



**Florida Aquaculture Review Council
The Holland Building
600 South Calhoun Street, Suite 217
Tallahassee, Florida 32399-1300**

July 15, 2024

The Honorable Ron DeSantis
Governor of the State of Florida
The Capitol
400 South Monroe Street
Tallahassee, Florida 32399-0001

Dear Governor DeSantis:

Pursuant to section 597.005 Florida Statutes, a responsibility of the Aquaculture Review Council (ARC) is to provide a list of research needs critical to the development of the aquaculture industry. The list of research needs outlined below will be utilized in the request for Statements of Interest released later this year. Attached is the 2024 Florida Aquaculture Plan that includes recommendations for research and development to grow Florida's aquaculture industry.

For fiscal year 2025-2026, the following research and needs have been identified by the Aquaculture Review Council:

Industry At-Large:

- Create an outreach campaign to promote the environmental benefits provided by Florida's aquaculture industry to community stakeholders, consumers and conservation organizations.
- Identify ways to consider the benefits of aquaculture production when analyzing risk of invasion and potential environmental harm.
- Develop or enhance regular biosecurity training for growers and hatcheries, in both English and Spanish.
- Support school education programs leading to certification(s) of competency in aquaculture.
- Conduct risk assessments and develop a risk assessment tool for sustainable aquaculture of non-native species.
- Conduct research to address current and emerging issues in aquatic organism health.
- Develop operational cost-saving methodologies for aquaculture producers.

Food Fish:

- Develop a genetic selection program for commercially important food fish species.
- Develop and evaluate new husbandry technologies for food fish species which increase productivity or reduce operating costs.

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- Evaluate new or alternative feed ingredients and dietary formulations to reduce feed costs and increase growth and reproduction of commercially important species.

Ornamental Fish:

- Evaluate protocols to replace or reduce the use of live feeds during larval culture of commercially valuable ornamental fish species.
- Development of hybrid and new to Florida ornamental species.
- Use of native species for biological control of non-native species.

Aquatic Plants:

- Determine techniques for optimal growth and propagation of commercially important aquatic mosses (e.g., in the genus *Taxiphyllum*, *Versicularia*, *Leptodictyum*, *Pellia*, *Riccardia*, *Plagiomnium*, *Fissidens*, *Riccia*, *Fontinalis*, and *Monosolenium*).
- Investigate methods to control aquatic plant predators (i.e., *Physella spp.*, *Marisa spp.*, Lepidoptera, Amphipoda).

Alligators:

- Develop a protocol to nest, incubate and hatch alligators to increase hatch rates and reduce or eliminate umbilical scarring.
- Develop a protocol for rearing alligators to increase growth rates and reduce scarring from bites (density levels, frequency of feeding, water level and optimum grow out house temperature).

Shellfish:

- Investigate water quality parameters (biological and chemical) that affect survival of bivalve seed in the hatchery and nursery environment.
- Develop improved stocks and associated methods for commercially farmed bivalves which improve production characteristics (e.g., tolerance to high temperature, low dissolved oxygen and salinity variation) in real-world farm conditions.
- Research and development of technologies to address red tide issues in commercial bivalve farming.
- Research on interactions between environmental conditions, stock characteristics, culture methods, and lease sites for the optimization of farming practices of bivalve shellfish.

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In line with the research and development priorities, the Aquaculture Review Council selected six research and development projects to fund fully and one to fund partially for fiscal year 2024-2025. The funded projects are as follows:

- Using Retinal Development to Improve Feeding Protocols for Larval Freshwater Ornamental Fishes.
- Determine the Efficacy of AQUI-S®20E to Lightly Sedate Aquaculture Species Important to Florida for Rested Harvest and Live Transport.
- Temperature Data for Risk Assessment of Non-Native Species and for Determining the Thermal Landscape of Florida Aquaculture.
- Impacts of Carry-Over Effects on Crop Dynamics in the Eastern Oyster, *Crassostrea virginica*.
- Breeding of Low Salinity Resistance Hard Clams *Mercenaria mercenaria* for Industry Farms.
- Aquaculture Education and Industry Workshop.
- Mitigating Interactions Between On-Bottom Hard Clam Culture and Rays via Novel Deterrent Technology.

Thank you for your support of the Florida Aquaculture Review Council recommended research and development priorities and for your continued interest and enthusiasm concerning Florida aquaculture.

Sincerely

Portia Sapp

Portia Sapp
Director, Division of Aquaculture

cc: Cody Farrill