

EAST COAST SHELLFISH GROWERS ASSOCIATION

From the President Changing Markets



President
Jeff Auger

I have always looked forward to spring on the farm, as warm weather ushers in a new crop and the hope of a productive, new growing season. Seed time is the best time: we get to plant our beds with the promise of good returns, but have yet to experience the harsh realities we

inevitably will have to face over the course of our shellfish's life. While things are still hopeful for most of the shellfish farms in the U.S. (outside of the significant damage seen from such a harsh winter) I want us all to sympathize with growers in the Canadian provinces of Prince Edward Island (P.E.I.) and New Brunswick. MSX has reared its ugly head in the waters of our neighbors to the north, and the disease has been doing what it does best: killing massive numbers of oysters.

Most of the growing areas in the U.S. have seen this disease already. Maine's Damariscotta River dealt with MSX in 2011, and

saw 90–95% mortality, similar to what happened in Massachusetts (Duxbury and Cape Cod), Connecticut, and Virginia. We in the U.S. are fortunate to have a robust hatchery network. In Maine we were able to rely on Mook Sea Farm and Muscongus Bay Aquaculture to breed some of the MSX survivors with known disease-resistant broodstock from Rutgers and the Virginia Institute of Marine Science (VIMS). Coupled with some fast growing times (18 months) the Maine industry bounced back in relatively short order. We now use only disease-resistant broodstock in all our lines to prevent this disaster from occurring every year.

Unfortunately, Canada does not have a hatchery network as advanced as ours in the U.S. A few of their hatcheries can provide aid, but none have disease-resistant stock, and acquiring it has proven time-consuming, expensive, and too late to immediately help the industry. As a result, the Canadians are experiencing what we have gone through in the states: cages full of empty shell, 90% mortality, and the total loss of crops. Not a fun time and not something any of us should wish on anyone.

As with any disaster, some opportunities will arise. As discussed in our past newsletters, imports of Canadian oysters have grown in the past few years, reaching about half

the value of U.S. East Coast production. Because most of those imports come from P.E.I., with those oysters out of the markets it is inevitable that U.S. product will be in much higher demand. I predict that it will be a very good time to be an oyster farmer in the U.S., and I believe that we as an industry should work to fill the void wherever we can.

Now is the time to grow your farm. Buy some extra seed, get more gear in the water and push your state to allow farms to scale up to a size where we can try to make up for some of the impending losses. I also want to caution you not to feel too jubilant about this situation. Farms losing crops is never a good thing. Farmers in P.E.I. are just like American farmers—we all do this because we love working on the water, are passionate about the environmental and the economic benefits our job provides, and we don't want to be stuck behind a desk.

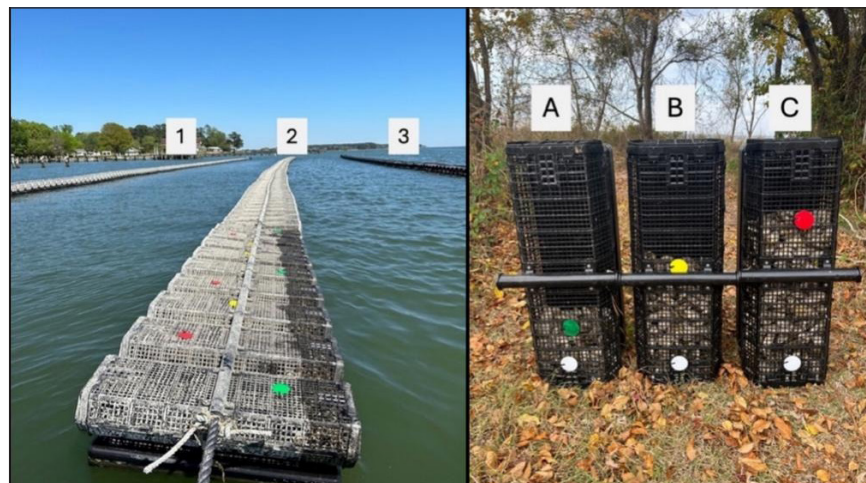
We should never cheer about a fellow farmer losing their crop. I also think there is a legitimate worry we will not be able to replace the oysters missing from Canada, and as a result we will see oysters come off the menu and shrink our market. Fewer people eating oysters hurts us all. I think we should all work to try and help fill the void until our Canadian neighbors can right the ship and get back into the market.

To Split Or Not To Split: That Is the Question

by Robert B. Rheault,
ECSGA Executive Director

“When should I split the oysters in my grow-out gear?” is a question I often get from new growers, along with, “What is the best stocking density for my gear?” Unfortunately, the answers to both questions are never simple. These decisions always come with trade-offs, and every site will have unique features that change the calculus.

A new article published in *Aquaculture* by Matt LaGanke, a graduate student at the Virginia Institute of Marine Science (VIMS), sheds some light on the question of when to split: [“Re-thinking stocking density: Biological and operational tradeoffs of splitting oysters \(*Crassostrea virginica*\) at different trigger](#)



MATT LAGANKE/VIMS

(L) Researchers deployed approximately 37,700 oysters in 27 baskets, each at a standard 10% density by basket volume, distributed across three FlipFarm lines—(1) closest to shore, (2) middle line, and (3) furthest offshore—on the VIMS Commercial Shellfish Aquaculture Research Farm in the York River, Chesapeake Bay. (R) When the volumetric density of baskets reached the assigned trigger-density threshold—(A) 25%, (B) 50%, and (C) 75%—oysters were split and redeployed at the standard 10% initial stocking density (white tags), spreading into assigned baskets within blocks down each line.

[densities in off-bottom oyster aquaculture.”](#)

Matt and his team used FlipFarm™ gear at the VIMS Commercial Shellfish Aquaculture Research Farm on the York Riv-

er in Chesapeake Bay. Baskets were stocked in April at 10% of the volume of the basket, with growth monitored weekly. The experiment was designed to evaluate the impacts of restock-

ing (splitting) triggered at three levels: 25%, 50%, and 75% of the total basket volume. Cages were flipped weekly for drying, and when the trigger volume was reached, the contents of the baskets were split and restocked again in baskets at 10% of the volume.

It was not too surprising that the lowest trigger density had the fastest growth and the highest total yield. During the first growing season, the baskets that were triggered at 25% volume needed to be split three times, while the 50% trigger volume only needed to be split twice, and the 75% trigger volume was split just once.

After 14 months, all the animals were sorted by size and measured for height, width, cup depth, and meat weight. An MSX mortality event reduced overall survival, but the animals in the baskets with the lowest trigger volume had the best

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Walk the Hill 2026

by Robert B. Rheault,
ECSGA Executive Director

A record-breaking 15 ECSGA members joined our Walk-the-Hill event in Washington, D.C., in April, allowing us to schedule 39 meetings with our elected representatives and agency leaders. Over three days we shared with them a laundry list of issues and requests to support our legislative priorities. We split into teams and were joined by Caitlyn Czajkowski, the executive director of the National Aquaculture Association, along with a contingent of growers from the Pacific Coast Shellfish Growers Association (PCSGA).

Working with members on both sides of the aisle, we emphasized jobs and economic development while promoting sustainable, delicious seafood. We dashed from meeting to meeting, sharing the same 15-minute speech again and again. But the real job is the relentless follow-ups. Staff are continually inundated with constituent requests, and only by repeatedly emailing and calling them in the weeks following the trip can we get our issues pushed back to the top of the pile.

Through dogged persistence we have enjoyed a fair amount of success in shaping legislation and guiding congressional spending. Beyond these legislative requests, it is important to elevate our industry's stand-



MARIA SMITHSON/NATIONAL AQUACULTURE ASSOCIATION

The Congressional Shellfish and Wine Caucus reception was enjoyed by a record number of Congress members and hundreds of staff. As usual, the popular bash allows us to rub elbows with members and staff in an informal setting, reinforcing our messages and building relationships that ensure we are welcomed by attentive staff when we next come to Washington. We served 1,000 oysters from five states, and the PCSGA brought an equal number from the West Coast. The Wine Caucus served eight cases of wine.

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ing in the eyes of your elected representatives and to establish relationships so they know who to call when a question arises. We cap every meeting with a request to invite congressional representatives for a farm visit, as that is typically a formative experience for them. The effort is significant, but the payoff of establishing these relationships is considerable and well worth the effort.

This year our priorities were largely shaped by the investigation into the *Salmonella* illness cluster that broke around Christmas. We scheduled 13 meetings with House and Senate offices that have oversight authority over the Centers for Disease Control (CDC). In each of those meetings we shared the facts surrounding that illness event and offered several proposed remedies that we hope the CDC will adopt to avoid this type of industry defamation in the future (see *Salmonella* p. 3).

We also advocated for passing the bipartisan Destruction of Hazardous Imports Act ([H.R. 2715](#); [S.3213](#)), which would allow the Food and Drug Administration (FDA) to force the destruction of illegal, contaminated, or mislabeled seafood imports. This act would close a loophole that allows imported, illegal products that are refused entry to the U.S. to be reshipped to another port, in the hopes that it might avoid detection there (so-called "port shopping"). The act is supported by the FDA, and would hopefully deter unscrupulous exporters from

sending dangerous and illegal products to our shores.

We spoke to leadership at the National Oceanic and Atmospheric Administration (NOAA) about restoring staffing levels at the NOAA Fisheries Laboratory in Milford, Connecticut. The Milford Lab is where hatchery techniques were invented in the 1950s and where the breeding work for the Oyster Breeding Project is performed as part of a USDA–NOAA collaboration seeking to selectively breed disease-resistant oyster lines.

The lab used to support more than 30 scientists, but priorities have shifted at the Northeast Fisheries Science Center, and NOAA is now prioritizing staff at the Protected Resources Division and on the Stock Assessment team, while failing to back-fill retirements at the Milford Lab. The lab now supports only a dozen research scientists, and the last two shellfish biologists are slated for retirement at the end of 2026. The appropriations process has gotten ugly, but we remain hopeful that we can save this storied facility from the combined impacts of the budget axe and DOGE staffing cuts.

While in D.C. we also championed programs such as Sea Grant, the Sea Grant Marine Aquaculture Competition, Harmful Algal Bloom and Hypoxia Research, working waterfront access, and expansion of the non-immigrant H–2B Temporary Workers program to support the aquaculture industry's workforce needs.

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CDC's *Salmonella* Telelkebir Cluster

by Robert B. Rheault,
ECSCGA Executive Director

Most of you probably recall the Christmas present the Centers for Disease Control (CDC) dropped on our community with the announcement of an illness-cluster investigation linked to a rare strain of *Salmonella* that has been associated with tropical tortoises and bearded dragon lizards.

After the CDC issued its press release, it was picked up by more than 900 news outlets within three days. The deleterious impact on holiday sales was significant, with many growers and dealers reporting lost sales. Working with the National Aquaculture Association, we conducted a survey and estimated that the damages due to lost sales exceeded \$5 million. Reputational damage was also considerable, as many dealers experienced canceled orders and spent hours trying to reassure customers that their product was safe.

The investigation was closed on February 24, 2026. In total, 80 cases of *Salmonella* Telel-kebir were diagnosed across 23 states over six months. Of the 43 patients who were interviewed, 26 reported eating raw oysters, and 11 reported eating sushi. Nineteen successful tracebacks identified potential harvest locations from nine states, three Canadian provinces, and Mexico. All but one of the cases were classified as “multi-source,” meaning that oysters from several sources were consumed. Notably, no two tracebacks revealed a common harvest area, and state investigators did not report any harvest area association with the illnesses.

Similarly, there was no commonality in distribution and shipping routes that might suggest a method of contamination. Consequently, no recall or regulatory actions were taken. (One question that comes to mind is how did the 17 patients interviewed who did not report oyster consumption acquire this rare form of *Salmonella*?)

Shockingly, Dr. Matthew Wise of the CDC was adamant that the high correlation of reported oyster consumption was “definitive proof” that the illnesses were caused by oysters, and the CDC website continues to assert that these illnesses constitute an oyster-related outbreak.

The fact that the CDC issued an outbreak alert implicating oysters based on correlation alone defies the accepted scientific principle that **correlation alone does not prove causation**. Dozens of sci-

entific papers and statistical texts repeat this mantra, explaining the dangers of confounding third variables and cross-correlation, and the need for other tests or criteria that must be satisfied before causality can be proved.



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Oyster markets took a tumble during the 2025 holiday season when the CDC announced an investigation into an illness cluster involving a rare form of *Salmonella* usually associated with tropical tortoises and bearded dragon lizards. With no substantive proof of causation, CDC linked the “outbreak” to oyster consumption.

I was able to convince the Executive Board of the Interstate Shellfish Sanitation Conference (ISSC) to write a letter to the CDC requesting that the Food and Drug Administration (FDA) and CDC work with the ISSC to develop a consistent outbreak definition. We are still awaiting a response and have urged our congressional allies with oversight authority to weigh in on the issue.

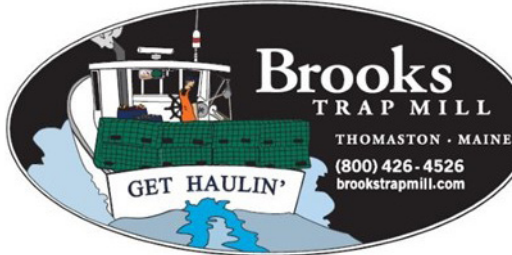
Another revelation from this bizarre episode was that the FDA said it was legally barred from sharing “confidential commercial information” (CCI) with the state Shellfish Control Authorities, which are responsible for investigating illness reports linked to state harvest areas. To perform a proper investigation, states need to have accurate harvest data—who, what, where, when, and how product was distributed—to identify common factors and determine how the shellfish may have become contaminated. In cases like this it is difficult to rule out other possible modes of infection, such as poultry or leafy greens, which are far more commonly associated with *Salmonella* illnesses.

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To Split Or Not To Split

survival, as well as the highest percentage of market-size oysters (retained in the 44-mm tumbler), the deepest cup, and the best fan shape (ratio of length to height, see diagram at right). The highest trigger-volume animals had higher meat weight, which may seem counterintuitive until you stop to consider that the higher mortality in those baskets resulted in less competition for food.

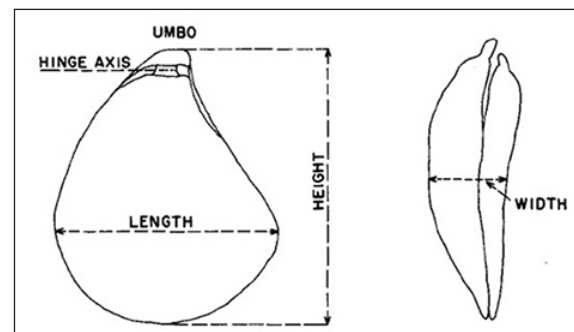
LaGanke's work revealed clear trade-offs as a result of changing the trigger volume for splitting. Although splitting at the lowest density resulted in higher yield and survival, it also required more than twice as many baskets and more than three times as much labor. The tradeoff for higher yield in this case is higher cost per oyster and a reduction in total farm capacity (or a requirement for additional gear).

Had the experiment continued beyond the 14-month trial to allow all the oysters to grow to market size, some of these differ-

ences would have been erased by the longer time required to reach market size. Since faster-growing animals in the lower-trigger-volume baskets would have been harvested earlier, more baskets and more labor would have been required to bring the entire crop to market for the largest trigger volume.

The best initial stocking density question is just as complicated as deciding when to split, and also involves trade-offs. Some growers go to extremes, simply stocking at a final harvest density (usually about 200 oysters per bag) and never splitting. If you stock at a low density, you should see faster growth, better survival, fuller meats, and better shape, plus it allows you to avoid the labor of splitting altogether. However, you will also have to buy more gear for the same number of animals, which means more fouling-removal labor, and higher gear costs. Stocking at a higher density may save money on gear, but it may take longer for the oysters to reach market size and result in higher mortality and thinner, watery meats.

The ideal initial stocking density will be lower for small seed than for larger animals, and higher for sites with strong currents and rich food, so farmers really need to figure it out for themselves. I recommend that growers stock a few bags at different volumes and return in several weeks to look at the results. You can look at total volume increases and compare the percent increase per day, but you should also keep an eye on meat quality. If your animals are looking thin or watery you should probably cut back on your stocking densities and split more frequently. If



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your bags are covered with algae and sea squirts, that will restrict the food from reaching your crop, and nothing will grow.

From a practical standpoint, most farmers are always behind in summer. Fouling growth is crazy, and we rarely have enough labor to keep up with all the jobs that need attention. Bad weather, a balky outboard, an injury, or a set of mussels can quickly put you behind, and then everything snowballs. Your decision about when to split is often determined by factors beyond your control.

The profit motive often leads growers to buy more seed than they have gear to hold it in or labor to properly maintain it. This is the most **common error** I see growers make. Over-stocking bags and failing to deal with excessive fouling will result in slow growth and poor quality, and could lead to significant stress and mortalities. With soaring costs for gear and labor, it is easy to see why growers are squeezed into making tough decisions with challenging tradeoffs.

But if this was easy then everyone would be doing it!



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Coming Events

Gulf & South Atlantic Shellfish Conference. July 28–30. Visit www.issc.org/event.

International Conference on Molluscan Shellfish Safety. Sept. 6–11. The Forum at Exeter University, Exeter, UK. Visit www.icmss.net.

International Conference on Shellfish Restoration. Oct. 4–8. Little Creek Casino Resort, Shelton, WA. Visit www.shellfish-society.org/icsr2026.html.

Winter Storage of Oysters

by Robert B. Rheault,
ECSCGA Executive Director

After this brutal winter, many growers are talking about alternative approaches to dealing with ice and keeping their crop from being crushed, killed, or carried away. If you are growing oysters in floating gear in northern New England you can probably expect to lose that gear unless you sink it below the ice. That's pretty much guaranteed in Maine, but in southern New England we are never sure what winter will bring. After a series of relatively mild winters, many growers in Rhode Island and Long Island decided it would take too much effort to sink their gear, and as a result many got hammered. This winter, some growers experienced ice damage to floating gear as far south as North Carolina.

Talking to Farm Service Agency crop adjusters, there have been an unprecedented number of crop insurance claims, and the offices are still wrestling with the question of whether the growers were negligent in not sinking their gear, or whether this winter freeze was just so much worse than "typical" that growers should be eligible to make a claim. So what is "typical" and where should the line be drawn? Where is sinking gear a best practice, and when should growers expect to be bailed out?

Growers on Long Island reported 30% losses, and Governor Hochul is exploring the possibility of a federal disaster declaration. One Peconic Bay grower had ice dislodge the anchors of his FlipFarm array, and the chain managed to get wrapped in the propeller of the ferry *Menantic* as it headed from Greenport to Shelter Island before dawn. The vessel is now undergoing propeller and shaft repairs in Rhode Island.

We had Coast Guard vessels in Maryland helping fishermen get out to work, and two watermen perished this winter. Further south, most growers were in pretty good shape, but to the north, pictures of icebergs in Delaware Bay crushing racks at low tide and growers standing on sea ice were common.



Lots of anchors were dragged, and tons of gear was lost or destroyed.

So what are your options? If you can move your cages to deeper water, you are usually in pretty good shape, but blowout winter tides have often exposed oysters to freezing conditions and crushed gear that was not in deep enough water. On the north side of Cape Cod where tides of more than 7 feet are common, and many growers work on intertidal leases, growers have learned to store seed oysters on land in various types of pits or refrigerated storage.

For decades researchers have looked at the biology of dry storage. We have two fact sheets on our website describing the various approaches listed under Grower Resources (Overwintering Oysters [I](#) and [II](#)). Herb Hidu published studies in 1988 showing that 44-mm Eastern oysters made it through six months of storage in cold, moist air with 95% survival. A Sea Grant fact sheet put together by Dianne Murphy and Bill Walton in 2005 suggests that 2" seed on Cape Cod is commonly "pitted" for three months at 30–40°F with typical survival rates over 90%.

I checked with Wellfleet grower Andrew Cummings, who has been pitting his oysters for 20 years, and he shared some pro tips on this storage technique:

1. Make sure your animals are fully dormant. Water temperatures should be below 44°F

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ANDREW CUMMINGS/
WASH-ASHORE
OYSTER RANCH

Andrew Cummings of Wash-Ashore Oyster Ranch in Wellfleet, Massachusetts, built the "perfect pit," to overwinter his oysters on land. After pouring a 16' x 16' concrete foundation with a drain-less floor, he capped the foundation with a pressure treated ceiling/roof, then added a deck on top with a hatch door. The pit maintains an ambient temperature of 34–36° with 100% humidity all winter long.



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2023 Food Safety Innovation Award Recipient

Shellfish in the Digital Age: A Conversation with Chef Willow Hubsher

by Mason Bailey,
ECSCGA Executive Assistant

For better or for worse, we are all increasingly online, especially younger generations. Nevertheless, the shellfish industry lacks visibility on social media. While folks pick up a molluscan interest in different ways, accessibility is a major issue for new or casual consumers. This is something Willow Hubsher, a classi-

cally trained chef and owner of Market Price mobile oyster bar, hopes to improve through her engagements.

At just 28, Hubsher realized that she craved a more public-facing role than that of a back-of-house professional chef. She decided to start a mobile raw bar and educational initiative, cheekily named Market Price, which aims to bring a “sommelier experience to both aficionados and skeptics alike.” Embedded in the culinary world, Hubsher is dismayed by how little cultural, historic, and scientific consideration is given to oysters, as opposed to wine. She notes that the latter sector has “done an amazing job at marketing,

especially for trends like natural wines, whereas the shellfish industry could do better.”

With her “direct-to-camera oyster content” on TikTok and Instagram, Hubsher is doing her part to whip up more interest in the industry. She has found that, for younger audiences, “aesthetics are a huge component” in attracting the lay consumer. And oysters are certainly eye-catching, presenting as analogs for both high-class aspiration and traditional coastal living. What’s more, by “highlighting a story” about oysters, we can draw in consumers from even the most land-locked states.

Expanding the shellfish market also depends on accessibility. As we see oyster prices spiking in restaurants, especially here in New York City, it’s important to build confidence among consumers in purchasing oysters from local growers and shucking at home. Hubsher’s shucking classes are a hugely successful part of her business. These can be privately booked or attended as part of frequent pop-up



events across the metro area. Shucking tips are also featured on the MarketPriceBK social channels. Still, Hubsher thinks sellers should “provide a damn glove and knife with a box of oysters,” if for nothing else than making folks more comfortable with eating them at home.

On the controversial topic of accompaniments, Hubsher is a firm believer that “beer is the best pairing for an oyster,” and while preferring hers plain, notes that sauces like mignonette and horseradish add variety and make oysters more approachable. At the end of the day, educating the shellfish-curious or any other scrollerby online brings awareness to the industry, helping to secure its future.

I recently had the opportunity to attend one of Market Price’s



MASON BAILEY/ECSCGA

Chef Willow Hubsher is a chef and owner of Market Price mobile oyster bar in New York City. With her “direct-to-camera oyster content” on TikTok and Instagram, she is doing her part to whip up more interest in the oyster industry.

shucking classes here in New York City. In a cornered-off event space at a brewery in Queens, our group of 10 sipped along to Hubsher’s mini Ted-talk on oyster history, anatomy, and cultivation methods. Moving through a handful of oysters—Eel Lakes from Nova Scotia and West Passages from Rhode Island—attendees became increasingly proficient at shucking. Slurping each one down with no more than a squeeze of lemon, Hubsher quizzed us on the salinity ranges in parts per thousand (ppt) for each type and casually offered her insights into the subtleties of their merroirs.

Wrapping up the class, Hubsher emphasized that farming oysters for consumption is the one practice that leaves the environment “truly better off than doing nothing at all.” Not a single participant left the class without a newfound interest in oysters, including a fellow transplant from Kentucky, who admitted to Hubsher that she had just made an oyster lover out of him.

It is certainly good for the ECSCGA to have such industry partners as Chef Willow, and we continue to work peripherally to improve outcomes for growers, leading with a shared assertion that “more oyster eaters are good for everyone.”

Check out MarketPriceBK on both Instagram and TikTok, and on www.marketpricebk.com. If you’re one of Hubsher’s shucking protégés, consider joining the ECSCGA and finding a wealth of knowledge for new and existing growers and consumers on our website ecsga.org!

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Pitting Oysters for Storage

consistently for at least 10 days.

2. The pit should be below the frost line and should hold temperatures stable in the mid 30s.

3. Humidity must be near 100%, but you can't seal the pit completely. The animals still need to open up and breathe occasionally. Cummings says you can stack oysters several feet deep, in sacks or flat growout bags (boxed bags will get crushed).

4. Once you put the oysters away, don't touch them. They should be OK for 10-12 weeks.

Cummings pits his animals at a size of about 2" after a single season, and says the consensus among local growers is that larger animals don't store as well. He also points out that healthy animals will do better than ones that may be diseased, or those going into the winter in poor condition. (I can personally attest that this is also true for animals held in the water at depth).

Another grower I spoke to on Cape Cod uses insulated shipping containers to store his seed above ground. To avoid the need for too much refrigeration, he waits for snow and uses a snow blower to cover the pile. I have also heard rumors that Canadian growers use large refrigeration units to store oysters over the winter, splashing them in wet storage tanks for a week or two before sale. It sure beats trying to harvest through several feet of ice!

Biologically, it is probably ideal to have the temperature held steady at just above freezing to slow down the animals' metabolism as far as possible. When it is time to put them back out in the water, they are going to be hungry. They can start to feed when water temperatures are above 40°F, but typically won't grow below 50°F. However, often there is not much food in the water until later. Cold, rainy spring weather will delay a good plankton bloom, and can lead to starvation after a long winter. One grower on Cape Cod told me he likes to wait to put his animals back out until after he sees the first barnacle set on the rocks. It's a great strategy to avoid the barnacles and apparently works well for him.

I am not sure how far south the pitting strategy might work, but there are a couple of researchers in Massachusetts and New Hampshire looking at re-examining the whole approach. After the winter we just had, we might see more growers willing to give it a try.

The Winter of Our Discontent



GRADY KOEPELE/NORTH FORK BIG OYSTER

Death from above, when anchors turn into battering rams. Grady Koepele (L) holding a helical anchor from a flip cage array (R) that was dragged by ice from another farm and trashed the eastern lease belonging to North Fork Big Oyster in Peconic Bay, Long Island.



MATT KETCHAM/PECONIC GOLD OYSTERS

The ice made oyster farming difficult in Great Peconic Bay, between the north and south forks of Long Island in New York this winter.



JIM LYNCH/OCEAN STATE SHELLFISH CO-OP

Rhode Island natives jokingly refer to the state as being in the banana belt. Not this year. At Rob Krause's Ninigret Oyster Farm in Charlestown, farm hands had to harvest the oysters using a snowmobile towing a skiff over the ice. When the ice started to melt, the snowmobile broke through and became partially submerged.



DAN DEVEREAUX/MERE POINT OYSTER CO.

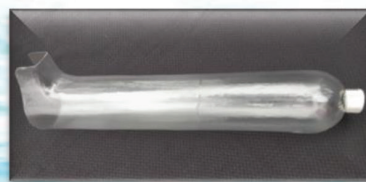
Farm hands at Mere Point Oyster Co. had to use chain saws to access iced-in gear in Brunswick, Maine.



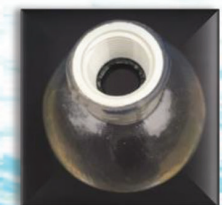
ERIC KOEPELE/NORTH FORK BIG OYSTER

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Shellfish Mariculture Hub Will Be a Boon To NC Industry

North Carolina Coastal Federation and North Carolina Sea Grant are cooperating on a new project to help the state's shellfish aquaculture industry meet a goal of growing to \$100 million in overall economic impact (\$33 million in farmgate value) and creating 1,000 jobs by 2030.

According to the North Carolina Coastal Federation, "The Shellfish Mariculture Hub will serve as a shared resource for shellfish growers, marking a significant milestone in sustainable shellfish aquaculture in the state and supporting the local community. The Shellfish Mariculture Hub promises to enhance the production capabilities of shellfish farmers while promoting collaboration and innovation."

When it becomes operational, the hub is slated to provide 15 different farms with shared resources, including a space to work on gear, cold-storage facilities, and a dock for accessing growing areas and for landing harvests. It is hoped that the hub will process \$1.5 million in local shellfish every year.

For more info visit coastalreview.org.



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ECSGA Seeking New Executive Director

After 18 years of extraordinary leadership, ECSGA Executive Director Bob Rheault will be retiring at the end of 2026, and we are searching for a replacement.

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—Continued from page 2

Walk the Hill

After an annual expected and almost performative move, the president's budget request zeroes out Sea Grant funding, and stakeholders have to rush to D.C. to plead for Congress to keep Sea Grant alive.

As usual, the fly-in was capped off by a Congressional Shellfish and Wine Caucus reception, enjoyed by a record number of representatives and hundreds of staff members. We served 1,000 oysters from five states, and the PCSGA brought an equal number from the West Coast. The Wine Caucus served eight cases of wine.

This event is always well attended, and allows us to rub elbows with representatives and their staff in an informal setting. It gives us a chance to reinforce our messages and build relationships that ensure we are welcomed by attentive staff whenever we come

to Washington. **I cannot stress enough how important it is to have constituents in the room when we go to D.C.** Members and staff don't want to hear from another lobbyist—they want to hear from growers in their state. If we want to get a meeting from senior staff it really helps to have a local in the room. The Hill Walk event could not happen without a huge commitment from grower members who sacrifice valuable time away from their businesses, spend large sums to travel, and spend several days racing from meeting to meeting in business attire to carry our message to their elected representatives.

Please make sure to thank these folks when you see them: Jeff Auger, Atlantic Aqua Farms; Dan Pittenger, Island Creek Oysters; Heather Ketcham, Ketcham Supply; Kerian Fennelly, Newport Mussels; Matty Gregg, 40 North Oyster Farms; Mark Nardi, Arrowhead Point Oysters; Stephan Abel, Ferry Cove Hatchery; Kim Huskey, Cherrystone Aqua-Farms; Chris Matteo, Chadwick Creek



MICHELE FAMILIETTI/WINE INSTITUTE

The success of the 2026 Walk the Hill was made possible by the huge commitment from members who sacrificed their time and money to carry our message to elected representatives.

Oysters; Laura Solomon, Tybee Oyster Co.; Adrienne Johnson, Florida Shellfish Aquaculture Association; Reed Smith, Calusa Oyster Co.; and Doug Ankersen, Isle Dauphine Oyster Co.

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—Continued from page 3
Salmonella Cluster

When multi-source illnesses occur, states need to compare notes and share information so they can work together. While the CDC shared information, the FDA claimed it was barred from doing so. This could be rectified by a bill called the [Federal State Information Sharing Act of 2026](#), which we hope will be passed to prevent this disconnect between the FDA and state authorities from being an issue going forward. Again, the ECSGA is tracking this problem closely and will be pushing our congressional allies for support.

The ECSGA made several other recommendations that the

ISSC Executive Board adopted, including:

1. The ISSC shall charge the Traceability Committee with evaluating whether unique lot codes should be mandated on shellfish tags to help improve the success of tracebacks and to speed recall efforts.
2. The FDA should enhance training for state epidemiologists, develop training manuals, and fund additional training.
3. The ISSC and the FDA should work with the Conference for Food Protection to emphasize to shellfish purveyors and restaurants the importance of retaining shellfish tags to allow for proper tracebacks following reports of illnesses.

One of the burning questions in these *Salmonella* illness reports (and similar reports of campylobacteriosis) is how the state epidemiologist determines whether the illnesses are related to shellfish consumption, given that illnesses associated with poultry are far more common.

Certainly, if you ask folks if they ate or had contact with chicken, turkey, or raw vegetables in the past week, the odds are high that the answer would be yes. A single drop of chicken blood is often sufficient to cause illness. If an ill person reports both eating shellfish and eating or handling raw chicken, how does the epidemiologist decide which food is the causative agent?

According to the USDA's Food Safety and Inspection Service, of the estimated 1.3 million *Salmonella* cases in the U.S. each year, approximately 23% (~300,000) are caused by poultry consumption, yet they rarely generate media reports.

But when 26 salmonellosis patients (of 43 interviewed) reported oyster consumption, we had 900 news outlets run with the libelous allegation that oysters caused an outbreak.

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Northeast Aquaculture Conference Celebrates Innovation, Growth, and Community

by Kristen Jabanoski, Science Communications Specialist, NOAA NEFSC, Milford, Connecticut

The snow and cold temperatures in Portland, Maine, were no match for the energy of nearly 700 people who gathered this year for the joint 26th Northeast Aquaculture Conference and Expo and 45th Milford Aquaculture Seminar. With its largest-ever turnout, the conference highlighted the Northeast's growing aquaculture sector. In Maine alone, aquaculture has nearly tripled in economic impact since 2007. The meeting was co-hosted by the Maine Aquaculture Innovation Center and NOAA Fisheries Milford Lab from January 7–9, 2026.

Attendees learned from more than 100 presenters during 45 sessions over three days. Science presentations covered the latest research on shellfish, seaweed, sea urchin, and finfish aquaculture. A record 38 aquaculture vendors demonstrated the latest innovations in aquaculture gear technology during the largest-ever trade show. In addition, 78 students received support to attend and present their work. The meeting brought industry leaders, scientific researchers, resource managers, extension specialists and students into the same room to discuss the future of sustainable farmed seafood production in the Northeast.

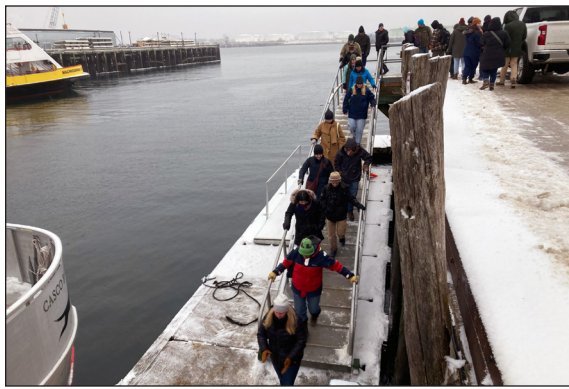
The conference kicked off with a welcome address by Danielle Blacklock, director of the NOAA Office of Aquaculture. She highlighted the growing tailwinds toward expanding U.S. aquaculture production. This was followed by updates from U.S. states and Canadian provinces from Prince Edward Island, Canada, to Virginia. The Maine Aquaculture Association then presented Dr. Chris Davis, Maine Aquaculture Innovation Center's Innovator-in-Residence, with its inaugural lifetime achievement award.

Beyond the Lecture Hall: Field Trips and Workshops

The learning didn't stop with presentations; more than 200 attendees gained hands-on experience with aquaculture through four field trips and seven workshops.

Field trips included:

- ❑ Boat tour of Casco Bay and tour of Bangs Island Mussels facility
- ❑ Shred Electric workboat demonstration ride
- ❑ Merrymeeting Shellfish Hatchery in Harpswell, Maine
- ❑ University of New England's Girard Marine Science Center



CHRIS DAVIS/MAINE AQUACULTURE INNOVATION CENTER

Participants walk down to the dock for a boat tour of Casco Bay and tour of Bangs Island Mussels facility during the 2026 Northeast Aquaculture Conference and Expo.

Workshops included:

- ❑ Farm design with Kelson Marine's aquaculture engineers
- ❑ Economics in action: Empowering aquaculture farms through business planning and financial management
- ❑ Introduction to marine electrification with Shred Electric and the New England Ocean Cluster
- ❑ Building strength, building skills, building community

Future: Education and Workforce Development

Several sessions focused on developing the aquaculture workforce and cultivating the next generation of growers and scientists through education, internships, and apprenticeships. Innovative programs throughout the Northeast shared their best practices for matching students' skills and hands-on experience with the aquaculture sector's growing

workforce needs, including:

- ❑ Aquaculture Internships for Massachusetts
- ❑ Maine's Aquaculture Apprenticeship Program
- ❑ Washington County Community College
- ❑ The Sound School's shellfish hatchery

Maya Pelletier, workforce and education manager at Maine Aquaculture Innovation Center, chaired an education session. During the session, the University of Maine Cooperative Extension shared virtual field trips they created to make visiting Maine's aquaculture farms accessible to more K–12 students.

Celebrating Indigenous Aquaculture in Maine

The conference featured its first-ever panel discussion about Indigenous-led aquaculture projects. The inspiring panel included Wabanaki Confederacy tribal members from the Mi'kmaq Nation, Penobscot Nation, and Passamaquoddy Nation. They shared how aquaculture supports local economies and fosters community health, wellbeing, and cultural identity, as well as Indigenous food sovereignty—the right of the tribes to grow their own culturally significant food.

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ECSCGA Board Welcomes Two New Members

Mark Nardi has stepped up to replace Mark Casey as the Delaware representative on the ECSCGA board of directors. Nardi has been growing oysters commercially in Delaware's Rehoboth Bay for six years and is part of the Arrowhead Point Oysters brand. Until his recent retirement, he worked as a geographer for the U.S. Geological Survey, where he studied questions related to subjects like water quality, Best Management Practices implementation, and shoreline change.



Mark is an appointed member of Delaware's Aquaculture Task Force, and President of the Delaware Aquaculture Association. He also serves on the Sussex Conservation District's Board of Supervisors.

Dan Martino is replacing Mark Begley as the board's Mas-

sachusetts representative. Dan is president of his local Farm Bureau chapter and sits on the Executive Committee for the Massachusetts Farm Bureau, Massachusetts Aquaculture Association, and the Shellfish Growers Climate Coalition.

He is the Chairman of the Oak Bluffs Shellfish Committee and served on Governor Baker's Massachusetts Ocean Acidification Council, the NOAA Sanctuary Advisory Council, and USDA's Natural Alignment of Mariculture Seaweed Organic Certification Guidelines working group.


Dan has taken part in cutting-edge ocean farming experiments, and following the release of

"The Oyster Book" (Agate Publishing), which he published in 2024, he has been working with multiple higher education institutions to create aquaculture college-level courses.




We would like to thank outgoing board members Mark Casey and Mark Begley for their many years of faithful service to the association. And thanks to Mark Nardi and Dan Martino for volunteering to serve as board representatives.





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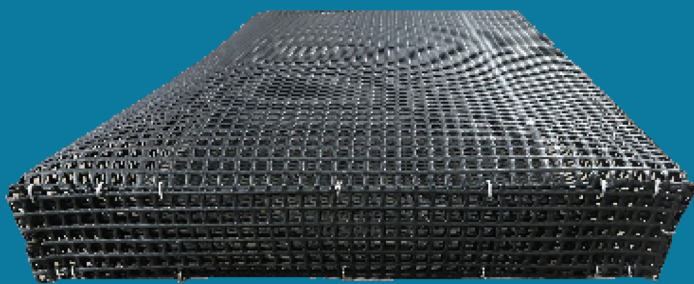
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Advances in Hatchery Disease Prevention

by Robert B. Rheault,
ECSGA Executive Director

Among the many fascinating presentations at the National Shellfisheries Association (NSA) annual meeting in Portland, Oregon, in March were those describing the great work being done at the lab of Dr. Marta Gomez-Chiari at the University of Rhode Island (URI). For three years she has been leading a U.S. Department of Agriculture (USDA)-funded research team called the Bivalve Hatchery Health Consortium (BHHC), looking for clues about what causes batches of larvae to crash.

One of the postdoctoral fellows in Gomez-Chiari's lab, Dr. Austin Calhoun, blew my mind with a presentation showing how the natural immune response of oyster larvae could be stimulated before they even encounter pathogens, in a process called "immune-priming." Calhoun demonstrated that this process works in Eastern oysters (*Crassostrea virginica*), and could potentially be leveraged by hatchery workers to prevent disease.

Calhoun writes:

"To get at this, pathogens implicated in larval crashes were first obtained from the BHHC. Those pathogens were then heat-killed and administered via liquid inoculation into experimental housing units for both developing larvae (6–8 days post fertilization) and seed (4–6 mm). At a set timepoint later (for larvae: 6, 48, 96, or 144 hours post-priming; for seed: 6 hours post-priming), live pathogens that either matched or mismatched the priming treatments were administered to both larvae and seed.

"Interestingly, Eastern oyster larvae show memory-like responses where they survive much better when the priming treatment is identical to the pathogen they are exposed to later in their lives (Fig. 3), for two distinct strains of *Vibrio coralliilyticus* (RE22 and RRD8) and *Tenacibaculum ascidiaceicola*. While seed also show signs of improved survival after immune priming against *Roseovarius crassostreae* and *Vibrio coralliilyticus*, this protection was found to be non-pathogen specific. These preliminary results show that oysters are remarkably capable of pathogen defense, [that] immune priming may be long-lasting during larval development, and that immune priming may be a promising disease management tool for Eastern oyster aquaculture."

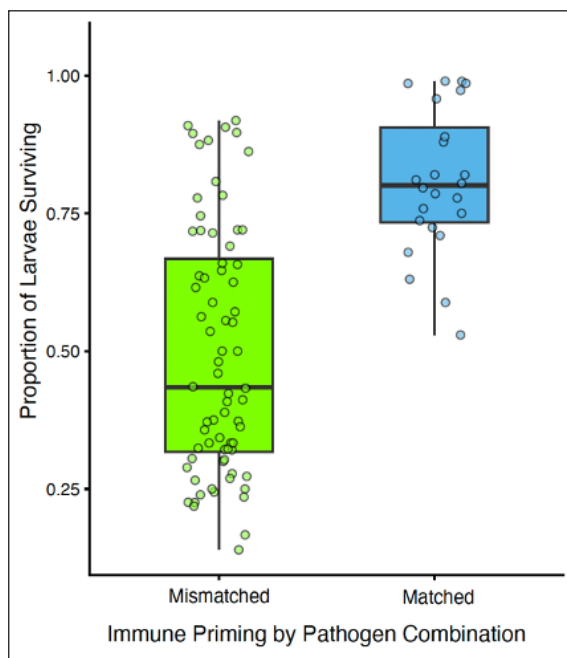


Fig. 3. Dr. Austin Calhoun's graph showing the "proportion of larvae surviving according to the immune priming by pathogen combination. 'Matched' indicates the priming treatment was completely identical to the live pathogens (*Vibrio coralliilyticus* [RE22 and RRD8] and *Tenacibaculum ascidiaceicola*), while 'mismatched' indicates the priming treatment was not identical to the secondary pathogen experimentally administered."

Probiotics: Mixing Strains Works Better Than Going It Alone

In another presentation at the NSA's annual meeting, recent URI graduate Dr. Jaypee Samson described his work with the BHHC focusing on using beneficial bacteria (probiotics) to improve larval survival and resilience. He said that:

"In previous studies, we evaluated a single probiotic strain, *Phaeobacter inhibens* (aka S4), and found that it improved larval survival under disease conditions. From further screening, we identified four more promising candidates: *Algoriphagus yeomjeoni*, *Glutamicibacter soli*, *Pseudoocenicola nitratreducens*, and *Marinomonas gallaica*. These strains were safe for larvae and improved survival when larvae were subsequently exposed to bacterial pathogens. The probiotic strains were exposed to 6–8 day-old larvae and we then exposed the larvae to known pathogens *Vibrio coralliilyticus* or *Aliiroseovarius carassostreae*.

—Continued on page 19

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Following are some highlights of comments submitted by the ECSGA objecting to a Proposed Rule by the U.S. Fish and Wildlife Service (USFWS) to change the definition of the term “shellfish” to include cephalopods in the Code of Federal Regulations by removing the phrase “having a shell” and adding specific taxa.

We strongly object to the proposed change and reject the faulty logic used to justify altering the definition [of shellfish].

The...notice claims that the change “reduces regulatory ambiguity.” This is absurd. Cephalopods have no shells and are not referred to as “shellfish” under any definition of the term. A search of all dictionary definitions of “shellfish” fails to find a single mention of cephalopods. Making this change would confuse customers and disrupt current commercial trade practices. All federal documents ... define “shellfish” in a way that does not include cephalopods. Making this change would be inconsistent with decades of federal and state publications.

If USFWS aims to acknowledge the taxonomic groupings of cephalopods and bivalve mollusks within the phylum Mollusca, it should also exclude Crustacea from the term to ensure consistency. It is understandably confusing that crabs, shrimp, and lobsters are considered “shellfish” under most definitions of the term, even though they belong to their own phylum and have little resemblance to the species most commonly recognized as shellfish: bivalve mollusks...

The term “shellfish” has never reflected biological classification, as the phyla Mollusca and Crustacea have been distinct since Linnaeus proposed the concept of phylogenetics in the 1700s. More importantly, cephalopods have never been considered “shellfish” in “modern commercial use.”

USFWS claims that since cephalopods are molluscs, their exclusion from the term “shellfish” creates “ambiguity...for the purposes of wildlife importation, declaration, inspection, and enforcement.” This implies that the term “shellfish” refers to the phylum Mollusca, which ignores the fact that many crustacea are

—Continued on page 20

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—Continued from page 17

Hatchery Disease Prevention

“When combined into a multi-strain probiotic mixture, the formulation provided stronger protection than the single-strain probiotic alone (Fig. 1) and significantly improved survival across a range of pathogens associated with recent hatchery larval crashes. All [in] all, multi-strain probiotics may offer a more effective and practical strategy for reducing larval losses in bivalve hatcheries.”

Dr. Gomez-Chiarri will be testing these probiotics in the hatchery over the next couple of years, but has offered to provide them to hatcheries for testing, as long as the hatcheries return larval samples (at their own expense) for her lab to examine.

To learn more about the BHHC or to get involved in this research visit [gomezchiarri.wixsite.com/gomez-chiarri-lab](http://wixsite.com/gomez-chiarri-lab).

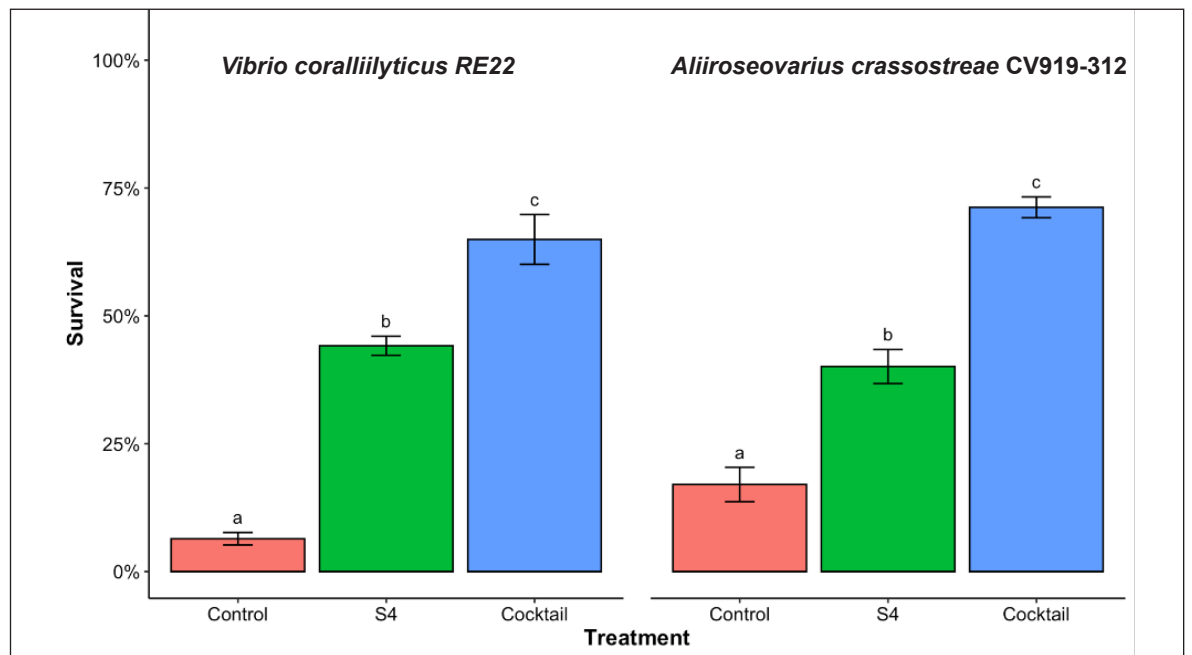


Fig. 1. Survival of oyster (*Crassostrea virginica*) larvae following challenge with *Vibrio coralliilyticus* RE22 or *Aliiroseovarius crassostreae* CV919-312 after treatment with either an untreated control, S4 alone, or a probiotic cocktail.

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Grower	over \$3 million	\$3,000
Shellfish Dealers and Equipment Suppliers		\$250
Restaurant Ally		\$100
Non-voting Associate		\$50

—Continued from page 17
Shellfish/Cephalopods

typically (and frustratingly) included in the term “shellfish” in many commercial transactions and most dictionary definitions. This ambiguity can best be alleviated by avoiding the term “shellfish” and using appropriate phylogenetic terms such as cephalopods, crustaceans, and bivalve molluscs.

USFWS also claims: “In practice, this ambiguity has led to inconsistent treatment of mollusks and mollusk products at ports of entry, confusion among regulated entities, and unnecessary regulatory burden on importers, exporters, and enforcement personnel.”

Proper education for importers, exporters, and enforcement personnel will alleviate this confusion. Training this small group will be much easier and more effective than trying to teach the entire population... to adopt a misleading definition of “shellfish” that includes cephalopods.

Only marine biologists recognize the fact that cephalopods are close relatives of bivalve molluscs. The typical consumer, and even most fishmongers, will be very confused by this change....

USFWS would be better off eliminating the term “shellfish” ... altogether and just using precise phylogenetic terms, such as bivalve mollusks, cephalopod mollusks, and crustaceans.

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