



Regional e-Notes ~ June 2017

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Letter from the Director

Aloha!

At the beginning of this month, I along with a cohort of CTSA staff and researchers traveled to Boise, Idaho to attend the National Aquaculture Extension Conference. The conference takes place every four to five years (with funding support from the Regional Aquaculture Center Program), and offers a great opportunity to learn from and network with aquaculture extension experts from across the country.



Extension conference participants enjoyed a tour of several fish farms in Idaho

I am proud of the presentations by members of the CTSA group. Dr. Harry Ako gave a presentation on his CTSA-funded aquaponics research and extension efforts, and many attendees expressed interest in the technology and future collaboration. His work was even featured in a national news alert from NIFA following the conference! Miguel de los Santos presented on his ongoing work with mangrove crabs, milkfish, rabbitfish and other species at Palau Community College, while Meredith Brooks shared results of the various CTSA extension efforts across our region, including our in-house publications project. Their presentations also attracted the attention of conference participants, with many approaching our group to learn more about CTSA activities throughout our region. I am thankful to the three of them for a job well done.

It was nice to see a positive reaction to our current and most recent extension activities by the national aquaculture extension community. The aquaculture industry in our region is still small but we have to do our best to secure our seafood using sustainable farming practices... [Read More](#)

Mid-Year Update on Ongoing CTSA Projects

CTSA Midterm Progress Reports are due at the beginning of June each year. Although these reports are not as detailed as the annual progress reports due in November, they provide important insight to the status of ongoing research. The following is a summary of progress from some of CTSA's ongoing projects:



At the Oceanic Institute, the project "Integrated Multi-Trophic Aquaculture of Shrimp and Sea Cucumbers for Nutrient Recycling, Sludge Reduction, and Creation of Additional Revenue Streams" is investigating Integrated Multi-Trophic Aquaculture (IMTA), where "waste" nutrients from a "fed" species is taken up and incorporated into the biomass of another commercially valuable "extractive" species. To date, researchers have collected, quarantined and PCR-

screened two species of sea cucumbers for feeding trials. Average survival rates for *H. atra* and *A. mauritiana* were 43.8% and 4.2%, respectively during the trials...

PACRC in Hilo is continuing work on the project "Assuring Oyster Seed Supply for Hawai'i and the West Coast." During this reporting period, work continued to develop methods to produce tetraploid oysters using a diploid male by triploid female cross with treatment with 6-DMAP. So far, the work group has conducted inductions in 106 groups of larvae as part of this research. They currently have 25 induction groups which have been combined according to the percentage of tetraploids and these are being reared batches split between the Hawaiian Shellfish LLC nursery and the PACRC nursery...

At the University of Hawaii, and in collaboration with the Oceanic Institute, the project "Utilization of local agriprocessing byproducts to produce fungal protein for aquatic feed production" is looking into alternative aquatic feed ingredients. Microbial protein such as fungi biomass production on lowcost feedstock has gained significant attention due to cost effectiveness and longterm sustainability. Thus far, samples of the fungal biomass have been produced in the UH lab, and proximate contents and amino acid and fatty acid profiles have been analyzed. From that analysis, researchers have determined that the fungal biomass is... [Read More](#)

NAA Represents US Aquaculture at Farm Bill Listening Session

The Farm Bill is one of the major pieces of legislation supporting U.S. aquaculture; it includes support for the Regional Aquaculture Centers and a host of other important aquaculture-related programs.



The Farm Bill is up for discussion and renewal this year. The National Aquaculture Association (NAA) and Florida Tropical Fish Farms Association spoke for US aquaculture during the first Farm Bill listening session held by the House Committee on Agriculture last week. The session was a success for US aquaculture.

Amy Stone, NAA Board of Director member, and John Skidmore, President of the Florida Tropical Fish Farms Association, spoke from a letter prepared for the event by the NAA. They touched on a Specialty Crops designation for US aquaculture and USDA aquaculture research, aquatic animal health, Wildlife Services and catfish inspection programs. Speakers were allowed two minutes. Ms. Stone's remarks start at 1:44:36 and Mr. Skidmore's start at 2:18:11. Chair Conaway's closing remarks occur at 2:33:00... [Recording of listening session](#)

AquaClip: Genetics roadmap to develop more resilient farmed fish

WorldFish will embark on new research to create more resilient fish with characteristics such as disease resistance and more effective feed utilization. Based on a roadmap developed with world experts at a WorldFish-hosted fish breeding workshop on May 23-24 at The Roslin Institute in Edinburgh, the research will use advanced techniques such as genomic selection to introduce these characteristics into its improved tilapia strains.

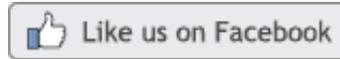
Since 1988, WorldFish has used selective breeding to develop and manage the fast-growing Genetically Improved Farmed Tilapia (GIFT) strain. The strain has been disseminated to at least 16 countries, mostly in the developing world, and is grown by millions of small-scale fish farmers for food, income and nutrition across the globe.

Use of genomic selection tools, which enable the selection of animals based on genetic markers,

will allow WorldFish to expand its GIFT research beyond a growth-only focus and introduce selection for characteristics that are otherwise difficult to measure, such as resilience and feed efficiency. Genomic selection has enabled a step change in the rate of genetic improvement of terrestrial livestock, and has the potential to do the same in fish

Source: [Aquafeed](#) / [Read Article](#)

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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 grants 2012-38500-19566, 2014-38500-22241, and 2016-38500-25751. 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 Oceanic Institute of Hawaii Pacific University and the University of Hawaii.

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