

Aquaculture

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Aquaculture

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
123	Management and Sustainability of Forest Resources	12%	12%	12%	12%
131	Alternative Uses of Land	18%	18%	18%	18%
307	Animal Management Systems	27%	27%	27%	27%
311	Animal Diseases	15%	15%	15%	15%
312	External Parasites and Pests of Animals	10%	10%	10%	10%
601	Economics of Agricultural Production and Farm Management	11%	11%	11%	11%
604	Marketing and Distribution Practices	7%	7%	7%	7%
Total		100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	0.8	0.8	0.0	0.5
Actual	1.6	1.0	0.0	1.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c 137617	1890 Extension 294445	Hatch 0	Evans-Allen 107532
1862 Matching 137617	1890 Matching 294445	1862 Matching 0	1890 Matching 107532
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Workshops will be held on the topics of catfish production and freshwater prawn production that include distribution of detailed reference material. Publications will be written to update existing catfish production and freshwater prawn production literature. Assistance will be given to at least 4 catfish processors in Georgia for plant development, market development, or supply development. Aquaculture product promotion and marketing will be conducted to more than 6,000 consumers at the Sunbelt Exposition. The Georgia Aquaculture Association newsletter will be edited and published biannually. The UGA Aquaculture website will be maintained to include aquaculture information and events.

In 2008, 1,198 visitors toured the aquaculture greenhouses with 798 of those being students from pre-school to high school. Six aquaculture workshops and presentations with aquaculture center tours were provided at FVSU during 2008. Aquaculture presentations on various topics were given, and in depth training was provided with "hands on" demonstrations with different recirculating aquaculture and aquaponic systems, and with different fish and prawn species. Over 839 clients attended either on-campus workshops or other aquaculture presentations made at various sites around the state. Other off-campus aquaculture FVSU outreach efforts provided more than 2,400 participants aquaculture information, presentations and demonstrations at 8 field days or workshops. Our outreach efforts with the Tri-State Aquaculture Association at the Sunbelt Agricultural Expo and at the FVSU building exposed over 8,000 participants to information on aquaculture and/or the taste of farmed catfish.

In each of the six aquaculture workshops and/or presentations conducted at GCAD, training was provided on proper water quality management and disease prevention. Tours of the greenhouses were conducted to demonstrate best management practices to optimize aquatic animal health and biosecurity in the different RAS. Water quality management and disease diagnosis services were provided for producers at the GCAD. The aquaculture newsletter articles dealt with best management practices to avoid water quality and disease problems. Progress was made in equipping the aquaculture water quality, fish nutrition and disease diagnostic laboratory.

2. Brief description of the target audience

Georgia farmers and citizens who plan to enter the aquaculture business or are already in business. Catfish processing plant operators and their clients are helped directly and through county extension agents. County extension agents are trained at workshops and update meetings.

Citizens who are curious about aquaculture or serious about starting an aquaculture business. Producers who are already in aquaculture and those just starting a business who need greater assistance in all areas of production. Small scale farmers or those without large acreage that can use RAS training. Senior citizens interested in additional activities. Seafood processors and their clients.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	120	600	800	0
2008	360	800	1576	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2008:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	0	
2008	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

Number of significant publications including referred journals articles, bulletins and extension publications.

Year	Target	Actual
2008	4	13

Output #2

Output Measure

Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Target	Actual
2008	80	190

Output #3

Output Measure

Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Target	Actual
2008	20	201

V(G). State Defined Outcomes

O No.	Outcome Name
1	Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.
2	Number of invited presentations by faculty as a direct result of the success of this program.
3	Percentage of program participants reporting an increase in skills proficiency in aquatic animal management and aquaculture production systems.
4	Percentage of program participants who indicated a plan to adopt one or more of the practices recommended for proper aquatic management.
5	Number of pond acres in catfish production in Georgia reported annually.
6	Increase in the farm gate value of catfish production in Georgia. Reported annually in millions of dollars.
7	Programming outcomes from educational programming.

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
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V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Fuel Costs)

Brief Explanation

Hurricanes may damage aquaculture facilities, economic recessions have led to reduction in aquaculture market prices, public policy related to tariffs may improve the aquaculture marketing environment, government policy relating to aquaculture may increase costs of production, competing public priorities may reduce the resources needed for aquaculture development, competing programs withing UGA have reduced resources needed for this extension effort in the past, fuel costs will cause fish feed costs to increase and also add to the final cost to the consumer which may reduce the demand for aquaculture products over time.

Lack of completion of aquaculture laboratory greenhouse and pond facilities have delayed progress of accomplishing some of the planned outcomes. Employment of additional aquaculture staff besides one FTE (aquaculture director) came after the second part of the year and work was still directed at facilities development. Capacity for research had not been reached with facilities nor had staff been trained in aquaculture research capabilities in 2008.

The late date of the hire of assistance and the lack of completed laboratory, aquaculture facilities and acquisition of required research equipment prevented research goals from being accomplished in 2008.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

After Only (post program)

Retrospective (post program)

During (during program)

Comparisons between program participants (individuals,group,organizations) and non-participants

Evaluation Results

Programs are evaluated by following the activities of participants after the programs. Georgia production is compared to the national average. Value of each development activity is evaluated on its own merits. Each development activity is evaluated by observation noting number of acres, size of construction, and number of employees and the owner is interviewed to obtain production volume and value. People, taste samples, literature distributed, web site requests, email requests, calls, visits, and letters are enumerated.

Key Items of Evaluation