

December 14, 2011

The following is a listing of projects funded by the five regional aquaculture centers that collectively represent the Aquaculture Centers Program under the USDA National Institute of Food and Agriculture. The projects listed cover the period from 2005 to the most recent. The projects respond directly to priority needs and issues identified by industry stakeholders in each of the five regions and represent unique regional characteristics in industry development, species of economic importance, and critical issues. The listing informs on the diverse scope and breadth of projects and how many provide critical impetus and multi-state team building that result in continued resource support from a variety of federal and state agency programs. The listing is intended to avoid potential of duplication in future efforts and take full advantage of project findings and outcomes at both the regional and national levels.

Go to: <http://www.srac.msstate.edu//theracs.htm> for a summary description of each project by regional centers. Each regional center will post information on new projects when they are approved for funding to keep the listing current as a reference and resource for the US aquaculture community.

**North Center Regional Aquaculture Center (NCRAC) Projects:**

Aquaculture: NCRAC and MarketMaker™ Collaboration

Evaluation of the Newly-Developed Least-Cost Experimental Diet for Bluegill at Commercial Densities in Ponds at Two or More Facilities in the North Central Region

Determination of Production Parameters of Selected Yellow Perch Lines at Commercial Densities in Ponds at Two or More Facilities in the North Central Region

Comparison, Identification, and Role of Microbial Communities in Recirculating Systems in the North Central Region

Official Transfer of 17"-methyltestosterone (MT) Analytical Method for Feed

Rapid Determination and Amino Acid Requirements of Yellow Perch and Tilapia

Effectiveness Research Leading to Approvals for Controlling Mortality in Coolwater and Warmwater Finfish Due to Aeromonad Infections with Terramycin 200 for Fish® (Oxytetracycline Dihydrate) and Aquaflor®

Viral Hemorrhagic Septicemia (VHS)

2nd Regional Aquaculture Extension Specialist (RAES)

North Central Regional Aquaculture Center Extension Project ("Base" Extension Project)

12th “Base” Extension Project

11th “Base” Extension Project

10th “Base” Extension Project

Rapid Determination and Amino Acid Requirements of *Lepomis* Sunfish

Feed Training Carnivorous Fish

Determinative Method for the AQUI-S® Marker Residue in Fillet Tissue

North Central Regional Aquaculture Center Baitfish Project

Drug Approval Research on 17"-methyltestosterone

1st Regional Aquaculture Extension Specialist (RAES)

Largemouth Bass Nutrition

National Coordinator for Aquaculture INADs/NADAs

**Center for Tropical and Subtropical Aquaculture (CTSA) Projects:**

Aquaculture of Opihi, Years 1 and 2

Developing a Value-Added Product “Half-pearls” from the Blacklip Pearl Oyster *Pinctada margaritifera* in Pohnpei (The Federated States of Micronesia), Years 1 and 2

DNA-Based Identification and Selection of High-growth Tilapia in Hawaii

Collection and Health Certification of Coralgroupers Broodstock in the Mariana Islands

Adapting Aquaponics Systems for Use in the Pacific Islands, Years 1 and 2

Pacific Regional Aquaculture Information Service for Education (PRAISE) and Publications, Year 5

Regional Biosecurity: Operational Biosecurity and Diagnostic Surveillance, Years 1 and 2

Value Added Approach for Tuna Fish Roe: Local Ingredient for Shrimp Maturation Diet

Analyze and Compile the Nutritional Composition of Potential Feed Ingredient Resources in American Samoa into a Feed Manual for Use in Tilapia Feeds

Diversifying Freshwater Aquaculture Products for Hawaii: Two Crossover Species, the Red and Black Pacu (*Piaractus brachypomus* and *Colosomma macropomum*), Years 1 and 2

Pacific Regional Aquaculture Information Service for Education (PRAISE), Year 4

Alternative Methods for Marine Copepod Production in Hawaii, Years 1 and 2

Pacific Regional Aquaculture Information Service for Education (PRAISE) and Publications, Year 3

Sea Cucumber Hatchery Production Technology Transfer in Pohnpei, the Federated States of Micronesia, Years 1 and 2

Promoting Health Management of Shrimp Aquaculture on Guam and the Commonwealth of the Northern Mariana Islands (CNMI)

Improving the Hatchery Output of the Hawaiian Pink Snapper (*Pristipomoides filamentosus*), Years 1 and 2

Improving Outputs in Commercial-Scale Production of Swordtails in Hawaii, Year 3

Determining Aquaculture Bottlenecks of Pacific Threadfin (*Polydactylus sexfilis*): Increasing Fry Survival, Growth, and Quality, Years 1 and 2

Developing Bivalve Culture to Diversify and Position Hawaii as a Supplier of Safe, Premium Edible Shellfish Products, Years 1 and 2

Artificially Propagating the Feather Duster Worm *Sabellastarte spectabilis* for the Marine Ornamental Trade

Planning and Inter-institutional Coordination for a Guam Aquaculture Development Plan

Kahala Broodstock Management

Kahala Parasites and Shrimp Viruses of Concern

Improving Pearl Quality by Grafting Technologies and Husbandry Methods for a Hatchery-based Black Pearl Industry Development in Pohnpei, the Federated States of Micronesia

Shrimp Production Demonstration Project and Aquaculture Training for Industry Stakeholders of the Commonwealth of the Northern Marianas Islands and Guam.

Improving Outputs in the Commercial-Scale Production of Swordtails, Year 2

Development of Captive Culture Technology for the Yellow Tang, *Zebrasoma flavescens*, Years 1-3

Bioprocessing of Pacific Island Byproducts for the Production of Value-added Feed Ingredients

Risk Assessment to Identify Potential Shrimp Virus Impacts in Hawaii and Development of Biosecurity Protocols

Development of DNA Markers for Pacific Threadfin Aquaculture

Culturing the Harlequin Shrimp (*Hymenocera picta*) for the Marine Aquarium Industry

Pacific Regional Aquaculture Information Service for Education (PRAISE) and Publications, Year 2

Demonstration of Seedstock Transportation and Spawning Synchronization in Sturgeon

Improving Outputs in Commercial-Scale Production of Swordtails in Hawaii

Improved Stocks and Management Practices for Commercial Tilapia Culture in Hawaii and the Pacific Region, Year 2 — Hawaii Component

**Northeastern Regional Aquaculture Center (NRAC) Projects:**

Aquaculture Health Hazards: Developing Outreach Services to the Region's Farmers via Extension and Aquatic Animal Health Professionals Using a HACCP Approach

Breeding Resistance to Sea Lice and Infectious Salmon Anemia virus in Atlantic Salmon

Examination of Finfish Pathogen Physiology and Predictive Ecology in Bivalve Integrated Multi-Trophic Aquaculture

Assessment of Environmental Impacts of Oyster Aquaculture in New England Waters

Novel Methodologies to Overwinter Cultured Hard Clams in the Northeast United States

Assessment of Grow-Out Strategies for the Green Sea Urchin

Selection for Enhanced Disease Resistance and Growth Performance in Cross-Bred Oysters, *Crassostrea virginica*

The Infection Cycle of Viral Hemorrhagic Septicemia virus

Creation of a Tetraploid Broodstock for the Bay Scallop *Argopecten irradians*

Targeted Biosecurity Education and BMP Development Program for Aquaculturists, Extension Agents, Researchers and Regulators

Investigation into the Potential Health and Economic Benefits of Bivalve/Finfish Co-Culture

Deterring Duck Predation with Underwater Sound

Evaluation of Putatively QPX-Resistant Strains of Northern Hard Clams Using Field and Genetic Studies

Development of JOD-Resistant Lines and Markers for Eastern Oyster Aquaculture

Evaluating Restoration and Mitigation of Aquatic Plant Species and Markets to Advance Commercialization of the Industry

Development of Environmental Code of Practice and BMPs for East Coast Shellfish Growers

Cross Breeding and Field Trials of Disease-Resistant Oysters

Evaluation of Hard Clam, *Mercenaria mercenaria*, Stocks for QPX-resistance

Effect of Temperature on the Infection of Hard Clams (*Mercenaria mercenaria*) by the Protistan Organism, QPX

Development of Genetic Markers to Assess Disease Resistance in the Eastern Oyster

**Western Regional Aquaculture Center (WRAC) Projects:**

Optimizing the Larval Nutrition of Marine Finfish Aquaculture Species Along the West Coast

Environmental and Endogenous Factors Affecting Egg Quality and Caviar Yield in Farmed Sturgeon

Optimizing Dietary Protein and Energy Utilization to Improve Production Efficiency of Tilapia in the Western United States

Cost-Effective, Alternative Protein Diets for Rainbow Trout that Support Optimal Growth, Health and Product Quality

Coldwater Disease Prevention and Control Through Vaccine Development and Diagnostic Improvements

Potential Threat of Great Lakes VHS Virus in the Western United States

Economic Impacts of Private Sector Aquaculture-Based Recreational Fishing in the Western USA

Determining Ripeness in White Sturgeon Females to Maximize Yield and Quality of Caviar

Physiological Changes Associated with Live Haul: Maintaining Healthy Fish

Development and Evaluation of Starter Diets and Culture Conditions for Three Subspecies of Cutthroat Trout and Gila Trout

An Evaluation of the Effectiveness of Various Florfenicol Treatment Regimens to Control Mortality Caused by *Streptococcus iniae* in Cultured Hybrid Striped Bass

AQUARIUS: Shellfish Sanitation Simulator, Rainfall and Water Quality Closure Rule Evaluator Version 2.0

**Southern Regional Aquaculture Center Projects:**

Publications, Videos and Computer Software

Development of Baitfish, Goldfish and Ornamental Fish Hatchery Methods

Reproduction and Larval Rearing of Freshwater Ornamental and Marine Bait Fish

Potential Marketing Structures for the Catfish Industry

Evaluation of Impacts of Potential “Cap and Trade” Carbon Emission Policies on Catfish, Baitfish, and Crawfish Farming

Development and Evaluation of Cool-Water Crawfish Baits

Identifying Determinants for Development of Live-Market Grading Standards for Crawfish

Effects of Mosquito Abatement Pesticides on Various Life Stages of Commercially Important Shellfish Aquaculture Species in the South

Improving Reproductive Efficiency of Cultured Finfish

Economic Forecasting and Policy Analysis Models for Catfish and Trout

Using National Retail Databases to Determine Market Trends for Southern Aquaculture Products

Improving Reproductive Efficiency to Produce Channel x Blue Hybrid Catfish Fry

Development and Evaluation of Pond Inventory Methods

Feed Formulation and Feeding Strategies for Bait and Ornamental Fish

Innovative Technologies for Commercial-Scale Aquaculture

