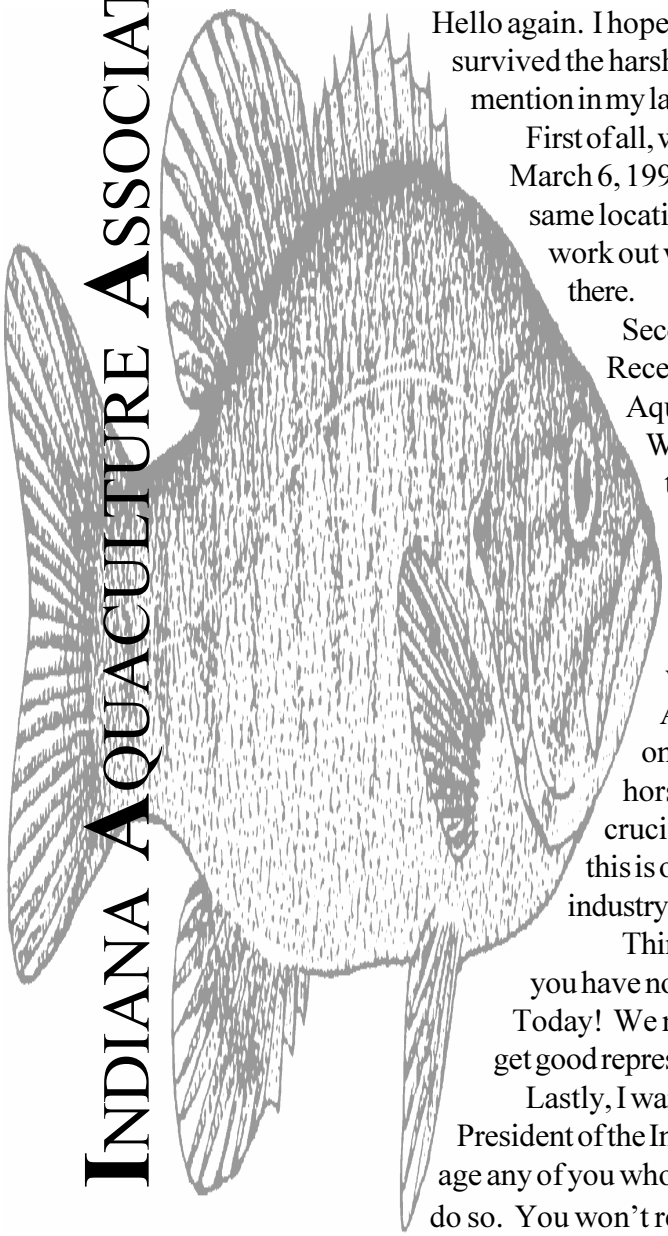
Newsletter

Volume 13 Number 1 1999

INDIANA AQUACULTURE ASSOCIATION



PRESIDENT'S MESSAGE

Hello again. I hope everyone had a good holiday season and has survived the harsh weather. I have a number of things I want to mention in my last Presidential Message so I will get right to it.

First of all, we will be having our annual Spring meeting on March 6, 1999 at the Econo Lodge in Indianapolis. This is the same location we have used for several years and it seems to work out well for everyone. I look forward to seeing you all there.

Second, but probably most important, is the Legislative Reception that will be hosted by You, the Indiana Aquaculture Association. The reception will be held on Wednesday March 10 from 5:30 pm to 8:00 pm in the Consulate Room of the Embassy Suites Hotel Downtown Indianapolis. The reception is our chance to meet with the decision makers in the Indiana state government to discuss the issues you feel are important to our industry. The Legislators will also be given a copy of the Indiana State Aquaculture Plan and be given a short presentation on the aquaculture industry. Cocktails and seafood hors d'oeuvres will be enjoyed by all in attendance. It is crucial that we get a good turnout by the membership as this is our formal introduction as an association and an industry in the state.

Third is the NCRAC logo selection questionnaire. If you have not already filled these out and sent them in, Do It Today! We need your input to move forward on the logo and to get good representation at the NCRAC planning meeting.

Lastly, I want to thank you for the opportunity of serve as President of the Indiana Aqauaculture Association. I would encourage any of you who have not served as an officer or Board member to do so. You won't regret it.

Casey Reed
Aquatic Control, Inc.

In This Issue:

Message from the Editor

We finally have the winter that we have missed for the last several years! The snow and cold weather prevents a lot of outdoor activities this time of year. Most of us are using this as an opportunity to catch up on our reading, keeping books and attending professional development activities. There is a great chance to attend the bi-annual North Central Regional Aquaculture Conference in Columbia, Missouri February 24-26. The workshop will highlight much of the research being conducted by our North Central Regional Aquaculture Center. Additionally, there will be a special session on recirculating aquaculture systems that will interest many of our struggling hog producers here in Indiana. If there is enough interest I will drive a van to the meeting. Contact me if you need a ride.

Purdue's annual Agriculture Alumni Fish Fry this year will feature pork on the menu instead of fish. I certainly emphathize with the plight of hog producers, but as an association we need encourage that fish not only be returned to the menu next year, but the type of fish should be switched from wild-caught to farmed-raised.

Finally, I received word from Greg Bossaer, White County CES, that Kroger Supermarket in Monticello will be opening a new fresh fish market sometime in March. This presents another marketing opportunity for food fish producers in the central Indiana area.

I look forward to seeing you at the Spring IAA Meeting.

Calendar

Juanuary, 1999

Aquaculture America , sponsored by the World Aquaculture Society, January 27-30, Tampa, FL. Contact: John Cooksey, 206-485-6682.

February, 1999

Fish Farming Trade Show - February 4-5 Convention Center, Greenville, MS. Contac: 601-981-0807.

North Central Regional Aquaculture Conference and Missouri Aquaculture Association Annual Meeting - February 24 - 28. Holiday Inn Select Executive Center Columbia, Missouri. Contact: Conference Office at 573-882-2301.

March, 1999

Indiana Aquaculture Assocation Spring Meeting - March 6, Econolodge Inn, Indianapolis. Contact: LaDon Swann, 765-494-6264.

Legislative Dinner - March 10, Indianapolis. Contact: Casey Reed, 812-497-2410.

Midwest Aquatic Plant Management Society Annual Meeting - March 13-16, Sheraton-Westin Hotel, Indiana. Contact: Phone 800-558-5106.

International Boston Seafood Show - March 16-19. Boston, MA, Contact: 207- 842-5504.

April, 1999

World Aquaculture '99.
April 27-May1, 1999, Sidney, Australia. Contact: John Cooksey, 206-485-6682.

RAISING QUESTIONS

By Olivia Wu

Salmon steak at $7 a pound is the kind of grocery bargain that makes consumers smile. It's a slab of protein, it's heart healthy and the price seems to keep dropping. Americans are buying more seafood than ever, but they may not know that the bargain-priced salmon or the all-you-can-eat shrimp dinner at the chain restaurant is raised on a fish farm.

As aquaculture has become the wonder child in U.S. agriculture, environmentalists and concerned chefs are voicing concerns about the hidden costs of raising seafood. Aquaculture simultaneously spawns big hopes and equally big fears. Water is plentiful and free, but is easy to abuse and difficult to keep clean, observers say. Because fish have extremely high reproductive rates (a catfish lays up to 3,000 eggs at a time), they are an easy commodity to raise. But their waterborne wastes can quickly spread to the surrounding ecosystems.

"The health of aquaculture is an indicator of the health of our existence on the planet," said chef Greg Higgins, owner of Higgins Restaurant & Bar in Portland, Ore. "It's connected to water quality. It's a deeply complicated system." Higgins addressed a recent conference here of Chefs Collaborative 2000, an organization of 1,200 chefs and growers dedicated to sustainable agriculture and cuisine.

Aquaculture has boomed worldwide, fueled by demand in the United States and other affluent countries. Almost all catfish and rainbow trout consumed in the U.S. are farmed within the country, according to the USDA. Half of the shrimp and a third of the salmon consumed in the U.S. come from fish farms, agricultural economists say. Farmed shrimp comes almost exclusively from overseas. Fish farms are found in all 50 states, raising more than 100 species, but most concentrate on catfish, trout, salmon, tilapia and hybrid striped bass. In shellfish, the top farmed categories are oysters, crawfish and clams.

Aquaculture can be a source of chemical and biological pollutants and nutrient wastes, Rebecca Goldburg of the Environmental Defense Fund said at the same conference. The dumping of wastes from tanks or the free flow of wastes from open ocean systems, called net pens, play havoc with the environmental balance by depleting oxygen, stressing or killing surrounding marine life.

Goldburg warned that fish waste, like livestock waste, might create elsewhere the same kind of "dead zone" that exists in the Gulf of Mexico. "There is evidence that the zone is due to huge amounts of nutrient waste from hog and chicken farming," she said. Net pens are especially harmful. "Building a net pen is like building a very tall smoke stack," Goldburg said.

Government and industry officials do not take such a dire view, saying that the industry is regulating itself. But aquaculture waste is "a concern for industry and government," said LaDon Swann, aquaculture extension specialist with Purdue University and the University of Illinois. "There's a lot of research going into more efficient feed," he said, to minimize nutrient waste. In addition, the federal government does have discharge guidelines, and some states' standards are even tougher, he said. In some cases discharge from fish farms is cleaner than stream water, he said. But Swann acknowledged that current filtration systems are too expensive for small farms.

Aquaculture is here to stay, the experts said. In many cases, it helps local economies and the environment. Shrimp aquaculture in developing countries is "taking pressure off the land by giving a better way of life to farmers. They're not clear-cutting (forests) and subsistence farming," said David Wills of the Peat Institute Environmental

Programs. Wills, who consults on environmental issues for corporations, says these companies look for sustained growth and therefore are farming fish in ways that maintain the environment and social growth.

Intensive fish farming increases the use of antibiotics, pesticides and colorants, said Portland chef Higgins. Residues of those chemicals may be on seafood and left in the water, he said. Goldburg said antibiotics are used to control disease, and pesticides are used to control weeds, algae and parasites. Often, farmers apply these chemicals by putting them directly in water, she said.

Higgins posed the question: "What are the residuals brought to our tables, and are we returning water the way we found it?"

There is also the danger of so-called "biological contamination." Farmed fish escape from net pens and breed with or compete with wild stock, Higgins said. "Non-indigenous fish can escape and dilute the local gene pool. They can disrupt the spawn cycle of native salmon," he said.

Farmed Atlantic salmon have escaped from net pens to breed with the wild salmon, threatening their survival. The wild species may soon be listed under the Endangered Species Act, Goldburg said.

Salmon farming is more of a problem because the fish is a carnivore. It has to be fed anchovies, herring and sardines, all wild food fish. Estimates of the fish protein needed to raise 1 pound of salmon range from 3 to 5 pounds, Goldburg said. "Feeding fish to fish leads to a net loss of protein in a protein-short world," she said. Furthermore, catching wild fish to feed farmed fish leaves less food for wild, predatory fish, Goldburg said.

Aquaculture can be environmentally friendly, profitable and feed the world at the same time, Goldburg believes. The aquaculture industry should learn from countries such as Norway, Ireland and Chile, which have halted salmon aquaculture from time to time because of disease, overproduction or environmental degradation.

According to Norwegian fisheries consul Stein Owe in Washington, Norway has limited licensing for salmon fisheries as well as the sale of feed since the 1980s to control production. Norway is the largest producer of farmed salmon in the world: In 1997 it sold 320,000 metric tons, Owe said. But the issue of interbreeding between domesticated and wild species is still a controversy there, he said.

Regulation teamed with science may be able to unlock the potentials of a sustainable aquaculture. The World Bank continues to invest in shrimp farming, as it has since 1984, especially in Asian countries, said Ron Zweig of the bank's Rural Development and Natural Resources Unit. In 1997, it spent $450 million on shrimp farming, the bulk of which was directed at reclamation, Zweig said.

The governments of India and Thailand, for example, are creating controls since they halted shrimp farming because of disease, abandoned sites, salinization of drinking water, loss of mangrove forests and the undercutting of fishermen's livelihoods. Some of the bank's assistance goes toward new, sustainable ventures.

IAA is Now
on the World Wide Web
ag.ansc.purdue.edu/aquanic/iaa/

Send events for the Newsletter to:
LaDon Swann
Illinois-Indiana Sea Grant College Program
1026 Poultry Building
Purdue University
West Lafayette, IN 47907-1026.

Expanded Label Use of PARASITE-S

(formalin)

On June 18, 1998 Western Chemical, Inc. received written notice from FDA/CVM that several supplemental applications for their currently approved PARASITE-S have been approved. This product has been approved by FDA for use in the control of certain external protozoan parasites on trout, salmon, catfish, largemouth bass, bluegills and shrimp, and as a fungicide for trout, salmon and esocid eggs.

The approved supplements include use of PARASITE-S as a parasiticide for "ALL" finfish and as a fungicide on the eggs of "ALL" finfish. This approval by FDA is significant in that the approvals are not for specific species but for all finfish. The other uses previously approved, for example on shrimp which is not a finfish, remain in effect also.

NFI's "Top 10" List

Rank	Species	1997 Per Capita Consumption
1	Tuna	3.10 lbs
2	Shrimp	2.70
3	Pollock	1.64
4	Salmon	1.30
5	Cod	1.06
6	Catfish	1.02
7	Clams	0.46
8	Crabs	0.42
9	Flounder/Sole	0.33
10	Halibut	0.29

AquaCalc Software

AquaCalc (version 1.0) is a series of 12 preprogrammed, easy-to-use calculators that do many of the basic calculations required to design and run an aquaculture facility. Funded by Texas Sea Grant, the software was developed by EcoMar Mariculture. Whether the user is working with finfish or crustaceans, this program can be a real time saver. The program is organized into three categories - design calculators, operations calculators and conversion calculators, and comes with a detailed user's manual. aquaCalc 1.0 has been tested and used by commercial aquaculture facilities (both finfish and crustacean) for the monitoring and daily control of important parameters such as oxygen, NH_3 production, feed rates, pH and alkalinity, and un-ionized NH_3. aquaCalc software can also assist with converting a variety of units commonly encountered in aquaculture, such as biomass, productivity, energy, power, flow rate, nitrogen, oxygen, length, area, mass, temperature, alkalinity and volume. The user can quickly convert meters to inches or feet, or convert hectares to acres, liters to gallons or to cubic meters, temperature in degrees C to temperature in degrees F, and many more conversions. aquaCalc includes conversions for shrimp such as count-per-pound of shrimp and carapace length. It also includes finfish conversions such as standard length or fork length to whole weight, and many more useful conversions to assist the fish and shrimp farmer make their job easier.

AquaCalc 1.0 is available in either PC (Windows) or Macintosh format. Please specify which format when ordering. The cost is $US45.00, including hard copy of 98 page user's manual, shipping and handling.

To order contact:
Texas A&M University
Sea Grant College Program
1716 Briarcrest, Suite 603
Bryan, Texas 77802.
Tel. (409)862-3767, Fax (409) 862-3767.
Attention: Eric Graham, Distributions Manager.
E-mail address egraham@unix.tamu.edu

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