CENTER FOR TROPICAL AND SUBTROPICAL AQUACULTURE

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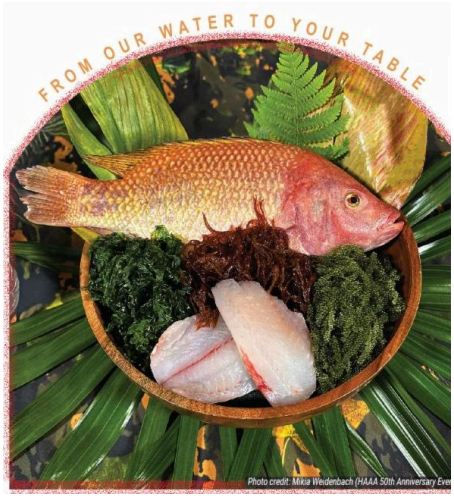
Letter from the Director

Aloha,



I am pleased to share that last month, our Board of Directors met and approved the CTSA FY2025 Plan of Work. We now await final approval from the USDA, and we look forward to moving ahead with the exciting and impactful projects included in this plan.

On that note, there is encouraging news out of Washington. The Secretary of Agriculture recently outlined future R&D funding priorities for the USDA, and the Director of NIFA expressed his strong desire for NIFA to play a leading role in meeting those priorities. As one of five Regional Aquaculture Centers, I am proud to say that the RAC program's mission aligns squarely with these goals, particularly the priority of increasing the profitability of farmers and ranchers. Our work also speaks directly to several other USDA funding priorities: improving human health and food quality, protecting American farming from invasive species, and expanding markets to create new uses for U.S. agricultural products. As I have often remarked in these letters, CTSA has been a champion of collaboration and industry progress since our inception, and it is gratifying to see our longstanding commitments clearly reflected in national priorities.

Speaking of collaboration, one of the more inspiring moments at the recent 2026 Seafood North America (SNAP) Expo came from Aquamar, whose demonstration made a compelling case for unity within the seafood industry. Rather than competing against one another, Aquamar called on seafood producers to band together and take on the real competition: other protein sources. Their approach --simplifying seafood through convenient, ready-to-eat packaging-- is a practical and powerful way to increase consumption in the U.S. While 500mg of omega-3 fatty acids per day is recommended, the average American consumes only around 100mg. Seafood is one of the best and most accessible ways to close that gap, and it often costs less than beef. Our industry has a real opportunity to grow seafood's share of the American plate, and it will take the whole industry working together to seize it.

To ensure CTSA's efforts are as targeted and effective as possible, we want to hear directly from you. Please take a few minutes to complete our annual survey, linked here and below. Your feedback helps guide our work to make aquaculture farming more profitable, more sustainable, and to keep Americans healthy. We are grateful for your continued partnership and look forward to a productive year ahead.

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

We Need Your Input! Take the CTSA FY26 'CTSA Priority Areas and Species' Survey

CTSA is gathering input on regional aquaculture development and would like to hear from you, our valued industry stakeholders!

Each Spring, CTSA releases a Request for PreProposals based on industry input from our 'Funding Priorities' survey. **We request that you please click here to take our FY2026 survey.**

Last year, we redesigned our priority areas survey to identify the highest-priority species for development in Hawai‘i and the U.S. Affiliated Pacific Islands (USAPI). Based on stakeholder input, the top seven species for Hawai‘i and the top three species for USAPI were selected as funding priorities for our FY25 'Request

for Pre-Proposals.' Building on that process, this year's survey asks respondents to rank the species that were identified as top priorities in last year's survey.

Our goal is to focus on species that have already been initiated in the region and require additional support to reach full commercial potential or to address key challenges within established industries. Accordingly, the first section of the survey asks you to rank the previously selected top-priority species. This will help us assess the **top** priorities for our next round of funding.

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FY26 Funding Priorities Survey

This survey also lists the other priority areas included in our FY25 RFP-P, and requests that participants indicate whether or not each area remains a priority for regional aquaculture development and funding support. There is an option to write in new priority areas that were not identified in FY25. **Please complete the survey by April 15; it should only take a couple of minutes and will greatly assist our process**.

We will release the FY2026 Request for Pre-Proposals in the April issue of e-Notes, and are developing the priority areas with essential input from our Industry Advisory Council, Technical Committee, Board of Directors, and stakeholders like you!

If you have any questions or need assistance completing the form, please email ctsa@hawaii.edu.

Regional Aquaculture Announcements

Attention Hawaii Farmers: Resources Following Storm Damage

The Hawaii Coffee Association has released a guideline for farmers to follow as part of their storm recovery; aquaculture farmers can use this guideline as a reference to begin the recovery process. Contact Sofia at the USDA Farm Service Agency Honolulu Office for more information: sofia.blackwelder@usda.gov. There will also be an Emergency Conservation Program available at the end of April.

For those whose farms were impacted by the recent Kona Low, here are the most important steps to take right now. Time is critical for several of these, so please act as soon as possible.

1. DOCUMENT YOUR DAMAGE FIRST
Before any cleanup, chipping, or tree removal, take photos. This is essential for every step below.

2. CROP INSURANCE
If you have crop insurance, open a claim with your agent immediately. You do not need a full damage report to get started. An inspector will be sent in April to verify. The most important thing right now is to document and take pictures before anything is removed.

3. USDA FARM SERVICE AGENCY (FSA)
Email or call your local FSA office with a description and photos of your damage. Include estimates of how much debris you are removing. These reports are needed for FSA to establish an Emergency Conservation Program (ECP), which provides payments for debris removal, watershed runoff repairs, and infrastructure. ECP has no income limit or maximum farm size.
Find your local FSA office: https://www.fsa.usda.gov/state-offices/Hawaii/service-centers

4. FILL OUT THE STATEWIDE DAMAGE SURVEY
This takes about 2 minutes and will connect you with additional resources and programs. The data also helps State and County officials direct resources and seek Federal aid.
Survey link: https://report.agstewardshiphawaii.org/

5. REPORT TO CIVIL DEFENSE
Residents and businesses are encouraged to report storm damage to their county to help local officials and non-profit partners understand the full extent of the impact.

6. KAMEHAMEHA SCHOOLS OR OTHER LESSORS
If you lease land and have damage or drainage concerns, contact your Land Manager directly.

7. EMERGENCY LOANS
Emergency loans for cleanup or repair are available through the Department of Agriculture and Biosecurity (DAB) at 3% interest. You must start the application process as soon as possible. Contact: (808) 973-9460

HDOA Emergency Farmer Relief Program

The Hawai'i Department of Agriculture and Biosecurity announced the establishment of the Emergency Farmer Relief Program. Farmers and ranchers impacted by the recent storm systems may apply for a one-time grant of $1,500 to address immediate needs resulting from the storms.

Applications for the Emergency Farmer Relief Program opened on March 24, 2026. Awards will be announced in the week of March 30, 2026. As of today (March 31), the application link is still active.

The program application may be found on DAB's website at https://dab.hawaii.gov/emergencyfarmerrelief/. Applicants must have experienced damage or losses from the storms and must provide a General Excise Tax (GET) license, proving they conduct business in the state.

Questions on the program or application should be directed to dab.efr@hawaii.gov.
more information, go to: https://dab.hawaii.gov/blog/main/nr26-04-emergency-farmer-relief/

Dr. Bradley 'Kai' Fox Hired for New Faculty Position at UH CTAHR Human Nutrition, Food and Animal Sciences Department

The University of Hawaii at Manoa, Human Nutrition, Food and Animal Sciences (HNFAS) department has announced that its aquaculture faculty position has been filled. The position was initiated just before the Covid pandemic. Dr Bradley 'Kai' Fox was selected and recently accepted the offer of the Assistant Professor position; he will start on August 1, 2026. In its announcement, HNFAS expressed gratitude to the search committee Chair Dr. Andre Seale and all members for their "hard and diligent work from the beginning of position posting to final recommendations."

The WRAC Request for Pre-Proposals for FY2027 is now open and closes April 10, 2026.

The Western Regional Aquaculture Center (WRAC) has opened its annual development cycle:
https://wracuw.org/current-funding-opportunities/
The RAC program allows projects to collaborate with researchers in other regions.

AquaClip: For many island fish farmers, aquafeed sourcing and costs requires new thinking

Novel feed ingredients are urgently needed to meet rising global demand for animal products. While aquaculture has significantly reduced fishmeal and fish oil in feed over recent years, continued growth in fish consumption means that reliance on marine-based ingredients remains a major challenge. Novel ingredients could offer a reliable alternative, with recent research in feed formulations highlighting strong potential to further advance some innovative solutions.

In the Caribbean, aquaculture is expanding rapidly, but growth is constrained primarily by limited access to affordable, high-quality feed. Tilapia dominates Caribbean aquaculture, followed by shrimp, crayfish and ornamental fish, yet feed is largely imported, expensive and subject to additional tax burdens. Feed prices range from U.S. $75–$95 for each 50-pound (23 kg) bag, prompting strong interest among farmers in locally produced alternatives.

Mia Avril of the University of Plymouth in the UK and the Cape Eleuthera Institute in the Bahamas are researching feed solutions to make responsible aquaculture more accessible in the Caribbean region. Avril, who previously consulted with the Food and Agriculture Organization of the United Nations (FAO) in the Dominican Republic, focuses her research on locally sourced ingredients, with the aim of developing feed options that are not only accessible but also affordable.

"During my work as an aquaculture consultant, it became clear that access to suitable feed was a major challenge, with farmers often relying on chicken feed, fish scraps, crop leaves and other agricultural byproducts," Avril told the Advocate. "Even on islands like Saint Lucia, where feed pellets can be produced locally, key inputs – including corn, wheat, coconut and fish – are imported. This prompted me to explore whether locally available materials could replace imported ingredients. Our research is applicable across the Caribbean, as the proposed ingredients are widely available regionally."

Avril and her team are investigating a range of ingredients, including breadfruit, cassava, brewer's spent grain, Irish moss, finfish viscera (primarily from reef species such as snapper, grouper and grunt), lobster heads, conch discards and coconut oil. Although many are not native to the Caribbean, they are widely consumed and embedded in the region's landscape, culture and diet.

Several ingredients – particularly fisheries discards – show promise as substitutes for imported fishmeal. Others appear suitable but are awaiting validation through proximate analysis.

“Preliminary feed formulations show a higher per-unit cost for local feed due to energy and labor costs, but their advantages are significant,” said Avril. “Local feed reduces environmental impacts by easing pressure on wild stocks, as fishmeal substitutes can be sourced from seafood discards already caught for human consumption. Producing feed locally also reduces feed imports and, by boosting local production, lowers imports of aquaculture products. Finally, repurposing fish viscera helps reduce any ecosystem disruption that could occur from these waste streams.”

Japan is also researching the use of locally sourced ingredients in aquafeeds. In Okinawa, in southern Japan, where the main farmed species include mozuku seaweed (*Cladosiphon okamuranus),* kuruma shrimp (*Marsupenaeus japonicus*), sea grapes and finfish such as cobia, Malabar grouper and red sea bream, Dr. Taekyoung Seong of the University of the Ryukyus is researching underutilized local resources as potential feed ingredients.

His work examines regional food processing byproducts and circular feed approaches involving insects, microalgae and other resources. Ingredients under study include rendered pork and chicken byproducts, locally produced fishmeal from fisheries processing waste (heads, frames, viscera and trimmings) and other sidestreams like distillery byproducts, tofu and soy processing residues, as well as the eri silkworm (Samia ricini).

From a circular economy perspective, Seong sees strong long-term potential in integrating local waste streams, insect production and insect-derived ingredients into feed...click here to read the full article.

Source: Responsible Seafood Advocate // 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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