



## Letter from the Director

Aloha,

Our team at CTSA hopes that you have been enjoying the Thanksgiving kick off to this most unusual holiday season. Although most of us are unable to gather with family and friends as we normally do, we hope this time of year will present us with meaningful opportunities to reflect on gratitude, and all that we can still accomplish together even when we're 'apart'.



Something that I am increasingly thankful for is the unified effort of our stakeholders, especially the CTSA committee members and proposal reviewers who volunteer their time and the PI's who complete impactful work throughout our region. CTSA just completed our semi-annual project update conference calls with each project's PI(s) and industry liaison. The calls, which take place each November and June to coincide with annual and midterm progress reports, are an opportunity for our staff and industry liaisons to touch base with project PI's and expand on the information in each report. As always, it was great to talk with everyone, and I am very pleased with the progress of all of the ongoing projects. Something of particular note that we were happy to hear about during almost every call this month was the leveraging of CTSA funding. From leveraging existing funds to obtaining new grants based on CTSA-projects, we are happy to hear about several projects securing additional funding to increase and expand on their CTSA work. Some PI's have even generated new ideas and obtained funding to support further development of new concepts. Where appropriate, CTSA tries to help find funding support for these efforts. This type of leveraging and partnership is critical to future sustainable development in our region, and CTSA is honored to do our part.

I would like to take this opportunity to extend a special thank you to the PI's, liaisons, and everyone else involved in the success of not only the CTSA projects, but also our project monitoring efforts. Their accomodation of our requests to conduct these unique calls has helped keep our plans of work on track and ensure that CTSA-funded projects are helpful to our regional aquaculture industry.

I also thank you, our *Regional e-Notes* readers and stakeholders, for your continued support of our program!

With much gratitude,  
Dr. Cheng-Sheng Lee  
Executive Director, CTSA

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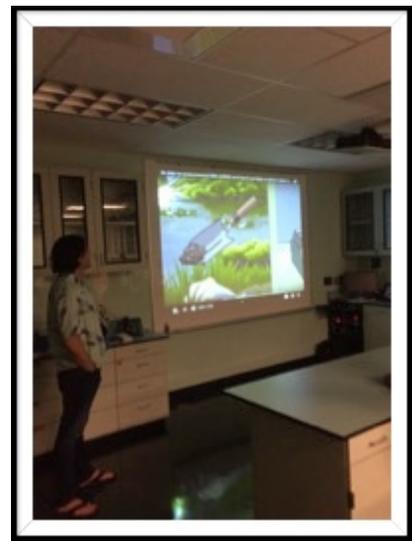
## CTSA Project Summary: Aquaculture Workshop for Waianae High School Marine Science Learning Center Students and Teachers

*2020 Aquaculture Workshop Affected by COVID-19 Restrictions*

By: Gary Karr, Oceanic Institute of HPU

In mid-March 2020, the Hawaii State Department of Education closed public schools across the state because of the COVID-19 pandemic. As a result, the Waianae High School Marine Science Learning Center (WHS MSLC) teachers reported that they and their students would not be able to attend the aquaculture workshop scheduled for March 25-27, 2020.

The workshop was the main objective of Year 2 of the CTSA-funded project “Aquaculture Workshop at Oceanic Institute for Students of Waianae High School’s Aquaculture Program,” and was scheduled to follow the very successful workshop that took place during the Year 1 of the project (reported in e-Notes, July 2019). The possibility of conducting the Year 2 workshop in the fall semester was explored but it wasn’t feasible. Even if in-person classes resumed, it was determined that the workshop could not be rescheduled to fall 2020 because of other academic obligations the students are required to complete. This unprecedented action meant despite preparation, planning, and advance activities the 2020 aquaculture workshop was lost. Yet there were still many project accomplishments including the leveraging and procurement of another grant to support the aquaculture workshop to be conducted in 2021.



Planning and preparation for the second aquaculture workshop scheduled for March 25-25, 2020, for WHS MSLC students and teachers began in September 2019. A series of meetings, telephone conference calls, and emails provided a steady exchange of ideas regarding the workshop content and schedule. Development of the 2020 workshop activities and materials was based on information gained from an analysis of the 2019 workshop; what worked and what could be improved. During these exchanges the revised workshop curriculum, activities schedule, and workbook content were developed. The curriculum and activities were finalized and the workbook was modified but not finalized prior to shut down due to the COVID-19 pandemic. In addition, meetings were held with OI and HPU subject matter experts serving as instructors for the workshop to finalize their activities and schedule. These meetings also identified the equipment, supplies and, in some cases, animals needed to carry out the workshop activities.

Other activities accomplished during the planning and preparation period included contacting local college admissions and enrollment offices to request their presence at a mini-college fair. HPU admissions and enrollment office help coordinate these efforts and contacted their counterparts at other colleges. Colleges contacted included Windward and Leeward Community Colleges, University of Hawaii -Manoa and West Oahu, and University of Hawaii at Hilo. In addition, emails were sent and phone calls were placed to nine industry professionals inviting them to participate in the “Career Lunch Mingle” on the last day of the workshop. Six of the nine confirmed their willingness to participate.

Another major accomplishment was the introduction of two technical workshop subjects and one activity. Through the analysis of the 2019 workshop, it was determined that the students would benefit from formal presentations being given prior to the workshop. This included workshop personnel going to the school and making presentations to the students ahead of the actual workshop. Dr. Matthew Iacchei and the project PI visited the WHS MSLC students at their school on Monday, March 2, to introduce the students to DNA and eDNA concepts and applications. This front loading of the subject was done as a result of both the review of last year’s workshop and at the request of the teachers to help the students better understand DNA’s and eDNA’s roles in aquaculture and marine conservation. In addition, the PI worked with the students and teachers on the aquaculture business game by going over all the game elements and requesting the students break into groups to establish “companies” that they would run and grow during the rounds of the game conducted at the workshop. The students were asked to come up with a name for their company prior to the workshop and to begin working on a business strategy. Furthermore, an updated finfish live larval feeds presentation was provided to the Waianae High School teachers to show the students prior to the workshop as means to move them on quicker to the hands-on portion of the activity once they got to the workshop.

The presentations made in advance of the workshop were well received by the students and teachers. According to Mrs. Katie Kealoha, WHS MSLC Teacher: "In preparation for our planned activity, Gary and Matt visited our students to provide background information about DNA and the uses of DNA sequencing in Marine Science. Our students were excited to meet scientists that work in the field and were looking forward to the planned activities at the workshop. They were engaged during the presentation and Matt was even able to connect some of the concepts he was explaining to current events with the coronavirus spread that had begun in the continental US. It was very beneficial for the students to learn about a difficult concept from someone who uses it in the field and in connection with future activities where they could explore the

concepts more. Even without being able to fully complete what we had planned, there was benefit from what we were able to do with these partnered activities."

On a positive note, funding from NOAA was secured to conduct the aquaculture workshop in 2021. In the fall of 2019, a proposal was submitted to the NOAA Pacific Islands Regional Office Marine Education and Training Mini-Grant Program. On June 1, 2020, HPU was notified that funding was awarded for the aquaculture workshop in 2021. The grant begins October 2020 and will include planning, development, and preparation for the workshop tentatively scheduled for late March 2021. This award means the aquaculture workshop that had been planned but not conducted in 2020 will be able to be run again next year.

The NOAA funding leverages the efforts and tradition started with the funding from CTSA. As stated in the original proposal, "The overall goal of this proposed two year program is to inspire students to consider a career in aquaculture or related field and provide them with information about how educational choices can help them fulfill those career aspirations." Despite not conducting the 2020 workshop, the success of the 2019 workshop, the preparation, planning, and advance presentations conducted for the 2020 workshop along with the continued interactions provided tangible steps toward that goal. Being able to conduct the aquaculture workshop in 2021 means another WHS MSLC cohort of students will be able to take advantage of the process started with CTSA funding. These students get the opportunity to learn more about the aquaculture field enabling them to make better informed decisions about their future.

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## Aquaculture Announcements

### USDA Corona Virus Food Assistance Program

If COVID-19 continues to impact your aquaculture farm, you may sign up for the Coronavirus Food Assistance Program 2 (CFAP 2). The application period opened on Sept. 21, 2020 and will continue through Dec. 11, 2020. CFAP 2 provides eligible producers with direct financial assistance due to market disruptions and associated costs because of the COVID-19 pandemic. CFAP 2 is a separate program from the first round of the Coronavirus Food Assistance Program, now referred to as CFAP 1. Farmers and ranchers who participated in CFAP 1 will not be automatically enrolled and must complete a new application for CFAP 2. To watch a USDA video that describes applicability and applying click [here](#). Or jump right into CFAP 2 application information specific to US aquaculture by clicking [here](#).



### Register Now for the USDA 'Aquaculture is Agriculture' Webinar

On December 11<sup>th</sup> the USDA is hosting a webinar entitled Aquaculture is Agriculture: USDA's Role in supporting Farmers of Fish, Shellfish and Aquatic Plants. The webinar will feature presentations from USDA leaders; stakeholders representing seaweeds, shellfish, finfish and other sectors of agriculture; and report outs from each of the six Deep Dive sessions that will be captured for publication. This event will raise the visibility of aquaculture within USDA and provide valuable engagement opportunities for farmers interested in USDA programs. [Click here to register for this free webinar.](#)

### NOAA Funding Opportunity: 2021 Pacific Islands Region Sustainable Recreational and Non-Commercial Fishing Program

The NOAA Fisheries Pacific Islands Regional Office (PIRO) recognizes the fundamental role that recreational and non-commercial fishing serves in the culture and livelihoods of Pacific Islanders. This competition seeks to support recreational and noncommercial fishing projects in the PIR that improve sustainable fishing opportunities, maintain stability of fish stocks, and protect cultural fishing traditions. We are seeking projects conducted within Guam, the Commonwealth of the Northern Mariana Islands, American Samoa, or Hawaii. Recreational and non-commercial fisheries in the region are major economic contributors to coastal communities and have important social and cultural significance through the perpetuation of subsistence and traditional fishing practices. The region also has both well-established and growing for-hire recreational fishing opportunities available through deep-sea charter boats, guided reef fishing, and eco-tourism. [Click here to learn more about this opportunity.](#)

### SBA Loans for Aquaculture Farmers & Other Businesses Impacted by Oahu Drought

The SBA Office of Disaster Assistance is providing SBA economic injury disaster loans (EIDL) to businesses with a financial impact due to the drought disaster in Honolulu, Oahu County. SBA's direct low-interest loans are available to small nonfarm businesses, small agricultural cooperatives, small businesses engaged in aquaculture, and most private nonprofit organizations, who may have been impacted due to drought declaration in Honolulu, Oahu County. [Click here to learn more.](#)

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## AquaClip: IFIF and FAO continue to strengthen collaboration to ensure safe and sustainable feed

The International Feed Industry Federation (IFIF) and the Food and Agriculture Organization of the United Nations (FAO) held their 19<sup>th</sup> annual meeting to further strengthen their collaboration on critical issues to ensure safe, nutritious and sustainable feed and food.

The virtual meeting was officially opened by Badi Besbes, head of Animal Production and Genetic Branch at FAO and Daniel Bercovici, IFIF Chairman, who welcomed IFIF delegates representing over 80% of global compound feed production and reiterated their commitment to this longstanding partnership and agreed to continue to strengthen their work together to tackle the challenges facing the feed and food chain. Besbes reaffirmed the importance of "the collaboration between the public and private sector to support the key role of the livestock sector in reducing hunger and supporting livelihoods worldwide in light of high-level global reflections on sustainable agriculture and food systems."



Bercovici said that "our joint meeting with the FAO once again underlined our strong partnership as IFIF continues to support key FAO initiatives such as the Feed Safety Multi-Stakeholder Partnership, the Livestock Environmental Assessment and Performance (LEAP) Partnership and the Global Agenda for Sustainable Livestock. The publication of the updated IFIF FAO Manual on Good Practices for the Feed Sector was a key milestone this year as we work together on Capacity Development for feed safety. IFIF continues to contribute to FAO's work to address antimicrobial resistance including through advancing nutritional innovation to support animal health. IFIF looks forward to the 14<sup>th</sup> International Feed Regulators Meeting (IFRM), which is another great example of IFIF FAO collaboration positively impacting the feed and food chain."

Bercovici added that "together with the dedicated colleagues at the FAO we contribute to building a solid science-based approach to support safe and sustainable animal nutrition to bring quality and affordable food to a growing world population, producing more with less and even better under diverse production systems. The high quality of exchanges and cooperation towards the United Nations Sustainable Development Goals (SDGs) continue to build on our achievements and together with all IFIF members I am pleased our relationship continues to strengthen year to year."

Daniela Battaglia, Animal Production officer at the Animal Production and Health Division of the FAO, said that "FAO and IFIF have a long-standing partnership and this meeting addressed a number of critical issues of common interest, such as the need for capacity development to ensure feed safety and the importance of collaborating to tackle the containment of antimicrobial resistance (AMR). FAO is committed to working with the private sector and the feed operators and believes that they can valuably contribute to make the livestock and food sectors more responsible and sustainable and to achieve important goals such as public health, and animal health and welfare."

Source: [Aquafeed.com](#) // [Original Article](#)

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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 and 2018-38500-28886. 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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