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# Shellstockers Review

*Newsletter of the North Carolina Shellfish Growers Association*

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## ***INSIDE SCOOP . . .***

### **Shellfish Expo 2009**

NCSGA members are invited to join us for an exclusive event showcasing North Carolina's homegrown cultured clams and oysters, featuring a shellfish cook-off by local chefs. Sample some of NC's finest shellfish and wines.

Monday, April 6, 2009, 5:00 p.m.  
Culinary Arts Center  
Carteret Community College  
Morehead City  
Casual Attire

### **Cherrystone Aqua Farms**

recently celebrated its 25<sup>th</sup> anniversary. The Cheriton, Va. farm has sold more than 600 million clams nationwide and abroad. Production has increased steadily since 2006 when the company completed an expansion that included a 7,600 square foot hatchery and nursery.

**Note from the President:** Most people associate open ocean aquaculture with finfish, such as salmon or sea bass, but those impressions are being challenged by some new ideas – namely open ocean shellfish aquaculture. Is it a good idea? Well, in New Zealand, for example, the annual farm-gate value of green-lipped mussels cultured in nearshore waters is more than \$100 million. That's no cheap chunk of change.

The idea of fish farms in the ocean has been challenged, mainly by environmentalists, and for some very good reasons. They say a hybrid species, such as salmon, could cross with the wild species and over a period of time, out-breed and overtake the wild species. Then there is the question of effluent. Where does it go? Some say on the East Coast with the relatively shallow continental shelf, would wash ashore much the same as an ocean outfall sewer discharge. Others say an aquaculture operation could not withstand the rugged storms that come through each summer. And not of least consideration is the cost of building, anchoring, and maintaining an offshore farm. Is it worth the investment?

Chris Langdon, an Oregon State University professor of fisheries and wildlife, says the development of an offshore shellfish industry has fewer social, political and environmental obstacles than other alternatives, and could be complementary to existing and future enterprises.

He says scallops and mussels grow well in Northwest waters, and since there is very little commercial harvest, they wouldn't create competition with an established industry. In fact, a scallop or mussel fishery could result in an opportunity for crabbers or other fishermen with limited seasons. They have the boats, the skill and the manpower to make such an enterprise conceivable.

Langdon is looking to establish a three to four-year demonstration project off the coast of Oregon to analyze the pros and cons of establishing a new venture.

I asked a few friends I consider experts in these matters for their take on the issue and got many varied opinions. Here are a few relevant responses edited for brevity:

- I believe the biggest issue is the relatively shallow water of the continental slope. You have to go 20+ miles offshore just to break 100' of depth. Any shallower and the wave action from storms would be a huge factor in the survival of the animals. It seems like most places that practice offshore farming have deep water near the coast and are relatively protected and/or have low incidences of strong weather patterns . . . most are rocky coast and deep water almost at the waters edge. The fjords in Scandinavia, the bays and inlets in CA, WA and OR, the sounds and inlets and bays of the NE. Also with these types of farms the start up and operational costs are huge -- probably multiple orders of magnitude more than a small shellfish farm inshore.

There is a big difference between waste products produced by bivalves and those produced by finfish. With finfish (depending on the species and density) you are talking about large amounts of nutrient inputs in terms of feed (digested and undigested). But when you begin to talk about bivalve culture now you are talking about filter feeders that extract their nutrients from the ambient water. They will produce feces and pseudo-feces but the other main waste product is ammonium that is quickly broken down and made available to the phytoplankton.

- . . . bivalve culture is completely different and should not be viewed in the same way as ocean outfalls. For one, bivalve culture depends on ambient flows to bring food to the bivalves, and that same ambient flow will remove waste minus the energy and biomass needed for oyster respiration and growth, so less material would leave the culture than would arrive. This would mean that the bivalve operation would be filtering the water.
- Mariculture of suspension-feeding shellfish has very different environmental effects from culturing (predatory) finfish. . . . bivalve shellfish can have positive effects on water quality by their filtration activities. In addition, finfish culture typically depends on some extractive harvest of prey from the marine system, with potential for depletion of bait stocks for natural populations of marine predators. In contrast, bivalve shellfish feed at the bottom of the food chain on phytoplankton. One would need to ask what pelagic herbivores on the shelf may suffer somewhat from reduced food concentrations - this may affect jellyfish and zooplankton.
- In offshore environments we find that wastes are diluted very rapidly. In demonstration offshore projects in Puerto Rico and Hawaii there were no measurable impacts to water column nutrient levels or benthic impacts. The shame is that in their zeal to block carnivorous fish pens the NGOs end up blocking sustainable offshore mussel farms as well.
- We should at least look into it starting with the water flows, the hardware and engineering, species possible (both finfish and shellfish) and even marine algae or invertebrates, and of course economics.
- With regards to offshore aquaculture in NC we need to understand:
  - 1) The dynamics of the ocean currents (location, strength and direction) to follow the waste and/or supply of plant nutrients, depending on the crop produced; and what commensal organisms could sustain double-cropping aquaculture scenarios
  - 2) The structural engineering and anchoring mechanisms

***The National Offshore Aquaculture Act of 2007 never became law. This bill was proposed in a previous session of Congress. Sessions of Congress last two years, and at the end of each session all proposed bills and resolutions that haven't passed are cleared from the books. Members often reintroduce bills that did not come up for debate under a new number in the next session.***

- 3) The fouling communities and predation factors
- 4) The actual growth characteristics of species with proven potential
- 5) Culture requirements and growth of shellfish
- 6) The infrastructure and servicing aspects for transportation to/from culture units
- Offshore aquaculture is a complex issue in the US as we have no rules allowing it or regulating it. It seemed that was going to change in 2007 and legislation was introduced in the House and Senate but with no resolution. So right now it is not feasible nor is there a legal mechanism to allow it.

The East Coast Shellfish Growers Association has come out in support of offshore shellfish aquaculture, and there are many others such as the UNC System and NOAA interested in investing in a big marine science research project. It would be easy enough to make the big project offshore aquaculture, especially if NOAA will fund it. But that is unlikely until comprehensive aquaculture legislation passes.

The big question may be whether we can do all this and compete economically with China, which has a huge shellfish aquaculture industry and cheap labor. -- Jim

**Delaware Proposes Tax On Each Bushel of Shellfish Harvested:** Governor M. Jodi Rell proposed to charge commercial shellfishing operations \$1.00 for every bushel of shellfish harvested. State Senator Bob Duff (D-Norwalk) and Representative Terry Backer (D-Stratford) said the action could seriously injure the state’s oyster farming and shellfish industry.

Joined by area fishermen who say that the proposal is a new tax that could drive many of them out of business, the two lawmakers said that the potential for job losses and closed businesses due to the governor’s proposed “shellfish harvesting fee” outweighs the revenue that the state stands to collect in a difficult budget year.

“It defies belief that during the most economically challenging times for small businesses, the state would propose increasing their cost of doing business, causing them to decrease the number of people they employ,” Representative Backer said.

According to the state Department of Agriculture, Connecticut’s shellfish harvest exceeds 450,000 bushels annually. The state’s oyster farming industry directly provides more than 300 jobs in the state. *Pres Release*

**NCSGA Joins ECSGA:** Our board of directors voted to join the East Coast Shellfish Growers Association as an association member. All NCSGA members are free to join the Discussion list (see text box). It provides links to the archives which can be interesting

You may sign up in DIGEST mode which means you get one big multi-part email at the end of the day instead of perhaps several in one day. NCSGA members will also receive the quarterly ECSGA newsletter. Jay Styron represents the NCSGA at ECSGA meetings.

*Join the ECSGA discussion list and stay abreast of the most current and relevant news about shellfish issues. You can view archives as well as join or leave the list from the web site.*  
<http://www.ecsga.org/index>

**University of Delaware to Study Vibrio:** A new research study at the University of Delaware seeks to determine why *Vibrio parahaemolyticus*, a microorganism that lives in seawater and is related to the bacterium that causes cholera, is expanding its range and virulence.

*Vibrio parahaemolyticus* is a leading cause of seafood-borne illness worldwide, most frequently associated with the consumption of raw or undercooked seafood, particularly oysters and other mollusks, and crabs. Victims typically suffer from diarrhea, vomiting, fever and chills for a few days, although the infection can be fatal in those with weakened immune systems.

In North America, *Vibrio parahaemolyticus* is considered an “emerging pathogen.” An estimated 4,500 cases of infection occur each year in the United States, according to the Centers for Disease Control.

The ultimate aim of the University of Delaware study, which is funded by a \$400,000 food biosafety grant from the U.S. Department of Agriculture (USDA), is to home in on this emerging pathogen's virulence genes and determine how the organism overcomes its victim's immune system -- information that can then be used to combat, detect and prevent infection.

The aquaculture industry loses millions of dollars each year to the contamination of oyster beds with *V. parahaemolyticus* during the summer months. Thus, providing oyster farmers with an agent to treat the oysters is an important overall goal and potential future direction of the research. Newswise, Jan. 09

**Task Force Recommends Oyster Aquaculture:** A task force recommends Maryland watermen should be taught how to raise oysters instead of having the state pay millions of dollars to plant oysters in the Chesapeake Bay that are later harvested.

The 21-member Oyster Advisory Commission says the planting efforts should continue, but the oysters should be left in the bay, where the filter feeders can help improve water quality. Leaving the oysters in place will also improve the chances that some may develop resistance to diseases that have ravaged oyster stocks. *AP*, Feb 09

**Coastal Issues to get More Scrutiny:** Speaker Joe Hackney has formed a new committee for this legislative session in the state House.

The Marine Resources Committee is made up of nine members, including three from the Cape Fear region. Rep. Bonner Stiller, R-Brunswick, is vice chairman, while Reps. Danny McComas, R-New Hanover, and Carolyn Justice, R-Pender, have seats on the panel. Stiller, who served on the Seafood and Aquaculture Committee, said he was pleased Hackney recognized the need for a stand alone committee to discuss marine resources issues.

“I think the speaker realizes what kind of difficulty our fisheries are in,” Stiller said. “Our fisheries are being abused in certain areas. It’s time to start addressing the fisheries down on the coast.”  
Wilmington *Star-News* Feb 2009

*The NCSGA has asked the committee to look into leasing restrictions in Core Sound and Brunswick County.*

**Aquaculture Stewardship Council Formed:** The World Wildlife Fund has embarked on its next phase for sustainable aquaculture standards.

The organization announced today it will co-found the Aquaculture Stewardship Council (ASC) and eventually take possession of the global standards for responsible seafood farming being developed by the Aquaculture Dialogues.

More than 2,000 farmers, conservationists, government officials and others, including ECSGA and NCSGA members, participated in the Aquaculture Dialogue meetings, ensuring transparency and creating measurable, performance-based aquaculture standards, according to WWF.

Over the next year, draft standards for nine species will be completed, including salmon, shrimp, trout, pangasius, abalone, mussels, clams, oysters and scallops. Press Release, Jan. 09

**Man Arrested for Stealing Shellfish:** According to the Montgomery County, NY Sherriff’s Department, an Amsterdam man brought a lobster back to Price Chopper complaining that it had gone bad.

While he went to get crab legs to replace it, and as he was doing that, according to investigators, the store worker who took the lobster noticed all that was left was the empty shell.

When that employee confronted the man he ran out of the store.  
Somehow deputies found him at his home - they say he had eaten the crab legs.  
57-year old Walter Tessier is charged with petty larceny. CBS 6 Albany, NY Jan

**Virginia Proposes to Buyout Crabbers:** Virginia would spend \$3 million in federal aid to buy back licenses from hundreds of watermen who agree to stop catching crabs from the Chesapeake Bay, according to a conservation plan.

Under the plan, the state also would pay struggling watermen another \$3 million over the next three years to cruise the Bay and pick up trash, abandoned crab traps and other marine debris.

Such initiatives highlight a state plan submitted to the U.S. Commerce Department, which in September declared the Bay's crab fishery a federal disaster. Congress then promised to provide \$10 million in relief.

In Virginia, about 2,750 crabbing licenses exist today.

Another big program will focus on helping crabbers move into oyster farming. The state would set aside about \$2 million over the next two years to encourage the transition for growing two kinds of native oysters - spat-on-shell and culchless.

Ken Smith, president of the Virginia Watermen's Association, has been a proponent of the program, saying it would relieve pressure on crabs, give crabbers a new skill and increase cultivation of oyster stocks, which are fading even faster than crabs. *The Virginian-Pilot* Feb 09

**Dockworker Jailed for Stealing Seafood:** A dock worker is in the Lee County, FL Jail accused of stealing hundreds of pounds of seafood worth thousands of dollars.

Brandon Myles, 21, is being held on \$31,500 bond after Lee County Sheriff's deputy Richard Dailey reported he stole seafood from his employer, Roy Kibbe Farm Raised Clams, in St. James City on Pine Island.

Dailey said Myles stole two boxes of oysters, 50 pounds of shrimp, 50 pounds of pompano and 50 pounds of stone crabs — worth \$1,192 total — and sold it to a friend for \$150.

But that friend, Kasha Darna, became suspicious, and questioned him about how he came to get such a large quantity of seafood, and why he was selling it to her so inexpensively. Myles told Darna that his employer hadn't paid him for several days, and was giving him the seafood in exchange for the food.

Myles left, and Darna proceeded to call Roy Kibbe to ask if this story was true. Kibbe told her Myles did not have permission to remove the food.

That's when deputies were called.

Myles' charges include larceny theft in excess of \$1,000 and burglary of a structure. [rmyers@news-press.com](mailto:rmyers@news-press.com) • Jan 09

**COOL Becomes Final:** The United States Department of Agriculture has announced details of the final regulation for the mandatory country of origin labeling (COOL) program required by the 2002 and 2008 farm bills. The rule took effect March 16, 2009.

Commodities covered under COOL must be labeled at retail to indicate country of origin. For fish and shellfish, the method of production—wild or farm-raised—must be specified.

For most NC shellfish farmers a notation on harvest tags stating "Farm Raised Product of USA" is sufficient.

The final rule outlines the requirements for labeling covered commodities and the recordkeeping requirements for retailers and suppliers. The law provides for penalties of up to \$1,000 per violation for both retailers and suppliers not complying with the law. Press Release Jan09

**Great Britain’s Prince Charles Upset with non-native oyster cultivation:** The Prince of Wales is calling for a judicial review into the activities of the Duchy of Cornwall's oyster farm. He alleges that the fishery intends to cultivate and harvest predominantly non-native Pacific oysters – a practice which, he says, could take a heavy toll on the biodiversity in the protected area. The Prince's spokesman said: "It is a tenant's responsibility to comply with environmental regulations to the satisfaction of the public body concerned, in this case Natural England. Telegraph.co.uk, March 09

**Bargain Center:**

- Lowest Prices — NCSGA membership discounts for ADPI bags, cages, and netting. Peter and Diane Perina, distributors for ADPI and Coastal Aquacultural Supply. (804) 725-3948.
- Oyster Gardening Supplies and Grow-Out Cages — J&B AquaFood (910) 347-7240.
- 3/8” clam mesh. 14’ X 1900’ Bill Cox (252) 225-8891  
*(Members advertise free)*

**Invite a friend to join NCSGA today.**

*North Carolina Shellfish Growers Association—Membership Application*

Name: \_\_\_\_\_  
Last
First
M.I.

Company/Affiliation \_\_\_\_\_

Address: \_\_\_\_\_  
City
State
ZIP

E-mail: \_\_\_\_\_

Make check payable to NCSGA. Mail to P.O. Box 269, Smyrna, NC 28579  
 Annual Dues \$15

**MAY ALL YOUR CLAMS BE SOLD; MAY ALL YOUR OYSTERS BE BIG**

*North Carolina Shellfish Growers Association*

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