CENTER FOR TROPICAL AND SUBTROPICAL AQUACULTURE

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Letter from the Director

Aloha,

As we reflect on another busy Earth month, we here at CTSA hope that you have enjoyed this annual opportunity to celebrate Earth and its wonderful resources. In consideration of the positive impacts that aquaculture can have on our planet, CTSA is excited to release our annual Request for Pre-Proposals (full announcement shared below). The Request contains pre-proposal guidance and lists the top priority areas for CTSA funding this year, as determined by our regional industry stakeholders through the FY25 Funding Priorities Survey completed earlier this month.

This month's issue of e-Notes features an article highlighting the full survey results, including other stakeholder suggestions. We are very pleased with the quantity and quality of responses we received to this year's priorities survey. I would like to extend our sincere appreciation to those of you who participated and took the time to share your valuable, detailed feedback. We redesigned the survey this year to assess and prioritize the top species that have potential to be commercialized in Hawaii and the U.S. Affiliated Pacific Islands (USAPI). The species included in the survey are those that CTSA has already supported (in at least one stage of development) through our funded projects; it is our mission to help existing industry or identify new profitable and sustainable farming practices in the region. Survey participants in Hawaii indicated significant interest in seaweeds, oysters, moi, tilapia, opakapaka, mullet, and shrimp, with the latter three tied for support. Amberjack and some marine ornamental fish were also mentioned. Meanwhile, stakeholders in the USAPI clearly indicated the importance of mangrove crab, rabbitfish, and sea cucumber for their islands. Of course, one challenge we face in this endeavor is assessing the return on investment --or ratio between the potential commercial value and required additional investment-- for each species. We urge our respected researchers to keep this in mind when submitting ideas for the next funding cycle.

It is our hope that the project ideas we receive in response to our FY25 Request for Pre-Proposals will reflect the results of the survey, and focus on addressing remaining issues that will improve and/or lead to successful commercialization of those species in the near future. We look forward to receiving your pre-proposals, and as always, we welcome your feedback and opportunities to discuss our program processes and shared goals. We acknowledge that in previous years, some pre-proposals with good ideas may have been missed by our project development process for one reason or another. We --CTSA staff, IAC, TC, and Board-- do our best to accommodate our regional aquaculture stakeholders while meeting industry-driven priorities. We follow protocols established by the RAC program and our Board of Directors, and maintain transparency throughout our development process, though some confidential information cannot be shared. We appreciate the immense work that research teams put into their applications and we understand firsthand the difficulties in obtaining funding; we want to remind you that even if a project is not selected, it doesn't mean we don't like the concept. Some proposals are better suited for other funding agencies with different program missions, and we are rooting for them to succeed in growing our regional aquaculture industry.

All of our collective work across the region will assist the development of U.S. aquaculture. The integration of aquaculture and fisheries management is essential for the success of the recent of the Executive Order 14276 "Restoring American Seafood Competitiveness" to make the U.S. seafood industry globally competitive. We are excited to continue this important work together with you!

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

CTSA FY2025 Request for Pre-Proposals - Due June 9!

CTSA is pleased to release the **FY2025 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 9. 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.

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 2025 Priority Species include: seaweeds, oysters, moi, tilapia, shrimp, opakapaka, and mullet 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. *New as of 2024*: commercial companies collaborating with eligible applicants in the region can serve as the prime contractor for a project pending USDA approval.

CTSA FY25 'Funding Priorities' Survey Results

Each Spring, CTSA releases a Request for Pre-Proposals based on industry input from our 'Funding Priorities' survey. This year, nearly 50 stakeholders from across the region participated and shared their valuable input. The survey was redesigned this year to help us assess the top priority species for development in Hawaii and the U.S. Affiliated Pacific Islands (USAPI(. As described in the Director Letter, it is our goal to focus on working with species that have already been started in the region and just need additional support to either achieve full commercial potential or address problems of established industries.

The first questions of the survey listed out all of the species that CTSA has invested in developing since our program inception. Respondents were asked to select a maximum of five top priority species from the list for Hawaii and a maximum of three top priority species from the list for the U.S. affiliated Pacific Islands, and then use a checkbox grid to indicate which areas of production need support. These maximum amounts represented 1/3 of the total amount of species listed for each location. While our intention was to delineate the top five species for Hawaii aquaculture, some species tied with others. The survey found the following seven species to be the highest priorities: **seaweeds, oysters, moi, tilapia, shrimp, opakapaka, and mullet**. Shrimp, opakapaka, and mullet all received the same amount of support. For the USAPI, there were three clear priorities: **sea cucumber, rabbitfish, and mangrove crabs**. These results reinforce data from other recent surveys and stakeholder discussions across the region.

This survey also listed the priority areas included in our FY24 'Request for Pre-Proposals,' released last year, and requested that participants indicate whether each area remains a priority for regional aquaculture development and funding support. Results were integrated into the FY25 RFP-P. With new focus on the specific species mentioned above, our goal is for projects to work on those species within the defined the priority areas (as appropriate). The highest priority area identified in the survey is once again Innovations in Aquaculture. It is important to mention that innovations in this context can and should include new solutions to address an existing industry problem, and not necessarily a new problem. Participants suggested several examples of useful innovations including:

- Using molecular tools to help farming of species that have established industries in Hawaii, and to establish populations of species with high-market value and farming potential in Hawaii and the USAPI.
- Affordable RAS that is site specific and/or is broadly applicable to farmers in Hawaii and the USAPI.
- Genetic tools to select limu for performance-based production, focusing on varieties that grow fastest or produce the most health benefits / specific target compounds.
- Passive settling designs for small- and mid-sized farms.
- Durable, multi-parameter, and affordable water quality probes for real-time monitoring of aquaponics and aquaculture production parameters.
- Renewable energy technologies. Engineers in Japan have developed an energy generating "Vertical Contra-Rotating Turbine System" that can withstand strong tropical-hurricane winds, yet

remain in operation to charge-recharge Pb-Li storage batteries. It is also environmentally friendly to birds, bats and other animals.
- Establishing a program to monitor commercially available AI tools and other innovative products, and working with industry via extension support to test and demonstrate them for application in the regional industry.

We also provided an opportunity for participants to recommend new priority areas through an open-ended question. The following were some of the suggestions included in this section of the survey. Note, several responses to this question correlate with the identified priority areas and have been integrated into their respective categories in the RFPP.

- Comparative modeling of farming operations for gaining highest production value.
- Develop a research exchange / extension program between Hawaii, Guam, Palau, FSM, and the RMI.
- Educational workshops to educate the future generation on the importance of aquaculture in ensuring food sustainability in Hawaii and the Pacific Islands. The exposure of students to Hawaiian fishponds, commercial aquaculture farms, university hatchery-nursery- grow out production systems, aquaponic systems, etc. will help sustain and grow aquaculture for future generations.
- Focus on Indigenous aquaculture; the efforts of the many communities to restore and maintain these cultural treasures (Hawaiian fishponds) should be supported where we can for cultural and educational reasons.
- Social and cultural research on how to overcome permitting barriers.
- Value-added product development and assessing the potential value of a large-scale stock enhancement program supported by commercial aquaculture.

In addition, some stakeholders responded with advice for researchers who are interested in applying for CTSA funding, and also suggestions to improve the CTSA development process:

- Avoid proposing research that reinvents the wheel; conduct a literature search to avoid doing something that is already established in other parts of the world.
- Limited research dollars should be spent on projects that can reasonably lead to economic benefits. So, the focus should be on improving existing farming industries that have growth potential and less focus should be on developing industries from scratch unless the PI(s) can make a strong argument that their research will remove/solve a major impediment that is limiting the farming of the new species.
- There should not be projects that require prolonged funding because of unknown or unanticipated problems. If there are unanticipated problems, then the investigators do not know their organism or system well enough to justify funding.

We thank all stakeholders who participated in this survey; we could not determine funding priorities without your input, and we look forward to receiving pre-proposals to address the industry-driven issues identified in the RFP-P. Finally, we close this article and season of priority setting with a question posed by one survey respondent: “Who will come up with the next big idea that recharges the aquaculture industry in Hawaii?”

Invitation to Join the Aquaculture Engineering Society

After last month's issue of e-Notes, we received a message from our colleague and friend Michael Ben Timmons, who is now the President of the Aquaculture Engineering Society. He advised that the Aquaculture Engineering Society (AES) is looking to become an important part of recapturing seafood markets for U.S.A. growers, and is inviting aquaculture stakeholders from our region to learn more about and join the Society.

The vision of AES is to support the sustainable development of the aquaculture industry to meet the growing worldwide demand for seafood, by promoting the development, sharing, and application of scientific knowledge and experience.

The AES has the following primary objectives:
- To promote the science and art of aquacultural engineering
- To promote the transfer of technology into practice and encourage original research
- To develop and advance standards associated with the practice of aquacultural engineering
- To promote the development, education, and career advancement of the diverse community of aquaculture engineers

To meet its objectives, AES brings its members together to discuss engineering issues related to aquaculture, serves as a united voice for aquacultural engineering community, and provides an engineering

perspective and solutions to the problems. AES also serves as an authoritative source of information on aquacultural engineering and provides engineering support to initiatives from or for the aquaculture industry, and works closely with other professional societies that address aquaculture needs and issues in a more general sense. Click here to learn more.

AquaClip: ASC expanding its North American campaign to build awareness about standard

The Aquaculture Stewardship Council (ASC) has expanded its North American marketing campaign under the tagline “Sea Green. Be Green.” as it works to raise awareness and understanding of the ASC label.

The ASC launched its largest public-facing marketing campaign ever in 2022, with the initial tagline “New Way to Seafood.” Mark Lang, who was the U.S. marketing director for ASC at the time, told SeafoodSource the goal of the campaign was to begin bringing the seafood certification organization’s story to the public to both bring greater awareness of the ASC label and awareness of the benefits of aquaculture in general.

That initial run served as a test that ASCiterated on in subsequent years and is now expanding through retail activations, restaurant promotions, media outreach, social/digital engagement, influencer collaborations, high-profile tasting events, and thought leadership activations.

ASC North America Marketing Manager Athena Davis told SeafoodSource during the 2025 Seafood Expo North America that those initial campaigns have proven even more successful than it initially hoped.

“We did not expect to be joined by partners and supporters across industries, and we did not expect to be making such significant consumer impact, which we now have evidence of through our latest consumer survey,” Davis said.

Davis said the “proof is in the pudding” with numbers that the organization has been seeing – but that the direct interactions that ASC has had with the general public has also proven to be incredibly rewarding, especially given what it has learned about the base of knowledge most people have about aquaculture.

“No matter what industry you’re in, most people really don’t know as much as you might expect them to know,” Davis said. “I think the interest we’ve had ... and potentially changing perspective and decisions has been incredibly rewarding; that’s also been one of the biggest surprises.”

Source: Seafood Source // Read Original 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 2020-38500-32559 and 2022-38500-38099. 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.

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