Project Descriptions
2006 National Marine Aquaculture Initiative Grant Awards

1. Aquaculture Development and Fishery Enhancement of Cobia

Utilizing a multidisciplinary, multi-state effort, the goal of this project is to enhance the commercialization of cobia aquaculture in the United States. Specifically, this project will focus on improving hatchery, nursery and growout of cobia in commercial aquaculture operations and collect information useful for managing wild stocks and evaluating the potential for stock enhancement of this species.

2. Improved Diets for Warmwater and Coldwater Marine Fishes

The goal of this nutritional research is to improve the growth and survival of all cultured warmwater and coldwater species through diet. Specifically, this project will test the effect of several compounds on the digestive systems of juvenile red drum and salmon. Researchers will be assessing growth, performance, nutrient digestibility, intestinal health, and immune system competence. Potentially, all cultured species could benefit from this type of nutritional research.

3. Alternative Shellfish Production Methods, Environmental Interactions and Regulatory Compliance

The goal of this project is to provide new information and tools that will allow the U.S. shellfish industry to continue to move forward in achieving the level of regulatory compliance necessary to operate sustainably and viably in the coastal environment. Specifically, this project will focus on the benefits and impacts of various types of shellfish production methods. The project is a continuation of an environmental and technical assessment of alternative methods to cultivate bivalve shellfish, such as oysters and clams.

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4. Commercialization of Bait Shrimp Farming Based on Specific Pathogen-Free Stocks

The goal of this project is to determine the economic feasibility of culturing two native species of shrimp used as bait by recreational fishermen throughout the southeast United States. Specifically, researchers will isolate and reproduce healthy broodstock from the wild, demonstrate commercial production for the two species, and conduct a market evaluation and financial feasibility analysis. The results will be transferred to the private sector through targeted outreach and demonstration projects. Ultimately, the results of this research could relieve pressure on wild shrimp stocks in the United States and provide an economic development opportunity for U.S. coastal communities.

5. Hawaii Offshore Aquaculture Research Project

This project will identify and address the next steps in the successful demonstration of sustainable offshore aquaculture in the United States. Specifically, this phase of ongoing offshore aquaculture research will use existing open ocean aquaculture operations and research infrastructure in Hawaii to address critical scientific and regulatory issues in the genetic management of cultured stocks, examine disease transfer between wild and culture stocks, and advance the environmental modeling of cage effluents relative to the surrounding marine environment.

6. Assessment of Environmental Impacts of Offshore Cage Culture

The goal of this project is to determine the best way to detect the impacts of nutrient levels from open ocean aquaculture at the earliest stages so that potential problems can be identified and steps taken to minimize impacts. Specifically, this project will determine the impacts of two submerged fish cages on the surrounding environment in the coastal waters of Culebra, Puerto Rico. This research is important because ecosystem susceptibility to nutrient loads from submerged fish cages varies by location.

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7. Genome Mapping for Selective Breeding of Striped Bass

The goal of this project is to provide genetic information that will improve and expand the commercial production of striped bass, an important aquaculture species in the United States. Specifically, the project will use genetic markers to create the first genetic map for striped bass. A genetic map is required so that researchers can directly select for genetic traits underlying performance of cultured fish, a technique that will accelerate selective breeding to reduce production costs and allow the U.S. industry to compete successfully in world markets. This research will address major obstacles facing striped bass aquaculture in the United States and build on previous research on this species.

8. Culture of California Yellowtail as a Model for Marine Aquaculture

The goal of this project is to conduct a commercial-scale test on the feasibility of growing California yellowtail as a model for marine aquaculture. Specifically, the project will address the economic and production issues for yellowtail from egg to market size. California yellowtail is one of the prime candidates for the expansion of commercial aquaculture in the United States

9. Demonstrating Technological and Economic Feasibility of Cobia

Although cobia is one of the prime candidates for expansion of aquaculture in the United States, there are critical issues that need to be resolved before commercial production of this species can move forward. Specifically, this project will examine several cobia production issues including hatchery techniques, disease control, production technology, and fingerling transfer. The project will emphasize technology transfer to industry.

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10. Commercialization of Black Sea Bass Aquaculture

This project will demonstrate black sea bass aquaculture in the United States. Specifically, the research will look at the feasibility of culturing black sea bass in land-based recirculating systems. Researchers will also conduct economic and market analyses as part of this study. Ultimately, the results of this research could bring another cultured species into the marketplace, creating jobs and economic opportunity for coastal communities.

11. New Technologies for Cod Culture

This project will leverage current research and the resources of industry partners to provide a road map for the establishment of sustainable Atlantic cod aquaculture throughout the northeast region of the United States. Specifically, the project will support hatchery technology development, develop improved organic feeds, and clarify the permit process for cod culture in nearshore and open ocean environments. Atlantic cod are one of the prime candidates for expansion of aquaculture in the United States.

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