

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Global Food Security and Hunger - The New Farmer: Agriculture for the Next Generation

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%			
104	Protect Soil from Harmful Effects of Natural Elements	10%			
125	Agroforestry	15%			
205	Plant Management Systems	10%			
307	Animal Management Systems	10%			
403	Waste Disposal, Recycling, and Reuse	10%			
601	Economics of Agricultural Production and Farm Management	15%			
608	Community Resource Planning and Development	10%			
806	Youth Development	5%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	1.0	0.0	0.0	0.0
Actual	3.0	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	1890 Extension	Hatch	Evans-Allen
136314	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
60292	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
39596	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

There are over 1,090 farmers and potential farmers with agricultural land leases under the Chamorro Land Trust Commission (CLTC). However, many (the exact number unknown) are not utilizing the land for agricultural purposes and/or are underutilizing or improperly utilizing the land. A key multi-agency effort this year with UOG CES, Guam Department of Agriculture and the CLTC, assessed the CLTC Agricultural land usage, and surveyed the producers and potential producers on barriers they face in engaging in agricultural production.

A key accomplishment this year was the farm site inspections and a report based on the initial site inspections, on issues surrounding land use under the CLTC agricultural lease program. The report identified many areas of non-compliance with the agriculture lease program's production rules and pervasive violations of Guam building code and sanitation laws. The report also identified farmer education needs and perceived issues limiting their ability to engage in agricultural production. This effort will continue over several years. The findings of this effort have highlighted the need for outreach programs on best management production and conservation practices in a New Farmer program format. Over the past decade and a half, there has been a dramatic increase in number of new farms on Guam through the Chamorro Land Trust agricultural lease program. Unfortunately, a majority of these leaseholders have no farming experience and do not have the knowledge of how to farm under the limited resource constraints they face.

Agriculture support agencies on Guam are small and lack the breadth of expertise that would be found in analogous agencies on the mainland. Island-wide, the expertise pool is adequate to meet the island's needs but is fragmented among several agencies. Consequently, farmers have difficulty accessing the information they need or finding the expertise to explain key concepts to them when they seek advice. Many of these farmers have limited farm experience. The educational needs could be overwhelming for any single agency's staff, but in a coordinated partnership, several agencies may effectively address these needs.

As in previous years, planning meetings between the cooperating agencies were held this year to organize collaborative trainings around New Farmer trainings for the CLTC clients and Introduction to Organic Agriculture. These workshops were developed to support the needs of Guam limited resource farmers. By working together on the workshop curriculum and delivery, local agencies were able to enhance local outreach efforts through training, collaborative planning and presentation of needs. At the same time, agricultural professional competence in organic agriculture was enhanced, which may lead to a local group of qualified organic inspectors on Guam.

2. Brief description of the target audience

The primary target audience is the one thousand plus agricultural leaseholders of the Chamorro Land Trust Commission (CLTC) agricultural lands programs, and the more than 100 existing full and part time commercial and subsistence agricultural producers on Guam. In addition, a secondary target population is the island youth interested in entrepreneurial agricultural activities. Additionally farmer groups interested in soil and water conservation, agroforestry, and community agricultural activities are targeted.

The secondary target audience is the agricultural professional community on Guam. This program is a collaborative effort to build the capacity and enhance the performance of the agricultural professionals in Guam Cooperative Extension, and partner agencies so these agricultural professionals can better identify issues and mobilize resources to assist the agriculture community on Guam.

Additional audiences include professionals from Extension, Guam Department of Education, Guam Department of Agriculture as participant educators who may utilize program curriculum made available through the Web. These participants also serve as key contacts in future needs assessments so that the Island's needs may be incorporated in our curriculum development efforts.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	90	1000	15	0
Actual	521	10000	0	0

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

Patent Applications Submitted

Year: 2010
 Plan: 0
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Plan	1	0	
Actual	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
2010	2	3

Output #2

Output Measure

- number of workshops

Year	Target	Actual
2010	4	9

Output #3

Output Measure

- number of extension fact sheets/brochures/pamphlets

Year	Target	Actual
2010	2	4

Output #4

Output Measure

- number of one to one intervention

Year	Target	Actual
2010	10	106

Output #5

Output Measure

- workshop curriculum developed and piloted with agricultural professionals

Year	Target	Actual
2010	4	8

Output #6

Output Measure

- number of multi-agency agriculture best management practiced demonstrations conducted

Year	Target	Actual
2010	2	6

Output #7

Output Measure

- Number of Distance Education Workshops conducted on curriculum materials.
Not reporting on this Output for this Annual Report

Output #8

Output Measure

- # of new Chamorro Land Trust Leasholders participating in workshop and field day activities

Year	Target	Actual
2010	20	120

Output #9

Output Measure

- # memorandums and understanding and cooperative agreements with partner agencies and organizations

Year	Target	Actual
2010	1	1

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	# of Chamorro Land Trust Commission lease holders increasing knowledge of sustainable agriculture production technologies, marketing practices and available government services
2	# of agricultural professionals gaining knowledge of sustainable agriculture production technologies, marketing practices, available government programs, and grant opportunities
3	Number of organizations that leveraged/or increased their outreach efforts by participating in the New Farmer Programs.
4	# of farmers adopting recommended demonstration practices
5	# of participants increasing knowledge of sustainable agriculture production technologies, marketing practices and available government services
6	# cooperating agency and organization personnel adopting and utilizing curriculum materials developed under this POW (both Guam and Distance Education).

Outcome #1

1. Outcome Measures

of Chamorro Land Trust Commission lease holders increasing knowledge of sustainable agriculture production technologies, marketing practices and available government services

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	20	60

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Over 1,090 agriculture leases have been issued by the CLTC over the past decade but prior to this reporting period no one has ever visited and done site inspections to assess needs and compliance with lease terms.

What has been done

Under this planned program a multiagency team was trained and then conducted assessment on roughly 10% of the agriculture leases. Findings indicate that over half of these lease holders are not meeting minimum agriculture production requirements. The educational/technical support needs of these lease holders were assessed.

Results

Sixty leaseholders increased knowledge of sustainable agriculture production technologies and marketing practices. A multi agency effort was made to pilot a New Farmer curriculum targeted to the needs of these lease holders. Four 8-10 hour workshops were piloted to address some of these needs. Client response was very positive with large attendance. New modules will be developed in future years.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
125	Agroforestry
205	Plant Management Systems

307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management

Outcome #2

1. Outcome Measures

of agricultural professionals gaining knowledge of sustainable agriculture production technologies, marketing practices, available government programs, and grant opportunities

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	6	11

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Agriculture professionals from the agriculture support agencies needed training in production monitoring, needs assessments, and rules of the CLTC agriculture lease in order to inspect sites for compliance and assess client needs. This years assessment indicated that a collaborative effort from several support and outreach agencies would be needed to have any hope of addressing the complex set of issues found within the Chamorro Land Trust Commission's programs.

What has been done

A multi-agency production and needs assessment team was formed and trained and is now in the field working on these issues with local farmers. An initial report was generated. A team of agriculture professionals from UOG CES, Department of Agriculture, NRCS, FSA and the Chamorro Land Trust Commission and local Agriculture consultants was formed to develop outreach education materials and programs. A cabinet level multi agency advisory committee was put in place by the Governor of Guam to meet twice monthly to develop policies for addressing many of the problems facing the CLTC.

Results

Eleven agriculture professionals increased knowledge of sustainable agriculture production technologies and marketing practices. Agriculture professionals are working with a common shared series of themes/practices for a new farmers curriculum. Content specialists from UOG, Public Works, Revenue and Tax, Guam EPA, Public Health, Land Management, Bureau of Planning and Statistics, Chamorro Land Trust Commission (CLTC) are meeting regularly to

develop recommendations for the issues facing the CLTC.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
125	Agroforestry
205	Plant Management Systems
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development
806	Youth Development

Outcome #3

1. Outcome Measures

Number of organizations that leveraged/or increased their outreach efforts by participating in the New Farmer Programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	3	7

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

UOG CES, Department of Agriculture, Natural Resource Conservation Service, Farm Service Agency are working together to develop education programs to address the farmers needs. Reports on the issues and problems in terms of the land usage were developed. The agencies have shared technical expertise and information resources to give each agency increased outreach impact.

What has been done

A multi agency outreach effort was made to reach these new farmers.

Results

Four 6-10 hour workshops were piloted, with 7 participants indicating knowledge change.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
125	Agroforestry
205	Plant Management Systems
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development

Outcome #4

1. Outcome Measures

of farmers adopting recommended demonstration practices

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	8	12

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Farmers in the CLTC agriculture lease program are not meeting minimum production requirements of their lease. Often because they are not aware of soil and water conservation practices and agroforestry practices that will enable them to engage in production on their isolated off the grid farms.

What has been done

Workshops were piloted in a multi agency effort and these clients were targeted.

Results

Twelve farmers have use green waste as mulch (and shredded paper, phone books and cardboard) and as source of organic matter for our soils is the most commonly adopted and popular of the practices from the New Farmers curriculum. Demand for low cost mulch is very strong in the farming community farmers want this by the dump truck load. This represents a significant diversion of material from the land fill.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
125	Agroforestry
205	Plant Management Systems
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management

Outcome #5

1. Outcome Measures

of participants increasing knowledge of sustainable agriculture production technologies, marketing practices and available government services

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	60	110

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There is a huge local demand for workshops on these topics.

What has been done

Workshops were piloted on Weeknights and weekends.

Results

Clients want more workshops and more variety of time offerings. One hundred ten participants have demonstrated knowledge change in production technologies and marketing practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
125	Agroforestry
205	Plant Management Systems
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development
806	Youth Development

Outcome #6

1. Outcome Measures

cooperating agency and organization personnel adopting and utilizing curriculum materials developed under this POW (both Guam and Distance Education).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	4	6

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Agriculture professionals in UOG Cooperative Extension Service, Chamorro Land Trust Commission and Guam Department of Agriculture, Farm Service Agency and Natural Resource Conservation recognize the need for development of common curriculum on government programs, conservation practices, sustainable agriculture, soil and water conservation and organic production.

What has been done

Four 6-10 hour workshop modules were developed and delivered.

Results

Six agencies have adopted the curriculum in government programs, conservatin practices, sustainable agriculture, and soil and water conservation. Evaluations have been very positive indicating a need for more workshops in specified areas. Guam Department of Agriculture and UOG CES are both using these materials with other client groups.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
125	Agroforestry
205	Plant Management Systems
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Public Policy changes
- Other ()

Brief Explanation

Election year change in administration so collaborations will need to be redeveloped with the new administration appointees among the agencies.

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

1. Evaluation Studies Planned

- After Only (post program)

Evaluation Results

Evaluations were conducted after most workshops. In general they all indicated knowldege gain with many indicating planned changes in action in the coming year.

Key Items of Evaluation