From the Mouth of the Bay

Regulations Thwarting Industry Growth

We have been told that the economy is recovering, but the unemployment rate remains stubbornly high. Shellfish farming can’t fix the unemployment problem, but it does provide thousands of jobs nationally.

If we could just get some regulatory relief, we could bring hundreds more jobs online. As we head to Washington, DC for our annual Walk on the Hill we will be highlighting several areas where simply clearing away regulatory roadblocks would create new, sustainable shellfish-producing jobs without spending any new federal dollars.

In Maryland the Baltimore District of the Army Corps of Engineers is thwarting the governor’s initiative to stimulate shellfish aquaculture. Even though the state has created enterprise zones, and offered low-interest loans and training programs, lease applicants are being stonewalled by the Corps. No other Corps district has problems permitting aquaculture, and state regulators feel that after months of negotiations they have reached an impasse. Meanwhile, dozens of applications are being needlessly delayed by a district office that seems to have turned a deaf ear to orders from the Corps central command.

New England fishermen have been experimenting with mussel farming and demonstration projects in Massachusetts, New Hampshire and Rhode Island, showing that unemployed fishermen can earn a decent wage by farming mussels. The only thing holding back new farms is the daunting two-year permit process. State regulators have delayed lease proposals for years based on unfounded fears of environmental impacts or potential damage to hypothetical submerged antiquities. Hopefully, permit costs will come down to earth and regulators will become familiar with the ecosystem benefits associated with mussel culture. (See related story, p.2)

The lack of a regulatory framework to allow leasing in federal waters makes it impossible to lease offshore. Since 1980 there have been several bi-partisan attempts to craft a bill that would enable leasing in federal waters, but these have been thwarted by vocal opponents to salmon farming, even as salmon farmers in Maine win certification from environmental groups.

The FDA continues to push Gulf Coast oyster producers to sterilize their oysters for seven months a year to control naturally occurring bacteria that sicken an estimated 30 people annually. This will be a real job-killer! Recent studies show that consumers prefer live, fresh oysters, and that mandating oyster sterilization will cause over 200 processors to shut their doors and 2,000 workers to lose their jobs. (See related story, p. 8)

On Long Island regulators have barred shellfish farmers from using traditional, mechanical harvest

—— Continued on page 3
You may have read that over 90 percent of the mussels consumed in the United States are imported. In 2008 that was 54 million pounds worth $80 million that could have been raised here, generating more than 1,000 jobs. Why is that? And what can be done about it?

The reasons are several. As the chief exporters of mussels to the United States, Canada and New Zealand have enjoyed generous government support in establishing robust industries operating within clear legal and regulatory frameworks. These countries also have many sparsely inhabited and sheltered bays conducive to growing mussels.

But as Canada and New Zealand approach both biological and social carrying capacity in their nearshore waters, they are seeking new ways to expand and stay competitive. They are looking to the United States and a decade of technically successful offshore mussel farming experiments in Massachusetts and New Hampshire.

This is an example of how America leads the world in technology development, but at the same time puts up impediments to business development here at home. Over the last 20 years numerous studies have identified the lack of a legal and regulatory framework as the single biggest impediment to the development of an aquaculture industry in U.S. offshore waters. Until this framework is in place it remains difficult to attract investment.

Still, mussel farming is poised to expand in offshore sites in New England, especially if national aquaculture legislation can be passed soon. Until then, permitting new sites will continue to be an expensive and arduous process, often taking more than a year. However, for those who persevere, the chances for commercial success are very good.

What’s Wrong with This Picture?

Worldwide, mussel farming is a multimillion-dollar sustainable industry that:

- employs thousands of displaced fishermen
- uses idle fishing vessels and shore-side infrastructure
- grows safe, wholesome seafood
- pays taxes

Why can’t Americans get permits?

Lack of a legal and regulatory framework is the single biggest impediment to the development of an aquaculture industry in U.S. offshore waters.

For example, last August about 4,000 pounds of mussels were harvested from NOAA-funded experimental commercial-scale farms in Massachusetts’s Vineyard Sound and Rhode Island’s Block Island Sound. The mussels sold out quickly at local fish markets and restaurants, and attracted a lot of press. The fishermen-turned-farmers tending the mussels earned 80 cents per pound for their product. According to preliminary economic analysis by the Woods Hole Oceanographic Institution’s Marine Policy Center, a mussel farm with 20 lines can expect a six-year payback on investment (or an 18 percent internal rate of return) that includes the purchase price of a boat and longlines at 5 percent interest, based on a farm gate price of 40 cents per pound.

An upcoming Feb. 7 workshop being held before the Milford Aquaculture Seminar will be specifically tailored to those seeking new opportunities for entering and expanding mussel farming. U.S, Canadian, and European experts will present talks and answer questions. For more info visit the Milford Aquaculture Seminar website http://mi.nefsc.noaa.gov/seminarworkshop.

Scott Lindell (slindell@mbl.edu) is a Marine Resources Manager and the Director of the Scientific Aquaculture Program at the Marine Biological Laboratory in Woods Hole, MA.

Isn’t It Time We Ate Local U.S. Mussels?

by Scott Lindell

Alec Gale of Martha’s Vineyard, MA harvesting his mussels last August.
Virginia Is for Lovers ... of Cultured Shellfish

Aquaculture-friendly regulatory management and innovative cooperative research by scientists and growers are fueling Virginia’s $30 million-a-year cultured shellfish industry and creating jobs.

by Mike Oesterling

As an “extension guy” in Virginia since 1981 I have had the good fortune to witness the rebirth of shellfish aquaculture on the East Coast. Over the past 30 years, the expansion of hard clam and oyster culture has contributed greatly to the economy of the Commonwealth by providing jobs and income to many hard-working watermen. Beginning with hard clam culture in the early 1980s and continuing today with oyster culture, dockside value for cultured shellfish in Virginia now exceeds $30 million annually.

Virginia dominates the East Coast production of cultured hard clams, providing 122 full-time and 94 part-time jobs in rural coastal areas. In the past five years the production of single half-shell oysters has also exploded to over 12.6 million in 2009. Oyster culture provides another 53 full-time and 73 part-time jobs. Recently we have also seen a revival of spat-on-shell oyster production that will fuel the oyster shucking industry in Virginia, restoring additional jobs.

So, what were the keys to this success story? Virginians have been “cultivating” the oyster since the mid-1800s, initially operating frontier style without regulation, and later in a legally managed fashion. Today the Virginia Marine Resources Commission (VMRC) is responsible for the oversight of both the public and private oyster industry in Virginia. This “aquaculture-friendly” resource management agency has facilitated aquaculture development.

In the 1900s most growers transplanted wild-harvested seed to private, leased growing grounds. This practice still persists today, albeit at a much reduced scale. During the late 1930s the Chesapeake Corporation investigated a rack-and-tray system to grow oysters in the York River. Many variations of this are now collectively called “rack-and-bag” and are used by oyster farmers all over the world.

Breeding disease resistance

The advent of the oyster pathogen MSX (Haplosporidium nelsoni) in Chesapeake Bay in the early 1960s wrought great changes in the oyster industry. The lack of consistent production of natural seed led to the development of hatcheries, and by the late 1960s, the Virginia Institute of Marine Science (VIMS) was actively researching alternative methods of oyster culture and had established a hatchery at its Gloucester Point facility.

Three periods of drought during the 1980s led to crippling MSX and Dermo (Perkinsus marinus) infections spreading to areas never before impacted, including the seed grounds of the James River and the growing grounds in the

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Regulations Thwarting Industry Growth

devices because of purported environmental impacts, despite many scientific studies showing these impacts to be insignificant. Forcing farmers to use hand-rakes ensures that they will be inefficient. What other farmers have their harvest methods dictated by the government?

In many areas waterfront homeowners are able to block or delay applications by making spurious accusations of adverse environmental impacts. Even though the body of scientific evidence shows that shellfish farming is sustainable and provides substantial ecological benefits, lawsuits by well-heeled opponents of farming are often enough to block new projects, forcing American entrepreneurs to invest in other countries.

Shellfish aquaculture can be an engine of job growth if we can loosen the regulatory shackles.

Bob Rheault is the executive director of the ECSGA.

— Continued from the first page

© Virginia Shellfish Aquaculture Situation and Outlook Report: Results of 2009 Virginia Shellfish Aquaculture Crop Reporting Survey

Page 3
Dealing With the Threat of MSX-Disease Mortality

Growers today can pick and choose oyster lines that have a fighting chance against MSX

by Stan Allen

Losing an oyster crop to any disease can be financially crippling, but MSX-disease can be particularly devastating because it affects all sizes, from seed through adults. At the news of recent reports of MSX-disease resurfacing at growing sites in Cape Cod and Maine, I would argue that these losses could have been largely avoided because of advances made in breeding for resistance to MSX.

Although MSX-disease outbreaks in the Northeast have been intermittent, MSX-disease pressure has been quite consistent in Delaware Bay and southwards since the late 1950s. It was in Delaware Bay that a couple of the first disease-resistant lines arose through the work of Drs. Hal Haskin and Susan Ford. They theorized that the survivors of the original MSX-disease epizootic would themselves be resistant to MSX-disease. Haskin and Ford showed that resistance to MSX was highly heritable and could be reached in relatively few generations by selecting the survivors.

According to Rawson et al, at least three lines developed for the Northeast show MSX-disease resistance: NEH, Flower’s, and the Clinton line. How can growers get these research lines to their farms?

Getting seed to the farm

Here’s how we do it in the Chesapeake Bay area.

We select oysters from among our 12 lines, choosing the best from a large population of around 40,000 seed per line. At 18 months old we might have 20,000 left, due to sieving and various other losses. Since we only need about 1,500 to go into the next breeding cycle, we have tens of thousands left over after selection. The top 70 percent of that group is distributed to hatcheries that request them. (The bottom 30 percent, you don’t want). In 2010 we distributed nearly 20,000 brood stock oysters in this manner to hatcheries that wanted to produce seed from these lines.

For the Northeast, the same general mechanism is needed, although it’s unlikely so many brood stock would be required initially. Farmers interested in a particular line need to request this type of seed from their hatchery sources. Most hatcheries today have gotten used to the idea of providing specific “brands” (or lines) of seed, but in order to produce them, they have to know in advance that they need the brood stock. The hatchery, in turn, will have to go to the sources for the brood stock – Haskin Lab, Flower’s company, State of Connecticut, University of Maine, etc. (See Rawson et al. 2010 for list of sources).

The challenge for these labs will be for them to keep enough brood stock “left over” from research studies to supply to hatcheries. If stocks are insufficient, then some provision will have to be made between the program and commercial hatcheries to multiply these numbers – referred to in the Rawson article as “commercial brood stock repositories and multiplier hatcheries.” For the Northeast, there may be some lead time required for this activity, but it will only come with demand from the growers.

Triploid disease resistance

Another general strategy for avoiding MSX-disease mortalities does not necessarily require matching specific lines with your
tributaries of the Potomac River.

At the same time a shift in marketing strategies was occurring. Producers switched from oysters for shucking to the more lucrative half-shell market and developed techniques to produce oysters that could survive the pathogens and satisfy the half-shell consumer. The development of disease-resistant lines and new off-bottom culture technology moved an industry dependent upon wild seed to one reliant on hatchery production.

VIMS initiated cooperative research projects with private culturists to improve off-bottom culture techniques, develop select brood stock, evaluate polyploid oysters (e.g. triploids), and predict the best growth areas. During the 1990s and early into this century, great strides were made in all these areas. Now, Virginia has an established and growing base of hatcheries to supply disease-resistant, diploid or triploid seed to a rapidly expanding number of oyster farmers. VIMS continues to work cooperatively with the oyster industry, providing research and outreach services to

With continued research and development of superior brood stock lines, refinement of hatchery production, and hard work from growers, Virginia’s position as a leader in oyster culture will continue for many years to come.

For the last 20 years, Virginia’s efforts have primarily focused on furthering the production of single oysters destined for the half-shell market. However, in the last five years there has been a resurgence of interest in the production of spat-on-shell oysters for the oyster shucking industry, especially using the improved brood stock lines and triploid seed. Demonstration projects in the mid-part of this decade illustrated the potential for producing shucking oysters with remote setting of hatchery-produced seed.

This is not a new concept, but it was not until the development of disease-resistant brood stock and reliable hatcheries that remote setting and spat-on-shell production became viable. In 2008, close to a half billion eyed-larvae were sold by Virginia hatcheries for producing spat-on-shell by private oyster growers. Those oysters are currently being harvested for shucking.

With continued research and development of superior brood stock lines, refinement of hatchery production, and hard work from growers, Virginia’s position as a leader in oyster culture will continue for many years to come.

Hard clam culture

Hard clam culture in Virginia developed only within the past 30 years. The most important factors leading to commercial clam culture were the development of hatchery techniques for seed production and the development of the techniques to protect small seed clams from predators. Virginia’s Eastern Shore was the site of the first commercial U.S clam hatchery, started in 1956. Unfortunately, production was sporadic and field plantings were quickly destroyed by predators.

After years of experimentation, VIMS scientists in the Wachapreague Laboratory developed techniques for successful grow-out, and clam culture was poised for rapid growth.

By the 1980s several large clam firms began to demonstrate financial success, triggering a flood of imitators. By 1990 the value of cultured clams surpassed the wild harvest! With current harvests near $22 million, the importance of cultured clams to the Virginia seafood industry and local economies cannot be ignored.

Keys to success

As I look back on the past 30 years I see four keys to the development of our successful shellfish aquaculture industry:

Regulatory friendly management. Other states complain of a regulatory morass thwarting permits for all but the most persistent, but this has not been the case in Virginia. Both the state and federal resource managers in Virginia recognize the value of a healthy shellfish culture industry, both for economic and ecological reasons. Even though we do have some resource management issues, the agencies have long worked with industry, not against them, to resolve these issues.

Tradition of private culture. This goes beyond just the regulatory tradition to include a sociological component. Residents of...
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Thanks for looking
Update on FDA’s Mandate to Force Gulf Oyster Sterilization

by Bob Rheault

When the board of directors of the Interstate Shellfish Sanitation Conference (ISSC) met on January 10, the work of the Vibrio Management Committee consumed most of the two-day meeting. If you are not familiar with the issues surrounding Vibrio bacteria and the Food and Drug Administration’s (FDA) move to require Post Harvest Processing (PHP) of Gulf oysters for seven months a year, then I encourage you to visit our website for the full story. Although the entire PHP saga is complicated and somewhat confusing, it’s a very important issue and there is lots of information on ECSGA.org to help explain it all.

Here is the bare-bones “Cliff-Notes” version: Vibrio vulnificus is a naturally occurring bacteria that sickens about 90 people a year, but primarily affects those who are severely immune compromised (liver failure, diabetes, AIDS, immuno-suppressing drugs). About half of these illnesses are wound infections and half are related to eating seafood (primarily oysters). Around half of these illnesses are fatal. (However, these numbers are now in question after a new Centers for Disease Control (CDC) report projecting significant under-reporting and lower mortality rates.)

Since 2000 the FDA and industry have been working to reduce V. vulnificus deaths by 60 percent. Even though we have achieved about a 41-percent reduction, the FDA still wants to mandate PHP for Gulf oysters every April through November to bring the current average of 15 deaths a year down to less than nine. There are four currently approved PHP processes: cool pasteurization (the patented Ameripure process), ultra high pressure (HPP), extreme freezing and low dose gamma irradiation. Gamma is approved but not currently used because of the challenges in marketing irradiated foods. Ultra-freezing is not used for summer oysters because product quality is unacceptable.

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East Coast states with two or more V. vulnificus illnesses would be forced to join the Gulf states in submitting to the PHP mandate. As an industry our fear is that this is a slippery slope and the FDA really wants to mandate sterilization of all shellfish. This would open the door to cheap, sterilized shellfish from Asian nations where shellfish are grown in filth. Our only market advantage is that we can offer fresh live shellfish – once we lose that advantage our markets will evaporate.

While Vibrio problems are more prevalent in warmer waters, grow-
ers need to be aware that no state is immune from issues with these bacteria. Most states have had some illnesses associated with *Vibrio* bacteria and everyone in the industry should learn what steps they can take to minimize the risk of illness. The ECSGA has developed several educational brochures and has been conducting workshops in every state to educate growers, harvesters and processors.

In the recently passed Food Safety Act, Congress mandated that the FDA would have to perform a cost-benefit analysis prior to implementing a PHP mandate, so the FDA, ISSC and industry funded several studies in 2010. At the ISSC meeting we heard preliminary reports from four studies that should be complete in a few months. Keep in mind that these numbers are from notes I took from preliminary reports that may be modified before publication.

1) An FDA-funded study by the Research Triangle Institute (RTI) looked at the Economic Impact and Feasibility of requiring all Gulf oysters to be Post Harvest Processed. Researchers compared cool pasteurization, Ultra High Pressure (HPP), and low dose gamma. Their model assumes that most consumers cannot tell the difference between processed and fresh oysters. The various processes cost 3–5.8 cents per oyster (including the 20-year amortized capital cost of equipment, estimated at $75K – $3.4M). But they also found that **most consumers were not as willing to buy PHP oysters, nor would they pay more**. Interviews with nine restaurant owners revealed that frequent raw oyster eaters prefer fresh product, but infrequent consumers cannot tell the difference. Most importantly, RTI found that many smaller operations wouldn’t be able to install PHP because they lack space or capital or they don’t have enough volume to justify buying even the smallest PHP device. **RTI predicts 202 of 218 processing establishments would be forced to close for seven to nine months a year and over 2,000 employees would be laid off. Currently three plants process 23 percent of the Gulf landings. RTI predicts it would take two to three years and up to $35M in capital investment to develop adequate capacity to process all Gulf coast landings.**

2) The University of Florida’s Dr. Steve Ottwell compared consumer preference and acceptance for processed oysters and compiled a sensory profile. At seven days post-harvest, 50-60 percent of consumers preferred traditional product, and only about 34 percent preferred processed oysters. However after 14 days post-harvest the differences in consumer preference were no longer significant.

3) Bill Huth’s group from the University of West Florida studied consumers’ willingness to pay for processed oysters. Consumers were less willing to pay for processed oysters! Using an auction simulation, panelists valued a plate of three traditional oysters at $1.44 compared with only 87 cents for three processed oysters.

4) The FDA’s Don Kramer presented agency calculations projecting the cost benefit of seven months of mandated PHP. FDA calculated that eliminating 36 percent of the illnesses and deaths related to *V. vulnificus* would yield an annual benefit of $124M.

We look forward to the publication of these reports in the months ahead so we can make a full examination of the methods and findings. At this point “nothing has changed” said Don Kramer. From the FDA’s viewpoint, they will look at the economic impacts and consumer acceptance, but they still view PHP and seasonal closures in the Gulf as the “most appropriate way to control illnesses from *V. vulnificus*.”

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**Mandated Gulf Oyster Sterilization**

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**Heat-cool pasteurization (HCP) Step 1**
A cartload of trays holding in-shell oysters is dipped in a 126 °F water bath for 24 minutes.

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**Heat-cool pasteurization (HCP) Step 2**
After the hotwater bath, a cartload of oysters is cooled down to 40 °F for 15 minutes to stop the cooking process.

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MSX Threat

grow-out site, but rather involves using triploid oysters. Triploids are produced by crossing a tetraploid male oyster with a diploid female.

Currently all tetraploids available to hatcheries carry disease resistance, with the Haskin Lab being the repository for disease resistant tetraploids suitable for the Northeast, while VIMS supplies tetraploids suitable for the mid-Atlantic (but probably not for the Northeast). Since the triploid gets two doses of genes from the disease-resistant tetraploid, the source of the other set of genes in the triploid matters less. Even a locally adapted wild oyster could serve as the female source.

The principle behind triploid resistance is that the tetraploid father contributes enough resistance to improve survival significantly. However, not every grower wants triploids, which sometimes, but not always, grow faster than diploids. But even if they grow at the same rate, the fact that they are disease resistant may offer protection from MSX-disease mortality.

Disease resistant lines were critical in getting oyster farming started in the Chesapeake, because without them wild oysters were simply dying too frequently to be economically farmed. The lines have provided refuge from MSX-disease, if not absolutely then certainly financially, as they generally provide 100 percent improvement in survival. That is, instead of losing half your crop from MSX-disease, you might lose 25 percent.

Often, though, it’s the difference between 10 percent survival and 70 percent survival. Thus, for nearly a decade, It’s the disease, stupid was our breeding mantra.

In the Northeast, where MSX disease outbreaks are intermittent, it might be that using disease resistant lines is a form of crop insurance. Now that we have disease resistance in our lines, we are focusing on other traits that many of the programs in the Northeast have been focusing on from the beginning, such as growth rate, meat yield, and habitat specific performance.

Professor Stan Allen is the director of the Aquaculture Genetics and Breeding Technology Center (ABC) at the Virginia Institute of Marine Science (VIMS).

Join Our LISTSERV

If you haven’t joined the ECSGA e-mail LISTSERV yet you’re missing out on lots of timely news and information. It’s free and easy to get started. Click the Join button on www.ECSGA.org, then click on the “join the ECSGA e-mail listserv” link at the bottom of the page.

The volume of posts is not overwhelming and the list is our primary conduit for delivering important news, grant information and action alerts to our members.
Looking back over the years, I realize that in my life I have witnessed some interesting things in the rapid development of the United States, especially in the food that we eat. As transportation modes have advanced, fresh food can be flown in or trucked to our tables from great distances.

Now, years later, there is a public awakening to the benefits of eating food grown and produced locally. These benefits are not only nutritional but also societal, as the transport of locally grown foods to nearby markets is cost-effective, environmentally prudent and good for our economy.

Growing up in the post-war era, there was a feeling that America could do anything she set her mind to, including feeding the world. Our farmers produced grain that is still shipped worldwide. Our shellfish aquaculture businesses are fashioned with that same “Can Do” spirit, and though we may not be able to feed the world, we are sound local businesses producing world class food that is nutritious and affordable.

As we broaden both our markets and our awareness of the many benefits of shellfish aquaculture, let us also talk about the jobs we create, the bays and estuaries we help to clean and the revived entrepreneurial spirit that our industry brings to America every day.

Shellfish aquaculture is good for America in so many ways. We, the ECSGA, must start talking more publicly, extolling the virtues of all that we do. If we don’t toot our horn, who will?

America needs what we produce, what we do and how we do it. Let’s start talking and telling.

Tom Kehoe is co-owner of one of the East Coast’s biggest oyster distributors, K & B Seafood, based in East Northport, NY.
ECSGA Sends Help to Gulf Oystermen

by Kathy Rhodes

The East Coast Shellfish Growers Association and the Milford (CT) Oyster Festival Committee teamed up to contribute almost $4,000 to “Friends of the Fishermen,” a fund set up to assist those impacted by the BP oil spill. Mike Voisin, board member of the Gulf Oyster Industry Council, recommended donating to the group as the best way to help, saying in reaction to the news of our contributions, “We appreciate all that the ECSGA has done to help the Gulf Coast and Friends of the Fishermen!”

The ECSGA placed donation jars in its oyster booths at both the Milford Oyster Festival and the Long Island Fall Festival, so the oyster-enjoying public could participate in the effort.

In addition to money collected in the jars, the ECSGA contributed $1,500, while ECSGA board members Ed Rhodes and Chad Ballard each donated $500. With our encouragement, the Milford Oyster Festival added $1,000 from their 2010 charitable contributions for a total of $3,810.

In his letter to the Friends of the Fishermen, Oyster Festival President Jay Pinto wrote, “We are fortunate to work closely with the ECSGA. The oyster industry is obviously very ‘near and dear’ to the hearts of both of our organizations and we are happy to help to make an impact for these people affected by the oil disaster.”

Executive Director of the Louisiana Seafood Promotion and Marketing Board Ewell Smith responded, “We are very appreciative of all the support coming from around the country…it is especially important when our fellow fishing communities lend support.”

Over the past five years the ECSGA has provided the bulk of the oysters served at the Milford Festival, and this year two oyster shuckers from the Acme Oyster Bar in New Orleans were on hand to help open the 18,000 shellfish served.

In addition to the donation to Friends of the Fishermen, the Milford Oyster Festival committee presented donations to a number of local charities at an event on December 10.

Kathy Rhodes is the administrative assistant for the ECSGA.

Dear Members and Friends,

Just a quick note to ring in the New Year. I wanted to express my profound thanks to all our members and supporters. We have a great industry with a tremendous narrative of job creation, sustainable production, and environmental benefits. Our members consist of a diverse group of hard-working, creative watermen and women who have learned to work with nature to reap a nutritious harvest. Most of us are fierce protectors of water quality and enthusiastic stewards of the marine environment we work in.

Your commitment to improving our industry and the quality of your products speak volumes about your integrity and dedication. It is immensely gratifying to work with such a great group of people and it’s the support of folks like you that motivates me to do the best job I can to make this industry as strong and vibrant as I believe it can become.

I hope that 2011 brings good growing and a prosperous market for all,

Best Wishes,

Bob Rheault

Special Thanks to Our Booster Club Donors

Chad Ballard III, Cherrystone AquaFarms
Tom Ahern, J.P. Shellfish
Sandy Ingber, Grand Central Oyster Bar
Shore Gregory and Skip Bennett, Island Creek
Gef Flimlin, Rutgers Cooperative Extension
Ed and Kathy Rhodes
Tom Rossi, 4C’s Breeding Technologies Inc.
Penelope Jurick, Oyster Recovery Partnership
Richard Phelps, Allen-Bailey Tag & Label
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Lisa Milke, National Marine Fisheries Service
Barry Costa-Pierce, Rhode Island Sea Grant
Geoff Denham, Sargents Cove
Sandy Shumway, University of Connecticut
John Kraeuter, Haskin Shellfish Research Lab
Lee Ann Fick, Nandua Oyster Co.
Jack Spruill, Hampstead, NC
Connecticut Shellfish Extension Specialist Funded

The Connecticut Sea Grant Extension Program recently received a grant from the National Oceanic and Atmospheric Administration to hire a new shellfish extension specialist. The new employee will work with program staff to expand aquaculture development in the state in an effort to retain and/or create jobs. In addition to offering aquaculture training opportunities for prospective producers and resource managers, the extension specialist will work with producers seeking innovative ways to market aquaculture products.

The first project to be undertaken is an investigation into the feasibility of a community-supported aquaculture (CSA) program in collaboration with the Noank Aquaculture Cooperative in Groton, CT. Similar to community-supported agriculture programs, the new aquaculture program will allow local citizens to invest in an aquaculture farm prior to the production season, investing along with the farmer and, upon harvest, receiving a return of fresh, local shellfish.

“We see this as a way to help resolve the disconnect among consumers, food production and farmers,” says Tessa Getchis, Connecticut Sea Grant’s aquaculture extension specialist. “It will provide the community with access to fresh seafood and support the local economy.”

A study is currently underway to assess the program’s appeal to the broader community. If the program generates enough interest, it may create new jobs in Connecticut and serve as a model for other states.

For more information, contact Tessa Getchis, Connecticut Sea Grant, (860) 405-9104 or Tessa.getchis@uconn.edu.

Learn more about CSAs in the next issue of The Dredge!
Virginia are “used to” private leasing of public bottoms for the purpose of shellfish production, even more so now that the ecological benefits of shellfish culture are understood by a well informed general public. This has even spilled over into non-commercial oyster “gardening” for both personal consumption and ecological purposes. Oyster gardeners are strong supporters of commercial shellfish production simply for the ecological services provided by the growers.

**Supportive research and outreach programs.**

VIMS was actually started in the 1940s to investigate declines in oyster harvests. Since that time, it has become recognized as a leader in shellfish culture research. Our commitment to transfer this research into usable, “real-world” applications continues today through the Virginia Sea Grant Marine Extension Program and the VIMS Aquaculture Genetics and Breeding Technology Center.

**Innovative, hard working people.**

Every area has dedicated commercial fishermen, and Virginia is no exception. While the research institutions may have provided information, it was private industry that took that information and refined it to make it work. Private culture businesses continue to fine-tune production technology. In the end, it is their hard work that continues to make the Virginia shellfish culture industry successful!

Mike Oesterling is an “extension guy” with the Virginia Sea Grant Marine Extension Program at the Virginia Institute of Marine Science of the College of William & Mary.

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**HELP WANTED**

Strong willed, hard working politician willing to work on passage of National Aquaculture Legislation that identifies aquaculture in federal waters as a national priority and establishes the legal and regulatory framework needed for the industry to grow and develop.

Contact: Bob@ECSGA.org
Mail Membership form and dues to:
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RCE of Ocean County
1623 Whitesville Road
Toms River, NJ 08755

Annual Dues Schedule

<table>
<thead>
<tr>
<th>Gross Sales</th>
<th>Dues</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 50K</td>
<td>$100</td>
</tr>
<tr>
<td>50K to 100K</td>
<td>$200</td>
</tr>
<tr>
<td>100K to 300K</td>
<td>$500</td>
</tr>
<tr>
<td>300K to 3M</td>
<td>$1000</td>
</tr>
<tr>
<td>Over 3M</td>
<td>$1500</td>
</tr>
</tbody>
</table>

Dealers/Suppliers $250
Associations $15/member
Non-voting $35

For advertising rate information contact Bob Rheault (401) 783-3360
Visit our web site: www.ECSGA.org.
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