

REQUEST FOR PRE-PROPOSALS

Center for Tropical and Subtropical Aquaculture

Due Wednesday, June 1 2016

The Center for Tropical and Subtropical Aquaculture (CTSA) requests pre-proposals for applied research and extension that addresses problems and opportunities in the regional aquaculture industry. CTSA stakeholders have identified the below strategic areas and species as the top aquaculture development priorities. Pre-proposals that target these strategic areas and priority species will receive highest preference. **However, pre-proposals that do not fall under specific priority areas but address CTSA's mission will be considered in our development process. Our focus is on funding projects that will have immediate, positive impacts on the regional aquaculture industry.**

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. CTSA is funded by an annual grant from the U.S. Department of Agriculture's National Institute of Food and Agriculture (NIFA). The CTSA region includes the following areas: American Samoa, Guam, Hawaii, the Commonwealth of the Northern Mariana Islands, the Republic of the Marshall Islands, the Federated States of Micronesia, and Palau. **CTSA strongly encourages collaboration between institutions and agencies in the region, as well as shared funding of large priority projects.** Cultivating strong regional partnerships will catalyze the greatest changes in our industry.

Please note: Desired outcomes and/or deliverables are included where applicable. They represent industry-identified requests and it is strongly recommended that they be addressed in your pre-proposal.

FY 2016 Strategic Areas & Priority Species

Tilapia Farming Development

Tilapia has been identified as one of the most desired species for aquaculture farming throughout the CTSA region. Although most farming technology is available, the development and expansion of tilapia farming still faces regional challenges. One of the highest priorities in recent years has been stock improvement, and much work has been done in that area. CTSA encourages studies to continue improving the productivity of tilapia farming, and has identified the following top priorities for FY2016:

- 1) Develop protocols to ensure the quality of the final products.
- 2) Improve regional access to disease-free tilapia with high-quality genetic traits.

Sea Cucumber farming technology

With an increased demand for sea cucumber in Asian markets, natural stocks of the species have been over harvested in some Pacific Islands. To mitigate this problem, CTSA recently funded

projects to transfer sea cucumber hatchery technology to Pohnpei and Yap. Western Pacific islands communities in particular are interested in continuing the work, and CTSA has identified the following priorities for FY2016:

- 1) Determine how to increase larval yield from 1% to 5%.
- 2) Determine how to increase juvenile yield from 25% to 50%.
- 3) Develop the technology to culture the animals and investigate the correlation of organic makeup of the substrate to the growth and survival of the animal.
- 4) Investigate the economic viability of production of the species that are currently in culture in the region.

Marine Finfish Farming Technology

Farming of marine finfish, such as rabbitfish, moi, Kahala, milkfish, mullet and groupers, is important for the region and has been identified as a commercial aquaculture practice with potential for growth. CTSA has currently and previously supported the development of farming technology for several of the aforementioned species, and will accept proposals to help solve remaining culture issues (primarily pertaining to reliable source of fingerlings, affordable feed and environmental conditions etc.). In addition, CTSA will consider proposals that address marine ornamental aquaculture from the perspectives of both the marine aquarium market and the restoration of coral reefs. The priority CTSA has identified for FY2016 is additional research to commercialize the aforementioned species in our region.

Shellfish

CTSA stakeholders continually express their desire to farm shellfish in Hawaii and the US-affiliated Pacific islands using traditional Hawaiian Fishponds or other aquaculture technologies. CTSA is funding several ongoing research projects to support bivalve aquaculture in the state of Hawaii, and has identified the following priorities for FY2016:

- 1) Develop culture techniques for new species of bivalves in Hawaii and the US-affiliated Pacific Islands.
- 2) Develop SPF shellfish aquaculture.
- 3) Co-culture shellfish with other aquatic species to reduce negative impacts on the environment.
- 4) Assess economic feasibility of shellfish farming in the region.

Mangrove Crab

Mangrove crabs are a highly desired food in the Pacific islands and have thus been heavily harvested throughout the region. CTSA previously funded projects to produce juvenile mangrove crabs and study their feed requirements, but more information is needed to effectively grow them to market size. CTSA has identified the following priorities for FY2016:

- 1) Gather information to understand the behavioral aspects of inter-species competition and cannibalism, and investigate materials and/or protocols to limit aggressiveness (especially when 1-2 inches in size).
- 2) Conduct a disease prevalence survey across the region.

Cost Effective Locally-Made Aquatic Feed

Affordable feed has been identified as one of the major constraints in the regional development of aquaculture. CTSA has identified the following priorities for FY2016:

- 1) Develop cost-effective, environmentally friendly and sustainable local aquaculture feed resources. The major goal should be to create a local feed source that is less expensive than imported feed for species currently being farmed and/or species identified in a CTSA survey as desired species for regional farming. These include but are not limited to tilapia, marine shrimp, moi, Kahala, rabbitfish, and groupers.
- 2) Convert waste to acceptable feed ingredients or use abundant marine products, such as algae and seaweed (including invasive species), to replace traditional ingredients in feed.
- 3) Develop economic analyses or modeling that determines the feasibility, opportunities and challenges for locally-made feed.

Process and Instructions

Pre-proposals that do not follow the guidelines outlined in this section will be rejected. Properly formatted pre-proposals received by the deadline, 5pm HST Wednesday June 1 2016, will be reviewed by CTSA's Industry Advisory Council (IAC) and Technical Committee (TC). Only pre-proposals that receive a majority of votes will move forward with requests for a full proposal. Full proposals will receive both internal and external review for technical quality and industry impact. **Not all full proposals may be awarded.** Full proposals approved by the CTSA Board of Directors and the USDA as part of the CTSA FY16 Plan of Work are expected to have funding available for implementation by July 2017.

CTSA typically does not fund projects for more than \$100,000 per year. However, a project will not be automatically rejected if it exceeds that amount. CTSA gives preference to projects that will deliver the most benefits at the lowest cost. Due to its limited project budget (< \$600,000), CTSA will distribute funding to the highest ranked proposals until it has exhausted all available funds. **Please note: the amount available to fund new projects in this funding cycle is approximately \$150,000, which is less than most other years.**

Eligible Applicants

Universities, community colleges, or nonprofit research institutions and organizations must lead project execution. Private individuals or commercial companies are welcome to participate in research work but cannot act as the prime contractor for any project.

Pre-Proposal Guidelines

When submitting pre-proposals, researchers must identify the strategic area(s) and priority targeted. In addition, they must identify the type of project they are proposing: Research, Extension, or Integrated (Research & Extension).

Although an individual may submit a maximum of three pre-proposals, a researcher can act as principal investigator to only two projects in a single funding cycle. Pre-proposals must be no more than two pages (single-spaced, 12-pt. font, 1-inch margins), and the required format is Microsoft Word.

Pre-proposals must include the following sections:

1) Proposed title or main idea

2) Strategic Area and Priority targeted

3) Problem statement

Clearly explain the significance of the targeted problem and its relation to current and future industry development.

4) Proposed objectives

Define and number objectives that are achievable and measurable. Please visit the CTSA Web site (www.ctsa.org) to view previously funded projects so that your pre-proposal does not duplicate the work of completed or current projects.

5) Expected Industry Impacts

You must clearly define how your proposed project will realistically impact the regional aquaculture industry in economic terms, and indicate the potential return on investment. Please be specific in your description. CTSA typically funds projects that benefit multiple stakeholders. However, single beneficiary projects with compelling reasons will be considered. If the project will result in a new industry, the estimated economic impact of the industry has to be discussed.

6) Approach

Describe the principal approach that the project work group will use to accomplish the objectives outlined in your pre-proposal.

7) Duration

If a project's duration is to be more than one year, then your pre-proposal must include objectives and approach for each year. Objectives listed should be accomplished within a three-year time frame.

8) Estimated budget

Estimate the amount of funding needed to accomplish objectives. A breakdown need only include total estimates for major categories, such as salary, supplies, and equipment.

9) Project work group members

List members, by name and affiliation, who will participate in the execution of the proposed project.

10) Related research

If any participant has previously received CTSA funding to address the same species or subject area covered in the current proposal (or similar issues), provide a brief statement highlighting the results of that work and justification for the proposed project.

How to Submit

Please e-mail pre-proposals to mbrooks@ctsa.org by 5pm HST, Wednesday June 1, 2016. If you have any questions, please contact Meredith Brooks via e-mail or by telephone at (808) 292-1323. If necessary, pre-proposals may be faxed to (808) 259-8395 or mailed to the following address:

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