APHIS
Aquaculture Industry Report

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Since taking over as the Animal and Plant Health Inspection Service (APHIS) Administrator last July, it has been my pleasure to work with aquaculture experts in APHIS on problems affecting this fast-growing and important U.S. industry. Cooperation between government, industry, and academia is an effective way to handle issues and events in the aquaculture community.

Our Veterinary Services (VS) unit is constructing a team to deal with the problems of *Streptococcus iniae* is one example of how interagency cooperation and partnerships can be applied to address the serious issues facing aquaculture. In addition, Animal Damage Control (ADC) continues to provide assistance to the fish industry by working directly with aquaculture producers and State and Federal agencies throughout the United States in an effort to reduce damage caused by fish-eating birds and other wildlife.

APHIS' commitment to aquaculture isn't just about fish ponds and animal health. It's about cooperation in dealing with the issues that arise in today's industry. By working together to solve problems, aquaculture will continue to grow toward a stronger and more profitable future.

Sincerely,
Terry L. Medley
APHIS Administrator

Foreign Animal Disease

In the last year, at least three new foreign animal diseases affecting aquaculture were introduced into the United States. These viral diseases—yellow-head, white-spot, and Taura syndrome—all have high mortality and morbidity rates, especially in intensively cultured shrimp farms. Because the yellow-head and white-spot viruses can also affect shrimp in the wild, these viruses may pose a danger to the Gulf of Mexico's shrimp population. Currently, APHIS is working through the Joint Subcommittee on Aquaculture to assess the risk posed to wild shrimp populations.

Aquatic Animal Health

Dr. John Pitts, a private practitioner with Bellwether Consulting, was awarded a contract with APHIS-VS. Pitts will provide assistance in the area of aquaculture as it relates to aquatic animal health. While with VS, Pitts will draft a position paper on the application of quantitative risk-assessment techniques for aquatic animal health policy and determine APHIS personnel training needs for aquaculture.

Recently, there were eight confirmed cases of human illness in Canada from the bacterium *Streptococcus iniae,* due to injuries sustained from puncture wounds or cuts while handling or cleaning fresh, whole, raw fish. The genus *Streptococcus* was first recognized as a fish pathogen after it was isolated from rainbow trout in the late 1950's. Since then, the disease has been isolated from a number of culture systems worldwide. In response to concerns regarding this issue, APHIS-VS has formed a study group of government, academic, and industry organizations to learn more about this disease.

The Centers for Disease Control and Prevention (CDCP) will bench-train several members of the study group—one each from the National Veterinary Services Laboratories (NVSL), the Agricultural Research Service (ARS), and Mississippi State University—to isolate and identify this invasive strain of *S. iniae* from clinically suspect fish.

ARS will provide leadership to coordinate a national streptococcal research program. ARS will also conduct an inhouse research program to determine the incidence and prevalence of *S. iniae* in cultivated fish from U.S. farms. ARS has committed $75,000 to help initiate the effort.

APHIS-VS will facilitate and coordinate the overall effort, providing distribution of information and material to others on the team. A microbiologist from NVSL will train with CDCP to learn methods of isolation and identification. APHIS will provide assistance to ARS with their epidemiologic investigation of affected States and provide a risk-factor epidemiologic survey to aquaculture farms as needed.

The National Aquaculture Association, in coordination with the American Tilapia Association and the Striped Bass Growers Association, has conducted a survey to gather baseline data to determine the extent and impact of streptococcal disease-management methods and prioritization of applied research needs.

Veterinary Biological Products for Fish

In a recent APHIS restructuring, the veterinary biologics unit—formerly part of the Biotechnology, Biologics and Environmental Protection program—joined VS. This change enables APHIS to continue to offer a wide array of services to the aquaculture industry, including:

- Licensing domestic manufacturers of veterinary biologics to ensure that products produced for use in the United States or for export are pure, safe, potent, and effective.
- Issuing import permits for veterinary biologics produced in other countries.
- Inspecting veterinary biologics production facilities, methods, and records.
- Developing test methods, as well as references and reagents, and overseeing prelicensing field trials.
- Establishing and enforcing regulations for interstate movement of veterinary biologics.

• Issuing documents to meet foreign countries' requirements for accepting export shipments of veterinary biologics produced by U.S. manufacturers.
• Licensing veterinary biologics for the prevention, diagnosis, and/or treatment of diseases of aquatic animals.
• Investigating consumer complaints regarding biological products used in aquaculture.

Facilitating American Aquaculture Exports

APHIS representatives met with a delegation from Japan several times in October to discuss proposed Japanese regulations regarding the importation of salmonid eggs from the United States. The Japanese asked for a technical level meeting with APHIS to discuss proposed new certifications based on the Office of International Epizootics' International Aquatic Animal Health Code and Diagnostic Manual for Aquatic Animal Diseases. Some U.S. salmonid egg producers sell as much as 50 percent of their output to Japan.

So far, the APHIS-VS export certification program for aquatic animals in Washington has endorsed a total of 211 certificates for 55,000 salmonid eggs exported to Japan, 2,930,000 to Colombia, and 70,753,000 to Chile.

Exporting Made Easy

VS' National Animal Health Programs recently produced a video designed to educate APHIS Area Veterinarians-in-Charge (AVIC), State veterinarians, producers, and exporters on the export certification procedures used by APHIS to facilitate international trade of aquatic animals and related products. The video is about 8 minutes long and takes the viewer through APHIS' export certification procedures from beginning to end. It will be sent to all AVIC and State veterinarians.

APHIS Approved Laboratories

APHIS has provisionally given laboratory approvals for diagnostic services for export certification to the University of California's Veterinary Diagnostic Laboratory on the Davis campus, the Maryland Department of Agriculture's Animal Health Diagnostic Laboratory, Washington State University's Washington Animal Disease Diagnostic Laboratory, and the University of Arkansas's Aquaculture and Fisheries Center at Pine Bluff. One additional request for laboratory approval has been received from the State of Pennsylvania.

Migratory Birds and Aquaculture

ADC's operational personnel are working with the National Wildlife Research Center (NWRC), catfish and tropical fish farmers, and the University of Florida Extension Service to help solve problems caused by fish-eating birds at U.S. aquaculture facilities. ADC has assisted NWRC with installing nets and creating bird surveys at tropical fish farms located in Hillsborough and Polk counties in Florida. This is the first phase of NWRC's wading-bird project to quantify the impacts of fish-eating birds on the tropical fish industry. ADC has also worked with catfish farmers in northwestern Florida to obtain fish-eating-bird depredation permits and implement new bird-repelling techniques.

The Extension Service recently purchased the tropical fish farm located directly behind the ADC office in Ruskin, FL. That farm will provide the Extension Service, NWRC, and ADC with the ability to conduct research in bird predation, develop and test new exclusion mechanisms and barriers, and work out new avoidance techniques. This research will allow ADC to provide fish farmers the most effective and efficient methods of controlling bird depredation on their ponds.

At the beginning of this year, ADC experts formed a committee to draft a double-crested cormorant damage-management plan for aquaculture in the Southeastern United States. The plan concentrates on current avoidance technology, future depredation-control strategies, and research needs. Also included are sections on the cormorant's population status (past and present) and conflicts with aquaculture, sport-fishing, and commercial fisheries. Cooperative efforts are currently underway between the U.S. Department of the Interior's U.S. Fish and Wildlife Service and ADC to address cormorant depredation issues, and work will continue toward producing a finalized cormorant damage-management plan.

The cormorant roost dispersal program for 1995–96 had 56 fish farms, 1 timber concern, 2 waterfowl hunt clubs, and 1 Mississippi Wildlife, Fisheries and Parks officer participating. Roost-dispersal, a nonlethal control tactic, continues to be the most effective tool for deterring cormorant depredation in the area of a winter-roost site. The Catfish Farmers of Mississippi Association has taken the initiative for organizing and overseeing participants in the 1996–97 winter-roost location survey and the monitoring of cormorant activities. ADC will continue to provide support in dispersal training and will conduct bird-repelling programs as needed to assure the continued success of the roost-relocation program.

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