FISH FARMING NEWS

ALABAMA FISH FARMING CENTER
Auburn University

FEBRUARY 2008

OMEGA THREE STUDY

First off, I want to thank all the producers who provided fish for my omega-three study. I sampled over 150 catfish, threadfin shad, gizzard shad and algae from 25 producers. Preliminary results indicate that west Alabama algaes are very low in omega-three fatty acids but shad do a good job "bio-magnifying" omega- three in their tissue. Surprisingly, the smaller catfish had slightly higher levels of omega three fatty acids than the bigger fish. This may be because our smaller fish tend to be starved in multiple batch ponds and forage more on small minnow sized shad because the bigger fish are hogging all the feed.

Why am I concerned about omega threes? Medical studies indicate that omega three fatty acids can:

- Promote healthier cardiovascular systems
- Reduce strokes
- Diminish the effects of rheumatoid arthritis
- Improve the development of retinas and nerves in unborn children
- Reduce the incidence of mental diseases such as autism, depression, Alzheimer's and schizophrenia. (American Journal of Neurology)

The American Heart Association recommends that fish high in omega threes be consumed twice a week. Studies involving feeding channel catfish with diets fortified with omega -threes show that fillets increase the concentration of omega -three content 300%! If we could do this economically and make U.S Farm-Raised Catfish higher in omega-three content than tra, basa, Chinese catfish and tilapia we could get a marketing edge on our competition.

I propose that we look into improving our feeds in order to accomplish this. If you agree with this I need to hear from you. I can solicit funds for research if the industry feels it is worthwhile.

TOUGH TIMES AHEAD FOR CATFISH INDUSTRY

The other day I heard an agricultural economist tell a roomful of catfish producers that we are victims of the federal government's ethanol program. Good now we have someone to blame. Now that we have that behind us, what do we do now? This is the question on many producers' minds as they try to figure out how to survive 2008.

Enclosed is an enterprise budget given current feed, pond bank prices and a feed conversion ratio of 1.8. Why did I use a feed conversion ratio of 1.8? Because I have verified in West Alabama that this is possible. Also note that production per acre is 13,563 pounds. Admittedly this is a Cadillac budget- many of you can't start the year with 9" stockers which shortens production time to six months reducing interest on borrowed money. Most of you don't raise fish in a perfect world. This budget is a best case scenario. My cost of production for paper catfish is at 65.2¢ per lb. So it should be quite clear that with $400 feed and 60¢ fish, a profit will be impossible. I have found that what you want to happen on paper doesn't happen very often. But the reverse is also true. Quoting my farm economics professor, "If it doesn't work on paper, it sure will not work sitting on a tractor."

The budget includes depreciation. This is a non cash expense and can be forgiven for a year or so until conditions improve. But ignoring depreciation in the long term means you are farming the farm away. You will not have money in the future to replace equipment or make pond renovations.

Of course your budget is going to be different. This one may not be in the same ballpark but maybe at least the parking lot for some.

Now a survival strategy, I have to restate the obvious. You cannot feed $400 feed and sell fish for 60-65 cents a pound and stay in business in the long term. Keep in mind that the fish in your ponds now were not raised on $400 feed so you could sell them off and maybe come out ahead.

Channel catfish have a remarkable physiological trait called compensatory gain. You can starve catfish for specified lengths of time, resume feeding and actually catch back up like you never missed feeding. One particular research study showed that you can feed small (86 lb/1000) and larger (549 lb/ 1000) catfish once per week to satiation and maintain fish weight.

Condition factors for the fish were slightly poorer but several days of full feed get them back into condition. Another study showed that you could take catfish completely off feed for three weeks then feed all they wanted for three weeks and production, weight gain, carcass quality and feed conversion were basically the same as fish that were fed continuously.

So you have options available to you besides feeding every day. I am not an economist but my guess is if the majority of the catfish producers maintain fish inventories rather than actually grow more fish, supplies will dramatically tighten and demand/price should go up. There are complications to this plan however- processing plants need to run close to operating capacity to stay in business. We also risk losing market share to imported fish if a large void opens up in catfish supplies.

And some of you have plenty of equity and can borrow money without undue risk to your lenders and may elect to pour the feed this summer hedging that pond bank prices will go up and you will be in the rocking chair. That's the beauty of capitalism.

I don't have all the answers. As your extension aquaculturist I do have access to the latest and greatest in catfish production and will be glad to help you figure out the most efficient manner possible to get through the coming years.

2008
COMMERCIAL CATFISH PRODUCTION BUDGET

87.5 FOODFISH ACRES
12.5 STOCKER ACRES
100 TOTAL ACRES

ESTIMATED COSTS AND RETURNS

SURVIVAL/CATCH RATE	80%
FEED CONVERSION RATIO	1.8
STOCKING RATE PER ACRE	6,850
PRODUCTION PERIOD	183 DAYS
AVERAGE SIZE OF FOODFISH	1.98 LBS
TOTAL PRODUCTION PER ACRE	13,563 LBS
AVERAGE SIZE OF STOCKER	.181 LBS

ITEM	UNIT	QUANTITY	PRICE OR COST/UNIT	VALUE OR COST
Gross Revenues	Lbs	949,410	.60	**$ 569,646**
Specified Variable Costs				
Farm Grown Stockers 9"	Each	599,375	.12	71,925
Feed 32% Float	Tons	854	399.00	340,933
Electricity (Aerators)	Hours	41,552	.82	34,073
Tractor Expense	Hours	634	13.00	8,242
Chemicals				
Copper Sulfate/Diuron	Trtmt	28	180.00	5,040
Potassium Perm	Trtmt	3	1,382.00	4,146
Salt	Tons	70	82.00	5,740
Formalin	Trtmt	3	1,716.00	5,148
Chemical Boat Expenses	Trtmt	34	15.00	510
Miscellaneous/Supplies				3,500
Equipment Repair				3,500
Owner's Truck	Miles	20,000	.25	5,000
Feed Truck Maintenance				2,200
Operational Loan Interest	Dollar	455,884	.08	27,378
Total Variable Costs				**$ 517,335**
Total Variable Costs per pound				$ 0.44
Specified Fixed Costs				
Depreciation				89,293
Interest on Equipment	Dollar	25,000	.08	1,875
Other Fixed Costs				5,000
Vehicle and Farm Insurance				3,000
Communications				1,200
Office Equipment/Supplies				250
Accounting/Legal Services				1,000
Total Specified Fixed Costs				**$ 101,618**
Total Specified Expenses				**$ 618,953**
Cost Per Pound Produced				**$ 0.652**
Net Returns Above All Specified Expenses				**$ (49,307)**
Net Returns Per Acre				**$ (493)**

CARIBBEAN & LATIN AMERICAN CONFERENCE In San Juan, Puerto Rico

Here are some notes I took while I attended this conference:

Researchers at the University of the Virgin Islands raised 6600 pounds of tilapia in a 50 foot diameter tank with 2.25 hp of aeration. This is equilivalent to 133,500 lbs per acre. And they did this in six months starting with 4-5" fingerlings.

A commercial fish grower in Puerto Rico grew *Pangasius* in a pond. He raised 30, 000 pounds per acre in eight months. It gets worse. Without aeration. A 1.5 feed conversion rate. The fish has a fillet yield of 60%.

And the worse part, people in attendance taking notes as fast as I was were from Ecuador (millions of acres in ponds) Brazil (lots of soybeans down there) and Mexico (NAFTA- that huge sucking sound south of us) .

That's our competition. If you want to stay informed and learn about becoming more competitive, please be sure we have your address and hopefully an email address. We will be striving to improve communication with all of Alabama's producers in the future.

For the industry,

- Gregory N Whitis
Extension Aquaculturist
AL Cooperative Extension System

DISEASE TREATMENT STRATAGIES DURING HARD TIMES

Along with all the other costs that have recently gone up for our industry, the cost of chemical treatments has skyrocketed as well. Over the past two years copper, formalin, and potassium permanganate have almost doubled in cost. However there are still some things we can do to help reduce our chemical costs when fighting diseases. Since bacterial infections are our most significant disease issue, buying vaccinated fish would be an important option to consider when dealing with your fingerling supplier. There is a vaccine against ESC and another for columnaris that is available to the fingerling producer. Ask for vaccinated fish!

Stock shad into your ponds! Either the threadfin or the gizzard shad will benefit your pond from the standpoint of reducing the density of the algae bloom. They literally graze off certain types of troublesome blue green algae. Dense algal blooms will simply act as neutralizers to the chemicals that we use for disease control. The denser the bloom the more chemical we will need to achieve an effective treatment.

Use diuron when initially trying to get fish on flavor with an oscillatoria problem. Save the copper sulfate option until the diuron has not proved effective.

Know accurately the volume of water in your pond or in other words the acre-feet of the pond (surface acreage multiplied by the average depth). This will allow you to calculate the amount of chemical you need accurately. The Center can help you with this by measuring the amount of chloride in your pond before and after salt is added. If you can tell us how much salt was added, we can calculate the volume of water in your pond.

Before you treat a disease condition in a pond, get a second opinion on your disease situation. Call the Center and ask for the Mobile Lab to pay you a visit. It may save you some money in the chemical bill department.

VHS THREAT

VHS or viral hemmorhagic septicemia is a viral disease that recently made an appearance in the United States. For years it has been a serious cold water disease of salmonid fish in Europe. However in 2005 it appeared in the Great Lakes region of the United States and in 2006 started causing major fish kills in non-salmonid species in the wild. It is suspected to have come into this country in the ballast water of a ship from Europe and appears to have mutated. It has long been considered one of the most serious fish diseases in Europe. Now because of its history and the fact that it has mutated to be able to infect a wide variety of species, it is being considered a major threat to fisheries throughout the Northeast and Midwest. It has been detected in channel catfish but its virulence has not been determined. The good news is that at this time it has not been detected in any aquaculture facilities and it does not appear that it can be transmitted through the digestive system of birds.

There are several issues that concern our industry relative to this threat. First and foremost is the question as to whether this virus can and will make its way into our geographical area. The Midwest is part of the Mississippi river drainage basin and it could be easily be transported into the south. Subsequently it could become a winter time problem for catfish.

The other issue is possible restrictions on interstate transporation of live fish. Right now there is a ban on any interstate transportation of live fish with any states that border the Great Lakes. This could be a major problem for our industry if those type restrictions were imposed on us. It is important that our industry be involved in future developments concerning regulations resulting from this disease.

-Bill Hemstreet
Fish Health Specialist
AL Ag Experiment Station

DISASTER PROGRAM

Hopefully within the next few days you will be receiving your 2006 Catfish Disaster Program payments. Joe Cowart tells me that the Alabama Department of Agriculture has received the funds from Washington, and they will be issuing checks in the next few days.

Congress has also extended this disaster program to include all of 2007, and the Department of Ag. will be sending out applications for 2007 in the near future. The application will be pretty much the same as the 2006 application. You will have to calculate your lost feeding days using a formula similar to the one used for 2006.

Remember for this program a lost feeding day is any day the water temperature reached 89.5 degrees or higher.

If you need this information we will have it available at the Fish Farming Center. Also the 2007 rate will be $29.00 per ton of feed fed, which is an increase of $3 per ton over 2006.

Since the 2007 program is not a separate program from 2006 you will not receive the total calculated 2007 payment. Your 2007 payment will be reduced by your 2006 payment. For example you fed 500 tons of feed in 2006 and 600 tons in 2007. Your payment for 2006 was $13,000 (500 tons X $26/ton), and your calculated payment for 2007 would be $17,400 (600 tons X $29/ton). For the 2007 program you would receive $4,400 ($17,400 - $13,000).

Also for those of you that have cattle or row crops FSA has extended the LCP and CDP programs to include the full year of 2007. Your 2007 payment for this program will also be reduced by the amount you received for 2006. You should contact your county's FSA office for more information on these programs.

If you have any questions or need help filling out your application contact me at the Fish Farming Center.

- Jamie Yeager
Extension Ag Economist
AL Cooperative Extension System

IMPORTANT!

If you have an e-mail address, please submit it to Gayle Barnette at barnegh@auburn.edu

2008
Catfish Farmers of America
Annual Convention

Omni San Diego Hotel
San Diego, California
1-619-231-6664

February 29 – March 2

Advance registration is $165 for CFA members and $145 for spouses. Registration includes two receptions, Annual Awards Luncheon, two breakfasts and break refreshments.

For Reservations call
1-800-843-6664

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