

Animal Systems - Aquaculture Development

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Animal Systems - Aquaculture Development

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	15%			
111	Conservation and Efficient Use of Water	28%			
133	Pollution Prevention and Mitigation	5%			
301	Reproductive Performance of Animals	20%			
307	Animal Management Systems	20%			
403	Waste Disposal, Recycling, and Reuse	10%			
604	Marketing and Distribution Practices	2%			
Total		100%			

V(C). Planned Program (Inputs)

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	1.5	0.0	0.0	0.0
Actual	1.3	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c 81278	1890 Extension 0	Hatch 0	Evans-Allen 0
1862 Matching 56395	1890 Matching 0	1862 Matching 0	1890 Matching 0
1862 All Other 10849	1890 All Other 0	1862 All Other 0	1890 All Other 0

V(D). Planned Program (Activity)

1. Brief description of the Activity

An article for the Center for Tropical and Subtropical Aquaculture (CTSA) regional newsletter was published on the activities of this planned program for maintaining breeding lines of tilapia for fry production for local and regional farmers. The information increased awareness of all regional aquaculture professionals of Guam's ability to supply tilapia fry. A multi-agency sponsored demonstration system was initiated integrating rooftop rain catchments, with the storage tank being used to produce tilapia, and the water being filtered through disk filters used to irrigate fruit tree windbreaks at the Guam Department of Agriculture Livestock Breeding Station in the village of Dededo. Two workshops held at the site on other topics generated numerous inquiries on the system. Workshops on this system are planned for future reporting periods. Through the Cooperative Extension Service Aquaculture Park at the UOG campus, recirculating aquaculture systems and aquaponic systems were maintained to demonstrate this appropriate technology. Many school field trips visited this site. Tilapia hatchery production protocols were developed. Training sessions were held to transfer this technology to three hatchery technicians at the Guam Aquaculture Development and Training Center responsible for commercial production of tilapia seed stock for the tilapia producers in Guam. Training will be provided to regional interests in the future when requested. Existing recirculating aquaculture systems at the CES Aquaculture Park were upgraded to demonstrate more efficient and appropriate technology. One example is an irrigation sub-system was added that consists of a settling tank with pump, pressure regulators, disk filters and drip irrigation operating over a growing cycle of a bed of eggplants. The technology demonstrated the potential of tilapia tank based production systems to act as irrigation water holding tanks for high value fruit and vegetable production.

2. Brief description of the target audience

The target audience is varied, depending on the system. Ornamental systems audiences consist of farmers, aquaculturists, hobbyists, youth, and homeowners. Recirculating systems and aquaponics audiences include farmers, aquaculturists, homeowners (backyard production systems) and youth groups. Broodstock shrimp systems would appeal to large commercial shrimp farmers and investors interested in specialty niche export markets.

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	50	300	30	100
2007	28	80	74	0

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

Patent Applications Submitted

Year	Target
Plan:	0
2007:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

number of popular articles in newsletters, magazines and newspapers

Year	Target	Actual
2007	2	1

Output #2

Output Measure

number of extension articles

Year	Target	Actual
2007	4	1

Output #3

Output Measure

number of workshops

Year	Target	Actual
2007	2	2

Output #4

Output Measure

number of extension brochures/pamphlets

Year	Target	Actual
2007	2	1

Output #5

Output Measure

number of requests for research and new technology information

Year	Target	Actual
2007	2	2

Output #6

Output Measure

number of one to one intervention

Year	Target	Actual
2007	5	6

Output #7

Output Measure

number of multi-agency demonstration sites initiated and/or operated

Year	Target	Actual
2007	{No Data Entered}	2

V(G). State Defined Outcomes

O No.	Outcome Name
1	number of participants gaining awareness of emerging aquaculture technology
2	Number of participants gaining basic aquaculture knowledge
3	Number of individuals adopting enhancements to existing production systems
4	Number of individuals adopting new aquaculture technology
5	Increased number of producers in aquaculture
6	% substitution of imports

Outcome #1

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

Competing Programmatic Challenges

Other (The aquaculture specialist that represented the core FTE on this program retired during the period.)

Brief Explanation

The retirement of our only Extension Aquaculturist in this program has had a tremendous affected our ability to meet outcomes for this reporting year. The loss of faculty expertise, established networks with contractors and experience has resulted in a great reduction in activities for this planned program. The program is now being reassessed; changes will be reflected in plan of work updates and annual reports. In the early portion of 2007/2008 reporting period a new aquaculture specialist will be hired, until then other faculty are addressing client information needs.

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

1. Evaluation Studies Planned

After Only (post program)

Retrospective (post program)

Before-After (before and after program)

Evaluation Results

Key Items of Evaluation