CENTER FOR TROPICAL AND SUBTROPICAL AQUACULTURE

Regional e-Notes ~ May 2026 ~ Volume 18, Issue 5

Letter from the Director

Aloha,

I want to take a moment to remind everyone that **FY26 pre-proposals are due to CTSA by June 8**. I am excited to see what projects you bring forward, and I especially hope to see proposals that build on work already underway and have a clear path toward commercialization. As always, our mission is to close the loop on priority species and technology to grow aquaculture production and revenue from our region. This matters all the more given that Hawaii aquaculture production in 2024 marked a second consecutive year of decline from our 2022 peak, reflecting closely linked challenges in both consumer demand and investor interest. We need more producers reaching commercialization in order to reverse that trend, and expanding consumer demand is critical to making that happen.

Across the industry, there is growing conversation about how to leverage the updated Dietary Guidelines to increase consumption and create new markets. I was pleased to attend a recent SeafoodSource webinar that addressed this directly. Presenters shared information from various sources, including survey data on seafood preferences across generations, to help identify what it takes to open new markets. The takeaway was clear: different generations have different tastes, and when we develop products, we must be aware of those preferences to meet consumer needs. With the updated Dietary Guidelines now promoting greater seafood consumption, our aquaculture industry must be positioned to meet that demand.

The webinar also highlighted a recent study promoting seafood introduction as early as six months of age, finding that starting young helps shape taste preferences, build immunity, and reduce the risk of seafood allergies, with no meaningful difference between fresh, frozen, and canned seafood. Reaching younger generations is key --as explored in the CTSA 'education and workforce' article below-- and innovative seafood snack products are one example of how our industry is rising to meet that challenge. Those who grew up in Hawaii and the Pacific Islands are already familiar with seafood snacks, but for much of the U.S. this is a relatively new concept and one our industry has an opportunity to shape. Growing the next generation of seafood consumers, however, depends on having the production to meet that demand; that starts with the work we do today, which is why the pre-proposals you bring forward matter so much.

On a somber note, I am saddened to share that we recently lost a local seafood champion. Riley Saito, Executive Director of NELHA and valued CTSA Board Member, passed away unexpectedly. I had been looking forward to working more closely with him to advance Hawaii aquaculture, and his loss is deeply felt. Please read more about Riley's life and leadership on the NELHA website. His passing is a reminder that our time is precious, and that we must use it to make the most impact we can.

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

CTSA FY2026 Request for Pre-Proposals - Due June 8!

CTSA is pleased to release the **FY26 Request for Pre-Proposals**. The Request lists the top priority areas and species as identified by industry stakeholders in Hawaii and the U.S. Affiliated Pacific Islands, as well as instructions for submitting a pre-proposal by the deadline of 5pm HST on Monday, June 8. CTSA uses a standard form for all pre-proposal submissions. Pre-proposal forms can be downloaded on the **CTSA website** or via request to mbrooks@ctsa.org.

Pre-proposals received by the deadline will be reviewed by CTSA's Industry Advisory Council (IAC) and Technical Committee (TC). Pre-proposals that receive significant support will move forward with requests for a full proposal.

FY 2026 Request for Pre-Proposals

Regional Research, Demonstration and Extension Projects

CTSA's mission is to support aquaculture research, development, demonstration, and extension education in order to enhance viable and profitable aquaculture in the United States. Our main focus is on funding projects that will have immediate, positive impacts on the regional aquaculture industry. FY 2026 Priority Species include: **seaweeds, oysters, moi, shrimp, and tilapia for Hawaii,** and **sea cucumber, rabbitfish, and mangrove crabs for the U.S. Affiliated Pacific Islands**. Strategic Priority Areas include Innovations in Aquaculture Technology, Aquatic Feed Development, Finfish Farming Technology, Aquatic Animal Health, Hawaiian Fishponds, and others. As a reminder, eligible applicants include universities, community colleges, or nonprofit research institutions and organizations from the CTSA region. Since 2024, commercial companies collaborating with eligible applicants in the region are eligible to serve as the prime contractor for a project pending USDA approval.

Growing the Regional Aquaculture Workforce: Investing in Education from Classroom to Career

Aquaculture in Hawai‘i and across the U.S. Affiliated Pacific Islands holds enormous potential. But realizing that potential depends less on infrastructure or investment than it does on people. Skilled, passionate, locally rooted people who understand the ocean, the science, and the unique opportunity this region holds. Building that workforce takes deliberate, early investment through education, mentorship, and hands-on experience.

For the Center for Tropical and Subtropical Aquaculture (CTSA), building that workforce has been a priority since our inception in 1986. Established to support aquaculture research, development, and extension education across the region, CTSA has long recognized that our most important long-term investment is in our people. Over the years, that has meant placing trained extension specialists in Western Pacific Island communities, supporting the development of pearl farms and giant clam businesses in Micronesia and the Marshall Islands, and training local technicians in hatchery technology and aquaculture husbandry across the region. Today, that commitment continues through three active CTSA-funded workforce development projects spanning the educational pipeline, from high school internships to university certificate programs to integrated farmer training, alongside grassroots efforts to bring aquaculture directly to young people in their own communities.

The pipeline to a skilled aquaculture workforce begins long before a student enrolls in college. It begins when a young person learns where their food comes from and makes a connection between the fish on their plate and the farmer who raised it. To introduce K-12 students to sustainable seafood and the aquaculture industry that produces it, CTSA developed the A.Q.U.A. (A Quest to Understand Aquaculture) education program, a comprehensive suite of curriculum resources available to educators. A.Q.U.A. gives teachers the tools to bring aquaculture into their classrooms, helping students understand where their food comes from and sparking curiosity in those who may one day join the industry. In 2019, CTSA received a NOAA grant that enabled us to bring that mission directly into high school classrooms, deepening students' awareness of where their seafood comes from.

Curriculum is a critical foundation, but classroom learning is most powerful when paired with real-world exposure. CTSA recently supported a student field trip to HOST Park (Hawai‘i Ocean Science and Technology Park) at the Natural Energy Laboratory of Hawai‘i Authority (NELHA) on the Big Island, the hub of aquaculture activity in the state and home to over 55 innovative companies. Earlier this year, and building on a previous CTSA education project, CTSA worked with ‘Ewalu Industries to bring Kealakehe High School students to HOST Park for an educational site visit, exposing them to blue economy careers in their own backyard.

During the visit, students toured four innovative companies based at NELHA and learned about oyster farming, coral restoration, algae cultivation, and the full range of careers, scientific, technical, business, and engineering, that support a working aquaculture operation. Their reflections captured the impact clearly:

- *“I love marine science but [have been] exploring other career options as I was told there weren’t many job opportunities. Now I know there are, and it is something I can genuinely do.”*
- *“This opportunity provided me with a lot of insight into possible positions that fit me really well. I’m considering marine biology with engineering because of the hybrid roles involving scientific equipment and working with my hands.”*
- *“I think what I found most interesting was how within each business there are a variety of jobs for you depending on what you are interested in.”*
- *“I was really interested in doing something with the environment but didn't know what jobs I could pursue so coming here really opened my eyes to it.”*

Executive Director Dr. Cheng-Sheng Lee reflects on why investments like this matter: 'Through early programming, students can come to value and appreciate the farmers who produce food for their communities, and at the same time they may find a spark of interest that leads them into this field. The work of educational organizations like ʻEwalu Industries in bringing high school students to NELHA are exactly the kind of connections that help build a strong, local aquaculture workforce for the future. CTSA has continued to prioritize workforce development across the region, and we are proud to support these efforts.'

For a minimal investment in transportation, CTSA helped open doors that students did not know existed. Experiential education like this is one piece of a larger workforce development strategy that CTSA has been building for years. The Center is currently funding three complementary projects, each targeting a different stage of the education-to-employment pathway.

Establishing an Aquaculture Workforce Development Program Bridging the Education Gap in Hawaiʻi
Now in its second year and nearing completion, this project led by Jeffrey Garvey of Waipahu High School, Dr. Maria Haws of PACRC at UH Hilo (pictured with students), and Dr. Samir Khanal of CTAHR at UH Mānoa is building a modular aquaculture curriculum spanning high school, community college, and university levels. At PACRC, five undergraduate students received hands-on training in water quality monitoring, microalgae culture, shellfish and finfish husbandry, seaweed cultivation, and sea cucumber production, while four high school students were hired as Student Research Assistants. A further 46 high school students from four schools participated in educational programming at the facility. Two trainees have already transitioned into aquaculture employment. The UH Hilo 18-credit Academic Certificate in Aquaculture received final approval in Spring 2026 and launches in Fall 2026. A teacher externship program is also in development, with plans to engage 20 or more educators in site visits across Hawaiʻi.

Workforce Development to Support a Growing Aquaculture Industry
Launched in October 2025 and led by Elsa Van Hall at the Oceanic Institute of Hawaiʻi Pacific University, this project provides intensive, hands-on training for undergraduate students, building a steady pipeline of job-ready local workers for Hawaiʻi's aquaculture industry. Over two years, six 12-week training sessions will train up to 36 participants at OI's state-of-the-art aquaculture facility, working alongside scientists on active research projects in marine food fish, ornamental fish, and shrimp aquaculture. The curriculum extends beyond biology to include life-support systems engineering and data management, preparing graduates for the cross-disciplinary roles modern operations demand. Industry placements with partners Biota and Kualoa Ranch provide real-world commercial experience, and the project has just launched a dedicated website to connect qualified graduates with prospective employers across the region.

GoFish Hawaiʻi: Developing New Opportunities for Integrated Aquaculture in Hawaiʻi
Launched in January 2026 and led by Theodore Radovich at UH Mānoa, GoFish Hawaiʻi trains farmers in integrated agri-aquaculture systems with a focus on aquaponics, building on the proven GoFarm Hawaiʻi model. Expanding to a fourth cohort on Oʻahu, the project will train 50 participants over two years, with at least 25% from socially disadvantaged groups. Training combines classroom instruction with hands-on production experience at Kunia Country Farms, covering fish hatchery management, harvesting, and processing, alongside business and networking support. Graduates can access online market opportunities through Reelerapp.com, providing a practical pathway to develop sustainable aquaculture businesses. With Hawaiʻi importing the vast majority of its food, GoFish Hawaiʻi is investing in both a skilled local workforce and a stronger, more self-reliant regional food system.

Building for the Future
Across Hawaiʻi and the U.S. Affiliated Pacific Islands, aquaculture businesses have long struggled to find and retain qualified local workers, often relying on outside hires who leave after a short time. Without a trained local workforce, the industry cannot grow sustainably, and the broader promise of a more food-secure, economically resilient region goes unfulfilled.

The solution requires investment at every stage of the pipeline: primary school students who know what aquaculture is and why it matters; high schoolers who visit local aquaculture facilities and see firsthand that these careers are real and within reach; college students who graduate with practical skills and industry connections; and experienced farmers building lasting businesses. These are exactly the kinds of investments CTSA has been making for decades, and they remain central to our mission.

The future of aquaculture in this region will be shaped by the people we invest in today. Building that future requires our entire industry, our academic partners, community organizations, and farmers, to take an

active role in opening doors, sharing knowledge, and welcoming the next generation into this work. Together, we can build a workforce as resilient and resourceful as the communities we serve.

Regional Aquaculture Announcements

Tips on How to Sell to the Military MarketUSDA Resources for Aquaculture

Liz Akina (HDOA Economic Development Specialist and CTSA TC Member) recently attended a very useful workshop organized by DBEDT and SBA on how to access / sell to the local military market. Liz shared a summary of the event, including presentations slides by Sharon (the Chairperson of the local commissaries), and a flyer for an August event where farmers can present products and talk to military buyers one-on-one. Click here learn more.

Upcoming USDA Aquaculture Grant due June 15

The purpose of the 'Special Research Grants Program for Aquaculture Research' (Assistance Listing Number 10.200) is to support the development of a vibrant, robust, and profitable aquaculture industry in the United States by generating new, science-based information and technology to address industry constraints. Applied research is needed to develop practical solutions that will facilitate growth and remove limitations to expansion of the United States aquaculture industry. Results of projects supported by this program are intended to help improve the profitability of the United States aquaculture industry, reduce the multi-billion-dollar United States seafood trade deficit, increase domestic food security, expand markets for United States-produced products, and provide more jobs for rural and coastal America. Click here to learn more.

AquaClip: Pacific Hybreed to scale up shellfish production with USD 1 million funding round

Hawaii-based aquaculture biotechnology company Pacific Hybreed announced USD 1 million was earned in a funding round to support the company's expansion of commercial-scale hatchery operations for shellfish.

Investors included Honolulu, Hawaii, U.S.A.-based investors Hawai'i Angels and Blue Startups, according to a release by Hawai'i Angels. Pacific Hybreed develops high-performance oyster and clam seed using advanced hybrid breeding techniques and is the first to commercialize hybrid breeding in shellfish using "hybrid vigor," which involves crossbreeding genetically diverse parents.

Pacific Hybreed said the approach builds on traditional selective breeding techniques but does not use genetic modification. Instead, the company takes high-performance seed that's customized to the specific conditions of each farm in order to maximize survival rates, generate larger yields, and reduce cost.

"Closing this round allows us to move from proven field results to scaled commercial production at a critical moment for the industry," Pacific Hybreed CEO Melissa DellaTorre said. "Hawai'i Angels and Blue Startups represent an incredible base of local support. It's so meaningful to build this company here at home with investors who understand both the opportunity and the impact."

The company added that shellfish farming is high-risk, and many farmers often lose large yields of crop before or during harvest due to environmental stressors and inconsistent seed performance, thus creating the gap in the market for Pacific Hybreed to focus on pre-harvest seeds and conditions. Additionally, the company added that its' product has demonstrated about 30 percent greater yield and a 50 percent reduction in harvesting costs when used because of the shellfish's uniform growth. The company said farmers can increase output and probability at commodity pricing, so existing operations do not change. Now, the company is working with more than 20 farm customers and research sites across North America....read the full article.

Source: SeafoodSource // 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 2022-38500-38099, 2023-38500-40707, and 2024-38500-42306. The regional aquaculture centers integrate individual and institutional expertise and resources in support of commercial aquaculture development.

CTSA was established in 1986 and is administered by the University of Hawaii.

Center for Tropical and Subtropical Aquaculture
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