

**Title: Raising awareness of aquaculture in Escambia County utilizing an aquaponics demonstration exhibit**

**Project Leaders:** Andrew P. Diller, Sea Grant Extension Agent, Libbie Johnson, Aquaculture/Agriculture Agent, Beth Bolles, Horticulture Agent, Carrie Stevenson, Water Quality/FYN Agent

**Collaborators:** Chris Verlinde, Sea Grant Extension, George Carpenter, Northwest Florida Catfish Association, Issac Brady, Escambia County Master Gardeners

**Abstract:**

Escambia County is the leading producer of farm-raised catfish in the State of Florida with over two million pounds harvested annually. Awareness of this crop and its importance to the local economy is low. Additionally, research to improve agriculture runoff water quality is being conducted at local catfish ponds and farms. To raise awareness of aquaculture and sustainable farming methods, an aquaponics demonstration exhibit was constructed at the Escambia County UF-IFAS Extension Office. Over 200 adult and youth were introduced to aquaculture and aquaponics during the grant period. Many of these participants are educators and leaders in the community who will teach others and multiply effectiveness of the program. Formal and informal surveys indicated an increase in knowledge about agriculture, aquaculture, natural resources, and UF-IFAS Extension programs in Escambia County. The exhibit will continue to be used to raise awareness and test new aquaculture and aquaponic species and methods.

**Project Goals:**

To raise awareness of aquaculture production in Escambia County. To introduce youth/4-H audiences to aquaculture and aquaponics. To demonstrate aquaponics as a sustainable

method for raising multiple food products. To demonstrate the use of plants as buffer zones and biofilters to protect water quality.

### **Project Activities & Recipients:**

An aquaponics demonstration exhibit was constructed at the Escambia County UF-IFAS Extension office. Water from a 200 gallon fish tank is delivered to a hydroponic bed where nitrogen fixing bacteria change the ammonia from fish waste to nitrates. Hydroponic plants utilize the nitrates for growth and the filtered water is returned to the fish tank. Signage educates visitors on Escambia County aquaculture products and explains aquaponics.

The exhibit was demonstrated for the Escambia County Master Gardeners who will assist maintaining the system and educating future visitors. Forty-nine Master Gardener volunteers attended the demonstration. The system was also introduced to the 2007 class of Leadership Pensacola (LeaP). Participants of LeaP work to improve the quality of life in Escambia County. Fifty-four people participated in training at the Extension Office and were informed about aquaculture, agriculture, and natural resource Extension programs in Escambia County.

Information about the aquaponics system was presented to members of the agriculture and marine extension advisory committees, Environmental Education Coordination Team, and local teachers. Finally, 80 urban/suburban youth were introduced to catfish aquaculture as part of four agriculture and natural resource summer day camps.

### **Outcomes, Deliverables, & Impacts:**

Volunteers from the Escambia County Master Gardener Program assisted with the construction of the exhibit, are assisting with maintaining the system, and will educate future visitors. The 79 active members of the Master Gardeners contribute over 5000 volunteer hours annually educating the public and maintaining the demonstration gardens. The exhibit

will be featured at the Master Gardener Fall Jamboree in October, traditionally attended by several hundred County residents.

Two simple fact sheets based on signage for the exhibit were created. The first highlights aquaculture in Escambia County. The second defines aquaponics and explains how the system and biofilters work.

Informal surveys indicated many LeaP participants were not familiar with Extension and had never utilized any of the available resources. The LeaP training at the Extension Office resulted in Extension being asked to host a 2008 training session, the agriculture agent invited to be a speaker on a LeaP bus tour of the County, and information requests from participants to most Extension program areas. With significant cuts to the County budget possible in 2008, introducing these leaders of the Pensacola area to Extension could provide invaluable support for Extension and agriculture and natural resource programming.

The project leaders will continue to utilize the system during meetings and/or workshops with advisory committees and community/agency groups including the Northwest Florida Catfish Association, Environmental Education Coordination Team, and Escambia County school teachers. These groups can greatly multiply the use of the exhibit and knowledge of aquaculture in Escambia County. The system also will be utilized for research projects by students and 4-H programs and to test new aquaculture species and methods.