2013 University of Guam Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

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The University of Guam Cooperative Extension Service (UOG-CES), represents the University's front door to the non-formal education program needs of the residents of our island. UOG-CES serves the people of Guam by providing research-based knowledge through innovative community programs to foster positive change. As the University of Guam's primary service oriented unit, UOG-CES actively collaborates with other University colleges, schools, national/regional campuses, and distributed (distance) education delivery systems to meet the changing lifelong educational needs of our diverse population. UOG-CES has the unique capability of brining the University's depth and breadth of knowledge to bear in identifying and solving problems. Our research projects and Extension programs link different departments and facilitates mutually beneficial collaboration between the University and external organizations, individuals, and businesses. In so doing, UOG-CES makes vital contribution to the public and to the educational experiences of the University. Our Extension programs educate a wide spectrum of citizens (youths, adults, families and groups), including individuals who make (or have the power to influence) decisions with public consequences. Our Extension programs seek to promote an understanding of the consequences of various alternatives and to encourage well-informed policy decisions to better serve the public interest.

Extension programs seek to promote an understanding of the consequences of various alternatives and to encourage well-informed policy decisions to better serve the public interest. Our planned programs are concentrated in two unit areas: Agriculture and Natural Resources (ANR), and Communities, Youth, Families, Food and Nutrition (CYFFN). The primary mission of the ANR Unit is to work with its clientele and partners to advance research-based knowledge through extension and higher education in the food and agricultural sciences and related environmental and human sciences to benefit people and communities in Guam and the Pacific Islands. The program goals of ANR are carried out through its planned programs designed by ANR extension professionals to address issues faced by the community as well as other individual/community educational and informational needs. The CYFFN planned programs are focused on ensuring a safe and abundant food supply, helping families, youth and individuals to become mentally, physically and emotionally healthy and assisting communities in becoming sustainable and resilient to the uncertainties of economic, health and security issues. These two units achieve these goals through planned programs in Food Safety, Childhood Obesity, Global Food Security and Hunger (Plant Health and Pest Management, Community Development, New Farmer Agriculture for the Next Generation, Small Scale Swine and Poultry Farms), and 4-H and Communities.

In 2013 the University of Guam President began the "Good to Great" (G2G) initiative, aimed at a university-wide examination of all programs to measure its response to internal and external trends in higher education, and to clarify and strengthen the University's role in Guam and the region. As part of this process, all programs were required to submit an evidenced-based report to show levels of achievement in four areas: relevance and fit, sustainability, quality of program/activity, and demand and relationships. A program evaluation review committee was established to review and rank submittals in five areas where investment of resources ranged from heavy investment (1) to divestment (5). The rankings, not meant to be hierarchical, served as way for the University Executive Administration to have a foothold on those

programs that demonstrated closest rankings to the four criteria as noted above.

The G2G was an excellent opportunity for UOG-CES for several reasons. First the process allowed for internal review of its non-formal education programs and research; second, it served as an external review of the services and programs we deliver; and third, it communicated to the University community the high levels of collaboration, relevance and responsiveness to the community stakeholders we serve. While UOG-CES embraced the opportunity to review, collaborate and communicate our strengths and identify areas for shoring up, UOG-CES was just as satisfied that it ranked number one. Those programs falling into this category are described from the committee's report as "...programs for which itself is intrinsically central to the fundamental mission of universities in general, Land-Grant universities in particular, and/or the Good-to-Great objectives of leveraging the region's geographic location and preserving and promoting its unique cultures and natural resources...". (University of Guam Program Evaluation Committee Review Report, 2014). Moreover, the committee describes it rationale for its ranking, in part,

" To affect positive change in the environment and communities, extension services are responsible for bringing research-based knowledge in agriculture and natural resources, youth, families, food, and nutrition to local and regional communities, and to individuals. Through its close collaborations, annual impact assessments, step-wise gathering of community needs, and applied research, CES contributes directly to learning, teaching, discovery, and service that preserve and promote quality of life and sustainable use of the region's natural resources."

These often intrinsic values of UOG CES demonstrates the importance and centrality not only to the University of Guam but also, and more importantly to the people and environment we strive to serve and protect. The review now gives UOG-CES strategic areas where it can both strengthen and sustain our role in Guam and the region.

Program activities reporting year reflect the maturing of collaborations and partnerships that are moving towards interdisciplinary and holistic ways of serving communities and conducting research. The Plant Health and Pest Management planned program is a good example of this. Their goal this year was to strengthen multi-directional flow of IPM information among three agricultural groups and to position the Guam IPM program for future competitive funding that address each particular groups needs.They held integrated pest management (IPM) strategic planning this reporting year. There were 127 stakeholders representing three agricultural groups (commercial producers, residential gardeners, and governmental agencies). Results achieved from three strategic planning sessions included the identification of strengths and weaknesses of the current UOG-IPM program and recommendations for future funding. Specific recommendations for IPM funding included workshops and training sessions, the development of an IPM and agricultural service directory, crop/variety trials, and financial support for visiting subject experts. To improve communications between agencies, it was suggested that an educational task force be established. Possible functions of the task force will be to map areas of pests and their impacts on the island environment. It was also recommended that some of these funds be used to support the current diagnostics services to insure a quick turn around on identifications of pests, weeds, and plant diseases. As a result of the findings of the three strategic planning sessions and the successful grant submission, the University of Guam Cooperative Extension Service's Plant Health and Pest Management (PHPM) group was awarded a three-year $75,000 NIFA EIPM-CS Coordination grant for Guam.

There are still high numbers of chronic diseases on Guam. Our Childhood Obesity planned program continues to conduct work in educating the most at-risk audiences on the benefits of healthy living through nutrition and physical activity. In 2013, they conducted basic nutrition education classes on topics that relate to nutrition and food, developed culturally relevant curriculum for promoting physical activity; education to prevent obesity; localized general nutrition education materials (brochures/pamphlets), they have also developed a curriculum on food portion control and over-eating. More detailed activities can be

found in the planned programs section of this report.

While it is not feasible to list all the activities that UOG-CES conducted in 2013 in this portion of the report, we invite our readers who are connecting with us as reviewers, colleagues or interested individuals, to access each planned program to see the tremendous progress UOG-CES has made this past year. It is indeed an exciting time for UOG-CES as it begins to close the gaps among disciplines and, as is our charge, to move closer to true connections between the natural sciences to social behavior social research. It is UOG-CES's goal that research, activities, and extension move to multi and inter-disciplinary ways to address the complexities of social, political, environmental and economic issues that we face today. We believe that this is the essence of Extension's work - to give people research-based information in ways that are impactful and meaningful in their lives.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	22.0	0.0	0.0	0.0
Actual	110.0	0.0	0.0	0.0

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- Internal University Panel
- External Non-University Panel
- Expert Peer Review

2. Brief Explanation

The stakeholders input provide the essential and critical guidance to the priorities of the University of Guam Cooperative Extension during the five year plans of work. The internal panel review includes a two-phase process. The first phase involves extension professionals working with stakeholders to identify critical needs and the level of problem solving. Faculty across campus will be invited as a resource professional. The second phase will include the program leaders and extension professionals working closely with other partners who can collaborate to find solutions. The partners will assess what resources and expertise can be provided.

The external partners who will be invited are government and non-government entities who can provide support and critical resources to the plans of work. The external and internal panel will serve as the coalition engaging in the critical and emerging identified issues. Assessment and relevance will be key to prioritizing extension resources to the plans of work.

For this reporting year UOG-CES used the University's "Good to Great" initiative for internal and external review. In 2013 the University of Guam President began the "Good to Great" (G2G) initiative, aimed at a university-wide examination of all programs to measure its response to internal and external trends in higher education, and to clarify and strengthen the University's role in Guam and the region. As part of this process all programs submitted an evidenced-based report to demonstrate levels of achievement in four areas: relevance and fit, sustainability, quality of program/activity, and demand and

relationships. A program evaluation review committee reviewed and ranked submittals in five areas where investment of resources ranged from heavy investment (1) to divestment (5). The rankings served as way for the University Executive Administration to have a foothold on those programs that demonstrated closest rankings to the four criteria as noted above. The rankings also serve as a way for UOG-CES to identify and understand the weakness in program support, demand to need, and structure of support.

The G2G was an excellent opportunity for UOG-CES for several reasons. First the process allowed for internal review of its non-formal education programs and research; second, it served as an external review of the services and programs we deliver; and third, it communicated to the University community the high levels of collaboration, relevance and responsiveness to the community stakeholders we serve. While UOG-CES embraced the opportunity to review, collaborate and communicate our strengths and identify areas for shoring up, UOG-CES was just as satisfied that it ranked number one. Those programs falling into this category are described from the committee's report as "...programs for which itself is intrinsically central to the fundamental mission of universities in general, Land-Grant universities in particular, and/or the Good-to-Great objectives of leveraging the region's geographic location and preserving and promoting its unique cultures and natural resources...". (University of Guam Program Evaluation Committee Review Report, 2014). Moreover, the committee describes it rationale for its ranking, in part,

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These intrinsic values of UOG CES demonstrated the importance and centrality not only to the University of Guam but also, and more importantly to the people and environment we strive to serve and protect. The review now gives UOG-CES strategic areas where it can both strengthen and sustain our role in Guam and the region.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey of the general public
- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals

Brief explanation.

Formal and informal processes are employed to gather stakeholder input. Formal processes include the local advisory committees that are created and maintained specifically for the purpose of garnering stakeholder input. These formal advisory structures include the 4-H Youth Council, Soil and Water Conservation Districts, Workforce Investment Board, Serve Guam Commission, and advisory committees for extension units. In addition, each Extension faculty and administrator is encouraged to develop and maintain informal networks that permit them to garner input from key officials, industry representatives, and advocacy groups. Our faculty and staff are members of many key organizations at local and national levels. These connections are extremely valuable in understanding initiatives, opportunities for partnerships, and potential need. Surveys are frequently used to garner input about the effectiveness of individual programs. Focus groups are also used to test new approaches, methods and materials.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief explanation.

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Stakeholder identification is generally a step-wise process. Initially, we seek to identify emerging needs within communities. This is often initiated through searches of the literature and review of demographic (census) data followed by in depth discussions with local decision-makers and others with unique knowledge about emerging needs. Once groups are broadly defined, care is taken to understand most effective mechanisms of engagement. Selection methods varied from issue to issue. Individuals were identified based on their current or past involvement to the related issues, based on a sample size of the target group, or their prior work or life experiences. Individuals were selected and invited via written correspondence to participate in stakeholder input sessions. As well, UOG-CES and its partners collectively conduct focus group sessions to identify emerging needs of stakeholders.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Survey of the general public

- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals

Brief explanation.

Formal and informal processes are employed to gather stakeholder input. Formal processes include the local advisory committees that are created and maintained specifically for the purpose of garnering stakeholder input. These formal advisory structures include the 4-H Youth Council, Soil and Water Conservation Districts, Workforce Investment Board, Serve Guam Commission, and advisory committees for extension units. In addition, each Extension faculty and administrator is encouraged to develop and maintain informal networks that permit them to garner input from key officials, industry representatives, and advocacy groups. Our faculty and staff are members of many key organizations at local and national levels. These connections are extremely valuable in understanding initiatives, opportunities for partnerships, and potential need. Surveys are frequently used to garner input about the effectiveness of individual programs. Focus groups are also used to test new approaches, methods and materials.

3. A statement of how the input will be considered

- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- In the Staff Hiring Process
- To Set Priorities

Brief explanation.

Stakeholder input is routinely used to identify emerging issues, to redirect Extension programs and also in the hiring process. Where stakeholder input and needs assessments show the need for different staffing, it has been used to make changes in qualifications of those hired. Additionally, it is used in setting program priorities and allocation of resources. Information gathered through the stakeholder input process is used to determine program needs and direction. In some cases, teams made up of extension agents, specialists, clientele and researchers are formed to develop and implement programs. At times, agents are able and equipped to address the issue with resources from his/her office. At other times, and when issues are determined to be island-wide, specialists will become more involved with program development and direction than if they are responding to a single request for information.

Brief Explanation of what you learned from your Stakeholders

From stakeholder input sessions in 2013, the Plant Health and Pest Management program learned that collaborators and partnerships required better communication between agencies, a need for a map of pests and impacts on the island, as well as establishing an education task for to touch all aspects of pest management. Our stakeholder sessions revealed on a higher level beyond workshops and seminars that agencies (public, private and no-profit) in the agriculture community understand the need to work in more holistic ways. They also understand for managing pest, most especially invasive pests, that a groups must be well-connected one another and that communication among the groups must be a priority.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
908419	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	908529	0	0	0
Actual Matching	456429	0	0	0
Actual All Other	397182	0	0	0
Total Actual Expended	1762140	0	0	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover	397172	0	0	0

V. Planned Program Table of Content

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Community Development

☑ Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	40%			
801	Individual and Family Resource Management	20%			
802	Human Development and Family Well-Being	20%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%			
805	Community Institutions, Health, and Social Services	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	0.0	0.0
Actual Paid Professional	2.2	0.0	0.0	0.0
Actual Volunteer	0.0	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**
142449	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
64886	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
61972	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

This past year yielded increased collaborative and participation partnerships across the community development platform, translating to positive visibility for the University of Guam community development (CD) work. During this period, consultative work with councils (State Rehabilitation Council and the Guam Workforce Investment Board), represent the bulk of cooperative partnerships. The addition of the Guam Farmer's Cooperative under the CD work offers increased opportunities to connect to the current Extension activities planned for 2014.

Under the CD work area, the K@GI continues to promote the use of the Community Capitals Framework (CCF) offering government agencies and municipal leaders (Guam Mayors) the opportunity to understand the use of community indicators in helping address the myriad of public issues faced by communities.

Under this planned area, technical assistance (TA) and program support to the planning efforts of the participating entities (Guam Workforce Investment Board, Regional Workforce Development Council, and the Guam State Rehabilitation Council) continue to rely and request for expanded TA in the areas of needs assessment, survey work development, grants proposals, memorandum of agreements and technical report preparation. Added to this role is providing facilitation support and training assistance to deal with board communication, Roberts Rule and cooperative training and needs assessments.

2. Brief description of the target audience

The target audiences in the program include: local government, numerous commissions and boards; non-governmental organizations, Other target audiences also include economic development professionals, small businesses and industries, community groups and the general public, regional collaborators.

3. How was eXtension used?

eXtension was used to access resources related to the following:

- Webinars
- Communities of Practice
- Healthy Communities
- Community Planning

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	30	60	0	0

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- number of extension articles

Not reporting on this Output for this Annual Report

Output #2

Output Measure

- number of workshops

Year	Actual
2013	0

Output #3

Output Measure

- number of brochures

Year	Actual
2013	2

Output #4

Output Measure

- number of disseminated research results, new technology and information

Year	Actual
2013	0

Output #5

Output Measure

- number of surveys

Year	Actual
2013	1

Output #6

Output Measure

- number of focus groups conducted

Year	Actual
2013	0

Output #7

Output Measure

- number of popular articles in newsletters, magazines and newspapers

Year	Actual
2013	0

Output #8

Output Measure

- number of one to one assistance

Year	Actual
2013	30

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	number of individuals increasing awareness and understanding of disaster preparedness.
2	Number of community institutions increasing awareness and understanding of community food security issues, trends, and processes.
3	Number of organizations adopting group and organizational leadership skills.
4	Number of organizations adopting program development skills.
5	Number of organizations determining and developing appropriate and effective strategies for public decision making
6	Number of organizations crafting, evaluating, and implementing alternative solutions to address public issues
7	Number of organizations building skills and identifying opportunities to enhance effective participation in public decision making processes

Outcome #1

1. Outcome Measures

number of individuals increasing awareness and understanding of disaster preparedness.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The EDEN Community of Practice and established working committee continue to expand with international cooperators (Bicol University). The opportunities to address common disaster planning education interest areas continue to expand as sponsored through EDEN and NIFA work sessions.

What has been done
Through the EDEN Community of Practice, the EDEN International Work group was established to lead the interest and discussions to expand the common interests in disaster planning and coordination within our international networks and affiliations. A collaborative workspace exist within the EDEN community of practice.

Results
ongoing discussions with our international partners continue and participation in EDEN conferences.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #2

1. Outcome Measures

Number of community institutions increasing awareness and understanding of community food security issues, trends, and processes.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Cooperator work groups continue to build on the work relationships and need to update strategic plans annually and access to technical assistance, data sets analysis and interpretation of findings continue to be a ongoing request for support and report preparation.

What has been done
Strategic management and maintenance work on state plans and needs assessments technical assistance- State plan updates to strategic goal areas, Needs assessment review of program areas and work plans development.

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #3

1. Outcome Measures

Number of organizations adopting group and organizational leadership skills.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #4

1. Outcome Measures

Number of organizations adopting program development skills.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #5

1. Outcome Measures

Number of organizations determining and developing appropriate and effective strategies for public decision making

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Through our grantsmanship efforts particularly the Knowdedge@Guam Initiative, the Use of the Community Capitals help to promote the need to understand community development and the associated public issues. Through the Governor's office and the Department of Defense (Office of Economic Adjustment) work continues in the use of Community Capitals Framework (CCF) to help communities understand public issues.

What has been done
Under the K@Guam Initiative, resulted in the development of the the beta version of Guam's community capitals framework and the preliminary planning efforts for the planned community focus groups with 3 villages.

Results
Three villages completed the preliminary focus group sessions to explain the K@Guam Initiative and CCF capitals approach. Completion of the GovGuam preliminary CCF round and workgroup establishment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #6

1. Outcome Measures

Number of organizations crafting, evaluating, and implementing alternative solutions to address public issues

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #7

1. Outcome Measures

Number of organizations building skills and identifying opportunities to enhance effective participation in public decision making processes

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	3

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Through our representation and involvement with the various government boards, councils and organizations, the community development program provides for timely collaboration and capacity building to carryout and assess effective implementation of program resources and adjustment to programs and services.

What has been done
CD program effort include consultation and technical assistance work to the various organizations: (Guam Workforce Investment Board, Regional Workforce Development Council and the State Rehabilitation Council).

Results
Updates to state plans and continued capacity building through the development of quality reports and timely distribution and review. Annual reports generated for the State Rehabilitation Council and submission of the GWIB 5-year state plan.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Community data and community profiles continue to be a high interest area for both goverment organizations (local and federal entities). This is evident in the upcoming planning round for the military buildup for Guam and the region. The impact of ongoing infrastructure work continues to be a strong concern related to workforce availability and the corresponding migration issues. Communities are faced with the many challenges associated with the myriad of public issues and the ability of these communities to have relevant information to understand and assess these impacts.

Extension ability to address these issues require focusing on strategic solutions which require increase resources to help address planning issues and needs assessments work that will follow.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Guam Families, 4-H Youth Development and Communities

☑ Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management	25%			
802	Human Development and Family Well-Being	25%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	25%			
806	Youth Development	25%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	0.0	0.0	0.0
Actual Paid Professional	2.2	0.0	0.0	0.0
Actual Volunteer	0.0	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**
142229	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
58345	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
57022	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

To achieve the 4-H program ultimate goals the following activities will be conducted based research proven and curriculum adopted Experiential Learning Model promoting life skills.

05 new 4-H Clubs will be organized and supported annually,

15 4-H school enrichment programs will be established and later chartered as 4-H Clubs,

10 special interest/short-term programs/Day Camps and 5 overnight camps will be conducted,

10 School-Aged Child Care Education Programs will be offered yearly,

05 technology related workshops will be conducted and

02 planned workshops for 4-H individual study/mentoring/family learning activities will be implemented.

In 2013, the UOG-CES 4H Youth Development and Communities program conducted workshops using the Experiential Learning Model to promote life skills. UOG CES planned, organized, facilitated and conducted youth related outreach educational activities that reached 8,247 youth. Activities include 32 workshops with community clubs, 40 workshops with school clubs, 6 workshops with 4H after school clubs with military 4H clubs. We also conducted 23 special interest/short term programs, a 3-week day camping program, 18 after-school enrichment programs, 8 individual study/mentoring/family learning program, 2 after school program using 4H curriculum on staff training, and 3 instructional TV/Video/Web programs.

Workshop topics included consumer family science, biological sciences, technology and enginering, physical science, environmental educational/earth science, and agriculture in the classroom. Participants learned, practiced and mastered life skill activities including: teamwork, managing feelings, healthy lifestyle choices, personal goal setting, resiliency, cooperation/collaboration with others, communication and social skills, leadership, wise use of resources, decision making, critical thinking, self-esteem/motivation, marketable skills, responsible citizenship, and learning to learn. The workshops also included STEM activities, as well as other activities that focus on workforce preparation, such as seamanship work preparation and marine related occupations.

2. Brief description of the target audience

Primary target audience include children and youth in the community, public/private/military schools as well as their families/teachers/educators and organizations that requested our service in a collaborative manner. Extension continues its efforts to reach the population who are under-served. This year 4H partnered with the Guam Department of Education's Federal Programs providing life skills workshops to students whose first language is other than English, students who are primarily from the Federated States of Micronesia. We have established a partnership with JP Torres Alternative School dealing with high-risk students. We collaborated with Department of Youth Affairs to initiate programs and life skills to promote career path of clients.

3. How was eXtension used?

eXtension was used as a reference in developing and aligning our outreach program for youth at risk.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	596	982	8247	9361

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	3	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- (1) # of club members

Year	Actual
2013	1985

Output #2

Output Measure

- (2) # of volunteer leaders

Year	Actual
2013	152

Output #3

Output Measure

- (3) # of workshops

Year	Actual
2013	119

Output #4

Output Measure

- (4) # of brochures

Year	Actual
2013	3

Output #5

Output Measure

- (5) # of surveys

Year	Actual
2013	1

Output #6

Output Measure

- (6) # of media articles and promotions

Year	Actual
2013	6

Output #7

Output Measure

- (7) # of focus group

Year	Actual
2013	1

Output #8

Output Measure

- (8) # of volunteers trained

Year	Actual
2013	41

Output #9

Output Measure

- (9) # of extension staff trained

Year	Actual
2013	15

Output #10

Output Measure

- (10)# of collaboration established

Year	Actual
2013	23

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	(1) Number of youth through communication and expressive arts programming demonstrate increased self efficacy in public speaking, presentations, visual arts and performing arts
2	(2) Number of youth participants in 4H natural resouces and environmental education programs demonstrate environmentally responsible behavior
3	(3) Number of youth participants who study plant, soil and entomology learn the interconnectedness of organisms and their environment
4	(4) Number of youth reporting positive attitude change and/or aspirations about learning and careers in a 4-H project area
5	(5) Number of youth increasing participation in science and technology educational programming/clubs
6	(6) Number of volunteers completing a training program and successfully leading a program, activity, event or club
7	(7) Number of youth indicating increased knowledge/skills related to economic education and/or entrepreneurship
8	(8) Number of youth indicating knowledge and/or skills related to leadership
9	(9) Number of youth reporting positive attitude change and/or aspiration related to volunteering and community service

Outcome #1

1. Outcome Measures

(1) Number of youth through communication and expressive arts programming demonstrate increased self efficacy in public speaking, presentations, visual arts and performing arts

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	3117

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Communication and expressive arts programs promotes effective communication, public speaking, citizenship skills, build leadership and personal development, increases community/volunteer services, and civic engagement. These programs help youth express themselves, increase self-confidence, develop good self-esteem, additionally the programs increase knowledge in critical thinking, decision making, goal setting, and problem solving. These are identified essential skills in youth development as youth prepare to enter into the workforce.

What has been done
119 workshops were conducted with the total of 5,625 youth participating in the life skills sessions that increased their knowledge and skills in communication and expressive arts.

Results
3,117 participated in civic engagement, 968 learned skills in community/volunteer service, 2685 increased their leadership and personal development skills, 3,623 increase their communication skills and participate in expressive arts and STEM.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #2

1. Outcome Measures

(2) Number of youth participants in 4H natural resouces and environmental education programs demonstrate environmentally responsible behavior

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	3293

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
It is essential that youth take part in becoming leaders in our community and environmental issues. Sustainable community depends on our youth partnerships and leadership development. Youth need to understand the linkages between natural resources and environmental education program. By involving youth in ecological projects, they increase their sense of ownership, citizenship, and environmental stewardship.

What has been done
A number of workshops were conducted to increase their knowledge and skills in natural resources and environmental education programs.

Results
3,293 youth participants in the 4H natural resources and environmental programs increased their knowledge and demonstrated learned skills in environmental education programs including responsible behavior.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #3

1. Outcome Measures

(3) Number of youth participants who study plant, soil and entomology learn the interconnectedness of organisms and their environment

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	2142

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Youth who participated in school gardening (eg. in the classroom) curriculum developed positive self-esteem, increased nutritional habits, developed leadership skills, increased awareness and appreciation for the nature and the environment, increase a sense of healthy-lifestyles, and increased science skills. Youth gained an understanding of value of food, food processing and preparation as it related to healthy living. Youth outdoor activities increased their physical well-being.

What has been done
Workshops were conducted in the schools and 4H Clubs that helped increased youths knowledge and understanding of plants, soils, consumer sciences, food processing and preparations. Additionally, youth learned about the science of entomology and how insects play a major role in our environment connectedness.

Results
2,142 youth learned new science skills and increased their knowledge with regard to plants, soil sciences, and how the sciences of entomology is interconnected to organisms and environment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #4

1. Outcome Measures

(4) Number of youth reporting positive attitude change and/or aspirations about learning and careers in a 4-H project area

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	3875

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
An essential element in youth development is independence. A skill that motivates youth to become critical thinkers, problem solvers, and good decision makers. To achieve these, CES provides opportunities for the youth to engage in learning that motivates them to be masters of the skills and practice learned skill through community services and citizenship activities.

What has been done
A number of workshops were conducted to help youth increase their knowledge and skills in critical thinking, problem solving, and good decision making. Youth reported positive attitude and/or aspirations about learning and career identification in 4H project area.

Results
3,875 youth increased their knowledge and changed their attitudes with regard to career choice and overall outlook of the future.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #5

1. Outcome Measures

(5) Number of youth increasing participation in science and technology educational programming/clubs

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	4184

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In partnership with our local education department and 4H military project, a demand for science, engineering and technology has been addressed. Resources identification and sharing had equipped our 4H staff to deliver needed life skills activities that serviced SET programs. Our young people must learn life skills in SET in order to be competitive in job market.

What has been done
90 SET workshops were conducted in the GDOE, local 4H Clubs, community organizations, summer and Christmas break including 4 with the Military installation 4H Clubs.

Results
4,184 participants indicated an increased knowledge in basic sciences, engineering and math. Increased skills in measurements, plant identification, rocketry, marines sciences, and boating safety were identified to be activities that were also most enjoyed and learned.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #6

1. Outcome Measures

(6) Number of volunteers completing a training program and successfully leading a program, activity, event or club

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	147

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Volunteers are vital resources necessary for the success of our youth development programs. They play an important role in extending partnerships through community involvement, building, collaboration and delivering the programs to address client needs in the community. The volunteers must be supported with development opportunities, capable management and leadership, as well as adequate resources in order for them to increase their own skills and knowledge base so they engage and work with the youth and community.

What has been done
147 volunteers received training and orientation in the 4H Youth Development Program. 4H 101 training manual was used. The manual is extensive and provides a systematic approach to youth development programming.

Results
4H Community 4H Clubs, Special Interest 4H Clubs, School Based 4H Clubs, Military 4H Clubs were organized and chartered. 4H office continues to service clubs implementing life skills activities as scheduled. Finally, volunteers have had a major impact in the increase enrollment of 4H membership as a whole.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

806 Youth Development

Outcome #7

1. Outcome Measures

(7) Number of youth indicating increased knowledge/skills related to economic education and/or entrepreneurship

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	1240

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The community is currently facing an economic challenge. Prices for gas, food, shelter, and health care continue to increase. Youth finance and entrepreneurship programs help to promote skills, behavior, knowledge, and attitude for participants to become proactive in their future financial challenges.

What has been done
4H staff conducted 12 workshops within Guam public schools, local 4H Clubs, community organizations and during summer and Christmas break including 2 Military installations. Workshops in budgeting, understanding where money goes, value of money, and simple business plans were conducted.

Results
1,240 youth participants increased their knowledge and skills in money (finance) management, and practiced the development of a business plan. Youth indicated having increased their knowledge/skills related to economic education and/or entrepreneurship.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #8

1. Outcome Measures

(8) Number of youth indicating knowledge and/or skills related to leadership

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	2963

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Leadership skills are critical in our democratic governance. Youth who serves in leadership roles are potentially the leader of our nation's future. We must cultivate these skills and increase our potential the leader or our nation's future. We must cultivate these skills and increase our potential if we are to become and continue to be a stronger nation. Our future depends on good leaderships with good leadership skills.

What has been done
Partnering with our schools, volunteers, local organizations, and military partners, 4H has conducted life skills training using Targeting Life Skills Model and Experiential Learning Model.

Results
2,963 youth participated in workshop activities designed to increase skills in leadership that included targeted areas of communication, teamwork, self discipline, self responsibility, decision making, problem solving, concern for others, goal setting, critical thinking, cooperation, conflict resolution, good character and responsible citizenship.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #9

1. Outcome Measures

(9) Number of youth reporting positive attitude change and/or aspiration related to volunteering and community service

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	1952

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Volunteering and community service are the key elements to successful youth development programming. Youth need to learn from adults and adults need to learn from youth as we engage in both community betterment and oneself. Successful programs nationwide are based on volunteerism and community service.

What has been done
UOG-CES conducted workshops linking volunteer and community service to sustainable environment, community, individuals, families, and organizations resiliency.

Results
1,952 youth and adult volunteers attended and participated in the workshops were able to report an increase in positive attitude regarding caring for the environment and their families. An increase in their generosity performance indicated that they want to share what they have learned (mastered), increase in participatory community service (belonging), while sharing their capabilities (independence).

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Financial constrains have been most challenging. However, UOG-CES continues its efforts to seek extramural funding sources.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Pre and post evaluation results indivate that youths who participated in 4H life skills activities demonstrate increased knowledge in subject matter areas, increased awareness of well-being (self esteem and self motivation), increased levels of social skills, increased participation in teamwork, increased interest in STEM topics, and increased levels of critical thinking, problem solving, and decision making skills.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Food Safety - Tropical safe and wholesome food products

☑ Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
501	New and Improved Food Processing Technologies	40%			
502	New and Improved Food Products	10%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	40%			
806	Youth Development	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	1.0	0.0	0.0	0.0
Actual Paid Professional	1.2	0.0	0.0	0.0
Actual Volunteer	0.0	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**
83224	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
59480	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
41666	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

We trained and consulted individuals in the area of food safety and food technology in the community of Guam, helping them to handling food properly and safely to process value-added food products. We disseminated science-based information and technology related to food safety and food processing. We conducted research expriments to determine the values of tropical and subtropical plants and produces and develop value-added food products to benefit human health.

2. Brief description of the target audience

The target audiences include entrepreneurs, food manufacturers, food workers, and food-safety educators, farmers, general consumers, college students, youth, and school children.

3. How was eXtension used?

eXtension was not used in this program.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	50	500	50	100

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

Patent Applications Submitted

Year:	2013
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	1	4	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of peer reviewed publications

Year	Actual
2013	5

Output #2

Output Measure

- # of non-peer reviewed publications

  Not reporting on this Output for this Annual Report

Output #3

Output Measure

- # of workshops

Year	Actual
2013	1

Output #4

Output Measure

- # of dissemination of science-based information

Year	Actual
2013	600

Output #5

Output Measure

- # of work with media

  Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Changes of participants (or residents) in gaining knowledge of principles and practices in food safety and food processing
2	Changes of participants (or residents) in improving practices and applying principles in food safety and food processing
3	Changes in magnitude of foodbonre illness and marketing safe and wholesome value-added food products in the community

Outcome #1

1. Outcome Measures

Changes of participants (or residents) in gaining knowledge of principles and practices in food safety and food processing

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Various tropical and subtropical fruits and vegetables grow year-around on Guam. However, Guam imports about 90% of foods and lacks competitive processed tropical products. Due to the tropical climate, the frequency of foodborne illness outbreaks on Guam is much higher than that in the U.S. mainland. The estimated number of foodborne illness occurred on Guam are 13,000-152,000 each year. Preparing and processing safe and wholesome foods is a critical issue in the island.

What has been done
We trained and consulted individuals in the area of food safety and food technology in the community. We disseminated science-based information and technologies related to food safety and food processing in the community.

Results
Individuals who received our training and science-based information improve their knowledge in food safety and processing value-added food products.

4. Associated Knowledge Areas

KA Code	Knowledge Area
501	New and Improved Food Processing Technologies
502	New and Improved Food Products
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
806	Youth Development

Outcome #2

1. **Outcome Measures**

Changes of participants (or residents) in improving practices and applying principles in food safety and food processing

Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

Changes in magnitude of foodbonre illness and marketing safe and wholesome value-added food products in the community

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Some of goals and work have not been aschieved as we planned. The main reason is because of competing priorities from other responsibility and projects. Even though this is a program of Extension Service, we are also involved in funded reseach projects.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The previous evaluation of our program were mainly based on the pre- and post-test results, observing the knowledge improvement of partcipants. We also observed the skills that participants learned and improved after they received our extension service. We need to improve our evaluation to understand more if this program met its objectives or not.

Key Items of Evaluation

Pre- and post- tests, observation, and interview.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Childhood Obesity - Nutrition Education on Guam

☑ Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
701	Nutrient Composition of Food	15%			
702	Requirements and Function of Nutrients and Other Food Components	10%			
703	Nutrition Education and Behavior	20%			
704	Nutrition and Hunger in the Population	10%			
724	Healthy Lifestyle	25%			
802	Human Development and Family Well-Being	15%			
805	Community Institutions, Health, and Social Services	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual Paid Professional	1.5	0.0	0.0	0.0
Actual Volunteer	0.0	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**
67072	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
48549	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
23897	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Activities for this program in 2013 included: (1) conducted basic nutrition education classes on topics that relate to nutrition and food which include: 'MyPyramid'; Food Safety (Kitchen & Safe Food Handling); Importance of Exercise; Fruits & Vegetables (Vitamins); Shopping Tips; Budgeting; meal Planning; Reading Food labels; promoting use of herbs and spices to help reduce the intake of salts, fats and sugars; and chronic disease prevention. (2) Conducted nutrition workshops to target population. (3) Developed culturally relevant curriculum for promoting physical activity; education to prevent obesity; localized general nutrition education materials (brochures/pamphlets) and also develop a curriculum on food portion control and over-eating. (4) Developed recipe books that feature favorite local recipes. (5) Created a local recipe book that incorporates healthful modifications of local dishes. (6) Conducted food demonstrations on local dishes that incorporate healthful modifications. (7) Developed booklet and calendar that identifies locally grown fruits and vegetables with high nutritive value and suggest ways to healthful ways to prepare the local produce. (8) Conducted workshops promoting locally grown fruits and vegetables with healthful recipes for both farmers and experienced cooks, and marketing healthful recipes with locally grown produce. (9) Maintained partnerships with local food source businesses to promote a greater variety of healthful foods and education awareness within food source facilities. (10) Developed and disseminated fact sheets of common causes of preventable chronic diseases that are prevalent on Guam and showed how it is related to poor lifestyle choices. (11) Developed and disseminated health and nutrition education curriculum for chronic disease prevention along with educational materials.

2. Brief description of the target audience

The target audiences of the program include: (1) school-aged children (elementary through high school level); (2) families in public assistance programs; (3) families with young children; (4) general consumers; (5) military families; (6) health educators; (7) school teachers; (8) local farmers; (9) working professionals; (10) other groups requesting services.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	435	1301	2431	685

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of workshops

Year	Actual
2013	136

Output #2

Output Measure

- # of brochures

Year	Actual
2013	1

Output #3

Output Measure

- # of dissemination of research results and new technology and information

Year	Actual

2013	104

Output #4

Output Measure

- # of one to one intervention

Year	Actual
2013	104

Output #5

Output Measure

- # of focus group

Year	Actual
2013	21

Output #6

Output Measure

- # of work with media

Year	Actual
2013	4

Output #7

Output Measure

- # of articles in newsletter, magazines, and newspapers

Year	Actual
2013	9

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	# of participants exposed to nutrition, exercise, and obesity prevention information
2	# of participants gaining an increase in physical activity knowledge and skills, especially as it pertains to maintaining mental and physical well-being, prevention of chronic disease, and improving overall health
3	# of participants who have been exposed to health and nutrition education for chronic disease prevention
4	# of children on Guam will practice healthy eating patterns
5	# of families, children, and youth have access to healthy food

Outcome #1

1. Outcome Measures

# of participants exposed to nutrition, exercise, and obesity prevention information

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	1270

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The data from the Guam Department of Public Health and Social Services, Office of Vital Statistics continue to indicate that high numbers of chronic and preventable diseases such as type 2 diabetes, cardiovascular disease and certain types of cancer are the primary causes of death on Guam. We continue to see the need for preventive nutrition education programs and services as they relate to the promotion of healthy diets and lifestyle habits for the whole community of Guam.

What has been done
Nutrition education workshops for: 1) families with young children in public assistance programs; 2) families who may not receive public assistance but fall into the 'low income' category; 3) youths in Guam schools, including after-school programs and other youth related programs; 4)Nutrition, Fitness and Fun Summer Camp; and 5) nutrition education workshops for the elderly in our community. Additional education efforts include: 1) static nutrition and health displays during island health fairs; 2) monthly (in-store) food demonstrations; and 3) distribution of nutrition education materials which provide information on how to stay healthy and prevent chronic diseases.

Results
A total of 1,270 had an increase in nutrition and health knowledge.

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
702	Requirements and Function of Nutrients and Other Food Components

703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being
805	Community Institutions, Health, and Social Services

Outcome #2

1. Outcome Measures

# of participants gaining an increase in physical activity knowledge and skills, especially as it pertains to maintaining mental and physical well-being, prevention of chronic disease, and improving overall health

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	1270

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The continuous rise in obesity prevalence and associated complications on Guam is linked to the lack of nutrition and health education. Obviously, there is a need for increased nutrition and health knowledge and skills. Through nutrition education, the people of Guam would be better informed on the many health benefits of proper nutritional intake of foods and the importance of regular exercise as it too links to good health.

What has been done
Nutrition education workshops for: 1) families with young children in public assistance programs; 2) families who may not receive public assistance but fall into the 'low income' category; 3)youths in Guam schools, including after-school programs and other youth related programs; 4)Nutrition, Fitness and Fun Summer Camp; and 5) nutrition education workshops for the elderly in our community. Additional education efforts include: 1) static nutrition and health displays during island health fairs; 2) monthly (in-store) food demonstrations; and 3) distribution of nutrition education materials which provide information on how to stay healthy and prevent chronic diseases.

Results
Pre- and post-tests showed that 96% of participants increased in nutrition skills in one or more lessons.

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being
805	Community Institutions, Health, and Social Services

Outcome #3

1. Outcome Measures

# of participants who have been exposed to health and nutrition education for chronic disease prevention

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	104

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
A sedentary lifestyle and poor food choices are linked to the increase number of Guam residents who suffer from chronic and preventable diseases such as obesity, diabetes, cardiovascular diseases, and cancer. Obviously, there is a need for increased physical activity, nutrition and health knowledge and skills. By providing proper health and nutrition education that not only increases knowledge and awareness, but also improves skills associated with increased physical activity and improved lifestyle habits, the number of Guam residents affected by these preventable conditions may be decreased.

What has been done
Nutrition education workshops for: 1) families with young children in public assistance programs;2) families who may not receive public assistance but fall into the 'low income' category; 3)youths in Guam schools, including after-school programs and other youth related programs; 4)Nutrition, Fitness and Fun Summer Camp; and 5) nutrition education workshops for the elderly

community. Additional education efforts include: 1) static nutrition and health displays duringisland health fairs; 2) monthly (in-store) food demonstrations; and 3) distribution of nutrition education materials which provide information on how to stay healthy and prevent chronic diseases.

Results

Pre- and post test and follow-up surveys indicate that about 91% of participants in one or more education session have adopted skills and knowledge and are leading healthier lives.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
805	Community Institutions, Health, and Social Services

Outcome #4

1. Outcome Measures

# of children on Guam will practice healthy eating patterns

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

# of families, children, and youth have access to healthy food

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

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

☑ Reporting on this Program

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	10%			
104	Protect Soil from Harmful Effects of Natural Elements	10%			
125	Agroforestry	10%			
205	Plant Management Systems	10%			
403	Waste Disposal, Recycling, and Reuse	20%			
601	Economics of Agricultural Production and Farm Management	20%			
608	Community Resource Planning and Development	10%			
806	Youth Development	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	1.5	0.0	0.0	0.0
Actual Paid Professional	1.5	0.0	0.0	0.0
Actual Volunteer	0.1	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**
122628	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
50551	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
90677	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

This plan of work is driven by needs assessments of local and regional farmers and agricultural professionals. Core issues were identified at the 2007 WSARE subregional conference and further refined by annual needs assessments though advisory meetings and focus groups.

The WSARE and locally funded Professional Development Program (PDP) component of this POW develops curriculum, educational materials, conducts workshops, capacity building meetings and facilitates multi-agency needs assessments, project planning and grant writing to support outreach professionals in addressing local and regional needs. Guam PDP focuses on leveraging these professionals' outreach activities through collaborations. The agricultural professionals supported include: University of Guam and other regional land grants (CES, AES), Guam Community College (GCC) culinary program, SBDC, CLTC, Guam DoAG, FSA, NRCS, SWDCs and local agricultural consultants.

In 2013 a new focus audience was identified: the growing number of education and outreach professionals, not trained in agriculture, that are working to promoting gardening and other agricultural activities. These included Extension field staff in Consumer and Family Sciences and 4-H, also included were a large number of teachers in the public and private schools and workers in public health and community development. The PDP worked with partners to adapt key components of the New Farmer curriculum for community and backyard gardens in our tropical context, and coordinated curriculum development in support of food preservation and processing trainings. Faculty in the New Farmer POW partnered with the Children Healthy Living (CHL) program field agents to develop a 16 hour "Basics of Starting Your Own Garden" curriculum, New Farmer partners both faculty and agriculture professionals modeled delivery of four, four hour workshops covering the 8 topics. Seven CHL Extension Associates observed and then worked with the PDP coordinator to enhance existing materials into a standard curriculum for use in training outreach workers and teachers on how to garden. They then used this knowledge and materials to deliver their own workshops and demonstrations, initially under the PDP coordinators supervision. They in turn trained 4-H staff in use of these materials in October. Now they are continuing to conduct workshops in the community and for teachers on using these materials. Additionally the 4H staff set up on-campus garden demonstrations based on this curriculum.

Faculty in the New Farmer POW assume that one of the best ways to develop agricultural, food, and culinary professionals' outreach capacity is to engage them in curriculum development and then pilot trainings. In the process we also leverage our time and expertise. One of the areas that farmers and community members identified where trainings are needed is in value added processing and food preservation. The Guam PDP effort under this POW in cooperation with the Food Safety - Tropical safe and wholesome food products POW is coordinating a mult-agency/partner working group that is

developing the curriculum series for a Guam Food Preserver/ Value-added Processer program. This is being accomplished in a manner similar to how the "New Farmer" Curriculum materials that were developed in past years. Twelve agriculture, food and culinary professions from University of Guam, Guam Community College, Micronesian Chefs Association and the local community are participating in this effort. Two of the workshop materials were completed and piloted this year 'Making Jams and Jellies" and "Making Quick Pickles". Significant progress has been made on other topics in this series.

One faculty, during this period, worked with the College of Micronesia Land Grant programs and the US Embassy in Pohnpei to conduct a rapid assessment of agriculture production and markets for each of the four states of FSM. This was to help in planning for a WSARE grant in the next year that focuses on week long workshops for agricultural professionals in each state to develop their capacity to conduct trainings that will help subsistence agro-forest farmers to transition to subsistence with cash crop/commercial production.

Gardening workshops were held on an almost monthly basis using this POWs standardized gardening curriculum . Additionally initial value added and food preservations workshops were piloted as part of this POWs effort to develop a shared food preservation curriculum in collaboration with Food Safety: Tropical Safe and Wholesome Food Products POW and partner agencies. The eventual goal is to develop localized curriculum required to initiate a Guam Master Food Preserver program.

For the subsistence/home/community garden portions of this program's workshops are addressing the information needs of the small (1/4 acre to 1 acre) island producers. Our outreach efforts address these educational needs through workshops and extension publications, in order to increase the substitution of local production for the current imported produce and home grown produce for purchased produce.

These efforts are all working towards the goal of promoting home and community grown food as alternatives to store bought food through home and community gardening programs, thus increasing local food diversity and self reliance. This program consistently partners with other local agencies and organizations when ever possible to leverage our outreach efforts.

2. Brief description of the target audience

The primary target audiences are the one thousand plus agricultural lease holders 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, and the thousands of island residents interested in gardening and other agricultural activities. In addition, teachers and the island youth interested in entrepreneurial agricultural activities are also beneficiaries of this program.

The secondary target audience is the agricultural and food professional communities 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. By targeting these communities and formally patnering with them in developing shared curriculum we leverage all of our limited professional resources.

A third potential audience are the agricultural professionals in the partner land grant programs, and their partners, throughout the American Affiliated Pacific.

A third target audience is Extension, education and island Department of agriculture professionals as participant trainers in a train the trainer distance education workshop series on the

curriculum materials.These participants will also serve as key contacts in future needs assessments so that the islands needs may be incorporated in our curriculum development efforts.

3. How was eXtension used?

Used as a reference source of information in developing new curriculum

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	893	530	610	0

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
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	Actual
2013	4

Output #2

Output Measure

- Number of extension learning opportunities

Year	Actual
2013	24

Output #3

Output Measure

- Number of extension publications and presentations (fact sheets, white papers, web-based learning modules, etc.)

Year	Actual
2013	13

Output #4

Output Measure

- Number of research and extension advisory councils and boards.

Year	Actual
2013	7

Output #5

Output Measure

- Workshop curriculum developed and piloted with agricultural professionals

Year	Actual
2013	10

Output #6

Output Measure

- Number of adults participating in food system knowledge and skill enhancement programs.

Year	Actual
2013	452

Output #7

Output Measure

- Number of either: Memorandums of understanding, or cooperative agreements, or shared demonstrations initiated or continued.

Year	Actual

2013 3

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Of the adults participating in food system knowledge and skill enhancement programs or learning opportunities the number indicating improved knowledge of food systems.
2	Number of community action plans implemented as a result of science and community based assessment.
3	Number of organizations that leveraged/or increased their outreach efforts by participating in the New Farmer Programs.
4	Number of adults or organizations who participated in the programs learning opportunities who adopting recommended or demonstrated practices.
5	Number of 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 the adults participating in food system knowledge and skill enhancement programs or learning opportunities the number indicating improved knowledge of food systems.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	320

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
This is important as it is a measure of the effectiveness our our outreach activities. When evaluations are conducted after workshops we generally find most filling out the evaluations indicate knowledge gain. This period evaluations were not conducted after the workshop.

What has been done
We have standardized an evaluation form and have begun to give out a raffle ticket to each participant that fills out the evaluation. Raffle prizes are generally a plant (fruit, vegetable or herb) from our nursery for the gardening demonstrations. This improves completed evaluation rates.

Results
Increased evaluation completion rates

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

Outcome #2

1. Outcome Measures

Number of community action plans implemented as a result of science and community based assessment.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
This POW strives to partner with other groups and agencies in our outreach efforts. Action plans adopted are a measure of success of our assistance.

What has been done
We drafted the Noncommunicable Disease Consortium's gardening and increasing fruit and vegetable consumption action plan. This was adopted by the larger group.
This program also drafted the Farmers Coop strategic plan.

Results

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
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 Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	7

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
A focus of the POW is to develop shared curriculum for program partners to share. This leverage all of our efforts

What has been done
We ave developed and disseminated curriculum for gardening and food preservation and value added processing.

Results
Seven agencies, organizations or programs are currently using these curriculum in their outreach efforts.

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
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development
806	Youth Development

Outcome #4

1. Outcome Measures

Number of adults or organizations who participated in the programs learning opportunities who adopting recommended or demonstrated practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	46

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Adoption shows but a knowledge and attitude change as a result of the education programs.

What has been done
Evaluation forms completed after the learning event indicate if there will be a change in behavior or adoption.

Results
Many participants indicated that they will do something directly inspired by the workshops.

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

Outcome #5

1. Outcome Measures

Number of 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	Actual
2013	18

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Key effort is to collaboratively develop curriculum that can be used by agriculture and food professionals. A measure of success is how many professionals are using this curriculum.

What has been done
We have monitored workshops conducted by the program partners and the materials they use to identify the use of these curriculum.

Results
18 agriculture, food and youth professionals have used curriculum materials developed under the POW in outreach workshops or trainings on Guam in the past year.

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
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

- Natural Disasters (drought, weather extremes, etc.)
- Appropriations changes
- Public Policy changes
- Other (change in gov't. admin.)

Brief Explanation

No external factors have negatively impacted this POW in the past year.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Want more workshops.
Like Saturday morning workshops.
Want grafting workshops.
Like multiple speakers.
Enjoy workshops with hands on activities.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Plant Health and Pest Management

☑ Reporting on this Program

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	5%			
205	Plant Management Systems	10%			
211	Insects, Mites, and Other Arthropods Affecting Plants	10%			
212	Pathogens and Nematodes Affecting Plants	15%			
213	Weeds Affecting Plants	5%			
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	5%			
215	Biological Control of Pests Affecting Plants	10%			
216	Integrated Pest Management Systems	40%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	2.5	0.0	0.0	0.0
Actual Paid Professional	3.6	0.0	0.0	0.0
Actual Volunteer	0.0	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**
267959	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
142617	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
90677	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The University of Guam Cooperative Extension Service's Plant Health and Pest Management (PHPM) group performed educational outreach to the public sector (farmers, homeowners, and students), private sector (crews and managers of plant nurseries, landscape companies, and golf courses), and government agencies (Department of Agriculture, EPA, and Parks and Recreation). Outreach included direct contact with clients through trainings, workshops and one-on-one interventions as the result of site and office visits and phone calls. Indirect contact included trainings, workshop focus groups, television and radio programing, and publications for the general audience (manuals, brochures, and fact sheets) and for the scientific audience (proceedings, abstracts, journal articles). Subject areas covered included pesticide application, Integrated Pest Management (IPM) strategies, plant propagation, insect identification, weed identification, plant disease identification, soil nutrition and fertilizers, invasive species, and grafting. The group also provided plant disease diagnostics and insect identification for the island through the Cooperative Extension Service's Plant Health Clinic (plant disease and entomology laboratories).

Three Integrated Pest Management (IPM) strategic planning sessions were held during the year. There were a total of 127 stakeholders representing three agricultural groups (commercial producers, residential gardeners, and governmental agencies). Goals of the sessions were to strengthen multi-directional flow of IPM information among these groups and to position the Guam IPM program for future competitive funding that address each particular groups needs. Results achieved from three strategic planning sessions included the identification of strengths and weaknesses of the current UOG-IPM program and recommendations for future funding. Specific recommendations for IPM funding included workshops and training sessions, the development of an IPM and agricultural service directory, crop/variety trials, and financial support for subject experts. To improve communications between agencies, it was suggested that an educational task force be established. Possible functions of the task force will be to map areas of pests and their impacts on the island environment. It was also recommended that some of these funds be used to support the current diagnostics services to insure a quick turn around on identifications of pests, weeds, and plant diseases. As a result of the findings of the three strategic planning sessions and the successful grant submission, the University of Guam Cooperative Extension Service's Plant Health and Pest Management (PHPM) groupwas awarded a three-year $75,000 NIFA EIPM-CS Coordination grant for Guam.

Members of the PHPM group continued to service Guam and other Micronesian islands by identifying insect pests and recommending methods for mitigating the damage they cause. Much of the time was spent doing project management for the Guam Coconut Rhinoceros Beetle project which is funded by multiple grants from USDA-APHIS, US Forest Service, and the Guam legislature. During 2013, focus of

the Rhino project has transitioned from an objective of eradication to development of an integrated pest management approach, which will minimize damage. Applied research resulted in traps which are 13 times more attractive for adult rhino beetles than standard pheromone traps.

2. Brief description of the target audience

The target audience for this program includes local farmers, homeowners, nurseries, landscapers and golf course superintendents and their crews, teachers, school children, and government agencies.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	5690	15330	1018	1400

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

Patent Applications Submitted

Year: 2013

Actual: 1

Patents listed

Devices and methods for detecting pests

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	4	5	9

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of research papers

Year	Actual

2013	4

Output #2

Output Measure

- # of research citations

Year	Actual
2013	94

Output #3

Output Measure

- # of extension fact sheets or articles

Year	Actual
2013	10

Output #4

Output Measure

- # of workshops/trainings/classes

Year	Actual
2013	29

Output #5

Output Measure

- # of brochures

Year	Actual
2013	4

Output #6

Output Measure

- # of research or new technology reports

Year	Actual
2013	24

Output #7

Output Measure

- # of one-on-one interventions

Year	Actual
2013	2290

Output #8

Output Measure

- # of surveys

Year	Actual
2013	26

Output #9

Output Measure

- # of focus groups

Year	Actual
2013	3

Output #10

Output Measure

- # of news media activities (TV and radio)

Year	Actual
2013	6

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	% of participants gaining skills in identification of insects and related pests
2	% of participants gaining skills in identification of plant diseases
3	% of participants gaining skills in identification of weeds
4	% of participants gaining knowledge about pesticides and their application
5	% of participants reducing indiscriminate use of chemical pesticides
6	% of participants adopting some established IPM practices

Outcome #1

1. Outcome Measures

% of participants gaining skills in identification of insects and related pests

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	71

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Local farmers, homeowners, nurseries, landscapers and golf course superintendents and their crews, students, teachers, government agencies and the general public. Identification is essential in determining the difference between beneficial insects and insect pests, and to insure that proper management practices for IPM and pesticide application are employed. These practices lead to improved plant health and crop yield, and reduce negative impacts on human and wildlife health and the environment.

What has been done
A Pesticide Safety Education Program (PSEP) Basic Core pesticide training workshop was conducted by the CES Plant Health group during the year. Identification of insects and related pests were major components of these trainings.

Results
Seventy one percent of participants passed EPA licensing tests for the Basic Core.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
216	Integrated Pest Management Systems

Outcome #2

1. Outcome Measures

% of participants gaining skills in identification of plant diseases

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	71

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Local farmers, homeowners, nurseries, landscapers and golf course superintendents and their crews, teachers, students, government agencies and the general public. Plant disease identification of biotic and abiotic caused diseases are essential to insure that proper management practices for IPM and pesticide application are employed. These practices lead to improved plant health and crop yield, and reduce negative impacts on human and wildlife health and the environment.

What has been done
A Pesticide Safety Education Program (PSEP) Basic Core pesticide training workshop was conducted by the CES Plant Health group during the year. Identification of plant diseases were major components of these trainings.

Results
Seventy one percent of participants passed EPA licensing tests for the Basic Core.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants
216	Integrated Pest Management Systems

Outcome #3

1. Outcome Measures

% of participants gaining skills in identification of weeds

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	71

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Local farmers, homeowners, nurseries, landscapers and golf course superintendents and their crews, teachers, students, government agencies and the general public. Identification of specific weeds is essential to insure that proper management practices for IPM and pesticide application are employed. These practices lead to improved plant health and crop yield, and reduce negative impacts on human and wildlife health and the environment.

What has been done
A Pesticide Safety Education Program (PSEP) Basic Core pesticide training workshop was conducted by the CES Plant Health group during the year. Identification of weed pests were major components of these trainings.

Results
Seventy one percent of participants passed EPA licensing tests for the Basic Core.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #4

1. Outcome Measures

% of participants gaining knowledge about pesticides and their application

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	71

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Local farmers, homeowners, nurseries, landscapers and golf course superintendents and their crews, teachers, students, government agencies and the general public. Knowledge of pesticides and their application is crucial for the health and safety of the applicator, consumers of produce, the health of humans and wildlife, and the environment.

What has been done
A Pesticide Safety Education Program (PSEP) Basic Core pesticide training workshop was conducted by the CES Plant Health group during the year. Pesticides and pesticide application were major components of these trainings.

Results
Seventy one percent of participants passed EPA licensing tests for the Basic Core.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
215	Biological Control of Pests Affecting Plants

216 Integrated Pest Management Systems

Outcome #5

1. **Outcome Measures**

% of participants reducing indiscriminate use of chemical pesticides

Not Reporting on this Outcome Measure

Outcome #6

1. **Outcome Measures**

% of participants adopting some established IPM practices

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Government Regulations

Brief Explanation

Outcomes five and six were not measured due to appropriations to EPA being cut for the Pesticide Safety Education Program (PSEP). Previously, EPA subcontracted the training and testing to the University of Guam Cooperative Extension Services. While the training (education) for PSEP is still performed by Cooperative Extension as a community service, the testing is now performed and under the purview of EPA. These two outcomes (survey questions) were on Cooperative Extension tests but are not included in the current EPA tests. It is hoped that next year, these survey questions will be asked during training.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Evaluation results were a combined grade of ninety six percent.

Key Items of Evaluation

Evaluation is based on internal review of the Plant Health and Pest Management group, stakeholder input, and pre/post testing.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Global Food Security and Hunger - Sustainability of Small Scale Swine and Poultry Farms on Guam

☑ Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
302	Nutrient Utilization in Animals	10%			
307	Animal Management Systems	90%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	1.2	0.0	0.0	0.0
Actual Paid Professional	1.0	0.0	0.0	0.0
Actual Volunteer	0.0	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**
82858	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
29781	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
31261	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Forage feeding trials for small ruminants were one of the main activities conducted this year. Five

varieties of forages were harvested from demonstration plots planted from previous years. This activity proved that protein supplement can be in easy reach for goats when forages are planted nearby the farms. There is no need to buy those imported alfalfa hay. Goats fed with the forages were healthy and a good growth rate.

I worked with our local cattle ranchers to bring in frozen bull semen for genetic upgrading of our cattle population. Inbreeding is becoming a serious problem. It took us almost a year to bring in the semen because of existing quarantine laws. Current regulations have to be amended to meet current importation laws.

2. Brief description of the target audience

Primary local clients will include former, existing and potential new animal producers (cattle,swine and layer) both small-scale and subsistence level. On Guam over the past decade, 1,000+ new agriculture land leases have been signed by the Chamorro Land Trust. Many of the producers possess limited resources and are in desperate need of education and technical support programs.

A second target group is the local and regional agricultural professionals. Regional workshops related to animal production will be conducted at the demonstration farm. Extension agents and local and regional professionals from the different Land Grant Institutions from Micronesia and Northern Marianas will participate in activities at the site. Guam will continue to be the source of swine breeders and replacement chicks for Marianas and Micronesia.

A third audience is University agricultural students. The demonstration farm will be utilized as laboratory classroom for students enrolled in agriculture courses (Introduction to Agriculture and Introduction to Animal Science) at the University of Guam.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	150	200	0	0

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

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of workshops

Year	Actual
2013	1

Output #2

Output Measure

- # of extension publications

Year	Actual
2013	2

Output #3

Output Measure

- # of applied research conducted in demonstration site

Year	Actual
2013	1

Output #4

Output Measure

- # of one to one contacts

Year	Actual
2013	100

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	# of producers increasing in knowledge and husbandry skills on an integrated to approach to animal and plant farm operations (short term)
2	# of producers indicating adoption recommended practices practices
3	# of producers practicing regular replacements of broodstocks (medium term)
4	# of producers decreasing in feeding imported commercial feeds (medium term)
5	Number of producers reporting inceased dollar returns per sow/laying hen

Outcome #1

1. Outcome Measures

of producers increasing in knowledge and husbandry skills on an integrated to approach to animal and plant farm operations (short term)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Local goat raisers tend to give minimalcare and feeding management to goats because they believe that goats can survive on anything that is green on the ground. Goat ranchers lack concept of high quality grasses and forages that should be fed to goats for better growth and performance.

What has been done
Five varieties of forages were planted at three demonstration sites. Once forages were ready for harvest, feeding trials were conducted using the five varities and comparisons were made on palatability and acceptance by the goats, incidence of digestive problems and growth rate of the goats.

Results
Farmers learned the relevance of feeding high quality forages to goats. Protein source for goats can be cheap by planting forages around goat facilities. These forages can act as protein supplements instead of buying imported goat meal or hay.Planting forages around the farm prevent ranchers from the practice of "cut and carry" along highways or areas they have to drive to avail of these feeds.

4. Associated Knowledge Areas

KA Code	Knowledge Area
302	Nutrient Utilization in Animals
307	Animal Management Systems

Outcome #2

1. Outcome Measures

of producers indicating adoption recommended practices practices

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	3

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Small-scale agriculture producers are very limited in their resources. Most of them are part-time producers and farm sales are not on a regular basis. They tend to rely on subsidies and any form of assistance from government to improve facilities or implement new technology in their farm. There are many challenges and obstacles that farmers face as they try to improve their farm productivity and profitability.

What has been done
Producers are encouraged to apply for grants from federal agencies. Two goat farmers visited research goat facilities in the Philippines to observe and experience goat production and pasture management. Demonstration plots of forages were set up at various sites for farmers to see follow. Seedlings of these forages were given to farmers to propagate at their farms.

Results
Two goat raisers planted forages in their farm. One swine producer adopted the dry-litter method of swine production to save on water and minimize effluents going to the environment. Maintaining the adopted practice can also be a challenge to the raiser even with positive results for the farm. No exerted efforts and time on the ranchers to sustain the practice.

4. Associated Knowledge Areas

KA Code	Knowledge Area
302	Nutrient Utilization in Animals
307	Animal Management Systems

Outcome #3

1. Outcome Measures

of producers practicing regular replacements of broodstocks (medium term)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Many poultry enthusiasts and raisers wanted to raise 10 to 30 heads of chickens for family consumption and sell any extra production. Getting in new replacements is difficult for these raisers because off-island hatcheries have a minimum order of 100 chicks per shipment. Besides the cost of importation, the permitting process to bring in poultry can also be time-consuming.

What has been done
The livestock and poultry facility of the Guam Department of Agriculture closed down due to budgetary constraints and retirement of personnel. For the past five years, this facility was able to supply small volume of replacements chicks from purebreed breeder stocks brought in from Texas.

Results
Poultry raisers have to import replacement chicks from Hawaii or in the continental United States.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems

Outcome #4

1. Outcome Measures

of producers decreasing in feeding imported commercial feeds (medium term)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Guam has non-conventional feedstuffs for livestock feeding (swine, goats and poultry) but most of these resources are underutilized. Most raisers still purchase expensive imported feeds to feed their generally inbred livestock population.

What has been done
Most of these non-conventional feed materials have been analyzed for nutrient contents and level by a feed laboratory. The results can now be used to formulate local feeds. Local feed materials have been formulated and use in feeding trials in goats and layers. Results were positive in terms of feed consumption and intake, no incidence of digestive upsets and growth rate.

Results
Processing of raw feed materials is a big challenge for farmers. They have seen the positive results of using these feed materials for livestock feeding but the whole procedures in making the feed would require time, efforts, equipment and storage facilities.It is also difficult to find feed equipment for small-scale feed operation. equipment for

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems

Outcome #5

1. **Outcome Measures**

Number of producers reporting inceased dollar returns per sow/laying hen

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities
- Other (Closure of livestock breeding facility; producers' priorities in the farm.)

Brief Explanation

1. A new director was appointed at the Guam Department of Agriculture. This brought changes in their programs and personnel. One of the changes was the closure of the livestock and breeding facility. This facility was producing hatching eggs from five different breeds of poultry. Eggs were being hatched and farmers were buying the chicks for their replacement. This facility was also being used for demonstrations and workshop venue. The University of Guam Extension Service and Guam Department of Agriculture had an agreement to operate this facility to address the needs of agriculture producers on island and also for Micronesia.
2. Our unit core funds given to Extension Faculty have diminished through the years. Each faculty used to get $5000 annually and dropped to $ 2300 this year. Without any grants to supplement core funds, extension activities to enhanced knowledge and skills of farmers decreased also through the years.
3. Stringent federal and local environmental regulations designed for large commercial farms are also being imposed to small-scale producers. Due to financial limitations of these small producers to install or re-design their facilities, either the farms closed down or decrease animal population to be exempted from new regulations.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

I did not do a formal evaluation like a survey of any kind among my contacts and clients. It had been a one-to-one sharing of thoughts and ideas with the clients at the site of the demonstration site. The producers and ranchers see the positive results of the demonstration and find it applicable and practical to incorporate the practices in their farm operations. But since farming is not their primary source of income, there is not much time and effort invested from them to implement such proven best management practices.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Climate Change

☐ Reporting on this Program

Reason for not reporting

{No Data Entered}

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	100%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	10.0	0.0	0.0	0.0
Actual Volunteer	20.0	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
110	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
2220	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
10	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

fygyuhiuj

2. Brief description of the target audience

rftgyuhijk

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	42320	0	0	0

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

Patent Applications Submitted

Year: 2013

Actual: 3430

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	3430	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

Outcome #1

1. **Outcome Measures**

{No Data Entered}

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes

Brief Explanation

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V(I). Planned Program (Evaluation Studies)

Evaluation Results

fdafdsfds

Key Items of Evaluation

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