fisheries and Aquaculture Division, Cultured Aquatic Species fact sheets

Webinar Resources

Great Lakes Aquaculture Collaborative Fish Health on the Farm webinar recording

ohioseagrant.osu.edu/p/h8gt1 originally held September 22, 2021

Kennebec River Biosciences

kennebecbio.com William Keleher, CEO & Founder

State of Wisconsin Department of Agriculture, Trade and Consumer Protection

datcp.wi.gov/Pages/Programs_Services/FishHealth.aspx Dr. Myron Kebus, Aquaculture Program Veterinarian

Purdue University

ag.purdue.edu/fnr/Pages/Profile.aspx?strAlias=rrode Bob Rode, Aquaculture Research Lab Manager

Great Lakes Aquaculture Collaborative

greatlakesseagrant.com/aquaculture The collective supports aquaculture via relevant, science-based initiatives. The website includes upcoming and past events along with on-going research.

Great Lakes Fresh Fish Finder

freshfishfinder.org Find fish businesses in the Great Lakes region, along with information on how to add your business.

Many thanks to all participants who contributed resources to this list via the webinar chat.

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