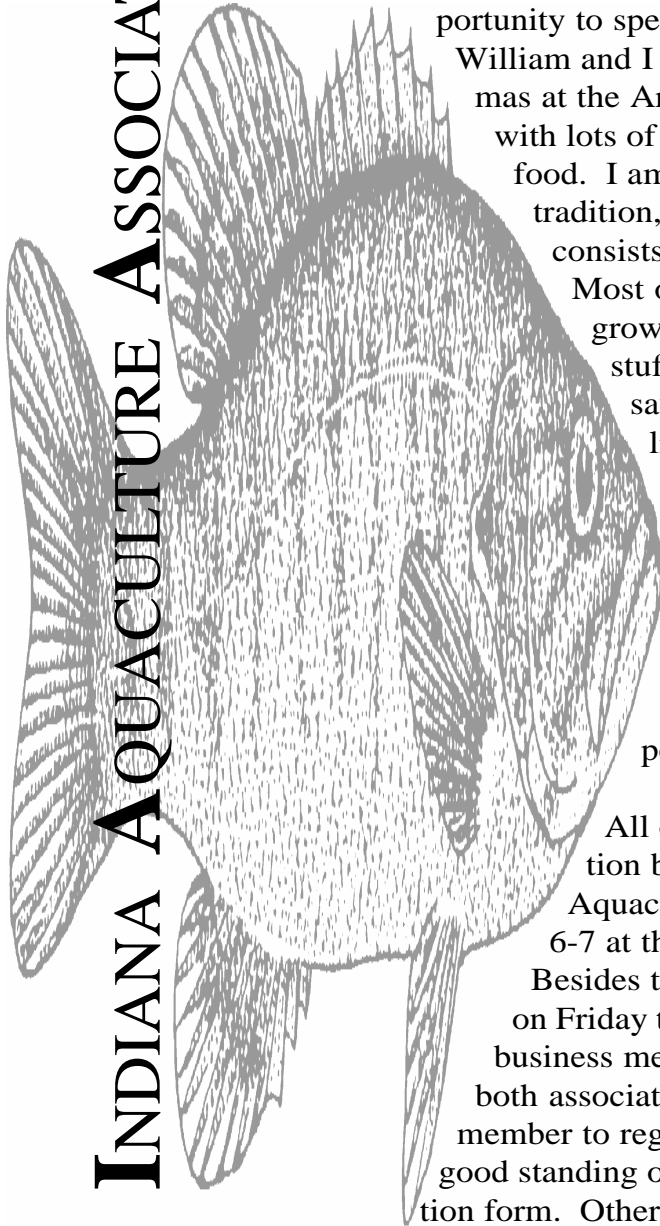


Newsletter

Volume 10 Number 4 December 1996

INDIANA AQUACULTURE ASSOCIATION



PRESIDENT'S MESSAGE

Welcome to the winter issue of the IAA newsletter. I hope each of you had a happy holiday season and had the opportunity to spend time with family and friends. Roberta, William and I went to Boston over Christmas. Christmas at the Arena home is always such a festive time with lots of people stopping by and plenty of good food. I am not sure if it is an Italian or Catholic tradition, but the Christmas Eve meal always consists of many varieties of fresh seafood.

Most of the items a Southerner like me did not grow up eating. For example, there was baked stuffed lobster, stuffed squid in tomato sauce, fried smelt and shrimp and even raw little neck clams. All this seafood was served with heaping helpings of macaroni cooked to order. Even though I did not grow up having these seafood feasts, I have rapidly grown accustomed to them. If everyone ate as much seafood as we did that day, then seafood consumption would easily be over 30 pounds per capita per year.

All of you should have received the registration brochure for the North Central Regional Aquaculture Conference scheduled for February 6-7 at the Adam's Mark Hotel in Indianapolis.

Besides the technical information to be presented, on Friday the IAA and IAIA will hold their spring business meetings. I really hope every member of both associations attends this year's conference. Remember to register early and if you are a member in good standing of either association send me your registration form. Otherwise you will be responsible for paying the \$75 dollar registration fee.

See you in February!

LaDonSwann

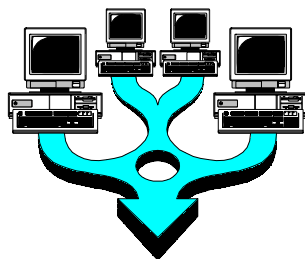
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From the Editor

Welcome to the Winter IAA Newsletter. Winter is a busy time for everyone. A major activity of the IAA and IAIA is the upcoming NCR Aquaculture Conference February 6-7 at the Adam's Mark Hotel next to the Indianapolis Airport. Each of you should have received registration information. All IAA and IAIA members who have paid their 1997 dues are eligible to attend free. If you have paid your dues, then all you have to do is to send me your completed registration information. The free registration does not apply if you register at the door.

Friday evening after the conference there will be a reception sponsored by the IAA and IAIA.



IAA on the Web

www.ansc.purdue.edu/aquanic/iaa.htm

Is Freshwater Prawn Production in Indiana Feasible?

There has been a lot of interest in producing freshwater shrimp or prawns (*Macrobrachium rosenbergii*) generated by our neighbors in Kentucky. Kentucky State University has a research and extension program to determine the feasibility of prawn culture in temperate climates. As a result of the many news stories following their progress, I have received numerous inquiries on the feasibility prawn production in Indiana and Illinois. The simple answer to this request is.....yes we can, but can prawns be produced profitably?

Before any decision on whether prawns are an aquaculture species for you, we should take a look at the technical requirements for prawn production. Freshwater prawns are grouped into four developmental stages. Females spawn in freshwater and lay 10,000-50,000 eggs per spawn 4-5 times per year when water temperatures are above 69.8°F. Hatching occurs when the water temperature is above 82.4°F. Newly hatched larvae must return to salt water where they will undergo 11 molts in approximately 35 days. At this stage they are 7-10 mm in length and resemble adults. Postlarvae are cannibalistic and omnivorous. Once the postlarvae reach 0.1-0.3 grams they are in the juvenile stage with a body color of blue to brown. The time to a juvenile stage is from 60-90 days. The final stage is the adults which are marketable at 2-3

ounces (40-70 grams).

The interest in prawn production in Indiana and Illinois is from the juvenile to the adult stage. Juveniles grow best at 84.2-87.8°C, but will survive temperatures between 57.2-95°C. Juveniles can be stocked in the spring when water temperatures reach 68°F at a rate of 40,000 per hectare (16,187 per acre). Ponds should be fertilized to obtain a zooplankton bloom and once they reach 5 grams may be fed a sinking 32% fish feed. Prawns are harvested when water temperatures drop to 68°C. Survival varies widely but should be between 50-90%.

Currently, a few Cooperative Extension Service county agriculture educators are working with farmers who have grown prawn in farm ponds for one to two years. Several of the farmers were successful and at least one has plans to increase his production next year.

In conclusion, all species of prawn are very marketable. In fact after tuna, shrimp are the most widely consumed seafood species. However, there are several factors which have to be addressed before any prawn production can be increased. First, advanced post-larval prawns have to be received and stocked as early as water temperatures allow to ensure the maximum growing season. Prawns are like other livestock and will not grow unless fed nutritious feeds. Only good pond management to ensure adequate zooplankton of the proper species in the early stages of the growing season followed by regular feedings will allow prawns to reach a minimum market size of two to three ounces in our growing

(Continued)

season. Harvesting farm ponds by seining will not harvest all prawns. A combination of seining and draining is the only effective way to ensure the catch of the entire crop. Finally, records must be kept so all costs can be compared with income. In my opinion, under the proper conditions more prawns can be grown in Indiana and Illinois, but anyone interested in aquaculture should not limit their interest to prawns. In the two state region we are blessed with a climate suitable for the production of a variety of aquaculture species including prawns.

Tank Spawn Largemouth Bass?

Over the holidays I had a chance to get together with Jim Estes who is the Chief of Fisheries Research with the Florida Game and Fish Commission. Jim and I were office mates and worked together on a trout study in graduate school. During our discussion the topic of spawning largemouth bass was brought up. I mentioned to Jim that in recent years the fluctuating spring weather has made it difficult for largemouth bass producers to obtain reliable spawns. Jim mentioned that one of his hatcheries in northern Florida is successfully tank spawning largemouth bass. Most of the fish are spawned in February so if anyone is interested in learning more about this procedure, please let me know. Jim invited me to visit the hatchery to see first hand how the bass are spawned. I am willing to go and shoot video for any producer who would like to learn more about tank spawning largemouth bass. You are also welcome to drive down to the panhandle with me.

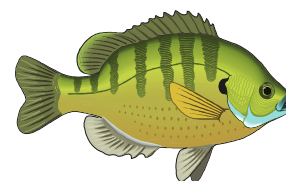
Double Cropping Fish

When people think of double cropping in Indiana or Illinois most imagine the possibility of growing wheat over the winter and spring followed by a late crop of beans. I believe we can add fish to the species which can be double cropped in our climate. The Illinois-Indiana Sea Grant Program has raised a variety of fish in cages at the Southern Indiana Purdue Agriculture Center (SIPAC) near French Lick, Indiana. This past summer four inch Tilapia were grown to more than one pound, between mid-May and early September. Then late in mid-November, 4-7 inch rainbow trout were stocked. We anticipate the water temperatures to be acceptable for trout until early May. At which time the trout will be harvested and the cages will again be stocked with tilapia. The staff at SIPAC hold field days each year for visitors. If you would like more information regarding this project please contact me.

New Books Worth Reading

There are a couple new publications that may be of interest to members. The Striped Bass Growers Association has produced "The Hybrid Striped Bass Industry From Fish Farmer to Consumer." The guide provides current information on the proper handling of striped bass. Much of the information is also relevant to other species of fish. The guide goes further and discusses aquaculture safety considerations and provides a listing of FDA low regulatory drugs and substances for use in aquaculture. If you would like to obtain a copy of this guide contact Betsy Sheehan at 803-734-2210.

The second book is the Walleye Culture Manual funded by the North Central Regional Aquaculture Center. The manual provides state-of-the-art information on how to successfully culture walleye fingerlings and food fish. The book cost \$34 and can be obtained after requesting an order form from me.



If you have events you want included in the IAA Newsletter contact: LaDon Swann, Illinois-Indiana Sea Grant Program, 1026 Poultry Building, Purdue University, West Lafayette, IN 47907-1026.

1997 North Central Regional Aquaculture Conference

February 6-7, 1997

Indianapolis, Indiana

Ramada Hotel or Adam's Mark Hotel

(at the Airport)

The upcoming NCR Aquaculture Conference in conjunction with the IAA and IAIA Spring meetings is quickly approaching. Here is the the final agenda for the program. I hope each of you come out and show your support of this event.

Thursday, February 6

7:00 a.m. Registration

8:00 Welcome

Jim Bradley, AquaManna Fish Farm,
President-Elect Indiana Aquaculture Association

General Session

8:15 a.m. Aquatic Plant Identification and Control

Carole Lembi, Purdue University

9:00 a.m. Mandatory Seafood Inspection at the Farm Level

Richard Linton, Purdue University

9:45 a.m. Break

Session I, Business Planning for Aquaculture

Patrick O'Rourke, Illinois State University, Moderator

Marketing of Aquaculture Products (Tilapia)

Kerry W. Tudor, Illinois State University

Revisiting Retail and Wholesale Markets (Yellow Perch and Walleye)

Jean R. Riepe, Purdue University

Keys to a Successful Business Plan

Norma Turok, University of Illinois Cooperative Extension Service

12:30 p.m. Lunch

Session II, Fish Feeding and Nutrition

Paul Brown, Purdue University, Moderator

1:30 p.m. Dietary Development of New Species

Paul B. Brown, Purdue University

2:15 p.m. Nutrition and Waste Management

Don G. Garling, Michigan State University

3:00 p.m. Break

3:30 p.m. Basic Nutritional Research – What does it mean for the farmer?

Konrad Dabrowski, Ohio State University

4:15 p.m. What the Future Fish Farmers are Learning in School

Chad Nunley, South Putnam High School, Greencastle, Indiana

5:00 p.m. Adjourn

Dinner on Your Own

8:00 p.m. Computer Training and Video Session Refreshments Provided

Friday, February 7

- General Session*
- 8:00 a.m. Taking Care of Sick Fish**
Dr. Randy White, Purdue University Animal Disease Diagnostic Laboratory
- 8:45 a.m. Levee Pond Construction**
Larry Sharp, Rust Construction, Inc
- Session III, Fish Reproduction and Spawning**
LaDon Swann,
Illinois-Indiana Sea Grant Program, Moderator
- 9:30 a.m. Reproductive Biology in Freshwater Fish**
Christopher Bidwell, Purdue University
- 10:15 a.m. Break**
- 10:30 a.m. Induced Spawning of Common Fish Species**
Christopher Kohler,
Southern Illinois University-Carbondale
- 11:15 a.m. Reproduction and Sex Reversal in Yellow Perch and Walleye**
Jeffrey Malison, University of Wisconsin
- 11:40 Reproduction and Sex Reversal in Tilapia**
Mark Griffin, Aqua-Manna Tilapia farm
- 12:00 p.m. Lunch**
- General Session*
- 1:00 p.m. Farm Pond Management**
Dave Kellan
Indiana Department of Natural Resources
- Session IV, Water Quality Management for Healthy Fish**
Joe Morris, Iowa State University
- 1:30 p.m. Basic Water Chemistry**
Bob Summerfelt, Iowa State University
- 2:05 p.m. Break**
- 2:20 p.m. Water Chemistry in Recycle Systems**
John Hochheimer, Ohio State University
- 2:55 p.m. Pond Aeration**
Terry Kayes, University of Nebraska
- 3:30 p.m. Zooplankton Management for Larval Fish**
Joe Morris, Iowa State University
- 4:00 p.m. IAA and IAIA Business Meeting**
- 5:00 p.m. Adjourn**

Calendar**February, 1997**

NCR Aquaculture Conference. February 6-7, 1997, Indianapolis, IN. Contact: LaDon Swann, 317-494-6264.

NCRAC Planning Meeting. February 8-9, Indianapolis, IN, Contact: LaDon Swann, 317-494-6264.

World Aquaculture Society Meeting. February 20-23, Seattle, WA. Contact: 206-485-6682.

Intensive Culture of Walleye. February 25, Iowa State University. Contact: Bob Summerfelt at 515-294-6107.

March, 1997

The International Boston Seafood Show. March 18-20, 1997, Boston, MA. Contact: 207-842-5504.

Putting Small Acreage to Work. March 1, Decatur, IL. Contact: Catherine Sebok at 217-875-7200.

July, 1997

Beginners Workshop for High School Teachers. July 21-22, Greencastle, IN. Contact: 317-653-9524

Advanced Aquaculture Workshop for High School Teachers. July 23-24, Greencastle, IN. Contact: 317-653-9524

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