

Letter from the Director

Aloha,

As you have likely heard, October is Seafood Month and we here at CTSA are celebrating by preparing our favorite delectable dishes (see our featured recipe in this issue)! Seafood is an integral thread in the fabric of the Pacific Islands. In fact, Hawaii residents consume more than twice the amount of seafood as the average American. The majority of that seafood comes from commercial and subsistence fishing, as well as imported aquaculture products - only a small portion of the supply comes from local aquaculture. There exist significant opportunities to develop responsible and even restorative aquaculture here, especially in our abundant EEZ and along the shorelines in Hawaiian fishponds. The FAO director general, Qu Dongyu, has called for innovation to support aquaculture growth: "Aquaculture already plays an important role in 'leaving no one behind,' which means all our efforts and actions must focus on everyone everywhere, in order to end hunger and poverty."



In two recent articles in the Honolulu Star-Advertiser, Crystal Johnson stated that "aquaculture is the cornerstone of a sustainable American seafood future." We must use our available ocean, land and technology resources to secure our seafood sources, as she suggested. However, social acceptance is a key element of any development in these remote islands, and there are still hurdles to overcome when it comes to commercial farming. In another recent article, Walter Ritte shared his thoughts that community-focused farming --such as production in fishponds-- is most appropriate for Hawaii, and that "commercial aquaculture" only serves the wealthy. We can understand this perspective, and it has become a hot topic in the global aquaculture community with FAO putting a spotlight on social acceptance and equity in aquaculture. I am a firm believer that farmed seafood should not be something reserved for wealthy people living in a foreign land, but should instead be affordable for everyone to enjoy, especially the local population of the place where it is grown. With that in mind, CTSA aims to support regional development that is pono (responsible) and in-line with community food production goals. We are happy to see many fishponds thriving, including those that are actually at the level of commercial-scale production. Through our supported research, we aim to make this and other sustainable methods of farming (and the resulting products) more efficient and affordable. The key is choosing the right species and technologies for the location where the farming is taking place.

Aquaculture is important to the future of our planet and people. As the global population and appetite for seafood protein increases, it is becoming even more apparent that we need aquaculture to supplement wild caught seafood or else there will be nothing left to harvest from the rivers and seas. But in order for aquaculture to realize its true potential, we as an industry need to work with our local communities to determine and address their unique opportunities and seafood supply needs. Only then will we achieve our shared goals.

I look forward to continuing this important work together with you.

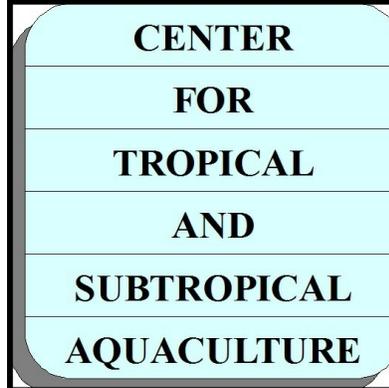
Mahalo,
Dr. Cheng-Sheng Lee
Executive Director, CTSA

Reminder: Last Chance to Tell CTSA What to Include in the 'Digital Aquaculture Toolkit' for Local Producers

If you have not already done so, please take a few minutes to complete the CTSA survey to assess stakeholder priorities for a forthcoming digital training series. The survey will be closed on November 12.

The CTSA FY21 Request for Pre-Proposals, released this past April, lists the five program priority areas for funding during this year's development cycle. Under the framework of the priority areas --and following the suggestion of CTSA committee members-- our program is planning to use remaining FY21 development funds to create a digital toolkit to address the needs of local aquaculture producers.

The toolkit will consist of a series of hands-on training seminars, featured live on Zoom with Q&A sessions and also recorded for future reproduction. The seminars will be based on our local conditions and prepared specifically for producers in our region. Accordingly, we are conducting a survey to help determine the most important topics that local producers and other stakeholders would like to see included in the seminars.



Please take a few moments and [click here to take the survey](#). If you have a preference for training outside of the priority areas listed in the survey, please explain under 'Other.' We also welcome discussion with any member of the CTSA administrative team. Your assistance and input is greatly appreciated in this process!

Attention Hawaii Farmers and Other Stakeholders Using Aquatic Feeds: We Need Your Input!

CTSA is soliciting survey input from the local aquaculture industry to understand the demand for local feed production in Hawai'i. This survey is part of a NOAA-funded study that is being conducted to assess the economic feasibility of local aquatic feed production in Hawai'i.

The survey will ask questions about your fish production, fish feed demand, and demography (e.g. age, gender, etc), and will take around 15-20 minutes to complete. Participation is voluntary and survey results will be kept confidential and will not be traceable back to you. Aggregated findings may be shared in publications or presentations with any potential identifiers.



[Click here to take the survey](#). Your participation in this survey (and others like it) is critical to the progress of regional aquaculture. Thank you for taking the time to share your input.

CTSA Interview with NOAA's Regional Aquaculture Coordinator: Collaboration and Creativity are Keys to Aquaculture Development in the Pacific Islands

"The umbrella term 'aquaculture' can mean so many things at once. It can mean food security...it can mean cultural preservation...it can mean restoring native ecosystems...and it can do all of that at the same time if you want it to! Aquaculture is an exercise in creativity and that's something I love about it."

CTSA recently interviewed one of our newest Technical Committee members, Tori Spence McConnell, NOAA Fisheries Policy Analyst and [Pacific Islands Aquaculture Coordinator](#), about her role at NOAA and the opportunities for collaborative aquaculture development in our region.



"I see this position as someone who can hopefully maintain and develop relationships with everyone who is interested in and affected by aquaculture in the communities here in the Pacific Islands, and ensure that NOAA keeps those perspectives in mind as we move forward," she stated.

Tori assumed the role of Aquaculture Coordinator in February 2020, just before the start of the Covid-19

intended. "Starting a position like this, I had hoped to be able to have a lot more face time to get to know the community, understand research interests, and see how people operate on a farm because there is so much value in having those in-person conversations whenever possible," she explained. "It hasn't been possible to do that, so I am really looking forward to doing whatever we can to reach out to the community and make sure we can have that face time, even if its [virtual] FaceTime."

In spite of these challenges, McConnell has worked to gather input from regional stakeholders to help in the development of NOAA's aquaculture management program. "My primary role is to work on developing an Offshore Aquaculture Management Program for Federal waters. The initial phase is the Programmatic Environmental Impact Statement that came out earlier this year. The public comment period has ended; we are working on responding to comments and hopefully completing a final draft soon," stated McConnell. "That should really set in motion the process to allow for a deeper dive into how to ensure aquaculture in Federal waters can be regulated in a sustainable manner and in a manner that has everyone at the table."

For the past decade, McConnell has been dedicated to applying multi-stakeholder approaches to sustainable seafood development. Prior to joining NOAA, she served as an Aquaculture Scientist for the Monterey Bay Aquarium 'Seafood Watch' program, and before that was a farm-level auditor for a sustainable seafood program. She attributes her experiences in those positions as the foundation for her role at NOAA, as she has a thorough "understanding of building something that is sustainability-minded from a multi-stakeholder approach, and ensuring that everyone is at the table that needs to be."

This is an approach that CTSA has in common with McConnell and NOAA. We agree that research, demonstration, and extension are more effective and impactful when driven by industry stakeholders, especially in a region with such a rich seafood history. Our shared programmatic goals of sustainability and national food security --and more specifically increased local food production and security-- will help us leverage the government support that our programs receive to have more meaningful impacts.

Like CTSA, NOAA is supportive of aquaculture through programming and grants to local research and commercial operations. McConnell pointed out that [two recent NOAA Saltonstall-Kennedy grant awardees](#) are focusing on the culture of native species in Hawaii.

"Aquaculture is a way to produce food but it holds so much more meaning for people, especially here, given the history of aquaculture in the region. I think having both of our organizations aligned in how we see aquaculture and the priorities of what it can do for us as a society and where it can fit in is beneficial. There is a lot of talk about farmed versus wild, but to me they are not mutually exclusive. There is a lot of opportunity for all of us to work together and learn from each other and these different perspectives."

Seafood Month Celebration: How to Make 'Hawaiian Garlic Shrimp'

"Hawaiian Garlic Shrimp" is a famous local dish, made popular by the numerous shrimp trucks on O'ahu's North Shore. At least one of the trucks uses locally farmed prawns to create these delicious dishes - keep an eye out for the 'farm fresh' sign next time you are in the area. [The following recipe is from the cooking website *Onolicious Hawa'i*](#)

Ingredients

12 ounces shrimp (deveined, shell-on)
2 tablespoons mochiko flour (can substitute regular flour)
1 tablespoon paprika
1 teaspoon cayenne pepper
1 teaspoon salt
1 head garlic, minced
4 tablespoons butter
1 tablespoon olive oil



Instructions

- 1) Pat the shrimp dry and set aside.
- 2) Combine mochiko flour, paprika, cayenne pepper, and salt in a mixing bowl. Add the shrimp, toss to coat, and set aside.
- 3) In a large pan, melt the butter over medium heat. Once melted, add the garlic and cook till toasty and golden brown (about 3 minutes). Pour the garlic and butter out into a bowl.
- 4) Add olive oil to the skillet. Once the oil is warm, add the shrimp (single layer only, do this in two batches if needed). Cook the shrimp for about 2 minutes on each side, till it's nicely crisp and browned.
- 5) Pour the garlic butter back into the pan, and mix with the shrimp. Cook for another minute, and then you're done! Squeeze lemon all over and eat with rice.

AquaClip: US Aquaculture Production to Grow 18% in 2021 as Consumers Return to Restaurants

US aquaculture production is forecast to grow 18% in 2021 from 2020 levels, and expand 5.7% annually in nominal terms through 2025, according to *Aquaculture: United States*, a report recently released by Freedonia Focus Reports. The largest driver of growth will be a rebound in seafood demand from restaurants after the COVID-19 pandemic suppressed eating away from home activity. Other trends supporting growth include continued expansion in the US population, rising disposable personal incomes, and continued consumer interest in seafood as a healthy alternate protein to red meat. Consumers will also continue turning to farmed seafood in response to concerns about overfishing of wild stocks. Ongoing adoption of recirculating aquaculture systems (RAS) and continued experimentation with aquaculture of different species will also help grow the industry.

Demand for seafood (both farmed and wild-caught) saw declines in 2020 as at-home cooking did not offset precipitous declines from restaurant and foodservice customers. However, these demand declines will be reversed as the economy begins expanding again, boosting production levels. Demand is expected to reverse its shift toward the consumer retail market as more consumers resume eating out and as school cafeterias have reopened after temporarily closing during the pandemic.

These and other key insights are featured in *Aquaculture: United States*. This report forecasts to 2025 US aquaculture production in kilograms and nominal US dollars at the farm level. Total production is segmented in value and volume terms by product in terms of:

Source: PR Newswire // [Full Article](#)

This newsletter is written and prepared by the CTSA Information Specialist Meredith Brooks.

The Center for Tropical and Subtropical Aquaculture (CTSA) is one of five regional aquaculture centers in the United States established and funded by the U.S. Department of Agriculture's National Institute of Food and Agriculture (NIFA) under active grants 2016-38500-25751, 2018-38500-28886, and 2020-38500-32559. The regional aquaculture centers integrate individual and institutional expertise and resources in support of commercial aquaculture development. CTSA was established in 1986 and is jointly administered by the University of Hawaii and the Oceanic Institute of Hawaii Pacific University.

Center for Tropical and Subtropical Aquaculture
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