2012 American Samoa Community College Combined Research and Extension Annual Report of Accomplishments and Results

Status: Accepted

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I. Report Overview

1. Executive Summary

The 2012 Accomplishment Report
American Samoa Community College
Community & Natural Resources
American Samoa

Major Accomplishments in 2012 were:

1. Finishing the "American Samoa Community Research Wellness Center."
2. Hosting the first "Operation Military Kids" Camp
3. Hiring key staff:
4. Plant Pathologist
5. Research Forester
6. Research Horticulturalist
7. Community Nutritionist
8. 4H Program Manager
9. Exercise Physiologist.
10. Co-Hosting the Two Samoa's Summit on Non-Communicable Diseases with American Samoa Department of Health

Major Challenges in 2102 were:

1. Being patient with the timely procurement of supplies, materials, and equipment
2. Land boundary issues

Participation

There was much more staff participation in writing the 2012 Annual Report than previous years. This included the heads of Research and Extension.

Under Research those who helped write the report were the Principal Investigator the Children's Healthy Living project, the Entomologist, the Plant Pathologist, the Research Forester, the Research Horticulturalist and the Exercise Physiologist.

Under Extension those who helped write the 2012 Annual Report were the Agriculture Extension Manager, the Forestry Manager, the 4H Manager, the Family & Consumer Sciences Manager, and the Sea Grant Manager.

Stakeholder Input & Documentation

As a result of the meeting with American Samoa's Annual Report evaluator at NIFA, much more attention and effort went into stakeholder input documentation and data that is quantifiable.

Too Many Planned Programs

There were Planned Programs which was a NIFA requirement. While Climate Change and Energy Sustainability are surely important programs, American Samoa just does not have enough expertise in these areas.

Outputs & Outcomes

There was much discussion among the staff about the difference between outputs and outcomes. What was helpful to the staff, that is what helped to guide the staff's understanding of the difference,

was that "outputs" measure the amount of work the staff did in 2012. "Outcomes" measure the difference our work was making in the community - in what the community learn, what they are doing differently, and in what in their lives has changed or improved.

Relation to Internal Processes

Staff are required to state the NIFA-approved "Plan of Work" output, outcome, activity, or goal to justify purchases, travel, check requests, vehicle-use, and other items that require Hatch or Smith Lever funds. They use the POW for bi-weekly reports and quarterly reports which are required by the American Samoa Government.

Conclusion

It is very important for us to consider life in American Samoa since the September 2009 Tsunami and the February 2009 Food Security Conference hosted by CNR. Have we made a significant contribution to strengthening food security in American Samoa? Are the people in American Samoa any healthier because of our efforts?

We have satisfactory outputs and outcomes but the questions remain. Our 2014 Plan of Work is attempt to continue the work needed to answer these questions.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	14.0	0.0	14.0	0.0
Actual	17.5	0.0	17.5	0.0

II. Merit Review Process

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

- Combined External and Internal University External Non-University Panel

2. Brief Explanation

A merit review panel judges the science quality and relevance of a research proposal. While difficult to define, science quality meets certain criteria, some of which are listed below. Relevance can best be measured by how well a project addresses the ASCC Land Grant Program's Research Division Mission Statement: "To acquire research-based knowledge that will enable people to make informed and educated decisions about their lives." Relevant research, then, is research undertaken to solve specific problems. Furthermore, the U.S. Department of Agriculture, as our primary funding agency, emphasizes sustainable agricultural research focused on three interlocking systems: economic, ecological, and social. These are generally expressed in terms of farm profitability, environmental stewardship, and quality of life. The three criterion that we ask review panel members to consider are:

Criterion 1: How important is the proposed activity to advancing knowledge and understanding of agricultural or health-related issues in American Samoa and other Pacific islands?

Criterion 2: Is the project based on sound scientific principles? Are the proposal's arguments supported by verifiable facts?

Criterion 3: Optional: Are sufficient resources available to bring the project to a successful conclusion? How well qualified is the individual or team to conduct the project? Are sufficient funds, facilities, equipment, and assistance available?

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
- Survey of selected individuals from the general public
- Other (Focus groups)

Brief explanation.

In 2012, ASCC CNR continues to encourage stakeholders' participation through: 35 media announcements (television stations, newspapers, radio stations); targeted invitations (letters, phone calls, personal visits) to traditional and nontraditional stakeholder groups and individuals; and surveys of the general public, workshops participants, and selected groups and individuals. Moreover, stakeholders' participation was encouraged through surveys and focus group sessions for 17250 clients during workshops & presentations (313), classes (12), tours (44) , camps (3), farm visitations (518), and meetings (25) in the community and at ASCC CNR.

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
- Needs Assessments
- Use Surveys
- Other (formative and summative evaluations of workshops)

Brief explanation.

In FY 2012, ASCC CNR continues to use inputs and recommendations from advisory committees (2), external and internal focus groups (4), surveys & workshops evaluations (313), and needs assessments (5) to identify stakeholders' groups and individuals. Moreover, recommendations from clients (17250) , partners (25) (government & non-government) and ASCC CNR program administrators (10) and staff members (57) are reviewed and considered.

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
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Survey specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public
- Survey of selected individuals from the general public
- Other (Focus group sessions)

Brief explanation.

In 2012, ASCC-CNR staff collected stakeholder inputs from 3482 youth, 1071 farmers, 75 pesticides applicators, 7808 homemakers/FCS clients, 3074 forestry clients, and 1740 aquaculture/sea grant clients and program participants through focus group sessions and survey questionnaires during workshops (schools, villages, community groups, government agencies, churches, CNR, other sites), demonstrations, presentations, pesticides courses, classes, guest lectures, public and council meetings, outreach programs at the Fagatogo Farmers' Markeplace, exercise and physical activity sessions, field trips, summer camps and institutes, tours, school visits, science fairs, field days, career days, farm and family visitations, clients' visitations to the office, and individual consultations.

3. A statement of how the input will be considered

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

Brief explanation.

In 2012, ASCC CNR continued to use inputs from stakeholders to direct and improve programs in both extension and research in terms of recruiting and hiring of new staff; staff capacity building opportunities; scholarship opportunities for agricultural sciences student majors; acquisition of new equipments and materials and supplies; improvement of existing programs and facilities;

development and implementation of new programs; formation of new partnerships; submittal of grant applications; and construction of new facilities to address stakeholders' inputs and recommendations.

In 2012 - 2013, CNR hired a new plant pathologist, animal specialist, forestry researcher, excercise physiologist, 4-H Program Manager, and more than 3 support staff. Moreover, CNR is a recipient of a Childhood Obesity (CHL) grant from NIFA/USDA and an Operation Military Kids (OMK) grant from DOD and USDA. The Childhood Obesity grant awarded 2 scholarships to two students to study in nutrition or related areas. On April 30, 2013, CNR dedicated its new Wellness Research Center funded by USDA and HUD. Researchers also ordered new equipment and apparatus for the plant pathology, plant tissue culture, entomology, horticulture, and soils labs.

Brief Explanation of what you learned from your Stakeholders

Aquaculture: The aquaculture program has continued to work on addressing stakeholder needs as determined by direct communication and questioning of local fish farmers. The previous agreement with StarKist Samoa resulted in a one year study to assess the impact of their tuna meal on fish farm production. Duke Purcell allowed the use of his farm for the study, which resulted in tripling the mass of his fish production during the 12-month period. StarKist Samoa was pleased with the results and their role in fish farming and have committed to providing tuna meal at no cost, indefinitely.

Collaboration with the Samoa Ministry of Agriculture and Fisheries and the Secretariat of the Pacific Community resulted in the importation of 45 individuals of an improved hybrid of tilapia called Genetically Improved Farmed Tilapia. These non-GMO fish were produced through a traditional selective-breeding program in the Philippines to grow faster, bigger, and with larger body/head ratios for greater sales value. These fish are now the target species for the breeding program that is the new focus for the Center for Sustainable Integrated Agriculture and Aquaculture (CSIAA) at the American Samoa Community College (ASCC).

We conducted three public workshops on general aquaculture, aquaponics, and feeds production. These workshops introduced concepts of agribusiness along with several options for using aquaculture in small businesses.

To provide further training in marine science, including aquaculture, we taught MSC 200: Introduction to Aquaculture in fall 2011 and MSC 220: Introduction to Fisheries Management in spring 2012. We conducted the second annual Quantitative Underwater Ecological Surveying Techniques course in March 2012. This week-long course trains students to survey underwater organisms including fish, algae, and invertebrates. We also served as guest lecturers to school classes of all grade levels from Early Childhood Education to College-level.

Community and Natural Resources staff assisted the Marine Science program at the ASCC in selecting and placing students in internship positions with local marine resource management agencies as well as at the CSIAA. Students that successfully completed the QUEST course were hired by the National Oceanic and Atmospheric Administration Coral Reef Ecosystem Division to conduct photographic sampling in Faga'alu Bay. This employment continues into 2013.

4-H Program: The 4-H Youth Program used a survey for to secure feedback from the stakeholders. An estimated 2477 participants attended 4-H Programs and workshops, and about 80% (1982) of the stakeholders were surveyed. The surveys were both in English and Samoan, since most of the participants are Samoan-speaking individuals. Most of the surveys were orally conducted during focus groups for the youths, especially the younger ones. It was easier to collect information from stakeholders (youth) during focus group sessions.

The 4-H program continued to address stakeholders' inputs as reported in surveys and focus group session during workshops. Ninety percent (90%) of the activities are carried out at the villages thus enabling 4-H and FCS agents to deliver the programs to clients (women, youth and families) in American Samoa. For the FCS program, most of the participants are women or homemakers. Most of these women do not have means of transportation, and having the FCS within walking distance

makes it easier to complete the 12-week program. Moreover, the 4-H program accommodated youth participation in programs when parents are either working, have no transportation or are too busy with other tasks. The 4-H clubs and in-school program leaders are grateful for all the activities that allow the youth to learn about culture, resource management, entrepreneurship, arts & crafts, peer pressure, pregnancy, developing life skills, and other areas. One of the highlights in 2012 was the Operation Military Kids (OMK) camp. The 4-H Program applied and received approval for a 2013 OMK grant.

Program areas that need to be addressed as reported by stakeholders include:

4-H continues to serve the youth of American Samoa through partnership with Department of Education, Boys Scouts of America, US Army Reserve, Department of Youth and Women, Water and Conservation Board, Department of Public Safety Juvenile Center, and Department of Health Family Planning Program. Overall, stakeholders are impressed with the 4-H program staff performance and program delivery.

- Deliver more program for youth in community settings
- Conduct more camps for the youth and families
- Need more workshops on family strengthening and the Samoan Culture
- Need more resources to assist with the activities and programs
- Need more qualified staff and resources to meet the demand for more programs and curriculums after school and during the weekends.

Families and Consumer Sciences & EFNEP Program: Families and Nutrition programs continued to provide nutrition and food safety outreach programs to youth, home-makers, community residents, and traditional and non-traditional clients. Nutrition workshops, presentations, and food cooking demonstrations are provided in the villages, health clinics, churches and government offices. Moreover, after hour programs were provided to meet the needs of participants who were unable to attend during regular working hours.

Families and Nutrition paraprofessionals collaborated with Agriculture Extension Agents in promoting vegetable gardening projects to reduce the high consumption of meats, starches and sugars. Nutrition Agents provided recipes that utilize locally grown vegetables to prepare nutritious and economical meals for the entire family.

Additional educational resources have been created and translated into the Samoan language. The translated nutrition educational resources (recipes, brochures, posters, fact sheets and handouts) were distributed to program participants and clients.

Families and Nutrition program continued to partner with the Department of Education in hosting Health Fair, Wellness Day, Walkathon, Zumba, Hot Hula, and Pick-a thons to address the need for physical activities in schools, work place, and community settings. CNR program dedicated the new Wellness Center on April 2013 to address childhood obesity, physical activity, healthy living, wellness and well-being, and non communicable diseases.

Based on stakeholders' inputs, program areas that need to be addressed include: re-introduction of health and physical education curriculum in the public schools; continue with programs on parenting, family management, traditional arts and crafts, and basic sewing; and nutrition and food safety quarterly visits to the Manu'a Islands (Tau, Ofu, Olosega) and Aunu'u.

Forestry Program: The Forestry program continued to provide forest and natural resources conservation education workshops and presentations to the community, villages, churches, and schools. Climate change impact on American Samoa is one of the top issues that the community addressed during outreach and awareness programs. Forestry staff conducted tree-planting, coastal stabilization, watershed, and restoration projects with villages, churches, and schools as requested. The Forestry greenhouse continued to accommodate tours and field trips by schools, organizations, clients, and the general public. The Forestry staff continued to conduct presentations and

demonstrations on plant propagation, soil preparation, and greenhouse maintenance. Moreover, Forestry staff continued to assist with students' science projects and serve as judges at the public and private school science fairs in the natural resources and environment categories. Forestry staff continued to conduct workshops and presentations to increase the community residents' awareness on the impacts of climate change and options for sustainable energy. A new forestry researcher started in 2012 and will work on the research areas and issues requested by the stakeholders.

Forestry continued to collaborate with partner agencies on forest health prevention and invasive species control strategies, forest stewardship (management plans), urban community forestry (agro-forestry and watershed management), and noxious weeds law. Forestry staff continued to serve the clients and community through visitations, distribution of printed materials, and outreach activities in schools, churches, villages, and other community events and settings as requested.

Agriculture Extension: At the conclusion of the 12 workshops we conducted, and also from 4 focus group discussions, we summarized our clients/stakeholders' input (2,154 participants) as follows:-

Issues:-

1. Improved varieties (Traditional crops) - we are doing an excellent job
2. Vegetable gardening workshops/demonstrations - we are doing an excellent job
3. Pesticide Safety Education program - we are doing an excellent job
4. Progressive Agriculture Safety Days - we are doing a very good job
5. Piggery waste management workshops - we are doing a good job
6. Farm visitations - we are doing a fair job (we need to be out in the community more often, thus, we need more professional staff (agents).
7. Fruit trees propagation workshops - we are doing a fair job (we need to import new varieties)

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
929445	0	904375	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	344349	0	317735	0
Actual Matching	344349	0	296794	0
Actual All Other	0	0	0	0
Total Actual Expended	688698	0	614529	0

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

V. Planned Program Table of Content

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Human Health and Well-being

☑ 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
703	Nutrition Education and Behavior	40%		30%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	20%		10%	
721	Insects and Other Pests Affecting Humans	10%		10%	
722	Zoonotic Diseases and Parasites Affecting Humans	10%		10%	
724	Healthy Lifestyle	20%		40%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	3.0	0.0
Actual Paid Professional	5.0	0.0	1.5	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
49187	0	40128	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
49187	0	49187	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Researched biology and control of disease-carrying mosquitoes

Communicated results via research reports, brochures, seminars, TV, and individual contacts with other agencies, students, and the public
Nutrition education workshops.
Local produce (vegetable & fruit) recipe development and testing workshops.
Vegetable gardens will be established with interested homemakers and other clients.
Demonstrations of vegetable dishes with recipes passed out.
Food preparation, handling, and storage demonstrations.
Food safety workshops and demonstrations.
Nutrition awareness media (radio, TV, newspaper) programs.
Development, translation, and distribution of calendar, posters, brochures, and other educational materials.
Aerobics, sports, vegetable gardening, and other physical activity programs.
Construct new facility for health programs.

2. Brief description of the target audience

All residents of American Samoa are the target audience including recipients of the Food Stamp and WIC programs, Mental Health Program clients, village and church women's organization members, homemakers, farmers, students, interested individuals, children and youth program participants.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	9043	21001	2000	10000

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of research projects completed

Year	Actual
2012	1

Output #2

Output Measure

- Number of Nutrition educational workshops.

Year	Actual
2012	99

Output #3

Output Measure

- Number of vegetable gardening workshops.

Year	Actual
2012	20

Output #4

Output Measure

- Number of vegetable gardens established

Year	Actual
2012	11

Output #5

Output Measure

- Number of different recipes using local produce given out

Year	Actual

2012	51

Output #6

Output Measure

- Number of food safety workshops conducted

Year	Actual
2012	7

Output #7

Output Measure

- Number of publications/brochures/posters/calendars.

Year	Actual
2012	6

Output #8

Output Measure

- Number of exercise and physical activity programs completed

Year	Actual
2012	8

Output #9

Output Measure

- Number of nutrient-dense traditional crop varieties disseminated

Year	Actual
2012	2

Output #10

Output Measure

- Number of collaborative projects with other agencies/organizations

Year	Actual
2012	6

Output #11

Output Measure

- Number of awareness activities with school children.

Year	Actual
2012	12

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of program participants that acquired knowledge and developed skills in nutrition, vegetable gardening, nutritious meal preparation, food safety and health and physical activities
2	Number of people eating more vegetables as a result of the vegetable gardening project
3	Number of program participants that prepared and consumed more economical and nutritious meals.
4	Number of program clients that adopted balance diets utilizing local produce and healthy foods.
5	Number of program clients who adopted safer food handling, storage, and preparation practices.
6	Number of program clients that increased participation in physical activities and exercises
7	Number of program clients that lived healthier lifestyles
8	Number of clients involved in collaborative projects.
9	Number of villages using ASCC CNR generated information to control mosquitoes
10	Number of nutrient analysis conducted for local crops and food.

Outcome #1

1. Outcome Measures

Number of program participants that acquired knowledge and developed skills in nutrition, vegetable gardening, nutritious meal preparation, food safety and health and physical activities

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	4023

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Childhood Obesity,overweight, poor nutrition, lack of physical activity/exercise, and food safety issues continued to be major health problems for both adults and youth in American Samoa in 2012.

What has been done
In 2012, program staff conducted 99 nutrition education workshops, 8 physical activity programs, 20 vegetable gardening workshops, 7 food safety workshops, and distributed 51 recipes using local produce to youth, homemakers, community residents, and other traditional and nontraditional clients. Moreover, F4HN staff continued to conduct workshops, presentations, and food demonstrations in villages, schools, Day Cares, Health clinics, churches and government offices. In-school programs emphasized the importance of physical activity to reduce the high risk of obesity, production and the consumption of local food with gardening projects, and food safety.

Results
4023 participants out of the 9043 workshop participants acquired knowledge and developed skills in nutrition, vegetable gardening, nutritious meal preparation, food safety, and health and physical activities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

724	Healthy Lifestyle

Outcome #2

1. Outcome Measures

Number of people eating more vegetables as a result of the vegetable gardening project

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	158

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The diets in American Samoa continue to be high in meats, starches, sugars, and fats and tend to be very low in vegetables, fruits and dairy products. Such diets lead to diet and life style related diseases such hypertension, diabetes, heart disease, strokes, obesity, and others. Diets could be greatly enhanced with the increased production and consumption of locally grown nutrient rich vegetables.

What has been done
Program staff conducted 20 vegetable gardening workshops; established 11 vegetable gardens; and distributed two nutrient-dense traditional crop varieties.

Results
Of the 311 vegetable garden worskhops and project participants, 158 participants are eating more vegetables as a result of the vegetable garden projects.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #3

1. Outcome Measures

Number of program participants that prepared and consumed more economical and nutritious meals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1808

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Obesity and overweight, poor nutrition, lack of exercise, and food safety issues continued to be major health problems for both adults and youth in American Samoa. The value of nutrition education for improving the diets and ultimately the health of people with limited resources has long been recognized in American Samoa.

What has been done
In 2012, program staff conducted 99 nutrition education workshops, 8 physical activity programs, 20 vegetable gardening workshops, 7 food safety workshops, and distributed 51 recipes using local produce to youth, homemakers, community residents, and other traditional and nontraditional clients.

Results
1808 participants out of the 6,723 workshop and project participants prepared and consumed more economical and nutritious meals.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #4

1. Outcome Measures

Number of program clients that adopted balance diets utilizing local produce and healthy foods.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1850

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The diets in American Samoa are high in meats, starches, sugars, and fats and tend to be very low in vegetables, fruits and dairy products. Such diets lead to diet and life style related diseases such hypertension, diabetes, heart disease, strokes, obesity, and others. Diets could be greatly enhanced with the increased production and consumption of locally grown nutrient rich vegetables.

What has been done
In 2012, program staff conducted 99 nutrition education workshops, 8 physical activity programs, 20 vegetable gardening workshops, 7 food safety workshops, and distributed 51 recipes using local produce to youth, homemakers, community residents, and other traditional and nontraditional clients.

Results
1850 participants out of 6723 workshops and project participants adopted balance diets utilizing local produce and healthy foods.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #5

1. Outcome Measures

Number of program clients who adopted safer food handling, storage, and preparation practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	278

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Obesity and overweight, poor nutrition, lack of exercise, and food safety issues continued to be major health problems for both adults and youth in American Samoa. The value of nutrition education and food safety for improving the diets and health of people with limited resources has long been recognized in American Samoa.

What has been done
In 2012, program staff conducted 7 food safety workshops for 824 youth, homemakers, community residents, and other traditional and nontraditional clients.

Results
278 participants of the 824 food safety programs participnats adopted safe food handling, storage, and preparation practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #6

1. Outcome Measures

Number of program clients that increased participation in physical activities and exercises

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	478

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Obesity and overweight, poor nutrition, lack of exercise, and food safety issues continued to be major health problems for both adults and youth in American Samoa.

What has been done
In 2012, program staff conducted 8 physical activity programs for 1437 community residents, and other traditional and nontraditional clients.

Results
478 participants out of the 1437 participants of the physical activity programs increased participation in physical activities and exercises.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #7

1. Outcome Measures

Number of program clients that lived healthier lifestyles

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	4572

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Obesity and overweight, poor nutrition, lack of exercise, and food safety issues continued to be major health problems for both adults and youth in American Samoa.

What has been done
In 2012, program staff conducted 99 nutrition education programs, 8 physical activity programs, 20 vegetable gardening workshops, 7 food safety workshops, and distributed 51 recipes using local produce to youth, homemakers, community residents, and other traditional and nontraditional clients. Moreover, F4HN staff continued to conduct workshops, presentations, and food demonstrations in villages, schools, Day Cares, Health clinics, churches and government offices. In-school programs emphasized the importance of physical activity to reduce the high risk of obesity, production and the consumption of local food with gardening projects, and food safety.

Results
4572 participants out of the 9043 workshop participants lived healthier lifestyles.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #8

1. Outcome Measures

Number of clients involved in collaborative projects.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	96

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The limited availability of financial and specialized human resources are major challenges in program planning, development, implementation, and evaluation in American Samoa.

What has been done
More than 20 local, federal, regional government agencies and non-government organizations partnered in program planning, development, implementation, and evaluation of more than 20 collaborative projects.

Results
In 2012, 96 clients participated and involved in planning, development, implementation, and evaluation of more than 20 collaborative projects involving more than 20 local, federal, regionalgovernment agencies and non-government organizations partners. The partnerships resulted in many accomplishments as reported in the outputs and outcomes sections.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
721	Insects and Other Pests Affecting Humans
724	Healthy Lifestyle

Outcome #9

1. Outcome Measures

Number of villages using ASCC CNR generated information to control mosquitoes

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Mosquitoes in American Samoa are known to vector several important human pathogens, including lymphatic filariasis (LF), dengue, and other arboviruses. Lymphatic filariasis, though endemic in the territory, was suppressed to low levels during American Samoa?s participation in the Global Program to Eliminate Lymphatic Filariasis. Currently the emphasis for LF is monitoring for any possible resurgence. Although dengue is apparently not endemic, outbreaks occur every few years. Research by ASCC-CNR and others indicates that elimination of the dengue vectors? container breeding sites is essential to reducing their numbers and in turn reducing dengue transmission.

What has been done
In 2012, processing was completed on mosquitoes collected from throughout the inhabited islands of American Samoa in a collaboration between ASCC-CNR; the US Centers for Disease Control and Prevention; the Bill and Melinda Gates Foundation; the American Samoa Departments of Health, Samoan Affairs, and Education; Smith College; and the University of Kentucky. The mosquitoes were tested for the presence of the parasites that cause lymphatic filariasis to assess the prevalence and distribution of the disease in the territory. Children in the elementary schools were tested for LF concurrently with the mosquito collections. ASCC-CNR continued educating the public about the need to eliminate mosquito breeding sites in villages through distribution of brochures and direct contacts with students, village leaders, counterparts in government agencies, and the general public.

Results
Results of the lymphatic filariasis survey on mosquitoes and children found evidence of continued presence of the disease at very low prevalence. Analysis of the data is underway, and further research and monitoring will be required to evaluate the significance of these results in context of the program to eliminate this disease in American Samoa. There have been few cases of dengue in recent years, and as a result there is an increase in complacency about the need to eliminate mosquito breeding sites in villages.

4. Associated Knowledge Areas

KA Code	Knowledge Area

721 Insects and Other Pests Affecting Humans

Outcome #10

1. Outcome Measures

Number of nutrient analysis conducted for local crops and food.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Obesity and overweight, poor nutrition, lack of exercise, and food safety issues continued to be major health problems for both adults and youth in American Samoa. The need to conduct nutrient analysis on locally grown crops was recognized.

What has been done
Program staff established two plots of the specialized banana variety(soa'a) for the purpose of conducting nutrient analysis when the fruits are ready. Unfortunately, the scientist and advisor on this project was diagnosed with cancer and finally passed away.

Results
No analysis was conducted on the soa'a bananas.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Loss of staff limited program capacity. ASCC business office continued to impede CNR's attempts to use Hatch and Smith-Lever and other grant funds to procure supplies and equipment for this and all other planned programs. In the process of recruiting for a Fruit Tree Specialist, Food Safety Specialist, and field and support staff.
Delay in recruiting staff reduced program capacity.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

In FY2012, EFNEP reached out to 9,043 participants in Nutrition Education & Cooking, Food Safety and Physical Activity workshops. Approximately, 4,023 participants acquired knowledge and developed skills in choosing healthier food choices, budgeting food dollars, hand-washing and food sanitation, and including physical activity daily.
Participants enrolled in EFNEP have since revealed their appreciation and gratitude. EFNEP has provided the tools and the incentive for our low-income families with young children to learn and improve their quality of life.
Program participants enjoyed the interactive hands-on-hands training, food-taste testing and cooking demonstrations, and participation is a fulfilling experience and an opportunity to learn and fellowship with others.
Efforts are currently in place for upcoming visits to the Manu'a Island groups; Ofu & Olosega and Ta'u, as well as Aunu'u.. Transportation to these sparsely populated areas is a major concern.

Similar to 2011, clients reported that CNR staff members are doing a very good job in teaching them how to eat right, preparing nutritious meals using local produce, safe handling and storage of food, preparing food budget, and reading and understanding the food labels. Moreover, the staff are doing a fair job in helping the children with the obesity and overweight challenges.
However, clients requested more assistance from CNR with: starting vegetable gardens and planting fruit trees; organizing physical activities for the families; hosting recipes' competition using local produce; and offerring alternatve programs for clients to loose weight. Furthermore, Nutrition Educators/Agents need to be more visible in the community; CNR need more Nutrition Specialists (qualified staff), more staff development

capacity building opportunities, vehicles, equipments, and technologies to develop, implement, and deliver programs to the clients.

Key Items of Evaluation

Nutrition Educators/Agents need to be more visible in the community; CNR need more Nutrition Specialists (qualified staff), more staff development capacity building opportunities, vehicles, equipments, and technologies to develop, implement, and deliver programs to the clients

Efforts are currently in place for upcoming visits to the Manu'a Island groups; Ofu & Olosega and Ta'u, as well as Aunu'u.. Transportation to these sparsely populated areas is a major concern. Transportation to these sparsely populated areas is a major concern. Transportation to these sparsely populated areas is a major concern.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Families, Youth 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	40%		40%	
802	Human Development and Family Well-Being	10%		20%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%		30%	
806	Youth Development	40%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	3.0	0.0
Actual Paid Professional	3.0	0.0	1.0	0.0
Actual Volunteer	2.0	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
49194	0	46271	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
49194	0	46271	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Entrepreneurial and job readiness workshops
Apprenticeship and career shadowing programs.
Sewing and arts and crafts workshops and demonstrations.
Vegetable gardening and marketing projects.
Parenting and character counts workshops.
Samoan cultural workshops and demonstrations
4-H fairs, camps, and summer programs.
Youth at risk issues workshops, conferences, forums, and seminars.
Public awareness media (radio, TV, newspaper) programs.
Development, translation, and distribution of posters, brochures, and other educational materials.
Communicate results via accomplishment reports, brochures, presentations, TV,
seminars, and individual contacts with other agencies.

2. Brief description of the target audience

All residents of American Samoa are the target audience including parents, youth, village and church women and youth organization members, homemakers, farmers, students, interested individuals, children and youth program participants.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	300	6000	2477	12000

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of entrepreneurial and job readiness workshops

Year	Actual
2012	48

Output #2

Output Measure

- Number of apprenticeship and career shadowing programs

Year	Actual
2012	7

Output #3

Output Measure

- Number of sewing workshops and demonstrations

Year	Actual
2012	16

Output #4

Output Measure

- Number of arts and crafts workshops and demonstrations

Year	Actual
2012	14

Output #5

Output Measure

- Number of vegetable gardening and marketing projects

Year	Actual
2012	7

Output #6

Output Measure

- Number of Samoan cultural workshops and demonstrations

Year	Actual
2012	4

Output #7

Output Measure

- Number of vegetable gardens established

Year	Actual
2012	7

Output #8

Output Measure

- Number of parenting and character counts workshops

Year	Actual
2012	16

Output #9

Output Measure

- Number of 4-H fairs, camps and summer programs

Year	Actual
2012	3

Output #10

Output Measure

- Number of youth-at-risk issues workshops, conferences, forums and seminars

Year	Actual
2012	12

Output #11

Output Measure

- Number of public awareness media (radio, TV, newspaper) programs

Year	Actual
2012	35

Output #12

Output Measure

- Number of publications/brochures/posters/calendars

Year	Actual
2012	12

Output #13

Output Measure

- Number of videos

Year	Actual
2012	1

Output #14

Output Measure

- Number of new 4-H Youth village clubs

Year	Actual
2012	2

Output #15

Output Measure

- Number of new 4-H Youth School clubs/enrichment programs.

Year	Actual
2012	3

Output #16

Output Measure

- Number of new 4-H leaders and volunteers.

Year	Actual
2012	6

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of program participants that acquired knowledge and developed skills in resources management (poverty), parenting, Samoan culture, and youth at risk issues
2	Number of participants generating revenues from resource management activities
3	Number of participants starting home-based and small businesses
4	Number of participants securing employment in the private and public sectors
5	Number of people continuing to grow and sell vegetables as a result of the vegetable gardening and marketing project
6	Number of program participants that improved parent and children relationship
7	Number of program clients that developed a sense of pride and appreciation of the Samoan culture and language.
8	Number of program clients who became self-reliant, productive, and contributing members of the society
9	Number of program clients who made successful transition from youth at risk behaviors to clean, healthy, and esteemed lifestyles

Outcome #1

1. Outcome Measures

Number of program participants that acquired knowledge and developed skills in resources management (poverty), parenting, Samoan culture, and youth at risk issues

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2105

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As reported in 2011, resource management (poverty), parenting, culture, and youth at risk issues continued to be the major areas of concern in American Samoa. Additionally, more than 58.3% of American Samoa's families are considered poor and below the U.S. poverty level. Unemployment is about 18%; cost of living is high and more than 50% of average spending goes to food and housing. With per capita income at $4357, people need to manage family resources wisely and take advantage of economic opportunities to maintain and increase their quality of life.

What has been done
In 2012, F4HN staff conducted 16 sewing workshops/demonstrations, 14 arts and crafts workshops/demonstrations, 1 OMK camp, and 4 Samoan cultural workshops/demonstrations. Moreover, F4HN staff hosted a summer program; and completed 35 public awareness programs (radio, TV, newspapers). F4HN, with support of Agriculture Extension staff, also conducted 7 vegetable gardening and marketing projects.

Results
About 85% (2105)of the 2477 program participants acquired knowledge and developed skills in resource management, Samoan culture, and youth at risk issues.

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

Number of participants generating revenues from resource management activities

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	98

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As reported in 2011, more than 58.3% of American Samoa's families are considered poor and below the U.S. poverty level. Moreover, unemployment is about 18%; cost of living is high and more than 50% of average spending goes to food and housing. With per capita income at $4357, people need to manage family resources wisely and take advantage of economic opportunities to maintain and increase their quality of life.

What has been done
In 2012, F4HN staff conducted 16 sewing workshops/demonstrations, and 14 arts and crafts workshops/demonstrations. F4HN staff also hosted 4-H a summer programs; and completed 35 public awareness programs (radio, TV, newspapers). The F4HN, with the support of Ag Extension staff, also conducted 7 vegetable gardening and marketing projects.

Results
About 25% (98) of the 395 participants generated revenues from resource management activities (vegetable gardening, sewing projects, arts and crafts sales, bake sales, marketing projects, traditional weaving, home based and small businesses, and employment in the private and public sectors. Program participants also established 7 vegetable gardens as family revenue generating enterprise.145 participants continue to grow and sell vegetables as a result of the vegetable gardening and marketing projects

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

Number of participants starting home-based and small businesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As reported in 2011, more than 58.3% of American Samoa's families are considered poor and below the U.S. poverty level. Moreover, unemployment is about 18%; cost of living is high and more than 50% of average spending goes to food and housing. With per capita income at $4357, people need to manage family resources wisely.

What has been done
In 2012, F4HN staff conducted 16 sewing workshops/demonstrations, and 14 arts and crafts workshops/demonstrations. F4HN staff also hosted a summer programs; and completed 35 public awareness programs (radio, TV, newspapers). The F4HN, with support of the Ag Extension staff, also conducted 7 vegetable gardening and marketing projects.

Results
In 2012, 25 participants started home-based and small businesses such as sewing shops, arts and crafts shops, cookie shops, vegetables and fruits roadside market stalls. 145 participants continued to grow and sell vegetables as a result of the vegetable gardening and marketing project

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

Number of participants securing employment in the private and public sectors

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	8

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As reported in 2011, more than 58.3% of American Samoa's families are considered poor and below the U.S. poverty level. Moreover, unemployment is about 18%; cost of living is high and more than 50% of average spending goes to food and housing. With per capita income at $4357, people need to manage family resources wisely.

What has been done
In 2012, F4HN conducted 16 sewing workshops/demonstrations, and 14 arts and crafts workshops/demonstrations. F4HN staff also hosted a summer programs; and completed 35 public awareness programs (radio, TV, newspapers). The F4HN, with support from the Ag Extension staff, also conducted 25 vegetable gardening and marketing projects.

Results
Eight (8) participants secured employment in the private and public sectors. The majority operate their own home-based and small businesses while the rest secured employment with the government and private businesses. Program participants also established vegetable gardens as a family revenue generating enterprise. 145 Participants continued to grow and sell vegetables as a result of the vegetable gardening and marketing project.

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

Number of people continuing to grow and sell vegetables as a result of the vegetable gardening and marketing project

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	145

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As reported in 2011, more than 58.3% of American Samoa's families are considered poor and below the U.S. poverty level. Moreover, unemployment is about 18%; cost of living is high and more than 50% of average spending goes to food and housing. With per capita income at $4357, people need to manage family resources wisely and take advantage of economic opportunities to maintain and increase their quality of life.

What has been done
In 2012, F4HN staff conducted 7 vegetable gardening and marketing projects.

Results
145 Participants continued to grow and sell vegetables as a result of the vegetable and marketing project. Program participants acquired knowledge and developed skills in vegetable production and marketing that resulted in the establishment of 7 vegetable gardens, which served as family revenue generating enterprises.

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

Number of program participants that improved parent and children relationship

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	120

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As reported in 2011, resource management (poverty), parenting, culture, and youth at risk issues are major areas of concern in American Samoa. More specifically, parent and child relationship is a critical issue in American Samoa. Lack of supervision for children and youth due to working or absent parents continued to be a major concern. Therefore, providing programs and resources to help parents become better parents and for the children to remain respectful of their parents are necessary.

What has been done
In 2012, F4HN staff conducted 12 youth at risk issues workshops. F4HN staff also completed 35 public awareness programs (radio, TV, newspapers) on parenting, youth character, youth at risk issues, and other topics.

Results
120 program participants improved parent and children relationships. Similar to 2011, appreciation and respect for parents by the children were reported. Moreover parents acquired knowledge and developed skills to improve relationship and in handling and raising children especially those who were born and raised outside of American Samoa.

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

Number of program clients that developed a sense of pride and appreciation of the Samoan culture and language.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	119

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As reported in 2011, American Samoan families are becoming more westernized and are forced to reconcile their traditional culture of respect for elders and communal living with the often directly opposite western value of individualism. Attitudes toward the Samoan culture or fa'a Samoa are changing and that people are losing their perspective and respect for high moral standards and ethical conduct. Therefore, providing learning opportunities to preserve the Samoan culture, language, and family values via 4-H and Family & Consumer Science programs need to be continued.

What has been done
In 2012, F4HN staff conducted 4 Samoan cultural workshops and 12 youth at risk issues workshops. F4HN staff also completed 35 public awareness programs (radio, TV, newspapers) on Samoan culture and language, parenting, youth character, youth at risk issues, and other topics.

Results
70% (119) of the 170 program clients developed a sense of pride and appreciation of the Samoan culture. Similar to 2011, many youth developed a sense of identity and affiliation. Moreover, participants acquired knowledge and develop skills in traditional customs, Samoan language, entertainment/performances (songs and dances), arts and handicrafts, sports, social norms and values, and other related topics

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

Number of program clients who became self-reliant, productive, and contributing members of the society

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	258

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Similar to 2011, resource management, parenting, culture, and youth at risk issues continued to be the major areas of concern in American Samoa. People need to: manage family resources wisely; become better parents and for the children to remain respectful of their parents; provide learning opportunities to preserve the Samoan culture, language, and family values; and opportunities to help youth make a smooth transition from youth at risk behaviors to becoming self-reliant, productive, and contributing members of the society.

What has been done
In 2012, F4HN staff conducted 16 sewing workshops, 14arts and crafts workshops, and 12 youth at risk issues workshops, and 4 Samoan cultural workshop. Moreover, F4HN staff hosted a summer program; and completed 35 public awareness programs (radio, TV, newspapers). F4HN, with support from the Ag Extension staff, also conducted 7 vegetable gardening and marketing projects.

Results
258 program clients became self-reliant, productive, and contributing members of the society.

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

Number of program clients who made successful transition from youth at risk behaviors to clean, healthy, and esteemed lifestyles

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	8

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The American Samoa 2007 Youth Risk Behavior Survey of 3,625 high school students in six public high schools reported: 22.2% of the students carried a weapon, 56.8% tried cigarette smoking, 46.6% drank alcohol, 17.6% used marijuana, 32.0% had sexual intercourse, and 19.6% attempted suicide. Addressing the youth at risk issues will help the youth of American Samoa become productive, self-reliant, and contributing members of the community.

What has been done
In 2012, F4HN staff conducted 16 sewing workshops, 14 arts and crafts workshops, 12 youth at risk issues workshops, 4 Samoan cultural workshop. Moreover, F4HN staff hosted a summer program; and completed 25 public awareness programs (radio, TV, newspapers). The F4HN, with support from the Ag Extension staff, also conducted 7 vegetable gardening and marketing projects.

Results
In 2012, 12% (8) of the 70 program participants made successful transition from youth at risk behaviors to clean, healthy, and esteemed lifestyles. Similar to 2011: participants acquired

knowledge and developed skills in dealing with youth at risk issues; and some participants served as ambassadors in spreading the news to their peers and friends about the negative impacts of youth at risk behaviors.

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
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Staff Recruitment, Culture)

Brief Explanation

The impacts of the September 29, 2009 earthquake and tsunami delayed and/or cancelled program activities.
Loss of staff reduced program capacity.
In the process of recruiting for: 4-H Specialists, Fruit Tree Specialist, Marketing Specialist, Energy Specialist and field and support staff. Samoan culture versus other cultures (acculturation) especially for youth who were born and raised outside of American Samoa.
Topics such premarital sex, teen pregnancy, and sexually transmitted diseases are held in taboo.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

In FY 2012, the 4-H and FCS were able to reach more than 2477 participants in all the programs that were conducted. One of the highlights of the year was the first "Operation Military Kids" camp in American Samoa in June. About 170 participants were able to learn the Samoan culture, the military lifestyle, arts & crafts, energy-saving activity, Technology/electronics, healthy lifestyle, and vegetable gardening.

Participants reported the Basic Sewing Program as a useful program for families in the community. Most participants are saving money from doing their own sewing. About 10% of the participants bought their own sewing machine and started their own businesses at

home.

As of now, programs can only provide services to the island of Tutuila but not to Manu'a islands and Aunu'u due to lack of transportation The program agents need to be more visible in order for the community to understand and know more on what the program is all about. The Programs need to provide services to Aunu'u and the Manu'a islands. There is also a need for more qualified staff. Additional agents, vehicles, and equipments are needed to effectively deliver the programs to the clients.

Clients reported that. CNR staff are doing a very good job with the "Basic Sewing Programn." Clients learned to operate the sewing machines, use the patterns, and take the basic measurements. Many program participants are saving money by sewing their own family members' clothes. Some of the participants purchased sewing machines and initiated the process of starting their own sewing businesses. However, participants requested to extend the program duration from three months to five months per group. Residents of the Manu'a islands requested the sewing program to be extended to their islands. One Sewing Instructor is not enough to meet the demand from the community. Additional FCS Agents, vehicles, and equipments are needed to effectively deliver the sewing programs to the clients.

Clients also requested CNR to organize fashion shows to display their work and accomplishments.

Overall, clients reported that CNR staff members are doing a good job in the 4-H program areas.

Clients are grateful for the 4-H program especially for helping the young people learned more about their culture, resource managment, entrepreneurship, traditional arts and crafts, peer pressure, teen pregnancy, other areas, and in developing the essential life skills.

However, 4-H Agents need to be more visible in the community and need to do more programs in the schools, villages, and in the Manu'a islands. CNR need more 4-H Specialists (qualified staff), staff development capacity building opportunities, vehicles, materials and supplies, and technologies to develop, implement, and deliver programs to the communities. .

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and crafts, peer pressure, teen pregnancy, other areas, and in developing the essential life skills.

However, 4-H Agents need to be more visible in the community and need to do more programs in the schools, villages, and in the Manu'a islands. CNR need more 4-H Specialists (qualified staff), staff development capacity building opportunities, vehicles, materials and supplies, and technologies to develop, implement, and deliver programs to the communities. .

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Clients also requested CNR to organize fashion shows to display their work and accomplishments.

Overall, clients reported that CNR staff members are doing a good job in the 4-H program areas.

Clients are grateful for the 4-H program especially for helping the young people learned more about their culture, resource managment, entrepreneurship, traditional arts and crafts, peer pressure, teen pregnancy, other areas, and in developing the essential life skills.

However, 4-H Agents need to be more visible in the community and need to do more programs in the schools, villages, and in the Manu'a islands. CNR need more 4-H Specialists (qualified staff), staff development capacity building opportunities, vehicles, materials and supplies, and technologies to develop, implement, and deliver programs to the communities. .

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Clients reported that. CNR staff are doing a very good job with the "Basic Sewing Programn." Clients learned to operate the sewing machines, use the patterns, and take the basic measurements. Many program participants are saving money by sewing their own family members' clothes. Some of the participants purchased sewing machines and initiated the process of starting their own sewing businesses. However, participants requested to extend the program duration from three months to five months per group. Residents of the Manu'a islands requested the sewing program to be extended to their islands. One Sewing Instructor is not enough to meet the demand from the community. Additional FCS Agents, vehicles, and equipments are needed to effectively deliver the sewing programs to the clients.

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Key Items of Evaluation

There is a need for more qualified staff, additional 4-H agents, vehicles, and equipments to effectively deliver the programs to the clients .

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Climate Change

☑ 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
112	Watershed Protection and Management	15%		25%	
123	Management and Sustainability of Forest Resources	30%		25%	
124	Urban Forestry	25%		20%	
125	Agroforestry	15%		20%	
132	Weather and Climate	15%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	0.5	0.0	0.2	0.0
Actual Paid Professional	3.0	0.0	1.0	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
49193	0	46271	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
49193	0	46271	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Pago Pago Harbor was monitored monthly for evidence of another algae bloom. We identified a FIFA soccer field, adjacent to the harbor head, as the source of nutrients (nitrogen and phosphorus) that were responsible for past blooms. CES agents worked with the field managers to schedule fertilizer applications in a manner that would adequately feed the turf without excessive runoff. Since then, no bloom has been detected.

We monitored tap water from 20 widely dispersed areas of Tutuila Island for Total Dissolved Solids, as determined by electrical conductivity and atomic absorption analysis for calcium, magnesium, potassium, and sodium. We found that the municipal water distribution system serving the southeastern shore was high in TDS/EC. Meetings with the local water utility identified a series of wells in the Pago Harbor area (village of Aua) as the source of this drinking water. The high EC was owing in large part to seawater infiltration of the fresh water lens, source of groundwater for these wells.

We will collaborate with partners at the local Department of Marine and Wildlife and the EPA for monitoring and reducing sedimentation on our fringing coral reef.

Conduct conservation and climate change workshops.
Propagate trees for agroforestry, watershed, and coastal stabilization projects.
Survey areas infested with invasive tree species.
Conduct control program for invasive tree species.
Develop GPS/GIS maps.
Develop FSP management plans.

2. Brief description of the target audience

Scientists involved in environmental resources protection.
Local water utility personnel.
Policymakers in the Executive and Legislative branches of local government.
The Public.
Students
Farmers
Forestry clients

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	831	6000	3473	10000

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	1	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Technical Reports/Peer-reviewed papers/Media reports

Year	Actual
2012	4

Output #2

Output Measure

- Number of conservation and climate change workshops completed.

Year	Actual
2012	35

Output #3

Output Measure

- Number of plants propagated at nursery for climate change projects.

Year	Actual
2012	1305

Output #4

Output Measure

- Number of workshops' participants.

Year	Actual
2012	1513

Output #5

Output Measure

- Number of trees planted for climate change projects.

Year	Actual
2012	1305

Output #6

Output Measure

- Number of acres (infested by invasive species)surveyed using GPS/GIS.

Year	Actual
2012	32

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Bacterial and sediment loads in stream runoff.
2	Number of agroforestry projects established.
3	Number of watershed projects established.
4	Number of coastal stabilization projects completed.
5	Number of acres infested by invasive tree species controlled.
6	Number of GPS/GIS maps developed.
7	Number of Forest Stewardship Management plans completed.

Outcome #1

1. Outcome Measures

Bacterial and sediment loads in stream runoff.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Agricultural and construction activities in stream riparian zones may lead to soil erosion and pollution of streams with anthropogenic nutrients and coliform bacteria loads. These activities have a greater impact on the reef, where a blanket of soil may impede coral photosynthesis while excess nutrients promote algae growth. As a nursery for many marine fauna and shoreline safeguard against wave erosion, loss of coral at the expense of algae has serious repercussions on fish and crustacean stocks as well as shoreline erosion.

What has been done
Monitoring bacterial counts at the mouths of streams, where access is relatively easy, alerts regulators, i.e, EPA, of a potential violation upstream. Likewise, visiting stream mouths soon after storm events allows for a qualitative assessment of soil erosion problems.

Results
Since an EPA initiative in 2009 to remove illegal piggeries from riparian areas and to identify possible households with ineffective sewage handling procedures, stream and off-shore bacterial counts have been substantially reduced and soil runnoff seen only after the most severe storms with accompanying intensive rainfall.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management

Outcome #2

1. Outcome Measures

Number of agroforestry projects established.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Population pressure and land clearance for agriculture and economic development in the mountainous areas of the limited land area (76 square miles)of American Samoa are major threats and challenges to the forests and natural resources.
Forty two percent (42%) of American Samoa?s 76 square miles has a slope of more than 45%. Soil erosion is highly visible in many of these sites.

What has been done
Forestry program conducted 35 conservation and climate change workshops for 1513 participants. Moreover, forestry staff propagated 1035 plants for climate change projects.

Results
Established one agroforestry project at Leone village. The mixed cropping system (crops & trees)at the site not only provided food for the family (food security) but also control soil erosion. Moreover, the landowner and staff controlled all the invasive tree species and replanted with 30 recommended native tree species at the one-acre site. The landowner appreciated the support from the forestry program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry

132 Weather and Climate

Outcome #3

1. Outcome Measures

Number of watershed projects established.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Pollution (trash & pig wastes), sedimentation, nutrients enrichment, soil erosion, invasive species, and human activities are major threats and chanllenges to the fresh water supply and qualtiy in American Samoa. The threats also impacted mangroves,fresh water fish, and marine life and coral reefs.

What has been done
Conducted 35 workshops on conservation and climate change education on agro-forestry, technical assistance, land management planning, and building partnerships with villages and landowners.

Results
Forestry staff established partnerships with two villages (Nu'uuli and Faga'alu. Sixty three (63) youth members and 3 church pastors from Nu'uuli village; eighty nine (89) youth members and 5 village officials from Fagaalu village established two watershed projects at the resspective villages. One hundred twenty (120) native trees (60 trees per village) were planted at these two watersheds to control soil erosion, replace invasive species with native trees, and to maintain healthy water quality and wildlife habitat. Villagers are able to continue youth watershed cleanup activities once a month. Families agreed to relocate their piggeries 50 feet away from the streams to maintain fresh water quality.

4. Associated Knowledge Areas

KA Code	Knowledge Area

112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #4

1. Outcome Measures

Number of coastal stabilization projects completed.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
On September 29, 2009 an 8.1 magnitude earthquake generated a massive tsunami that struck American Samoa, killing 32 people and injuring many others, both physically and psychologically. The shorelines and coastal areas of American Samoa were no longer enjoyed by its people, due to the destruction from this natural disaster. Trees that were use for windbreaks, coastal stabilization, and soil erosion were wiped out by the tsunami. Coastal and shorelines were not safe for the people.

What has been done
Forestry propagated 2,175 plants for climate change projects and conducted 35 conservation and climate change workshops.

Results
Planted 1150 trees at the 4 coastal stabilization projects involving the 27 tsunami impacted villages that requested assistance with coastal and shoreline stabilization.

4. Associated Knowledge Areas

KA Code	Knowledge Area

112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #5

1. Outcome Measures

Number of acres infested by invasive tree species controlled.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The spread of exotic invasive plants has become the greatest danger to American Samoa?s native rainforest. Such serious invasive plants included the African tulip (Spathodea campanulata) , Panama rubber tree (Castilla elastica), albizia(Falcataria moluccana), red-bead tree (Adenanthera pavonina), strawberry guava (Psidium cattleianum), cinnamon (Cinnamom umverum) and false kava (Piper auritum). These invasive species have slowly replace native trees of American Samoa.

What has been done
Forestry staff surveyd 64 acres of land at Maloata village. Thirty two (32) of the 64 acres are infested with Castilla elastica.

Results
Forestry team controlled 5 acres of the 32 acres of surveyed Castilla elastica infested area. Forestry staff eradicated 40 large trees, 280 saplings, and 2,336 seedlings.

4. Associated Knowledge Areas

KA Code	Knowledge Area

112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #6

1. Outcome Measures

Number of GPS/GIS maps developed.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The spread of exotic invasive plants are identified as the greatest danger to American Samoa?s native rainforest. Maps of invasive species distributions is a critically needed data. Mapping invasive plant distributions is critical to planning, implementation, and evaluation of invasive species control programs in American Samoa.

What has been done
CNR forestry program received assistance from NASF to develop a strategy for mapping and monitoring of invasive plants in American Samoa using geospatial technology. The USFS Region 5, Sr. GIS Analyst assisted ASCC-CNR GIS Specialist and Forestry staff in developing a long term strategy for mapping and monitoring invasive trees using the latest mosaic WorldView-2 (WV2) 8-band pan-sharpened satellite imagery made available very recently through the Pacific Island Imagery Consortium.

Results
Completed one invasive map for Tutuila island based on data and information collected in the field. A pilot mapping of red-bead tree (Adenantherepavonina) in part of the villages of Fagalii and Maloata was conducted successfully using latest WorldView-2 ()WV2) very ?high-resolution (VHR) satellite imagery and automated classification algorithm. 150 copies of the American Samoa's invasive plants map and posters were produced, distributed, and made available to the

public.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #7

1. Outcome Measures

Number of Forest Stewardship Management plans completed.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	31

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
At the end of year 2010, the population was estimated at 80,000. Out of 34,082 acres of land on Tutuila Island, only 18,626 acres have less than 45% slope. Land for development and agriculture are limited. Many landowners do not have any existing management plans to care for and manage their own lands. The spread of exotic invasive species throughout the island, population increase, and climate change will negatively impact the future of forests and natural resources in American Samoa.

What has been done
Forestry staff conducted 35 conservation education workshops and presentations to the community at large. Assisted 31 clients in developing management plans for their lands. Forestry staff and CNR-GIS Specialist secured resources maps for each FSP clients to assist with planning and evaluation.

Results
Forestry staff completed 31 forest stewardship management plans for 31 landowners. Landowners are now able to manage their family lands. Landowners are visiting our greenhouse more often for technical assistance or needed plants.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

The impacts of the September 29, 2009 earthquake and tsunami impacted program activities. Loss of staff reduced program capacity. Population increase, limited land area, invasive species, agricultral and economic development affected programming and outcomes.
In the process of recruiting for: 4-H Specialists, Fruit Tree Specialist, Marketing Specialist, Energy Specialist and field and support staff.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

In FY-2012, Forestry Program served 831 adults and 3,473 youth. 1,513 program participants participated in the 35 conservation education workshops and completed the program evaluations. Workshop participants learned about Agro-forestry, Tree Standing Improvement, Watershed Management, Natural Resources Conservation, Plant Propagation, Invasive Species Management, and Urban Community Forestry programs.

Program evaluation indicated the following: 1). forestry program staff should be more visible in the community to assist and encourage landowners to plant more native trees to address climate change challenges; 2) forestry program must work with village councils in managing watersheds and coastal areas; 3) forestry program must focus on native tree species and medicinal plants; 4) forestry program must extend programs to the Manu'a islands and Aunu'u; 5) need to hire more professional forestry staff to implement

programs; 6) vehicles and equipments are needed to effectively deliver programs to the communities. Overall, clients are impressed with forestry staff performance in the communities and recommended funding sources to sustain the forestry program in American Samoa.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Childhood Obesity

☑ 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
703	Nutrition Education and Behavior	50%		50%	
724	Healthy Lifestyle	50%		50%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	0.0	2.0	0.0
Actual Paid Professional	1.3	0.0	1.0	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
49193	0	46271	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
49193	0	46271	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

We will select among seven primary intervention studies for children aged 2 to 8 years that show a positive effect on at least one of our primary outcomes: Body Mass Index (BMI), food intake, or physical

activity. Specific interventions will be selected during 2011 based on consultations with our multi-state partners, local advisory committees, and healthcare professionals.

To determine an impact, two communities will be given the interventions and two communities will not. All four will have baseline data collected on children 2 to 8 years of age: height, weight, waist circumference, and evidence of acanthosis nigricans. Parents will be asked to complete a food and physical activity log during two days over the subsequent week of measurements. Children will also be fitted with a wrist accelerometer to quantify physical activity and sleep patterns. In two addition communities, children will be measured as above, but no accelerometer or food/PA logs distributed.

2. Brief description of the target audience

Communities in the two intervention sites.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	450	5000	714	3000

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Decrease in BMI percentiles, changes in food intake, changes in physical activity level among children 2 to 8 years of age.

Year	Actual
2012	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Prevalence of overweight and obesity decreasing in this cohort over time

Outcome #1

1. Outcome Measures

Prevalence of overweight and obesity decreasing in this cohort over time

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Childhood obesity usually leads to adult obesity which, in turn, is strongly linked to several non-communicable diseases such as type 2 diabetes, cardiovascular disease, and stroke.

What has been done
We held two meetings with each community to gather community-based recommendations to reduce childhood obesity. Participants included community leaders, parents, and elementary school teachers. From these meetings, we will plan our interventions.

Results
We learned that all four communities are ready for change. Several environ mental changes were recommended, but the participants recognized that personal responsibility--especially of parents--would be paramount.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations

Brief Explanation

Some excellent community suggested environmental changes will require a commitment from government for capital improvement projects.

Many small grocery stores that serve the communities are operated by Asian businessmen who are primarily profit-oriented and may be reluctant to experiment with stocking healthy food choices that are perishable and may require expensive refrigeration.

Finally, changing behavior is one of the most difficult things for an individual to do.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Although government leaders and the general public acknowledge that obesity and its accompanying non-communicable diseases is taking a high toll on the health of the people as well as the health of the economy, environmental changes that could help reverse the trend are cost prohibitive in the short political lifespan of most government officials.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Global Food Security and Hunger

☑ 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
133	Pollution Prevention and Mitigation	5%		5%	
202	Plant Genetic Resources	5%		10%	
205	Plant Management Systems	10%		15%	
211	Insects, Mites, and Other Arthropods Affecting Plants	5%		12%	
212	Pathogens and Nematodes Affecting Plants	5%		10%	
215	Biological Control of Pests Affecting Plants	5%		7%	
306	Environmental Stress in Animals	5%		1%	
307	Animal Management Systems	10%		5%	
315	Animal Welfare/Well-Being and Protection	5%		5%	
401	Structures, Facilities, and General Purpose Farm Supplies	5%		15%	
601	Economics of Agricultural Production and Farm Management	5%		5%	
604	Marketing and Distribution Practices	5%		5%	
903	Communication, Education, and Information Delivery	30%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	7.0	0.0	4.0	0.0
Actual Paid Professional	4.0	0.0	1.1	0.0
Actual Volunteer	2.0	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**
49194	0	46271	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
49194	0	16271	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Plant clinic diagnoses and recommendations
Pest surveys
Testing of reduced-risk pesticides
Biological control studies of important pests
Technical assistance with nuisance bee problems and assessment of apiculture
Evaluation, multiplication, and distribution of improved taro, banana, sweet potato, and vegetable varieties;
Budding, grafting and air layering workshops, and production and distribution of fruit trees;
Reduce inbreeding of farmers' animal operations, and Swine Waste
Management Systems demonstrations;
Tissue culture of traditional staples and increasing genetic diversity to improve crop security;
Pest surveys and clinic diagnoses and recommendations;
Pesticides Safety Training;
Farm Safety Training;
Farm visitations and demonstrations;
Tilapia breeding program;
Evaluation of native freshwater fish and crustaceans for intensive aquaculture;
Feeds lab maintenance and feed production;
Technical assistance with disease and nutrition issues for aquaculture farmers;
Technical advising for local Samoa Family Sunfish Cooperative, Inc

Community and Natural Resources Aquaculture Program staff improved the tilapia breeding program at the American Samoa Community College by assisting to bring an improved tilapia breed from Apia, Samoa to American Samoa. The Genetically Improved Farmed Tilapia (GIFT) grows faster and bigger than the inbred strains currently found in American Samoa. This fish is currently being distributed as fast as possible to farmers around Tutuila Island and is the focus of the breeding program at ASCC.

Plans to evaluate native freshwater fish and crustaceans for intensive aquaculture resulted one trials on GIFT tilapia. A collaborative project with a local farmer showed that GIFT tilapia can reach a market size of 220 grams in 4 months. An improvement on the existing strains that take up to 8 months to reach the same size.

The feeds laboratory at ASCC was used by two farmers to produce complete diets for tilapia. Equipment at the laboratory include electronic scales, a mixer, grinder, hammer mill, and drying oven. Our program was able to secure an agreement with StarKist tuna cannery to receive tuna meal at no cost, indefinitely. This arrangement, coupled with our providing free vitamins and minerals reduces the price of a 50 pound bag of feed from $25 to as low as $12, depending on the other ingredients used.

No work was done on the Manu'a High School Aquaponics Project in 2012.

Staff at CNR worked with the Clarion Tradewinds Hotel to reduce the incidences and outcomes of diseases on their Koi fish. Water quality is now greatly improved and reports of fish mortalities have ceased.

We continued to support aquaponics farmers with seed selection, water quality, feeds production, harvesting schedules and sales. We also continued to work with Duke Purcell on his integrated pig-tilapia system to improve water quality and pond productivity.

We assisted the Samoan Family Sunfish Cooperative in receiving IRS 5019(c)(3) tax exempt status and preparing a grant application to the Department of Interior Technical Assistance Program. This was done in partnership with Congressman Faleomavaega and his staff.

The Center for Sustainable Integrated Agriculture and Aquaculture at ASCC houses freshwater and saltwater aquaria. These were used in conjunction with aquaculture and aquaponics demonstration systems at the center to host school tour groups.

2. Brief description of the target audience

Small and resource-limited farmers, commercial farmers, aquaculture farmers, forestry clients, hobby farmers, gardeners, general public, school students, government agencies, Extension agents, businesses, 4-H members, homemakers, church youth and other non-government organizations, village residents, and community group members

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1765	100000	1090	5000

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of research projects completed.

Year	Actual
2012	0

Output #2

Output Measure

- Number of cultivars of disease resistant taro, banana,and improved varieties of sweet potato multiplied and released.

Year	Actual
2012	25

Output #3

Output Measure

- Number of improved taro setts,banana suckers/bits, and/or sweet potato slips disseminated.

Year	Actual
2012	6033

Output #4

Output Measure

- Number of plant clinic diagnoses and recommendations made to assist farmers.

Year	Actual
2012	13

Output #5

Output Measure

- Number of vegetable variety demonstrations completed.

Year	Actual
2012	9

Output #6

Output Measure

- Number of new fruit tree varieties introduced.

Year	Actual
2012	3

Output #7

Output Measure

- Number of fruit tree propagation workshops.

Year	Actual
2012	6

Output #8

Output Measure

- Number of pigs sold/traded and piglets born from AI.

Year	Actual
2012	34

Output #9

Output Measure

- Number of local crops prepared and sent to offisland laboratory for nutrient analysis.

Year	Actual
2012	0

Output #10

Output Measure

- Number of pesticide efficacy tests completed.

Year	Actual
2012	5

Output #11

Output Measure

- Number of Pesticide Applicators' Training workshops conducted.

Year	Actual
2012	5

Output #12

Output Measure

- Number of biological control species introduced or augmented to control local pests.

Year	Actual
2012	0

Output #13

Output Measure

- Number of video production.

Year	Actual
2012	1

Output #14

Output Measure

- Number of Tilapia released from breeding program.

Year	Actual
2012	50

Output #15

Output Measure

- Number of candidate species culture trials completed.

Year	Actual
2012	1

Output #16

Output Measure

- Number of tilapia feed trials completed.

Year	Actual
2012	1

Output #17

Output Measure

- Number of vetiver grass (Chrysopogon zizanioides), slips planted at nursery for distribution to farmers/clients.

Year	Actual

2012	0

Output #18

Output Measure

- Number of collaborative projects with other government agencies.

Year	Actual
2012	18

Output #19

Output Measure

- Number of vegetable gardening workshops conducted.

Year	Actual
2012	9

Output #20

Output Measure

- Number of vegetable gardens established.

Year	Actual
2012	579

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of farmers growing improved varieties of taro, bananas, and sweet potatoes.
2	Number of farmers targeting problems according to recommendations on plant clinic form.
3	Number of farmers/clients growing improved vegetable cultivars.
4	Number of people growing improved budded/grafted or airlayered fruit trees in their back yards.
5	Number of pig farmers upgrading their stock.
6	Number of reduced risk pesticides recommended for use.
7	Number of pesticide applicators trained and certified.
8	Number of farmers growing improved genetic stocks of tilapia.
9	Number of farmers upgrading their farms to aquaponics.
10	Number of farmers making their own tilapia feeds.
11	Number of farmers integrating their piggeries with tilapia culture.
12	Number of farmers/stakeholders involved with collaborative projects.
13	Number of farmers/clients planting vetiver grass (Chrysopogon zizanioides), for soil conservation.
14	Number of local crops nutrient analysis completed.
15	Number of agroforestry projects established.

Outcome #1

1. Outcome Measures

Number of farmers growing improved varieties of taro, bananas, and sweet potatoes.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	251

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The taro leaf blight of the 1990s and the black leaf streak disease of bananas negatively impacted taro and banana production in American Samoa. With the continued multiplication and distribution of improved (disease resistant) varieties, taro and banana producers now have greater diversity of disease-resistant varieties to choose from and to address the food security issue.

What has been done
Agriculture Extension staff, in collaboration with the Plant Tissue Culture Specialist continued to multiply the best tasting varieties of traditional staples for American Samoa. These improved varieties were multiplied and distributed to the farming community and the public.

Results
In FY 2012, the Agriculture Extension staff distributed 6,033 improved taro setts and banana planting materials from more than 25 cultivars of disease resistant taros and bananas to 251 farmers.Hence, 251 farmers are growing improved varieties of taro, bananas, and sweet potatoes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants
601	Economics of Agricultural Production and Farm Management

Outcome #2

1. Outcome Measures

Number of farmers targeting problems according to recommendations on plant clinic form.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	9

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As is the case for many isolated islands, American Samoa's natural and agricultural ecosystems are highly vulnerable to disruption by accidentally introduced exotic arthropods, and the likelihood of such introductions increases with increased movement of passengers and goods to the territory. Agriculture quarantine inspections and pest surveillance surveys can stop pests before they enter the territory or before they have an opportunity to spread and become established. Accurate identification is the crucial first step for effectively managing existing pests and responding to invasions by exotic pests.

What has been done
ASCC-CNR works with the territory's Department of Agriculture to conduct detection surveys for exotic invasive pests. The fruit fly quarantine surveillance program continued this year, and detection surveys for citrus greening disease and exotic invasive ants were completed. A survey to detect three major pathogens of coconut palms was launched after unusual symptoms were observed on some of the trees. ASCC-CNR worked with the US Geological Survey and US Fish and Wildlife Service to conduct an insect survey of remote Rose Atoll and worked with the local Department of Marine and Wildlife Resources to conduct an insect survey of equally remote Swains Island. The ASCC-CNR Plant Clinic continued to provide pest and disease diagnostic services to extension agents, farmers, and the general public. As a member of the USDA's National Plant Diagnostic Network, the ASCC-CNR Plant Clinic has access to regional and national-level diagnostics expertise when required.

Results
No exotic fruit fly species were found among the 26,139 fruit flies captured and identified in the quarantine surveillance program this fiscal year. Since the arrival and establishment of Asian citrus psyllid in 2011, it has been important to maintain surveillance against the disease it vectors,

citrus greening. Fortunately our 2012 survey again found no citrus greening. A total of 39 high risk areas were sampled for exotic invasive ants, and no new exotic species were found. The 39 symptomatic coconut trees that were tested for coconut cadang-cadang viroid, coconut foliar decay virus, and palm lethal yellows phytoplasma were negative for all three pathogens. Efforts are continuing to identify the cause of the symptoms. ASCC-CNR worked with the Department of Agriculture?s quarantine division in 2011 to document the threat posed by invertebrate animals and weed seeds entering the territory on imported fresh Christmas trees. Implementation of the resulting recommendations produced a 98% reduction in the numbers of exotic invertebrate animals and seeds found on the trees in 2012. Results of the Rose and Swains Island insect surveys will provide a baseline for future monitoring of pest presence and abundance on those islands. The ASCC-CNR Plant Clinic continued to provide assistance to CNR extension agents, the department of agriculture, farmers, and others through plant pest and disease diagnosis and management recommendations.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
215	Biological Control of Pests Affecting Plants

Outcome #3

1. Outcome Measures

Number of farmers/clients growing improved vegetable cultivars.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	570

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In 2012, farmers continued to grow improved vegetable varieties that are beneficial to them in terms of buying safer and cheaper seeds and generating additional revenues for the family. Also, consumers benefit in terms of reducing costs and meeting nutritional needs of the family and

community members.

What has been done
Agriculture Extension staff continued to provide small quantities of different vegetable seeds/seedlings to homemakers, schools, and 4-H clubs interested in growing their own vegetables. Also, staff conducted visitations to provide follow up assistance to back-yard farmers, commercial vegetable growers, and school and church vegetable projects. ASCC-CNR continued to order seeds of improved vegetable varieties, tried them on our local tropical environment, and sell them to the farming community. Extension sold 2294 packages (10gramms each) to 222 farmers at break-even price to encourage them to grow more vegetables.
Extension staff completed 9 vegetable variety trials.

Results
Extension staff identified improved vegetable cultivars that perform well in the tropics and are disease resistant. The success of the improved cultivars in the farming community is evident by the increase in the number of seed purchases, demand to order more seeds to cover the shortage of the seed supply, increase in production and human consumption, and vegetable sales. 570 farmers cultivated improved vegetable cultivars.

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources
205	Plant Management Systems
215	Biological Control of Pests Affecting Plants
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #4

1. Outcome Measures

Number of people growing improved budded/grafted or airlayered fruit trees in their back yards.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	47

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a great need in American Samoa to increase consumption of fruits to address the many non-communicable diseases such diabetes, hypertension, heart disease, obesity, and others. Parents continued to be concerned to ensure that their children have enough fresh fruits to eat. Making fruit tree planting-materials available to families to plant in the back yard and farm land is critical in addressing the above-mentioned challenges.

What has been done
Agriculture Extension staff continued to multiply and distribute the recommended fruit tree varieties to the farmers, homemakers, and interested residents. The new "Fruits for Life" greenhouse was used to accommodate the multiplication of fruit-tree planting-materials, and to serve as a teaching/learning lab for ASCC Agriculture students and farmers on the different methods of asexual propagation to increase the availability of diverse varieties of fruits for the people of American Samoa.

Results
CNR started using the new "Fruits for Life" greenhouse to multiply the fruit-tree planting-materials. Agriculture Extension continued to work with EFNEP and 4-H to conduct the "Fruits for Life" program to increase the consumption of vegetables and fruits in order to address the poor nutrition problem and lifestyle diseases. Extension conducted 7 fruit tree propagation workshops, and 47 farmers planted improved budded/grafted or air-layered fruit trees in their back yards.

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #5

1. Outcome Measures

Number of pig farmers upgrading their stock.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	41

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a continued need to introduce biodiversity in the local pig gene pool, not only from an inbreeding perspective but a homeland security one as well. Also there is a great need to address the pig waste management problem.

What has been done
CNR staff continued to use the ASEPA funded piggery to demonstrate the four (4) recommended waste management systems to farmers, students, and the general public.

Results
The renovated piggery now serves as a demonstration site for the pig farming community. Once the farmers? piggeries gain compliance of the local laws, the intent is to work with them to upgrade their stock and to reduce inbreeding by making available boar service and trading/selling to them some of our own improved stock. Extension staff also assisted ASEPA and FSA staff, the piggery council, and other government agencies with piggery compliance workshops (outreach) in Tutuila and Manu'a islands. 41 pig farmers upgraded their stock.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #6

1. Outcome Measures

Number of reduced risk pesticides recommended for use.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
American Samoa's farmers manage their traditional and nontraditional cropping systems under environmental conditions and pest combinations that are unique. Pest control solutions that work elsewhere in the U.S. or its territories may or may not work for American Samoa?s farmers. It is important to test technologies that offer effective, environmentally sound pest control to ensure that they work for American Samoa?s farmers.

What has been done
This activity was restarted in 2012 but had to be suspended again due to loss of key personnel.

Results
This activity could not be completed in 2012 due to lack of personnel.

4. Associated Knowledge Areas

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants
215	Biological Control of Pests Affecting Plants

Outcome #7

1. Outcome Measures

Number of pesticide applicators trained and certified.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	75

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Continued uses of unsafe and illegal pesticides are documented in American Samoa. Also people who imported and use non-EPA registered pesticides were cited by ASEPA.

What has been done
During FY 2012, ASCC-CNR conducted 5 Pesticide Applicator Safety workshops that enrolled 75 participants. The EPA Pesticide Officer was present to certify the participants.

Results
In FY 2012, 75 participants were trained and certified. Now, more people understand the importance of handling pesticides in a safe manner and are aware of how to use these chemicals safely. Many residents are now aware of Integrated Pest Management strategies and successful biological control programs. As a result, some farmers have dramatically reduced the use of pesticides, while others are no longer using pesticides.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #8

1. Outcome Measures

Number of farmers growing improved genetic stocks of tilapia.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Tilapia introductions in American Samoa have been few and far between. Inbreeding of existing stocks has been known to reduce growth rates and maximum sizes. This limits maximum farm yields and profits.

What has been done
CNR staff facilitated the transport of 45 Genetically Improved Farmed Tilapia (GIFT) from Apia, Samoa in April 2012 by Mr. Duke Purcell. These fish were stocked in a pond on Mr. Purcell?s tilapia farm and fed a high-quality, locally-produced, tilapia diet.

Results
Mr. Purcell has demonstrated the improved breeding and growth rates of the GIFT tilapia over previous genetic stocks in American Samoa. He has turned his initial 45 fish into more than 5,000 in less than one year. He was able to distribute GIFT tilapia to the Center for Sustainable Integrated Agriculture and Aquaculture at the American Samoa Community College and another local aquaponics farmer. All new farmers will begin their farms using this new breed of tilapia and old farmers will be encouraged to replace their older stocks with GIFT.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #9

1. Outcome Measures

Number of farmers upgrading their farms to aquaponics.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is little, available, arable land in American Samoa. Much of the available land is comprised of poor soils that are not suitable for gardening. With the current loss of jobs and economic recession, people are looking for ways to improve their food security.

What has been done
One workshop and two public presentations were conducted highlighting the benefits and practice of aquaponics. A total of 99 people improved their understanding of aquaponics, including assembly, fish care, and marketability of aquaponics products.

Results
Two people are currently working on collecting materials and other resources for building their own aquaponics systems. They are expected to have completed their systems by the end of 2013.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #10

1. Outcome Measures

Number of farmers making their own tilapia feeds.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Feed availability and quality are poor in American Samoa. Imported feeds are expensive and their shipping is difficult to arrange to provide a consistent supply. Locally-produced feeds are an option as are feeds for other animals, such as pigs.

What has been done

The Center for Sustainable Integrated Agriculture and Aquaculture continues to maintain equipment for the production of fish feeds that is available to local fish farmers for free use. A one year trial was concluded in August 2012 to test the impact of using StarKist Samoa fish meal in tilapia feeds on the production yield at one local tilapia farm. One other farmer continued to make use of the feeds facilities to produce feeds for her fish.

Results
Mr. Duke Purcell used tilapia feeds made using StarKist Samoa fish meal for one year on his farm. His farm production increased 3-fold over the previous year. A total of 5630.41 pounds of feeds were produced at the Center for Sustainable Integrated Agriculture and Aquaculture in 2012, up from 1,688 pounds in 2011. StarKist Samoa has offered to provide free fish meal indefinitely for use in local fish feeds production.

4. Associated Knowledge Areas

KA Code	Knowledge Area
306	Environmental Stress in Animals
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
401	Structures, Facilities, and General Purpose Farm Supplies
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #11

1. Outcome Measures

Number of farmers integrating their piggeries with tilapia culture.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The American Samoa Environmental Protection Agency began a significant campaign to bring non-compliant piggeries within the territory into compliance. Many piggeries were shut down due to close proximity to rivers and streams and poor management of piggery wastewater.

What has been done
We worked to assist one farmer to integrate his 80-pig system with tilapia ponds in 2011. The system design was approved by the local EPA. Most of our 2012 work was spent assisting the farmer in fine tuning the use of piggery wastewater to fertilize tilapia ponds

Results
No new farmers integrated their piggeries with aquaculture in 2012. However, Duke Purcell?s farm manager has improved his skills at managing the waste water from the piggery to ensure water quality remains optimal in each of the five fish ponds. Excess pigs are planned to be transferred to a separate piggery to reduce the amount of waste water going to the fish ponds.

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #12

1. Outcome Measures

Number of farmers/stakeholders involved with collaborative projects.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	381

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The limited availability of financial and specialized human resources are major challenges in program planning, development, implementation, and evaluation in American Samoa.Taro leaf

blight and black leaf streak disease of bananas negatively impacted the staple food production in American Samoa. Pig waste management in piggeries became a problem from a homeland security perspective. The territory?s environment and its agricultural production is always threaten by the introduction of exotic invasive species.

What has been done

In 2012, more than 20 local, federal, regional government agencies and non-government organizations partnered in program planning, development, implementation, and evaluation of more than 18 collaborative projects. Agriculture Extension staff continued to work collaboratively with the territory?s department of agriculture and CNR?s Plant tissue Culture specialist in multiplying and distributing the best tasting varieties of traditional staples to the farming community. We have worked hand in hand with the local EPA and USDA-FSA staff in addressing the pig waste management problem in the territory through outreach and trainings. Extension collaborated with our Research staff, the territory?s department of agriculture, and USDA?s National Plant Diagnostic Network in pest and disease identification and management. We partner with ASEPA in conducting the pesticide safety education program.

Results

381 farmers and stakeholders participated in planning, development, implementation, and evaluation of more than 18 collaborative projects involving more than 20 local, federal, regional government agencies and non-government organizations partners. Planting materials of disease resistant/improved varieties of traditional staples were distributed to 251 farmers. 41 pig-farmers upgraded their piggeries through collaborative effort with ASEPA and USDA-FSA. 14 farmers were able to diagnose and manage pests and diseases through collaborative work with Agriculture Extension, CNR Entomologist, local department of agriculture, and the USDA?s National Plant Diagnostic Network. The partnerships resulted in many accomplishments as reported in the outputs and outcomes sections.

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
202	Plant Genetic Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
215	Biological Control of Pests Affecting Plants
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #13

1. Outcome Measures

Number of farmers/clients planting vetiver grass (Chrysopogon zizanioides), for soil conservation.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Population pressure and land clearance for agriculture and economic development in the mountainous areas of the limited land area (76 square miles)of American Samoa are major threats and challenges to the forests and natural resources.
Forty two percent (42%) of American Samoa?s 76 square miles has a slope of more than 45%. Soil erosion is highly visible in many of these sites.

What has been done
Agriculture Extension staff are no longer multiplying and distributing the vetiver grass to farmers for soil conservation purposes. NRCS, Forestry, and other farmers are now distributing the vertiver planting materials to interested individuals.

Results
No work on vetiver grass was done in 2012 for other agencies and farmers are providing the service.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #14

1. Outcome Measures

Number of local crops nutrient analysis completed.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Obesity and overweight, poor nutrition, lack of exercise, and food safety issues continued to be major health problems for both adults and youth in American Samoa.The need to conduct nutrient analysis on locally grown crops was recognized.

What has been done
Extension Program staff established two plots of the specialized banana variety(soa'a) for the purpose of conducting nutrient analysis when the fruits are ready. Unfortunately, the scientist and advisor on this project was diagnosed with cancer and finally passed away.

Results
No nutrient analysis was conducted on the soa'a bananas.

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources
205	Plant Management Systems
604	Marketing and Distribution Practices

Outcome #15

1. Outcome Measures

Number of agroforestry projects established.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Population pressure and land clearance for agriculture and economic development in the mountainous areas of the limited land area (76 square miles)of American Samoa are major threats and challenges to the forests and natural resources.
Forty two percent (42%) of American Samoa?s 76 square miles has a slope of more than 45%. Soil erosion is highly visible in many of these sites.

What has been done
Agriculture Extension program collaborated with the Forestry program in offering 35 conservation and climate change workshops for 1513 participants. Moreover, forestry staff propagated 1035 plants for climate change projects.

Results
Established one agroforestry project at Leone village. The mixed cropping system (crops & trees)at the site not only provided food for the family (food security) but also control soil erosion. Moreover, the landowner and staff controlled all the invasive tree species and replanted with 30 recommended native tree species at the one-acre site. The landowner appreciated the support from the CNR program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Staff recruitment, procurement problems, Staff recruitment, procurement problems, Lack of staff; procureme proc)

Brief Explanation

Loss of staff limited program capacity. ASCC business office continued to impede CNR's attempts to use Hatch and Smith-Lever grant funds to procure supplies and equipment for this and all other planned programs.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

At the conclusion of the 12 workshops we conducted, and also from 4 focus group discussions, we summarized our clients/stakeholders' input (2,154 participants) as follows:-

Issues:-

1. Improved varieties (Traditional crops) - we are doing an excellent job
2. Vegetable gardening workshops/demonstrations - we are doing an excellent job
3. Pesticide Safety Education program - we are doing an excellent job
4. Progressive Agriculture Safety Days - we are doing a very good job
5. Piggery waste management workshops - we are doing a good job
6. Farm visitations - we are doing a fair job (we need to be out in the community more often, thus, we need more professional staff (agents)).

Fruit trees propagation workshops - we are doing a fair job (we need to import new varieties)

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Sustainable Energy

☑ 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
112	Watershed Protection and Management	15%		20%	
123	Management and Sustainability of Forest Resources	30%		30%	
124	Urban Forestry	25%		15%	
125	Agroforestry	15%		20%	
132	Weather and Climate	15%		15%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	0.0	0.0
Actual Paid Professional	1.4	0.0	1.1	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
49194	0	46271	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
49194	0	46271	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Energy conservation workshops
Community assessments/surveys
Tree plantings in urban areas
Collaboration with partner agencies
Propagation of trees in greenhouse and nursery for urban tree plantings
Collect native fuel wood tree seeds and seedlings for multiplication
Display and put up energy efficient items and materials
Recruitment for scientist
Site visitations to clients
Distribution of fuel wood tree planting materials

2. Brief description of the target audience

Students
Farmers
Forestry clients
4-H members
Church youth
Community groups
General public
Policy makers in the Legislature and Executive branches of the American Samoa government
Business people
Construction people
Car dealers

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	831	6000	3473	10000

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of energy conservation workshops completed.

Year	Actual
2012	35

Output #2

Output Measure

- Number of trees propagated at nursery for urban tree plantings.

Year	Actual
2012	2175

Output #3

Output Measure

- Number of fuel wood trees propagated for project.

Year	Actual
2012	785

Output #4

Output Measure

- Number of collaborative projects with other government agencies and non-government organizations.

Year	Actual
2012	6

Output #5

Output Measure

- Number of printed educational materials distributed.

Year	Actual
2012	2000

Output #6

Output Measure

- Number of energy efficient materials and items demonstration and display.

Year	Actual
2012	1

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of workshop participants who acquired knowledge about energy conservation.
2	Number of workshop participants who adopted energy conservation practices.
3	Number of trees planted for energy conservation projects.
4	Number of community assessments completed.
5	Number of trees planted for fuel wood projects.
6	Percentage of savings in electricity bills.
7	Number of participants who purchased and installed energy efficient materials and items at the work place or home.
8	Number of participants who are now using fuel wood for food preparation/cooking.

Outcome #1

1. Outcome Measures

Number of workshop participants who acquired knowledge about energy conservation.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1015

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Americans Samoa?s limited land mass, forest areas, available qualified human resources, and high energy costs necessitate the focus on energy conservation education, urban tree planting, and fuel wood tree species propagation.

What has been done
Forestry staffs conducted 35 energy conservation education workshops and presentations to the community at large. 1450 participants attended the conservation education workshops. Forestry staff propagated 2175 trees for conservation projects and urban tree planting, and distributed 2,000 printed educational materials.

Results
Of the 1450 workshop participants, 1015 (70%)acquired knowledge about energy conservation. Through partnership with the Teritorrial Energy Office, CNR received an electric car for energy conservation education and demonstration.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #2

1. Outcome Measures

Number of workshop participants who adopted energy conservation practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	507

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Americans Samoa?s limited land mass, forest areas, available qualified human resources, and high energy cost necessitate the focus on energy conservation education, urban tree planting, and fuel wood tree species propagation.

What has been done
Forestry staffs conducted 35 conservation education workshops attended by 1450 participants. Forestry staff propagated 2175 trees for projects and urban tree planting, and distributed 2,000 printed educational materials.

Results
Of the 1015 workshop participants who acquired knowledge on conservation education, 507 (50%) adopted energy conservation practices such planting trees around the homes,offices,churches,schools, hospital, and parks.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #3

1. Outcome Measures

Number of trees planted for energy conservation projects.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1087

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The high world prices of oil impacted Americans Samoa in terms of high costs for fuel/gasoline, electricity, and water. Therefore energy conservation is important for reducing the financial obligations for gas and utilities while protecting the environment.

What has been done
Forestry staff conducted 35 conservation education workshops attended by 1450 participants. Forestry staff propagated 2175 trees for projects and urban tree planting, and distributed 2,000 printed educational materials.

Results
Of the 2175 trees propagated for forestry projects, 1087 (50%)trees were planted around the homes,offices,churches,schools,hospital, and parks for energy conservation projects.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #4

1. Outcome Measures

Number of community assessments completed.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Americans Samoa?s limited land mass, forest areas, available qualified human resources, and high energy costs necessitate the focus on energy conservation education, urban tree planting, and fuel wood tree species propagation.

What has been done
Staff did not conduct any community assessments for CNR was not able to recruit an Energy Specialist.

Results
No results for there is no Energy Specialist to lead and conduct community assessments.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #5

1. Outcome Measures

Number of trees planted for fuel wood projects.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	260

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Americans Samoa?s limited land mass, forest areas, and available qualified human resources necessitates the focus on energy conservation education, urban tree planting, and fuel wood tree species propagation.

What has been done
Forestry staff conducted 35 conservation education workshops attended by 1450 participants. Forestry staff propagated 2175 trees for projects and urban tree planting, and distributed 2,000 printed educational materials.

Results
Forestry staff planted 260 trees for fuel wood projects.
Of the 2175 trees for projects, staff planted 260 trees for fuel wood projects.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #6

1. Outcome Measures

Percentage of savings in electricity bills.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The high world prices of oil impacted Americans Samoa in terms of high costs for fuel/gasoline, electricity, and water. Therefore energy conservation is important for reducing the financial obligations for gas and utilities while protecting the environment.

What has been done
No work was done on calculating the percentage of savings in electriciity bills for we do not have an Energy Specialist on board yet.

Results
No results were reported due to lack of an Energy Specialist.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #7

1. Outcome Measures

Number of participants who purchased and installed energy efficient materials and items at the work place or home.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The high world prices of oil impacted Americans Samoa in terms of high costs for fuel/gasoline, electricity, and water. Therefore energy conservation is important for reducing the financial obligations for gas and utilities while protecting the environment.

What has been done
No work was done on identifying who purchased and installed energy efficient materials and items for we do not have an Energy Specialist on board yet.

Results
No results were reported due to lack of an Energy Specialist.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

Outcome #8

1. Outcome Measures

Number of participants who are now using fuel wood for food preparation/cooking.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	31

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Americans Samoa's limited land mass, forest areas, available qualified human resources, and energy costs necessitate the focus on energy conservation education, urban tree planting, and fuel wood tree species propagation.

What has been done
Forestry staffs conducted 35 conservation education workshops and presentations to the community at large. 1450 participants attended the conservation education workshops. Forestry staff propagated 2175 trees for projects and urban tree planting and planted 260 trees for fuel wood projects.

Results
31 participants are now using fuel wood for food preparation/cooking in place of electricity and gas appliances.
No data on energy cost savings for we do not have an Energy Specialist.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
132	Weather and Climate

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Staff Recruitment)

Brief Explanation

The impacts of the September 29, 2009 earthquake and tsunami impacted program activities. Loss of staff reduced program capacity. Population increase, limited land area, invasive species, agricultral and economic development affected programming and outcomes.
In the process of recruiting for: 4-H Specialists, Fruit Tree Specialist, Marketing Specialist, Energy Specialist and field and support staff.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

In FY-2012, the Forestry Program served 831 adults and 3,473 youth. 1,513 program participants participated in the 35 energy conservation education workshops and completed the program evaluations. Workshop participants reported that: 1). Forestry program must recruit an Energy Specialist and assistants to lead and manage the Sustainable Energy program; 2). Forestry program needs to host and organize workshops/seminars on sustainable energy; and 3). Forestry program must provide resource materials and media programming to increase community awareness of sustainable energy benefits and options. Overall, clients are satisfied with forestry staff performance given the limited funding and lack of human resources (Energy Specialist and Assistants).

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Food Safety

☑ 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
101	Appraisal of Soil Resources	10%		10%	
111	Conservation and Efficient Use of Water	10%		10%	
132	Weather and Climate	10%		10%	
212	Pathogens and Nematodes Affecting Plants	10%		10%	
216	Integrated Pest Management Systems	10%		10%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	10%		10%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	10%		10%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	15%		15%	
723	Hazards to Human Health and Safety	15%		15%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	0.0
Actual Paid Professional	1.4	0.0	1.2	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**
49194	0	46252	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
49194	0	46252	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Determine safe use of fertilizers and pesticides.
Develop plans for Integrated Pest Management.
Determine relationship between school garden and school cafeteria.
Prepare for good safety audits.
Develop public awareness activities and media.

Extension concentrated on issues related to pesticide safety, safe handling of tools and chemicals, pesticide residues on farm produce, and other associated environmental concerns.

These issues were addressed during Pesticide Safety Certification trainings, and Progressive Agriculture Safety Day workshops.

2. Brief description of the target audience

All residents of American Samoa are target audience including students, teachers, food handlers, food-vendors, homemakers, cooks, farmers, village residents, church members, children and youth program participants.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	75	375	1210	5000

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Pesticides Safety workshops conducted

Year	Actual
2012	5

Output #2

Output Measure

- Number of Farm Safety Days conducted

Year	Actual
2012	7

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of pesticides applicators trained and certified
2	Number of participants trained on Farm Safety

Outcome #1

1. Outcome Measures

Number of pesticides applicators trained and certified

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	75

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Agriculture Extension recognizes the effects of improper handling of pesticide; food produce, and in food preparation.

What has been done
In 2012, Extension staff conducted 7 Progressive Agriculture Safety programs/days attended by 1,210 participants and 5 Pesticide Safety Education program/courses attended by 75 participants.

Results
Of the 75 participants of the Pesticides Safety Course, 75 (100%) were trained and certified. Moreover, the participants now understand how to handle pesticides and food safely.

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants
216	Integrated Pest Management Systems
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

Outcome #2

1. Outcome Measures

Number of participants trained on Farm Safety

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1210

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Agriculture Extension recognizes the effect of improper handling of pesticide; food produce, and food preparation in Food Safety.

What has been done
Staff conducted 7 (seven) Farm Sefety Days at school settings with an enrollment of 1210.

Results
1210 participants received training on Farm Safety.

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants
216	Integrated Pest Management Systems
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Loss of staff limited program capacity. ASCC business office continued to impede CNR's attempts to use Hatch and Smith-Lever and other grant funds to procure supplies and equipment for this and all other planned programs. In the process of recruiting for a Food safety Specialist, and field and support staff.
Delay in recruiting staff reduced program capacity.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

At the end of each training session we conducted, we pass out a survey for feedback from participants. These survey forms are both in English and Samoan and each participant chooses which language to use. According to these surveys, approximately 98% of the participants indicated that they have learned something from the trainings, and that they will adopt what they learned.

Extension reached 1,210 participants during 7 Farm Safety workshops; and 75 participants during 5 Pesticide Safety workshops.

Key Items of Evaluation