



## REQUEST FOR PRE-PROPOSALS

*Please Copy and Distribute to All Interested Parties*

The USDA-NIFA Southern Regional Aquaculture Center solicits response from qualified multi-state teams interested in participating in the regional project:

### COMMERCIAL PRODUCTION OF SELECTED NATIVE FRESHWATER ORNAMENTAL SPECIES

SRAC's Board of Directors has authorized up to \$150,000 for a 2-year project on commercial production of native freshwater ornamental fish. This project will be developed using the "competitive proposal method" where a team of multi-state scientists having demonstrated records of expertise in the subject complete a single pre-proposal that addresses all project objectives. One proposal will be selected for funding based on review by a committee of scientists not involved in any of the proposals that are submitted.

#### Background

The southern region of the United States has many native freshwater species of fish with market potential for the ornamental industry and some with existing market demand. As an example, the rainbow shiner (*Notropis chrosomus*) which is native to Alabama and Georgia is currently not cultured domestically in numbers to satisfy the North American market, but commercial production of this species occurs in Indonesia and other countries outside the US. This species is subsequently imported back into the domestic ornamental markets for sale to the aquarium trade. This species and many other native fish species represent an untapped opportunity for diversification of the US ornamental industry. Furthermore, culture of native species provides US growers with a competitive advantage over foreign producers and the import market. The demand for US native fish is even higher in export markets such as the European Union and Japan, where they are exotic and therefore demand a higher market price. While many of these fish have been successfully bred at the hobby or research level, transforming this information into commercial production has not occurred. This grant will identify some of these fishes and define their culture methods including broodstock development, spawning, egg collection and incubation, larval rearing, and growout to market size. Each stage of culture should have several objectives to the research.

The following list of species distributed within the Southeastern US, with some level of market potential has been developed working with wholesalers in Florida:

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|---|---|
| Blue Nose Shiner ( <i>Pteronotropis welaka</i> )      | Blackbanded Sunfish ( <i>Enneacanthus chaetodon</i> )   |
| Blue Head Shiner ( <i>Pteronotropis hobsii</i> )      | Bluefin Killifish ( <i>Lucania goodie</i> )             |
| Rainbow Shiner ( <i>Notropis chrosomus</i> )          | Golden Topminnow ( <i>Fundulus chrysotus</i> )          |
| Sailfin Shiner ( <i>Pteronotropis hypselopterus</i> ) | Gulf Coast Pygmy Sunfish ( <i>Elassoma gilberti</i> )   |
| Flagfin Shiner ( <i>Pteronotropis signipinnis</i> )   | Everglades Pigmy Sunfish ( <i>Elassoma evergladei</i> ) |
| Longear Sunfish ( <i>Lepomis megalotis</i> )          | Rainbow Darter ( <i>Etheostoma caeruleum</i> )          |
| Dollar Sunfish ( <i>Lepomis marginatus</i> )          | Mountain Redbelly Dace ( <i>Chrosomus oreas</i> )       |
| Redfin Pickerel ( <i>Esox americanus</i> )            |   |

## Objectives

The goal of this project is to develop methodologies and protocols for the culture of select native freshwater ornamental species and demonstrate feasibility via the extension of this research.

Specific objectives include:

- 1) Develop commercial production techniques and protocols for high-value native fish.
- 2) Extend this information to commercial clientele and assist with marketing strategies.

## Experimental Approach

The background section of this RFP details a list of 15 selected species distributed within various SRAC states which will serve as an initial list of native freshwater ornamental species from which submitters of pre-proposals must select. Each participating institution is required to select a minimum of two species from the above list.

Although time and resources are limited, successful proposals should address detailed experimental plans to address as many of the following research objectives for each of the selected species: *i.* Brood stock acquisition and development to sexual maturity, *ii.* Spawning and/or reproductive strategies, *iii.* Egg handling and hatching, *iv.* Larval rearing and care, *v.* Grow out to market size.

Successful proposals will demonstrate strong linkages with industry. Practical application of research results from the proposed efforts must relate to industry relevant practices and protocols. Proposals must contain detailed plans on the development of extension materials that can be used to inform and educate producers on how to carry out commercial production of the select species.

## How to Respond

Pre-proposals must address all objectives. Preference will be given to pre-proposals that show a high degree of collaboration and coordination among participants. To meet the criterion for a regional project, the pre-proposal must include collaboration from scientists in two or more states or territories in the Southern Region (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, U.S. Virgin Islands, and Virginia).

The pre-proposal must include a one page vita for each participant and a proposed budget for each participating institution or organization. Pre-proposals, vitae, and budgets that are not in the proper format will not be considered. The *Guidelines for Writing a SRAC Pre-proposal (Comprehensive)* contains an example of a pre-proposal. Contact Kristen Thompson at 662-686-3269 for any assistance.

Send an electronic copy of the pre-proposal in Word format to Jimmy Avery, SRAC Director as an email attachment (jimmy.avery@msstate.edu) by **August 7, 2016**. Proposals received after that date will not be considered.