WAA-The CREEL

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University of Wisconsin Extension Hires 3 Aquaculture Specialists

On January 1, 2007, 3 new extension people were hired by the University of Wisconsin Extension as aquaculture extension specialists. These are unique positions that the University has never had before. They come at a very urgent time for aquaculture in Wisconsin, with the industry facing challenges not only in marketing, public perception, rising production costs, but now with the VHS threat. One of the items on their agenda is to visit the fish farms in the state (but not all 2,000+ in the first year!) and personally meet with as many fish farmers as possible.

Jim Held, Aquaculture Outreach Specialist, Southern

Sarah Kaatz , Aquaculture Outreach Specialist, Central

Ron Johnson, Aquaculture Outreach Specialist, Northern

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from the 2005 Census of Aquaculture

Wisconsin's Aquaculture Sales Grew by $1.80 Million

The 2005 Census of Aquaculture revealed that sales of aquaculture products raised on Wisconsin farms totaled $7.03 million, a 34 percent increase from 1998. The 2005 count was the second nationwide aquaculture census conducted by the U.S. Department of Agriculture's National Agriculture Statistics Service.

Baitfish raised and sold by Wisconsin farmers, at $3.89 million, accounted for 55 percent of the aquaculture sales. The category of food fish was second in line with $1.95 million in sales. In Wisconsin, 84 farms satisfied the aquaculture farm definition of $1,000 or more in aquaculture sales per year, compared to 95 in 1998.

Both the number of trout farms and the total sales declined from1998. Perch were the second most popular food fish raised and sold in Wisconsin.

In 2005, Wisconsin producers released or distributed an estimated 49.9 million walleyes for restoration or conservation purposes.

At the National level, aquaculture production is a billion-dollar industry. The census shows that between 1998 and 2005, sales of aquaculture products grew from $978 million to $1.109 billion.

Census results show that food fish—including catfish, perch, salmon, hybrid striped bass, tilapia and trout - accounted for 62 percent of all aquaculture sales in 2005.

Complete results of the 2005 Census of Aquaculture are available online at **www.nass.usda.gov/aquaculture/**. Thanks to all the aquaculture producers for helping us complete the 2005 Census of Aquaculture!

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The CREEL

Volume 40 * * * Number 1

WISCONSIN AQUACULTURE ASSOCIATION
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Dr. Myron Kebus, DATCP-DAH
Jerry Rodenberg, DNR Newsreel
Greg Fischer, N. Aquaculture Demonstration Facility

The CREEL is published quarterly, March, June, September and December; serious and/or good humor letters and other submissions received by the first week of the preceding month WILL be printed. WAA welcomes input and involvement from all interested parties. Technical information, humor, stories, recipes, artwork, criticism, etc., are all requested.

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MEMBERSHIP

Active (voting): $50/ year
Associate (non-voting): $25/ year
Group(1 vote): $75/ year
All memberships include annual subscription to *The CREEL*

The CREEL reaches many potential customers four times per year. If your business involves the growing or selling of any aquaculture product or any necessary equipment, feed or services, advertising will be a great benefit to you.
Submit photo-ready ad copy and payment to the Secretary/ Editor by the 1st of February, May, August, or November, for inclusion in the upcoming issue.
Rates per issue are as follows:
1/8 page: $30; 1/4 page: $40; 1/2 page: $60; Full page: $100

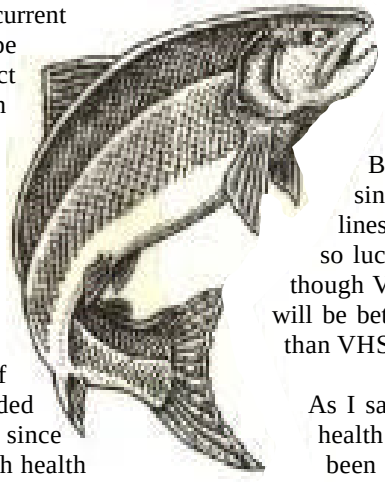
Unless otherwise indicated, all articles are authored by *The CREEL* editor and/or WAA editorial committee. Editorial comments pertinent to other submissions are italicized and noted in parenthesis (ed.)

All opinions expressed in *The CREEL* are those of the contributor/author and not necessarily those of the Wisconsin Aquaculture Association, its officers or directors.

President's Message

Bill West — Blue Iris Fish Farm, Black Creek, Wisconsin

It's time to give credit where credit is due. In the past four months, the aquaculture industry in the Great Lakes Region has been reeling from the effects of the discovery of viral hemmorhagic septicemia (VHS). If you are in aquaculture or any fish related business, the only way you would have missed the onslaught of media exposure was if you were asleep during that period. Even though Wisconsin fish farmers have never had a case of VHS, we are none-the-less lumped in with other Great Lake States in the current federal regulatory nightmare. Wisconsin would be in a fish health quandary if it were not for one fact – Wisconsin has one of the best if not the best fish health veterinary programs in the United States.



I cannot take any credit for the establishment of the fish health program which is administered by Wisconsin Department of Ag, Trade, and Consumer Protection (DATCP). Fish health legislation went through just as I was starting up my fish farm and, to tell you the truth, I probably voiced a little frustration about a perceived level of oversight which I felt was unnecessary and an added expense we may not need. However, I have since grown to welcome and give full support to the fish health program.

Throughout the VHS ordeal, the Wisconsin Aquaculture Association (WAA) has worked closely with representatives of DATCP and representatives of the Northern Aquaculture Demonstration Facility (NADF) to put together critical comments to assist in directing federal policy on VHS. If there is any good that has come from the VHS problem it is that we have recognized that:

fish health and fish issues in general are not species specific, cold water, cool water, warm water and bait fish culturists need to band together to solve problems,

fish health programs in the region and in the nation on a whole need to get much better,

we should be very proud of our program, and in order to protect our industry, it is time to get the word out to the public on what we are doing and how the public can assist in helping to preserve our healthy resources and industry

By having an excellent fish health program, Wisconsin is already back up and running within the guidelines of the federal policy on VHS. Everyone should be so lucky. We are not out of the woods as it appears as though VHS is on the way but by backing our programs we will be better prepared to deal with even more serious issues than VHS has presented.

As I said before, Wisconsin has been working with a fish health program for many years. Most of this effort has been led by Dr. Kebus at DATCP. Dr. Kebus has endured the public and private complaints regarding the fish health program first at home and now throughout the region. Why? Because Dr. Kebus is passionate about fish health and works to promote fish health programs and provide training. We do not need a fish health program until we need it. Fortunately we have one. As President of the WAA, I would like to personally thank Dr. Kebus for his past and continuous efforts.

Wisc. aquaculture assn— committees

WAA Committees report directly to the Board of Directors and are essential in performing the groundwork in achieving association goals. Members wishing to contribute or having a problem are encouraged to deliver their input through committees. The committees are the mechanism for members to address issues; new committees will be quickly created as needs are identified. ***THE POINT IS TO SERVE MEMBERS' NEEDS AND ENCOURAGE THEIR INPUT!*** When in doubt, contact with any officer or board member (see p.2) will work.

WAA/DNR Working Gp.	Chair: Bill West; Members: Dave Gollon, Peter Fritsch, Dan Gruendemann, Fritz Gollon
Legislative Committee	Chair: Dave Gollon; Members: Bill West, Ruby Kettula, Dan Gruendemann.
Conference Committee	Chair: Members: Ed Baum, Bill West, Peter Fritsch
Outreach/Extension	Chair: Bill West (Extension); Members: NADF representative (to be named)
Membership/Promotion	Chair: Members: Bill West, Jim Pierce, Peter Fritsch
Organizational, Policy & Procedures (OPPS)	Chair: Members: Bill West,
Nominating:	Chair: Jim Pierce; Members: Bill West, Dave Gollon
Finance:	Chair: Members: Bill West, Ruby Kettula
Baitfish:	Chair: Ben Gollon; Members: Dave Gollon, Fritz Gollon, Bill West
Perch/Sunfish:	Chair: Dan Gruendemann; Members: Bill West, Ed Baum, non-Board members
Fish Health:	Chair: Dave Gollon; Members: Dan Gruendemann, Bill West
Marketing & Sales	Chair: Jim Pierce; Members: Bill West, Brad Tork

From the CHAIRMAN'S DESK

Dave Gollon— WAA Board Chair

Statistics were recently published that showed a net growth in Wisconsin Aquaculture. While this is welcomed news it is misleading. Yes, the numbers are up. But what the figures do not show is that Wisconsin is a major importer of fish. We are importing more fish than ever before. This trend will continue and the gap will get wider. We will raise less fish in Wisconsin but we will sell more and import even more.

Some may argue that the industry is making money, so does that matter? I believe it does. In order for this industry to thrive or even survive long term, there must be production growth of the farms in Wisconsin. The demand for all fish is increasing but production in Wisconsin is falling further behind. There are a number of things that must change in order to reverse the trend.

The Wisconsin DATCP must develop a method to truly measure and accurately monitor growth in the industry. This can be done a number of ways. One would be to survey what is actually produced/raised on the farms in Wisconsin. They must also include what is being raised by Wisconsin farmers in other states. They must also keep track of distributors, people who strictly buy and sell. This will require possibly a different registration structure, because under current law you must be a registered fish farm to handle game fish. So, by default everyone is or can be mistakenly classified as a farmer.

The more difficult task will be to get DNR to develop a more pro-aquaculture approach. This can be done if DNR chooses. DNR must first of all inform the industry of any potential changes. The industry must be included in all discussions of policy changes or rules that may affect the industry, both long term and short term. They then must help the industry through the maze of regulations to encourage strong sustainable growth. They must develop a method to measure environmental benefits. I find it quite perplexing that fish need water to live yet fish farming by law is not a water dependant activity. The change in this law alone will help the industry grow and will not compromise our natural resources.

I find it somewhat disheartening as a businessman and tax payer, seeing one agency spending money to help and encourage growth while another agency spends the same amount or more to deny and discourage the same growth.

But that's our government, maybe that's part of the reason we are facing another deficit.

When these issues are addressed then we will be able to accurately measure and encourage growth in Wisconsin's aquaculture industry.

Wisconsin Aquaculture Industry Advisory Council Quarterly Meeting

March 9, 2007

Best Western Midway (Rib Mountain),
2901 Hummingbird (old Martin Ave.), Wausau
800-482-3770

DRAFT AGENDA

10:30 a.m.

1. Call to order
2. Approval of December 8, 2006 Minutes
3. Council Member introduction and brief company description on their operation and marketing program.
4. Agency and UW-System Reports
5. NADF update and introduction of new outreach staff: Ron Johnson, Jim Held, and Sarah Kaatz.
6. Viral Hemorrhagic Septicemia (VHS). Dr. Myron Kebus, State Aquaculture Veterinarian
7. Workshops for 2007. Bill West, Blue Iris Fish Farm
8. Proposed appointment of new or returning members for WAIAC
9. Other Business
10. Adjourn at approximately 12:30 p.m.

Getting Ready for Spring

By Ron Johnson,
Aquaculture Outreach Specialist- Northern
UW-Extension
Northern Aquaculture Demonstration Facility

Aquaculture in Wisconsin is a seasonal business - whether you're a trout grower, raise coolwater fish in ponds, operate a bait fish farm, fee fishing operation, RAS or have ponds for personal recreational use - it's the nature of our northern climate. Now is the time to plan out your year's work projects.

- Fish Health Assessments
- Consider your feed needs and consumption for the year -
- Digging any new ponds this year?
- Make sure your sources for fish are health tested
- Do your ponds depend on spring run-off for a water source? -
- Back-up plans
- New equipment
- How critical is testing your water?
- Weed/ Bird control - -
- Attend WAA/WAIAC quarterly meetings pond fertilization and feed training.
-

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A g e n d a s

Wisconsin Aquaculture Association
Board Meeting
Best Western Midway (Rib Mountain),
2901 Hummingbird (old Martin Ave.), Wausau
800-482-3770
Draft Agenda

12:30 pm

- **Call to Order**
- **Approval of Minutes**
- **Election of Officers**
- **Old Business**
- **New Business**
- **Adjourn**

Wisconsin Aquaculture Association
Annual Membership Meeting
Best Western Midway (Rib Mountain),
2901 Hummingbird (old Martin Ave.), Wausau
800-482-3770
Draft Agenda

8:30 am

- **Call to Order**
- **Approval of Minutes**
- **Sec/Treasurer's Report**
  Update on transfer of duties and changes
- **Legislative Committee - Dave Gollon**
- **Perch Committee - Dan Gruendemann**
- **Extension Committee - Bill West**
  Update on NCRAC meeting
- **Fish Health - Dave Gollon**
- **Marketing and Sales - Jim Pierce**
- **Nominating - Jim Pierce**
- **Updates from March 2006 reporting period**
- **Member Concerns**
- **Old Business**
- **New Business**
- **Adjourn**

EXTENSION SPECIALISTS MEET NADF STAFF
Kendall Holmes, Jim Held, Dan Duffy, Ron Johnson, Greg Fischer, Sarah Kaatz, and co-directors, Jeff Mailson & Chris Hartleb

CONTACT INFORMATION

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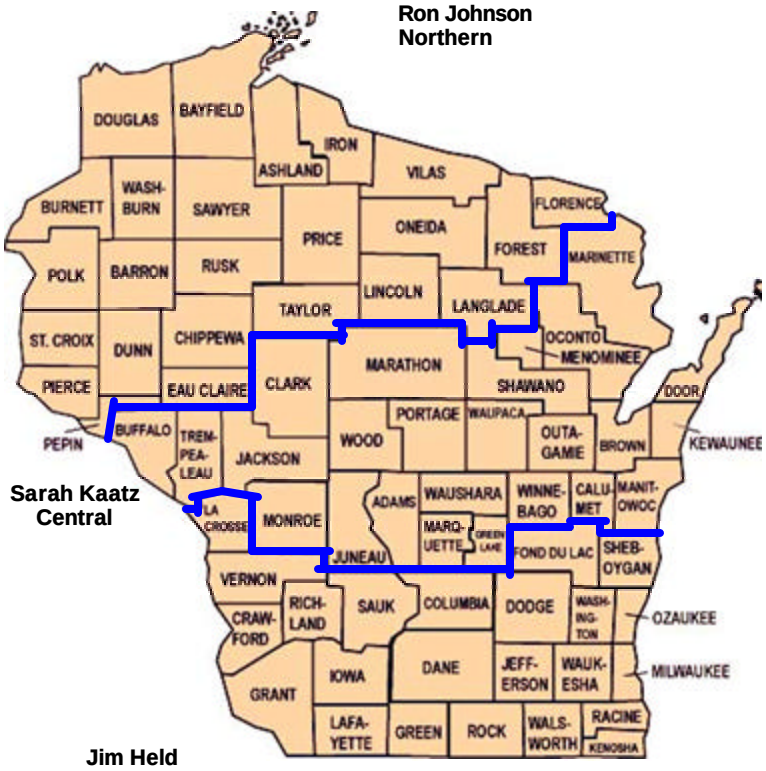


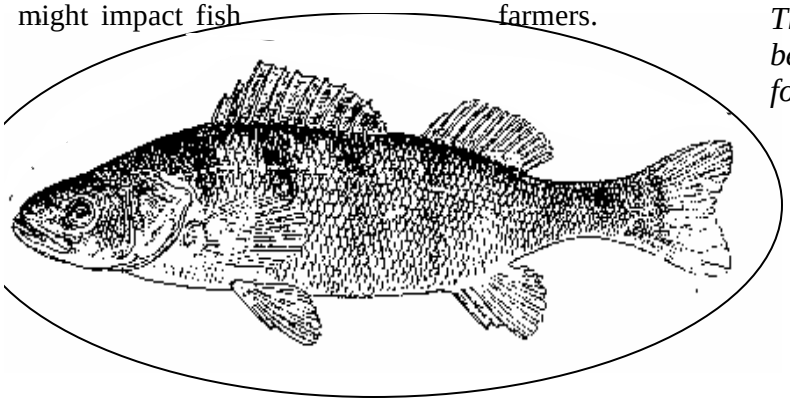
Aquaculture Outreach Specialists' Counties

The Dnr newsreel

Jerry Rodenberg, DNR Sector Specialist

It is with a bittersweet emotion that I write my last column for the Creel. I plan to retire in April of this year when I turn 65. I'm looking forward to doing lots of fun things when I retire but I know I'm going to miss all the people I've met that are involved with aquaculture.

It was over 6 years ago, in 2000, when I assumed the position of aquaculture sector specialist. One of my duties was to act as a liaison between DNR, WAA and DATCP to improve relationships. I wanted to effectively represent the DNR at the quarterly WAIAC meetings and the WAA conventions so I visited fish farms throughout the State to learn as much as I could about aquaculture. When controversial issues arose, such as proposed policy or code changes, I arranged meetings for WAA members to meet with DNR decision makers to discuss the reasons for DNR actions. The Creel column became a key communications medium to provide insight into DNR actions that might impact fish farmers.



In looking back upon those six years, I wondered whether DNR's relationship with private aquaculture has improved. My experience says I believe it has. I clearly recall the frank discussions between DNR decision makers and fish farmers when controversial issues arose. There were times farmers did not agree with DNR's decisions. However, I think we were able to provide a logical explanation as to why DNR proceeded as they did. Sometimes it turned out to be just a misunderstanding. One issue that was on the agenda throughout most of my tenure was the natural water body permit. Although it proceeded at a glacial pace I believe that it is finally resolved.

As I look ahead I believe that aquaculture in Wisconsin has a great future because everyone recognizes *the health benefits of eating fish*. The food fish brought in from other states and countries with questionable concentrations of contaminants such as mercury and PCB's does not lend itself to a profitable, long-term market. Continuing efforts to produce a quality product that can be safely eaten in any quantity will insure Wisconsin fish farmers a steady stream of customers and a sustainable, profitable business. I am proud to say I worked with you to support this goal.

Following my retirement I plan to stay in Madison. My wife and I are especially looking forward to plenty of camping and hiking adventures. I enjoy hunting and fishing and we have a family farm in Jackson County where I can drive tractors and an ATV. As I say good-bye- I know I'll always be interested in aquaculture. I truly appreciated the opportunity to work with all of you and I hope to talk with you at some future aquaculture events.

If there is anything I can help you with from now until the end of April please call or email me at 608-266-7715 or jerry.rodenberg@dnr.state.wi.us

Casting off,
Jerry

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MARCH 9 SCHEDULE OF EVENTS

LOCATION CHANGE:
Best Western Midway (Rib Mountain), 2901 Hummingbird (old Martin Ave.), Wausau 800-482-3770
http://www.midwayhotels.com/wausau/index.cfm

8:30 am - 10:00 am
WAA- Annual Membership Meeting

10:30 am –12:30 pm
Wisconsin Aquaculture Industry Advisory Council (WAIAC)

Lunch: On your own

12:30-1:30 (working lunch)
WAA Board Meeting

2:00-5:00 pm
Pond Fertilization Workshop ($25)

Pond Fertilization Workshop

Sponsored by WAA and the UW-SP Northern Aquaculture Demonstration Facility.

The Pond Fertilization Workshop is designed to help fish farmers increase their knowledge of the What – When – and How of pond fertilization in a northern climate. Productivity of fish ponds is increased by using fertilizers to boost the microscopic plants known as algae. The use of fertilizers will stimulate the natural food chain found in ponds and will lead to an increase in the zooplankton which many of the larva stages of cool water species need to grow. There is science behind how fertilization works and what types of fertilizers are best – but there is also an art to knowing your pond, its water chemistry and reading how your pond reacts to the applications. This blend of science and art will all be covered during the workshop. Along with the three talks – farmers will have the opportunity to ask questions about their ponds and time to break into small groups to work through sample calculations, use microscopes to identify plankton, and have hands on demonstrations of the various types of fertilizers and how to measure required amounts. Included in the cost of the workshop will be a plankton ID CD, afternoon break and fact sheets helpful in starting a fertilization program. Attendees should come away from the workshop with the information and knowledge needed to initiate a pond fertilization program this spring on their farm.

This is a must workshop for those wanting practical information on how to fertilize their ponds and monitor them throughout the growing season. The "Yellow Perch Manual" from NCRAC will be available for $30. Mark your calendars for 3/9 & plan on attending.

For more information contact Cindy 715 779 3081 or Cindy@wisaconsinaquaculture.com

CALENDAR OF EVENTS

March 9
WAA Annual Membership Meeting,
WAIAC Quarterly Meeting
WAA Board Meeting
Pond Fertilization Workshop
Location: Wausau

June 14
VHS and NADF research summary work shops

June 15
WAA Board meeting, WAIAC meeting
WAA Picnic and industry vendors
Location: Bayfield and NADF

July 12
Workshop on Feed Training Yellow Perch
Location: Lake Mills DNR Hatchery and Coolwater Farms

September 7
WAA Board meeting and WAIAC meeting
Location: Stevens Point

December 7
WAA Board meeting and WAIAC meeting
Location: Stevens Point

WAA will not be having an annual conference this year. However, there will be workshops, quarterly meetings and, at the June meeting, industry vendors .

"THE NEARER THE FISH GET TO MARKET SIZE, THE CLOSER THE FISHERMAN'S BED GETS TO THE FISH." -

Inland Aquaculture Association of S. Australia

NORTHERN WISCONSIN AQUACULTURE DEMONSTRATION FACILITY (NADF) UPDATE

Gregory Fischer, Facilities Manager

WALLEYE PROJECT- SUMMER 2006

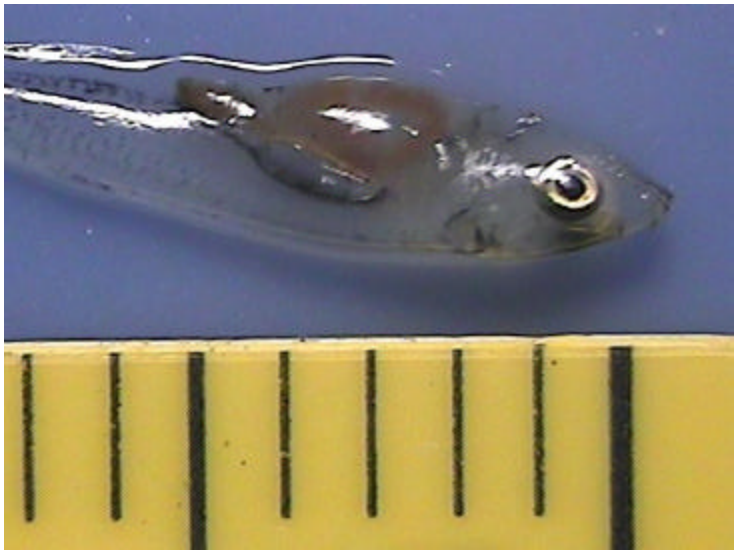
Introduction

During the summer of 2006, the UW Stevens Point Northern Aquaculture Demonstration Facility (NADF) continued to cooperatively work with the Lac Courte Oreilles Tribal Fisheries Program (LCO) providing approximately 450,000 fry, 37,827 fingerlings, and 7,876 extended growth walleyes for the tribes' lake stocking program. The information presented in this case study describes the methods used from beginning to end in a "cookbook" style how the NADF incubated and raised the walleyes in two half acre outdoor earthern ponds (approx. 391,000 gallons) utilizing several types of organic and inorganic fertilizers, various aeration systems and forage minnows. The intent of this report is to provide information to assist other aquaculture and hatcheries that are raising walleyes and other coolwater fish.

Methods

Adult male and female walleye were collected by NADF and WiDNR staff using fyke nets set in lakes on April 18 from Big LCO Lake. Eggs are stripped by hand from female walleyes into plastic containers and milt was added from several males utilizing both wet and dry methods. More than one male was utilized for several reasons; because milt from a single male may not be capable of fertilizing eggs, and for maintaining genetic diversity. After eggs and milt are in the pan, water was added and the combination stirred with a soft brush or feather. Stirring continues for several minutes and a slurry of bentonite clay is added to the mixture. Continue stirring and adding some fresh water for several minutes. The egg clay mixture is then rinsed off with fresh water and placed into a larger bucket or cooler of fresh oxygenated water. Water in the container was freshened periodically to keep oxygen levels up and maintain water temperature. Water hardened eggs were transported to NADF for incubation in the bell jar incubation system located at the facility.

Approximately 1,200,000 eggs were placed in McDonald style egg jars for rearing on April 18. Water temperature was



maintained between 48-50 degree F throughout incubation, temperature was increased during hatch out to aid in hatching. Water flow through jars was approximately 1.0 gpm and then increased to 1.5 gpm once eggs became eyed. Dead eggs were removed daily from the hatching jars through siphoning. A chicken waterer with a 15 minute (1,200 mg/l) formalin drip was used daily after egg eyeup to control fungus. Formalin treatments were discontinued nearing egg hatchout. Fry hatching began on April 30 and lasted several days. Strong swimming fry were stocked into prepared NADF 17,600 sq.ft (0.4 acre) outdoor earthen ponds 3 and 4 at the rate of approximately 150,000 fry per pond on May 3 and May 4, respectively. Additionally, this year approximately 450,000 walleye fry were provided back to the LCO Natural Resources Department and stocked into local lakes for conservation purposes on May 8.

Two different types of organic fertilizer, soybean meal and alfalfa meal, was used this year in two separate walleye outdoor rearing ponds at NADF to do some comparison evaluations. The fertilizer type, cost, and application rates are as follows:

Pond 3: Pond number 3 was filled partway and prepared approximately one week in advance of filling with 400 pounds of alfalfa meal, 2.25 gallons liquid 28% nitrogen urea and 1.0 lb. granular 0-45-0 phosphorous fertilizer. Granular phosphate was liquidyfied with heated water before applica-

tion. A total of 900 pounds of alfalfa meal costing $150.00, 3.75 gallons of 28% nitrogen costing $145.00, and 3.0 lbs. of 0-45-0 phosphorous fertilizer costing $27.00 was added during May-July to stimulate plankton blooms. Supplemental aeration was provided via the facilities main 5 h.p. rotary blower and two round membrane diffusers.

Pond 4: Pond number 4 was filled partway and prepared approximately one week in advance of filling with 400 lbs of soybean meal, 2.25 gallons of liquid 28% nitrogen urea, and 1.0 lb. of granular 0-45-0 p-phosphorous fertilizer. Granular phosphate fertilizer was liquidfyed with heated water before application. A total of 1000 pds. of soybean meal costing $129.00, 3.75 gallons of 28% nitrogen costing $132.00, and 3.0 pds. of 0-45-0 phosphorous fertilizer costing $27.00 was added during May-July to stimulate plankton blooms. Supplemental aeration was provided via the facilities main 5 h.p. rotary blower and two handmade pvc airlifts.

Table 1. 2006 season temperature, ph, and oxygen measurement ranges in NADF outdoor walleye rearing ponds 3 and 4.

Pond #	Month	Temperature range (degrees C)	pH range	Oxygen range (ppm)	
3	May	10.0 - 24.0	7.9 - 9.9	4.5 - 16.6	
	June	18.0 - 22.0	8.7 - 9.1	5.8 - 8.1	
	June	12.7 - 24.0	8.1 - 8.7	6.8 - 8.4	values after draining for fingerling harvest and refilling
	July	22.0 - 27.0	8.1 - 9.2	3.2 - 12.0	
	August	19.6 - 25.0	8.8 - 9.3	5.8 - 10.2	
	September	20.0 - 21.0	8.3 - 9.3	7.7 - 9.7	drained for e.g. walleye harvest on September 6
4	May	8.0 - 24.0	7.5 - 10.0	7.9 - 16.0	
	June	18.0 - 22.0	8.1 - 9.1	4.1 - 8.8	
	June	15.0 - 23.0	8.4 - 9.5	8.0 - 12.0	after partial draining and refilling for fingerling harvest
	July	21.0 - 26.0	7.0 - 9.5	5.3 - 10.0	
	August	19.5 - 26.0	8.8 - 10.0	7.0 - 12.0	
	September	13.0 - 22.0	7.7 - 10.2	7.7 - 10.2	drained for e.g. walleye harvest on September 20

Results

Walleye fry were observed around edges of the ponds in daylight and at night with lights in May. Plankton populations were average, but seemed adequate as sampled fish condition was good. Early fish sampling in both ponds yielded good numbers of fish per seining attempt which hypothetically meant good numbers in the ponds. Pond temperatures as well as the plankton populations increased in June as well as the plankton populations.

Walleyes from both ponds were sampled on a weekly basis to assess length, weight, and fish condition. Length and weights were very uniform throughout the summer for both ponds. Fish condition was excellent. Ponds were monitored daily for temperature, oxygen and pH throughout the summer (Table1.). Lowest oxygen level in Pond 3 was in July at 3.2 ppm.. Lowest oxygen level in Pond 4 was in June at 4.1ppm. Highest oxygen level recorded was around 12.0 ppm. for both ponds in July and August. No problems related to oxygen or temperature was observed. There didn't seem to be an identifiable difference in stratification or oxygen levels in either pond with the different aeration systems.

Ponds were stocked periodically with a total of 310 gallons (2,480 lbs) of forage minnows of various sizes ranging < 1"to

NAA/WAIAC VHS Interim Rule Suggestions

"In December, the USDA APHIS asked for comments on the Viral Hemorrhagic Septicemia (VHS) Interim Rule-Making Process. Basically, before they write the Interim Rule, they wanted to know what it should include . They have stated that the Interim Rule will be released in March. They asked for the comments to be provided by January 10th either in writing or at the public hearings they conducted in Detroit, Pittsburg, Memphis and Denver. In an effort to provide comments from Wisconsin fish farmers, The Wisconsin Aquaculture Industry Advisory Council and the Wisconsin Aquaculture Association submitted comments that were compiled and edited by Ron Johnson of the Northern Aquaculture Demonstration Facility. I believe Wisconsin's comments were very constructive and will have an influence on how the Interim Rule is written. Wisconsin's comments are listed below:"

1. VHS susceptible fish species have moved and continue to move widely throughout the U.S. Therefore all 50 states (and Canada) must be required to test all susceptible species initially so we can understand the distribution of VHS. It would be unsatisfactory for only the 8 Great Lakes states to continue testing while other states are not required to test; this would allow too many loop holes and opportunities to skirt the law.

2. The economic hardship placed upon farmers for VHS testing will be unbearable, unless farmers have the option to test lots (Bluebook, ~ 60 fish) or test farms (OEI certification, ~ 150 fish twice per year of mixed species). Allowing these options will greatly increase farmer compliance and support for the interim rule. The interim rule should require states to accept either testing method.

3. To ensure continuity and uniformity, all testing methods and protocols must be standardized including a standard VHS certification form. APHIS should monitor states to make sure that these standards are properly followed and compliance is uniform throughout the U.S.

4. Only the known susceptible species are required to be tested at this time. However, as new susceptible species are verified, a seamless method of adding these must be accomplished without interference in interstate transportation.

5. Broodfish pose little threat if these fish do not leave the farm and testing of brood fish is very expensive and in some cases prohibitive because of the small number (i.e. 10-15 or fewer). Therefore, the interim rule should allow for testing of offspring in place of broodfish testing.

6. As this is a federal disease control program, the interim rule should require that all testing, for purposes of movement of fish, be conducted by accredited veterinarians and monitored by APHIS (Veterinary Service). We feel there is a conflict of interests by allowing resource agencies to internally test the fish they raise on their fish hatcheries. We feel that these hatcheries should be required to use third party testing, accredited veterinarians, just like private fish farms. States that do not have adequately trained veterinarians or a health program in place should be encouraged to establish them.

7. The Federal Order has placed an enormous strain on our competent state fish health authority. We feel that federal money sent to states to help support the interim rule should be provided to the competent state fish health authority.

8. While VHS has been a disease of wild fish, so far the fish farmers have been required to carry a disproportionately greater share of the economic burden of the federal order. While we recognize that wild fish surveillance may be an important component of the interim rule it should not be funded at the expense of not providing funds to farmers to pay for required testing in the interim rule.

9. In order to ease the financial burden and encourage more testing, federal money should be provided to fish farmers to offset the costs for conducting required VHS testing in the interim rule.

10. Education must be a component of the requirements to lessen the spread of VHS. Education of the boating public and fishing tournaments, along with business stakeholders, will go a long way towards inadvertent transmission of the virus. The boating public has a poor track record with invasive species and will need to be informed about the seriousness of this disease.

11. Natural resource agencies move many VHS susceptible species of fish within their states from one public body of water to others to meet stocking goals. These movements should be required to be VHS tested under the interim rule.

12. Federal money should be provided to research spreading VHS via alternative risks including looking at avian and crayfish transmission, and water from recreational vehicles. Research should also assess the risks of VHS surviving in mud and what sterilization or sanitation methods are most appropriate.

13. There are transportation agents that are neither fish farmers nor wild bait harvesters. The interim rule should include them; the rule should develop best management practices for custom haulers, brokers, and all parties involved in transportation of fish.

14. Because this virulent form of VHS is new and not fully understood, a program should be developed to monitor short and long term effects of already infected water bodies.

15. There should be a federal indemnification program providing funds to farms if they become infected; without this in place, abnormal mortalities may not be duly reported thereby creating higher risks of spreading the disease.

16. There should be a national data base which is easily obtainable, listing water bodies infected with reportable diseases. Also, individual states should be encouraged to develop their own publicly viewed data base as each state has its own regulations.

17. Health programs are extremely important; therefore states which prohibit imports on economic grounds should not be eligible for federal assistance under this program. If a state closes its borders to imported fish, then they should not receive funds from APHIS for its testing program that will allow them to export fish. It would not be fair to provide the same level of assistance to states that have interstate trade barriers as would be provided to states that do not have those same trade barriers (as long as they meet health requirements).

18. There will be a burden on fish farmers if testing for the VHS virus is restricted to only cool water temperature times of the year. Testing during any time of the year, that does not put undo stress on the fish, should be allowed.

19. There should be no exemptions given to fishing tournaments in regards to transportation of fish from one locality to another. In this regard Multi-state fishing tournaments should be required to register, not only with the state, but with APHIS as well.

VALLEYE PROJECT, *Cont. from age 9*

2" from June through September. Ratio of forage minnows to walleye was approximately 5:1. Total cost of minnows was $7,930.00, which was paid by the LCO Fisheries Department.

Pond 3 was fully drained on June 13 and all fingerling walleyes were harvested from the catch kettle for LCO.

Approximately 32,688 fingerling walleyes (908/lb) (average length 36.0 mm/1.4 inches) was harvested from pond 3. Pond 3 was then refilled with fresh well water.

Pond 4 was partially drained and a portion of fingerling walleyes were harvested using the catch kettle and hand seines. Approximately, 14,900 fingerling walleyes averaging 946/lb and 33.0 mm/1.3 inches long were harvested from pond 4 on June 14. Total fingerlings provided to LCO at this time was 37, 827. A fish health assessment was performed on the walleye fingerlings from NADF on June 2 by Dr Myron Kebus of WiDATCP and a certified clean bill of health was provided.

Approximately 5,433 fingerlings from pond 4 were stocked back into refilled pond 3 for further rearing on July 12 and 13. Pond 4 had an unknown quantity of fingerlings left for further rearing. Fingerling walleye were monitored on weekly basis throughout the summer and averaged approximately 1.7 mm length increase per day feeding on minnows.

Extended growth (E.G.) walleyes were harvested from the pond 3 and 4 on September 6 and September 20 respectively. Ponds were drawn down slowly through the use of gate valves and dam boards located in the concrete funnel structure at the rear of the ponds. Fish were collected and held in the external concrete collecting kettle with fresh water and aeration. Approximately, 7,876 extended growth walleyes weighing 507 pounds were harvested from the two ponds and loaded on to the fish distribution truck. The harvested walleyes ranged from 130 to 175 mm (5.0 to 7.0 inches) in length and weighed between 28.0 to 31.0 grams (16/pd). No significant losses were recorded during harvest. The walleyes were stocked by LCO Fisheries Department into local lakes for conservation purposes.

Total estimated cost for this NADF project to produce the fingerling walleye was $1,010.00 ($0.027 per fish) which includes pond fertilizer, labor, electrical and miscellaneous expenses. Total estimated cost to produce the extended growth walleye was $8,330.00 ($1.06 per fish) which includes forage, labor, electrical, and miscellaneous expenses.

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Questions or comments regarding this project can be directed to Gregory Fischer, NADF Facility Manager, at 715-779-3461 or email gfischer@uwsp.edu

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