



REQUEST FOR PRE-PROPOSALS

Please Copy and Distribute to All Interested Parties

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

Evaluation of Bird Depredation of Traditional and Non-Traditional Species on Aquaculture Farms

SRAC's Board of Directors has authorized up to \$345,000 for a 2-year project on *Evaluation of Bird Depredation of Traditional and Non-Traditional Species on Aquaculture Farms*. This project will be developed using the "comprehensive 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

Fish-eating birds are the primary source of wildlife caused loss to foodfish and baitfish aquaculture. Most fish-eating bird numbers continue to increase and so have issues with depredation on catfish and baitfish aquaculture. While considerable research has been conducted to document losses to fish-eating birds in certain regions, little has been done within the Black Belt region of Mississippi and Alabama or the Delta of Arkansas. Fish-eating birds, particularly cormorant's exploitation of aquaculture ponds in the Black Belt needs study, given the significant economical investments in aquaculture within this region. The Common Grackle has never been studied on fish farms and is a reoccurring issue for Arkansas baitfish producers.

The Black Belt region of eastern Mississippi and western Alabama is a major production area for catfish *Ictalurus* spp. with over 30,000 water acres currently in production. The Black Belt region is also part of the southern region of the Mississippi Flyway, a major migratory bird route that includes many fish-eating bird species, with the Double-crested Cormorant (*Phalacrocorax auritus*; hereafter cormorant) being the primary depredating species.

Arkansas fish farmers produce golden shiners, fathead minnows, and goldfish for many markets throughout the U.S. Blackbirds (Family Icteridae) have been reported to cause significant losses of baitfish. Blackbirds are common on Arkansas baitfish farms and have a history of fish consumption of various commercially produced species. These species are opportunistic predators, ambushing baitfish during the spawning season by standing on spawning structures and invade fish sheds removing fish from vats farmers use to hold fish prior to shipping.

Objectives

1. Quantify abundance, fish consumption, and economic impact of waterbird depredation on East Mississippi and West Alabama catfish farms.
2. Quantify abundance, fish consumption, and economic impact of blackbird depredation on Arkansas baitfish farms.

Experimental Approach

Intensive temporally and spatially explicit survey monitoring (e.g., aerial, ground) of cormorants and blackbirds are needed on catfish and baitfish farms during two complete seasons to quantify bird distribution among farms, farm ponds, and facilities. These surveys must be able to quantify bird abundance and characteristics of foraging use of farms. Bird diet collections are needed to quantify and identify types of prey items consumed to be combined with species specific bioenergetics to estimate individual and overall prey consumption and potential depredation impacts. These surveys, diet, and bioenergetics information would be used to estimate current bird abundance and factors affecting abundance, use, and distribution relative to current baitfish aquaculture in Arkansas and catfish aquaculture in eastern Mississippi and western Alabama. These data in turn can be used to provide industry specific estimates of economic impacts of piscivorous birds to the baitfish and catfish industries.

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. See “Guidelines for Writing a SRAC Pre-Proposal Comprehensive” file attached or contact Kristen Walters with the SRAC office at 662-686-3269.

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 15, 2022**. Proposals received after that date will not be considered.