



FISH FARMING NEWS

ALABAMA FISH FARMING CENTER

Cooperative Extension System • Soil and Water Conservation Committee
Soil and Water Conservation Districts • Agricultural Experiment Station

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Hybrid Catfish Update

Hybrid catfish fingerlings will be produced for the first time in Alabama beginning this year at a hatchery south of Montgomery. Hybrid fry are being transported to two catfish farms where they will be grown to fingerlings and then sold to local catfish producers in Alabama. This hybrid fingerling operation, Eagle Aquaculture, is a business subsidiary of Aetos Technologies. Aetos, by the way, is Greek for eagle. As you have probably guessed already, Aetos has a contractual business relationship with Auburn University. In an effort to secure more long range funding, Auburn University has partnered with Aetos in hybrid production and as such will receive a share of the profits. Consequently, some of the latest research breakthroughs on hybrid production became proprietary. There are at least four technical breakthroughs that have not been published and will give Eagle Aquaculture a distinct advantage in hybrid catfish production.

This partnership is viewed as the best way to marry adequate financing with practical research, provide the Alabama catfish industry with hybrid fingerlings, and return needed revenue to Auburn University. Consequently, Alabama will remain on the cutting edge in catfish production. The hybrid catfish will return more profitability to our farms so that we can regain our competitive edge despite the threat of foreign imports and rising production costs.

Hybrid Catfish – The advantages and disadvantages.

Here are some of the advantages of the blue channel hybrid:

Production

- The hybrid catfish grows fifteen to twenty percent faster. What does this mean? They will out eat a channel catfish. They will be ready for harvest sooner. They will save you money on operating interest. They will eat more in colder temperatures.
- Feed conversion rates are eleven to fourteen percent better than the channels.
- Survival rates for hybrids are higher in food fish and fingerling ponds.
- The hybrid tolerates lower oxygen concentrations.



Harvesting and Processing

- Because the hybrid has a blue catfish heritage, they tend to stay higher in the water column and are less apt to escape under the seine. So all you producers who haven't seen the bottom of your ponds for the last twenty years may really benefit from this trait. Hybrids have catch rates over 90% compared to channels.
- Hybrid catfish have higher whole dress out and fillet yields however this increase on fillet yield is due to a larger nugget. The hybrid has a smaller head and deeper body conformation.

Stress and Disease Resistance

- Hybrid catfish are more resistant to columnaris, ESC, and PGD. Note: I said more resistant, not bulletproof!

Off-flavor

- One of our local hybrid producers made the comment that the hybrids may not get the muddy off-flavors because they spend more time higher in the water column. This observation has not been conclusively demonstrated in any research that I'm aware of.

Fry Production Difficulty

- This may be a distinct advantage because it may give Alabama producers a competitive edge over other catfish producers both at home and abroad. Without implementing the breakthroughs previously alluded to, commercial production may not be currently profitable.

Disadvantages or issues requiring a change in how we grow catfish:

Production

Given my experience in conducting verification trials of channel and hybrid catfish, I don't see how we can grow them in a typical multiple batch system. For those of you who truly are on a multiple batch plan whereby you are indeed harvesting ponds at least three times a year, hybrids might work. If you are in denial and actually only harvest once or twice a year and already have "big fish" problems, hybrid catfish will not work. I have verified that a quarter pound stocker will grow to five pounds in one year, a fingerling may grow to eight pounds in three years and a four to five year old fish may weigh over 33 pounds!

To truly maximize the hybrid's potential, a producer should consider single batch production. Ponds that have had their pond bottoms reshaped recently should be used for hybrid production. The idea being to maximize harvest of the hybrids so very very few escape to become behemoths that have to be processed with a chainsaw. And in order for single batch production to work efficiently, the producer should draw on stocker supplies from his/her own farm. In other words, dedicate a smaller pond where fingerlings are grown and maintained as stockers. This will reduce downtime for a single batch pond.

Frankly, I don't see how converting to a more efficient system of raising fish is a disadvantage. The only disadvantage is **changing** the way you grow fish. (One of the definitions of insanity is doing the same old thing over and over again and expecting a different result.)

You may have to increase aeration capacity in a hybrid pond in order to handle the increased feeding rate.

Harvesting and Processing

Hybrids have unique harvesting traits. First off, different seine mesh sizes will be needed. Hybrids have smaller heads and deeper bodies. An inch and three quarter mesh will gill .75 lb hybrids.

Hybrids are more hyperactive. They do not move as well as a channel into the throat of a live car during the seine crowding phase. Seine crews will have to be more patient during socking and more vigilant about oxygen stress. If live cars are overloaded, hybrids are more apt to go over the top. On one hybrid harvest, I witnessed hybrids schooling together and actually moving the live car in one direction!

Hybrids have sharper spines and make hand removal from seines and live cars more difficult. I have heard reports that carcasses may have more puncture marks.

One processing comment I have heard is that hybrids tend to be more uniform. As the Alabama catfish industry moves to more hybrid production, this "uniformity problem" may disappear. Processing plants have developed markets for different fillet sizes and consequently design their multiple processing lines to handle different sizes of fish. But on the other hand, you also hear how much the big fish cause problems and how much more profitable the smaller fillets are. So in the long run having uniform sized fish may

lead to better efficiencies at the processing plant.

Nevertheless, three major processing plants in West Alabama have endorsed the hybrid catfish, some more enthusiastically than others. When the head office at one of the processing plants heard about the enhanced yields, the local staff became more enthusiastic. Go figure.

Stress and Disease Resistance

Hybrid catfish seem to be more prone to "ich" parasitic infestations. This can be managed by having fingerling shipments inspected. Timely treatments using formalin and copper can be used for control.

Hybrids do get columnaris and ESC but losses are usually very minimal. Proliferative gill or hamburger gill disease (PGD) may also affect hybrids but significant mortalities have yet to be reported. Experiments with a partitioned aquaculture system (PAS) in the delta showed that channel catfish succumbed to PGD but hybrids did not.

Off-flavor

Just the fact that producers will feed hybrid ponds more may lead to more blue-green and off-flavor problems.

Cost of the fingerlings

Hybrid fingerlings will be priced considerably higher than the run of the mill, delta grade, channel catfish fingerling. Hybrid researchers, aquaculture extensionists, and producers who have raised hybrids feel that the additional expense of the hybrid fingerling is more than offset by the improved seinability, survival, feed conversion rate and growth. Budgets are available for those who would like further information.

Closing thoughts on hybrids

I have been quoted as saying, “The hybrid catfish will return decent profits to the family catfish farm.” But I have a caveat to this and this is not always quoted -“but only where the hybrid’s traits are taken advantage of in an efficient manner.” In one of my verification trials, I saw one efficient channel catfish producer outperform hybrids on a farm that is now out of business. This is not a miracle fish. It is a tool. In the hands of a conscientious producer, it can make a huge difference in production.

In a way, I don’t want to see hybrids take over the catfish industry. Why? Simply because this industry could not tolerate a 15-20% increase in production in the next two to three years—a glut of catfish like we have never seen before. But what I do want to see eventually is the average Alabama catfish farm make enough money so the kids stay after they graduate and **want** to work on the farm because the rewards are worth the blood, sweat and tears.

Okay Alabama, this year’s hybrid production will be limited. Place your orders with Eagle Aquaculture, Inc. (334-749-0134).

Fishy Workshop Scheduled for Thursday, June 30th

Dr. Wallace Killcreas, retired agricultural economics professor, will demonstrate the latest version of Fishy, a catfish software package designed to help manage catfish production.

This software is Windows based and requires no extensive computer knowledge. If you are interested please attend this informative workshop.

It will be held at the Fish Center in Greensboro, starting at 10:00 a.m. We will conclude around noon. For those of you that are not computerized yet, I can personally help you get set up and going with Fishy after the workshop. Fishy is

just another tool that will give you better insight into the production characteristics of your farm. Computers will not allow you to manage your farm solely from your office. Computers will never replace the front seat of your pickup truck. Production programs just provide you with more information, allowing you to make informed decisions that may impact your bottom line. Please RSVP with Gayle by June 29th.

Off-flavor Canines Ready for Samples

If you would like an early detection of off-flavor in your ponds, please bring a water sample by the Fish Center. The two trained canines, Maggie and Rusty, need to start earning their dog chow which has been donated by the Greensboro Farmers Cooperative.

The theory behind the dogs detecting low levels of MIB and geosmin in the water is that you can treat in advance and head off blue green off flavors by eliminating these algae earlier than normal. Of course, this theory needs testing and perfecting. Your cooperation is appreciated!

Water samples will be checked by the dogs once or twice a week so call ahead if you will be bringing in samples. You are invited to watch the dogs work.

Monthly Seminar Series is a Success

To date, three monthly seminars have been held the first Thursday of the month at the Fish Center. Lunch is served first and then the program follows. Crowds of thirty or so have attended in the past. This month’s program will actually be held the last Thursday of June due to scheduling problems. The next seminar is scheduled for August 4th. A topic will be announced later in July.

*-Gregory N. Whits
Extension Aquaculturist
AL Cooperative Extension System*

Mobile Research Laboratory One Step Closer



A three year effort to set up a mobile research/diagnostic laboratory to be located and operated out of the Alabama Fish Farming Center took a huge leap towards becoming a reality this past week. As with almost all of the projects that are associated with the Center, it has required a multi-agency cooperative effort along with funding from the private sector to become a reality. Thanks to an ADECA grant, funding from WACPA, and funding from the State Catfish Committee, a \$52,500 check was recently presented to the Hale County Soil and Water Conservation District specifically for the mobile research/diagnostic lab project. The Fish Center operates under this agency. The District subsequently signed this money over to Auburn University under a memorandum of agreement which states that these moneys will be used by Auburn to purchase, modify, equip, and operate a vehicle for these purposes to be located at the Center. As of today, Auburn has purchased a 2005 Class C/24ft long Winnebago which will soon be at the Center to be modified and equipped for future use. The primary purpose of this vehicle will be for research purposes and not for routine diagnostics, although there will be some occasions when this will be necessary. The idea is to make it possible for the fish health people to collect good quality samples from ponds on farms that are experiencing unexplained fish kills. In addition it will allow the researchers to collect data under all weather conditions and work in a suitable environment. Thanks to all involved. We can do great things when we work together!

*-Bill Hemstreet
Fish Health Specialist
AL Ag Experiment Station*

Black Belt Aquaculture Initiative Update

Communication is so important to the success of any business, especially the catfish industry. In my role as a part-time Extension agent, I am trying to encourage better communication between producers and processors. We depend on each other just to stay in business, so hopefully both parties can be profitable. If processors are profitable, they should be able to pass some of the profits to producers. If they are not, producers probably won't be profitable either. Communication between processors and producers can solve some problems before they develop. Better communication also brings trust. My goal is to help build trust and have better communication. Working together we can accomplish this.

Nelson Sansing and Ryan Clary are new faces at the Fish Farm Center. Both are working with the Black Belt Aquaculture Initiative on the research side. We welcome them both to the aquaculture industry.

Catfish Marketing Association's Website

The Catfish Marketing Association (CMA) has had a website for over a year, but we've never been real pleased with it. Several weeks ago the CMA board contracted with a company in Auburn to set up a new site. You can locate the website at www.catfishmarketingassociation.com Check it out and see what you think about it.



The CMA has been very active the last few months working with processors and other segments in the catfish industry. The goal of CMA is for all parts of the industry to be strong. Big fish over four pounds have caused problems the past several months for everyone. Hopefully the industry is about to work out of this problem for the remainder of this year. This is an industry that is rapidly changing, so hold on to your hat and become the best manager you can be. For more information about the Catfish Marketing Association, call 334-352-2142.

*-Jamey Clary
Extension Agent, Part-time*

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

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