Southern Regional Aquaculture Center
Office of Director

January 18, 2012

TO: Aquaculture Research and Extension Administrators -- Southern Region

FROM: Craig S. Tucker, Director

SUBJECT: Call for Request for Pre-proposals, **due February 24, 2012**

Enclosed is a Request for Pre-proposals to address the proposed SRAC project entitled "Performance Evaluation of Intensive, Pond-Based Culture Systems for Catfish Production". All scientists wishing to participate in this proposed area of research and extension activity should submit their form to the address below by February 24, 2012. Any applicable extension component should be identified in the proposal.

Enclosed are copies of the following:

1. Request for Pre-proposals entitled "Performance Evaluation of Intensive, Pond-Based Culture Systems for Catfish Production".
2. Proposal format -- Send an electronic copy (Word or WordPerfect) of the pre-proposal to the SRAC Director as an email attachment to <ctucker@drec.msstate.edu> by February 24, 2012.

Please forward copies of this memo and the attached information to appropriate departments and individuals within your organization. An electronic version of this memo and attachments can be accessed at http://srac.msstate.edu/whatsnew.htm.

Enclosures

REQUEST FOR PRE-PROPOSALS

Copy and Distribute to All Interested Parties

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

Performance Evaluation of Intensive, Pond-Based Culture Systems for Catfish Production

Background

Commercial catfish farming has been the largest and most important aquaculture sector in the United States since its progressive development in the 1970s. Technological advancements resulted in efficient production practices that are still being used today. Increased operating costs and foreign competition have recently caused catfish farming to become less profitable and catfish farmers are seeking ways to improve the efficiency and profitability of their operations.

Two approaches have been used by catfish farmers to increase productivity. First, some farmers have attempted to increase production within the constraints of traditional earthen ponds by stocking catfish at higher than normal densities in ponds, using the channel catfish × blue catfish hybrid, and installing more aeration per acre. The other approach is to modify the production system by physically separating the fish-holding function from ecological service functions (oxygen production and waste treatment) while retaining the benefits of outdoor, photosynthetic systems. These systems combine a number of biological, chemical, and physical intensification elements into a single, integrated production system that may prove more controllable and efficient than traditional pond culture.

Limited information on production economics for intensified pond-based systems is available from commercial farm settings because most research has been conducted at research institutions. Despite lack of information on production economics, many commercial catfish farmers are intensifying traditional pond culture or constructing systems based on the partitioned system concept.

Objectives

The overall goal of this project is to systematically evaluate catfish production performance and costs in intensive, pond-based catfish systems and identify their advantages and disadvantages relative to traditional catfish farming practices. Specific objectives are:

1) Monitor the production performance of channel catfish and hybrid catfish grown in in-pond raceways and split-pond systems on commercial-scale, catfish operations.

2) Monitor the production performance of hybrid catfish grown in intensive small acreage production systems on commercial-scale, catfish operations.

3) Estimate costs of production in these systems including total investment costs, annual fixed and variable costs, and cost per pound of production.

4) Identify the relative strengths, weaknesses, and trade-offs of these alternative production systems.

Approach

Proposals should focus on the two principle variants of the Clemson PAS that are now being used commercially: 1) in-pond raceways (Brown et al., 2011, Aquacultural Engineering 44:72-79) and 2) split ponds (Tucker and Kingsbury, 2010, Global Aquaculture Advocate 13(2):64-65). Studies should be conducted on commercial farms currently using some form of either of those systems to grow channel catfish or hybrid catfish (Objective 1) or small-acreage intensive production of hybrid catfish (Objective 2). A standardized method to monitor production performance of these systems, including (but not limited to) energy use (electrical and chemical); fish growth, survival, and yield; off-flavor occurrences; production inputs; repair incidence; and water quality should be included in the pre-proposal.

Pre-proposals should include a list of intended commercial collaborators and a brief description of their system(s). Yield verification protocols should be described, including data collection and cooperator participation. Preference will be given to approaches that assure success based on previous research and experience and the availability of existing commercial-scale production systems.

Primary consideration will be given to proposals that address the development of a common and standardized economic analysis approach toward estimation of production costs (Objective 3) for these systems. Total investment costs will be expected to include construction, installation, pond modification and renovation, and materials and supplies. Annual fixed costs should include (but are not limited to) depreciation, interest on investment, and insurance. Variable costs should also include (but are not limited) to chemicals, feed, fingerlings, fuel, interest on operating capital, labor, repair and maintenance, and utilities.

As part of the study, project participants will be expected to provide detailed physical descriptions of the systems investigated and an analytical summary of the strengths and weaknesses of the designs (Objective 4). Strengths and weaknesses should be assessed relative to other intensive pond-based systems and relative to traditional catfish farming practices.

Proposals must address all objectives as described above and preference will be given to proposals that show a high degree of collaboration and coordination among participants. To meet the criterion for a regional project, the 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).

Project Duration and Estimated Budget

This project will be funded for up to 3 years for a total of $300,000. Teams of scientists responding to the RFP should recognize that funding must cover work on all four objectives for the project duration.

How to respond

Multi-state teams of scientists having demonstrated records of expertise in the subject of this project must complete a project proposal using the format on the attached pages. Pre-proposals should address all four objectives and will be peer-reviewed. The 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. 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.

Send an electronic copy (Word or WordPerfect) of the proposal to the SRAC Director as an email attachment to <ctucker@drec.msstate.edu> by February 24, 2012. Proposals received after that date will not be considered.

Additional information can be obtained from the SRAC office by calling 662-686-3242.

Proposal Guidelines for the Regional Project

Performance Evaluation of Intensive, Pond-Based Culture Systems for Catfish Production

General Instructions:

Type the project proposal double-spaced in any standard 12 pt typeface using the guidelines below. The completed proposal should contain the following elements:

1) A cover page with the project summary
2) The project narrative
3) Vita for each participating scientist
4) Budgets pages consisting of budgets for each institution and an overall budget page for the entire project.

The deadline for proposals is February 24, 2012. Send an electronic copy (in MS Word) of your proposal to the SRAC Director as email attachment to <ctucker@drec.msstate.edu>

Proposal Format:

1) Cover Sheet with Project Summary (Page 1)

   This page should include the following: a) title of the project; b) the name, institution, address, phone number, and email address of the lead scientist; c) a list of cooperating scientists and their corresponding institutions; d) a Project Summary of 250 words or less. The summary must be self-contained and describe the overall project goals and the approach(es) to meeting the project objective(s). The summary should clearly indicate the nature of collaboration among the various participants.

2) Project Narrative (start on new page)

   The Project Narrative should not exceed 10 double-spaced pages. The Narrative should contain the following items:

   a) Objectives: restate the project objectives as stated in the Request for Pre-Proposals;

   b) Procedures: The procedures or methodology to be applied to the proposed effort should be explicitly stated and directly linked to the project objectives. This section should include, but not necessarily be limited to, a description of the proposed investigations and/or experiments; techniques to be employed, including their feasibility; kinds of results expected; means by which data will be analyzed or interpreted; pitfalls which might be encountered; and limitations to proposed procedures. Also see the description of desired project components under “Approach” above, for additional considerations that you should address in this section.

   c) Cooperation and Institutional Units Involved: To meet the criterion for a regional project, the 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). Identify each institutional unit contributing to the project. Clearly define the roles and responsibilities of each institutional unit of the project team and point out the nature of collaboration. Where possible, show how the work will be conducted in a truly collaborative fashion rather than simply as a division of labor.

d) Project Timetable: The proposal should outline all important phases as a function of time, year by year, for the entire project, including periods beyond the grant funding period.

3) Vitae

Include a one-page vita for each participating scientists. Use the attached format.

4) Budget pages

Include a one-page budget for each institution and a one-page overall budget for the entire project using the attached format.

VITA (centered at top)

(skip one line)
Name
Address
Phone
Fax
E-mail
(skip one line)

EDUCATION
(skip one line)
B.S. (year, major, institution,)
M.S. (year, major, institution,)
Ph.D. (year, major, institution,)
(skip one line)

EMPLOYMENT
(skip one line)
List each position held on a separate line from most recent to oldest
(skip one line)

SCIENTIFIC AND PROFESSIONAL ORGANIZATIONS
(skip one line)
List each organization on a separate line
(skip one line)

SELECTED PUBLICATIONS
(skip one line)
List several recent publications (from most recent to oldest) relevant to the subject area of the project. Skip one line between each entry.

BUDGET PAGE

A one-page budget proposal for the overall project should be prepared using the format below. The overall budget must be followed by separate budgets for each participating institution.

Salaries of the principal and co-investigators are not allowed and should be considered as institutional contributions. Personnel salary or wage costs should thus reflect only that of technical assistance (research associates, graduate students, etc.) required to accomplish the work; grant funds cannot be used by the institution as a supplemental source for professional salaries. Purchase of nonexpendable equipment is not allowed. Organizations performing work with the support of a SRAC grant are expected to have appropriate facilities, suitably furnished and equipped. SRAC grant funds for research and extension projects may not be used for office equipment and furnishings, air-conditioning, computers, or other "general purpose" equipment.

NOTE: Indirect costs are not allowed. Separate budget(s) must be included for each participating institution. Accountability of expenditures and distribution of funds to participants will be the responsibility of each participating institution.

Proposed Budget for the Regional Project

Performance Evaluation of Intensive, Pond-Based Culture Systems for Catfish Production

Name:
Institution:

	Year 1	Year 2	Year 3	Total
Salaries and Wages				
Research Associates-Postdoctoral				
Other Professional				
Graduate Students				
Prebaccalaureate Students				
Secretarial-Clerical				
Technical, Shop and Other				
Fringe Benefits (if charged as Direct Costs)				
Total Salaries, Wages and Fringe Benefits				
Materials and Supplies				
Travel within Region				
Publication Costs/Page Charges				
All other Direct Costs (Contractual Services)				
Total (for each year and cumulative)				