

# 2009 American Samoa Community College Combined Research and Extension Annual Report of Accomplishments and Results

Status: Accepted

Date Accepted: 05/26/2010

## I. Report Overview

### 1. Executive Summary

"Food Security" continued as a priority during 2009. The planned programs of American Samoa's Community & Natural Resources division coalesced around this theme of Food Security. Food Security takes into account food availability, food access, food stability (included Food Safety), and food utilization.

Under the planned program of "Small Farms," for example, CNR continued to strengthen its crop diversity. This was made possible by a positive relationship with the local Department of Agriculture (DOA) and the Secretariat of the Pacific (SPC). SPC provided the tissue culture and the local DOA approved the permits.

Food safety was improved by continuing to provide training in the safe and EPA-approved application of pesticides.

Under the planned program of "Ecosystem", CNR continued its GPS mapping of piggeries and initiated a vegetation map.

Under the planned "Human Health and Well-being" planned program, CNR continues to sustain its vegetable gardening project. Educating more American Samoans to eat more vegetables remains a major challenge. The EFNEP program continued its work in the community and during 2009 provided opportunities for more exercise activities.

The third year of our cooperative effort with the local Departments of Health and Education to survey the prevalence of childhood obesity was completed. Over half of all students between the ages of 5 and 19 years were either overweight or obese, compared to about one-third of US students. About 25% of students were at or above the CDC's 97th percentile cutoff, compared to about 12% of US students.

The dengue fever epidemic continued during 2009. CNR continued its collaboration with the local Department of Health and village leadership to provide a strong public education campaign for combating dengue fever at the source, that is, by emptying containers where water has collected and mosquitoes breed. The number of dengue fever cases has decreased.

Finally, under the planned program "Family, Youth, and Communities", CNR attempted to acquire a more clear understanding of poverty in the context of American Samoa. CNR was successful in getting participants in its F4HN programs. More work is needed in this area to determine whether the quality of life has improved for these participants.

#### Total Actual Amount of professional FTEs/SYs for this State

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	3.0	0.0
Actual	10.4	0.0	9.8	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

We send a research proposal to scientists within our department, to others within the college and other agencies on-island with backgrounds that would allow them to understand and judge the merits of the proposal based on three criteria: Is the work scientifically sound? Does it address a real issue that would be helpful to the Territory? Does the department have the resources necessary to complete this work?

### **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 of selected individuals from the general public

#### **Brief explanation.**

Similar to 2008, stakeholders' participation was encouraged through: 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 and selected groups and individuals.

#### **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 2009, our institution continued to use inputs and recommendations from advisory committees, external and internal focus groups, surveys, workshops evaluations, and needs assessments to identify stakeholders' groups and individuals. Moreover, recommendations from programs' staff and administrators were also utilized.

#### **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.**

Similar to FY 2008, ASCC-CNR staff collected stakeholder inputs from more than 5,000 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, public and council meetings, 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 2009, our institution 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; acquisition of new equipments and materials and supplies; improvement of existing programs and facilities; development and implementation of new programs; and construction of new facilities to address stakeholders inputs and recommendations.

### **Brief Explanation of what you learned from your Stakeholders**

Similar to 2008, stakeholders' inputs sessions recommended the following priorities:

Need to establish additional satellite office (either central or eastern part of the island of Tutuila) that focuses on Health, Obesity, Agriculture, Forestry, Youth Development, Family and Consumer Sciences, and other programs for clients in the Eastern and Central areas of Tutuila.

Need to visit the Manu'a islands on a quarterly basis and conduct programs in all program areas.

Need to build greenhouses in high schools and at the proposed central satellite office to assist with vegetables, traditional crops, fruit trees, and forest tree species production and distribution.

Need to continue programs in the following areas:

F4HN (Families, 4-H, and Nutrition Program), Health, Nutrition, Obesity and Overweight in youth and adults, Food Safety, Physical Activity, Vegetable Gardening, Food Security, Traditional crops, Non-traditional crops such sweet potatoes and others, "Sewing for Kids" program in schools, 4-H and Youth Development, Need to strengthen village clubs, Need to address Youth at Risk Issues, Samoan Culture and Language programs for 4-H youth, Computer literacy, Math and Arts, Entrepreneurship, Job Readiness, Parenting, Drugs and Alcohol, Samoan Culture and Indigenous art, Facilities for cooking demonstrations and physical activities, Exercise programs for teachers, and 4-H youth programs in the villages. Need to encourage farmers to adopt the recommended Waste Management systems for piggeries

Need to import improved fruit tree seeds and seedlings

Need to import seeds and seedlings of improved varieties (dwarf and disease resistant stocks)

Production and distribution of fruit trees to address health problems, agroforestry, and food security

Need disease resistant vegetable varieties

Need to continue seed orders and sales

Need to involve more 4-H clubs and community residents in starting their own vegetable gardens

Continue work on taro leaf blight resistant varieties and banana leaf streak resistant varieties

Swine production (improve stock with AI)

Conservation education and sustainable agricultural practices

Flouriculture

Leptospirosis Educational outreach

Pesticides Safety

Farm Safety

Organic Agriculture

Container gardening

Aquaculture

Hydroponics

Composting

Multiplication of native forest trees for agroforestry, coastal stabilization, beautification, and soil conservation

Need to provide staff capacity building opportunities

Need to collaborate with Department of Agriculture, Department of Education, Department of Marine and Wildlife, Office of Samoan Affairs, and other government agencies in conducting joint agriculture and related projects for the community.

Need to recruit scientists and professionals to implement programs

Need to offer competitive salaries to attract scientists and specialists from offisland

Need to attract local students to pursue majors in nutrition, agriculture, natural resources, forestry and related fields

Need to provide staff professional development opportunities to upgrade skills and knowledge and to pursue undergraduate and graduate degree studies.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
888487	0	796517	0

<b>2. Totaled Actual dollars from Planned Programs Inputs</b>				
<b>Extension</b>			<b>Research</b>	
	<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
<b>Actual Formula</b>	393554	0	260224	0
<b>Actual Matching</b>	393554	0	260224	0
<b>Actual All Other</b>	0	0	0	0
<b>Total Actual Expended</b>	787108	0	520448	0

<b>3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from</b>				
<b>Carryover</b>	0	0	0	0

**V. Planned Program Table of Content**

<b>S. No.</b>	<b>PROGRAM NAME</b>
1	Small Farms
2	Ecosystem
3	Human Health and Well-being
4	Families, Youth and Communities

**V(A). Planned Program (Summary)**

**Program # 1**

**1. Name of the Planned Program**

Small Farms

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
202	Plant Genetic Resources	10%		10%	
205	Plant Management Systems	36%		40%	
211	Insects, Mites, and Other Arthropods Affecting Plants	4%		12%	
212	Pathogens and Nematodes Affecting Plants	10%		10%	
215	Biological Control of Pests Affecting Plants	5%		7%	
307	Animal Management Systems	20%		7%	
601	Economics of Agricultural Production and Farm Management	10%		7%	
604	Marketing and Distribution Practices	5%		7%	
	<b>Total</b>	100%		100%	

**V(C). Planned Program (Inputs)**

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	1.2	0.0	2.0	0.0
Actual	5.5	0.0	4.1	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
188668	0	128907	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
188668	0	128907	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

- Multiplication, evaluation and distribution of improved taro and banana varieties.
- Laboratory bioassay for foliar plant diseases.
- List of plant-parasitic nematodes on taro, their distribution and management.
- Vegetable variety evaluation demonstrations
- Budding, grafting and airlayering workshops for citrus and other fruit trees
- Pig project to reduce inbreeding of farmers' animal operations - buying/selling or trading of stock, boar services, artificial insemination (work with U.H. in re-starting this program).
- Tissue culture of traditional staples and increasing genetic diversity to improve crop security.
- Plant clinic diagnoses and recommendations
- Pest surveys
- Testing of reduce-risk pesticides
- Biological control studies of economically important pests
- Technical assistance with nuisance bee problems and assessment of apiculture
- Pesticides Safety Training
- Farm Safety Training
- Farm visitations and demonstrations

Continued quarantine surveillance trapping program from exotic fruit flies in collaboration with American Samoa Department of Agriculture. A total of 114,960 fruit flies were trapped and identified during the year. Fortunately no exotic invasive species were detected. The plant clinic made 11 diagnoses and recommendations to help community members deal appropriately with various pest problems. Advice and assistance was also provided to several residents faced with feral honey bee problems. Initial anecdotal assessments indicated that the biological control project to control Seychelles scale insects affecting breadfruits and other trees on Ta'u Island was succeeding after introductions of the predatory lady beetle *Rodalia pumila*.

**2. Brief description of the target audience**

Small and resource-limited farmers and ranchers, commercial farmers, aquaculture farmers, forestry clients, hobby farmers, general public, schools, and all 4-H youth and other community group members.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

<b>2009</b>	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Plan</b>	1000	3500	500	2000
<b>Actual</b>	950	2000	5000	7000

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

**Patent Applications Submitted**

Year: 2009  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

<b>2009</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of research projects completed

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	0	0

**Output #2**

**Output Measure**

- Number of cultivars of disease resistant taro and/or banana multiplied and released

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	10	21

**Output #3**

**Output Measure**

- Number of improved taro setts and/or banana suckers/bits disseminated

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	3000	5729

**Output #4**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	25	11

**Output #5**

**Output Measure**

- Number of vegetable variety trials completed

<b>Year</b>	<b>Target</b>	<b>Actual</b>
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2009 5 3

**Output #6**

**Output Measure**

- Number of new fruit tree varieties introduced

Year	Target	Actual
2009	2	7

**Output #7**

**Output Measure**

- Number of fruit tree propagation workshops

Year	Target	Actual
2009	3	2

**Output #8**

**Output Measure**

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

Year	Target	Actual
2009	20	14

**Output #9**

**Output Measure**

- Number of directories published

Year	Target	Actual
2009	2	0

**Output #10**

**Output Measure**

- Number of pesticide efficacy tests conducted

Year	Target	Actual
2009	3	0

**Output #11**

**Output Measure**

- Number of Pesticide Applicator's Training workshops conducted

Year	Target	Actual
2009	6	4

**Output #12**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	0	1

**Output #13**

**Output Measure**

- Number of video production

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	1	2

**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 and/or bananas
2	Number of farmers targeting problems according to recommendations on plant clinic form
3	Number of farmers growing improved vegetable cultivars
4	Number of people growing improved budded/grafted or airtlayered 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

**Outcome #1**

**1. Outcome Measures**

Number of farmers growing improved varieties of taro and/or bananas

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	100	427

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

As reported in 2008, the taro leaf blight of the 1990s and 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 (food supply).

**What has been done**

Agriculture Extension, in collaboration with Research continued to conduct more Taro Taste Tests to identify the best tasting varieties for American Samoa. These improved (disease resistant and acceptable taste) taro and banana varieties were multiplied and distributed to the farming community and the public.

**Results**

In FY 2009, the Agriculture Extension staff distributed 5729 improved taro setts and banana planting materials from more than 10 cultivars of disease resistant taros and bananas to 427 farmers.

**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
604	Marketing and Distribution Practices

**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	Quantitative Target	Actual
2009	15	11

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In 2009, experienced farmers and extension agents continued to identify common pest problems and provide recommendations. Assistance from ASCC-CNR Entomologist is provided for less common pests or pests that are new to the area. The Entomologist also contacted counterparts in Hawaii, Pacific Region, and mainland USA for confirmation and additional recommendations.

**What has been done**

Similar to 2008, ASCC-CNR staff continued to assist agricultural producers and vegetable farmers utilizing the ASCC CNR plant clinic, USDA's National Plant Diagnostics Network (NPDN), the associated Pacific Islands Distance Diagnostics and Recommendation System, and local expertise. Continued quarantine surveillance trapping program for exotic fruit flies in collaboration with the American Samoa Department of Agriculture.

**Results**

A total of 114,960 fruit flies were trapped and identified during the year. Fortunately no exotic invasive species were detected. The plant clinic made 11 diagnoses and recommendations to help community members deal appropriately with various pest problems. Advice and assistance were also provided to several residents faced with feral honey bee problems. Initial anecdotal assessments indicated that the biological control project to control Seychelles scale insects affecting breadfruits and other trees on Ta'u Island was succeeding after introductions of the predatory lady beetle *Rodolia pumila*.

**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 growing improved vegetable cultivars

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	75	127

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In 2009, farmers continued to grow improved vegetable varieties that are beneficial to the farmers and consumers 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. Moreover, Extension continued to sell vegetable seeds of good quality at break-even price to encourage people to grow more vegetables. ASCC-CNR continued to order improved seeds of vegetable varieties and sell the seeds to the farmers and interested members of the community. Extension staff completed 3 vegetable variety trials.

**Results**

Extension staff have identified improved vegetable cultivars that perform well in the tropics and are disease resistant. Similar to 2008, 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. 127 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
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	25	29

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As reported in 2008, there is a great need to increase consumption of fruits to address the many non-communicable diseases such as 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 trees available to families to plant in the back yard or land is critical in addressing the above-mentioned challenges.

**What has been done**

Agriculture Extension staff continued to multiply and distribute the recommended varieties to the farmers, homemakers, and interested residents. Extension staff received the ordered materials for a new greenhouse and are putting together the greenhouse 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. Agriculture Extension continued to work with EFNEP and 4-H to conduct the "Fruit of Life" program to increase the consumption of vegetables and fruits in order to address the poor nutrition problem and lifestyle diseases.

**Results**

Extension program now received the ordered greenhouse materials and are putting together the new greenhouse 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. Agriculture Extension continued to work with EFNEP and 4-H to conduct the "Fruit of Life" program to increase the consumption of vegetables and fruits in order to address the poor nutrition problem and lifestyle diseases. Introduced 7 new fruit tree varieties and conducted 2 fruit tree propagation workshops. 29 farmers propagated improved budded/grafted or airlayered 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

**Outcome #5****1. Outcome Measures**

Number of pig farmers upgrading their stock

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	5	9

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Similar to 2008, pig farmers are concerned because of inbreeding of their stock which has manifest itself in lower production due to increased mortality and overall slower growth. 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 Extension continued to collaborate with ASEPA, DOC, DOA, NRCS, and other agencies in developing waste management systems demonstrations and educational programs. Completed the ASEPA funded CNR piggery to demonstrate the recommended waste management systems.

**Results**

ASEPA funded the renovation of the CNR piggery to demonstrate the three recommended waste management systems. The renovated piggery now serves as a demonstration for the pig farming community regarding their options should they want to keep their piggeries operational. Once these piggeries gain compliance of the local laws, the intent is to work with the farmers to upgrade their stock 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, piggery council members, and other government agencies with piggery compliance workshops(outreach)in Tutuila and Manu'a islands. Nine (9) 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	Quantitative Target	Actual
2009	2	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

As reported in 2008, American Samoa's environment, cropping systems, and pest problems are unique in many respects. Pest control solutions that work elsewhere may be ineffective or inappropriate in the territory. Agriculture extension agents must help provide proven pest control recommendations that are environmentally sound and safe for applicators.

**What has been done**

Continued quarantine surveillance trapping program for exotic fruit flies in collaboration with American Samoa Department of Agriculture. A total of 114,960 fruit flies were trapped and identified during the year. Fortunately no exotic invasive species were detected.

**Results**

The plant clinic made 11 diagnoses and recommendations to help community members deal appropriately with various pest problems. Advice and assistance was also provided to several residents faced with feral honey bee problems. Initial anecdotal assessments indicated that the biological control project to control Seychelles scale insects affecting breadfruits and other trees on Ta'u Island was succeeding after introductions of the predatory lady beetle *Rodolia pumila*. No "reduced risk pesticide" was recommended for use.

**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 Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	90	62

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Similar to 2008, impacts of unsafe and illegal use of pesticides to humans and environment are documented. Also people who imported and use non-EPA registered pesticides were cited by ASEPA.

**What has been done**

During this year, ASCC-CNR Pesticide Instructor conducted 4 Pesticide Applicator Safety workshops that enrolled 62 participants. Another Extension staff member was on hand to observe with the hope that he takes over the training in the absence of the current Pesticide Instructor. The EPA Pesticide Officer was also present to certify the participants. The Farm Safety Agent conducted 28 radio talk shows on safety and environmental topics. Two (2) Progressive Agriculture Safety Days in selected Elementary Schools were conducted this year in addition to one (1) Community Safety workshop conducted on-campus. Extension Agents reached 421 residents through the Farm Safety program.

**Results**

In FY 2009, 62 participants were trained and certified. Similar to 2008, more people now 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. Importation of illegal(non-EPA registered) pesticides cases are reduced.

**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

## **V(H). Planned Program (External Factors)**

### **External factors which affected outcomes**

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

### **Brief Explanation**

The impacts of the September 29, 2009 earthquake and tsunami delayed and/or cancelled program activities.

Loss of staff reduced program capacity.

Entomology technician promoted to another position in the department.

In the process of recruiting for: Plant Pathologist, Forestry Researcher, Forestry Program Manager, Animal Specialist, Fruit Tree Specialist, Marketing Specialist, and field and support staff.

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

### **1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

### **Evaluation Results**

### **Key Items of Evaluation**

**V(A). Planned Program (Summary)****Program # 2****1. Name of the Planned Program**

Ecosystem

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

<b>KA Code</b>	<b>Knowledge Area</b>	<b>%1862 Extension</b>	<b>%1890 Extension</b>	<b>%1862 Research</b>	<b>%1890 Research</b>
112	Watershed Protection and Management	80%		80%	
133	Pollution Prevention and Mitigation	20%		20%	
	<b>Total</b>	100%		100%	

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

<b>Year: 2009</b>	<b>Extension</b>		<b>Research</b>	
	<b>1862</b>	<b>1890</b>	<b>1862</b>	<b>1890</b>
Plan	0.6	0.0	0.0	0.0
Actual	1.0	0.0	2.4	0.0

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

<b>Extension</b>		<b>Research</b>	
<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
52556	0	49698	0
<b>1862 Matching</b>	<b>1890 Matching</b>	<b>1862 Matching</b>	<b>1890 Matching</b>
52556	0	49698	0
<b>1862 All Other</b>	<b>1890 All Other</b>	<b>1862 All Other</b>	<b>1890 All Other</b>
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Collect stream water samples for determining coliform and E. coli levels; identify point sources of sewage pollution and gauge extent of non-point sources attributed to feral pigs in headwaters; continue to share our expertise with other agencies and the public.

**2. Brief description of the target audience**

Pig farmers, government agencies, volunteer groups, schoolchildren.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	50	100	50	2000
<b>Actual</b>	24	60	186	300

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

**Patent Applications Submitted**

Year: 2009

Plan: 0

Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2009	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Percent of streams sampled  
Not reporting on this Output for this Annual Report

**Output #2**

**Output Measure**

- Percent of schools visited

Year	Target	Actual
2009	20	8

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Number of streams with reduced loads of coliform bacteria.
2	Number of streams with high biotic integrity.

**Outcome #1**

**1. Outcome Measures**

Number of streams with reduced loads of coliform bacteria.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	5	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

**Outcome #2**

**1. Outcome Measures**

Number of streams with high biotic integrity.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	5	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Competing Public priorities

**Brief Explanation**

On the morning of September 29, 2009, American Samoa experiences a magnitude 8.0 earthquake, followed less than 15 minutes later by a devastating tsunami that claimed 32 lives and several \$million in property damage. One of the two power-generating stations was destroyed. As of April 1, 2010, many residents are still living in FEMA-provided tents.

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

1. Evaluation Studies Planned

- Time series (multiple points before and after program)

**Evaluation Results**

Following the removal of illegal piggeries from stream banks, water quality (as measured by coliform bacteria counts) greatly improved. This action was spearheaded by the local EPA with help from CES and NRCS.

**Key Items of Evaluation**

Illegal piggeries contributed to high coliform bacteria counts in stream water.

**V(A). Planned Program (Summary)**

**Program # 3**

**1. Name of the Planned Program**

Human Health and Well-being

**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%		10%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	20%		30%	
721	Insects and Other Pests Affecting Humans	10%		20%	
722	Zoonotic Diseases and Parasites Affecting Humans	10%		30%	
724	Healthy Lifestyle	20%		10%	
<b>Total</b>		100%		100%	

**V(C). Planned Program (Inputs)**

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	0.0	0.7	0.0
Actual	1.9	0.0	2.4	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
86483	0	49698	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
86483	0	49698	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**

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.  
 Leptospirosis brochures will be developed cooperatively with ASEPA, ASPH, ASDOA and USDA NRCS.  
 Research biology and control of disease-carrying mosquitoes.  
 Communicate results via research reports, brochures, seminars, TV, and individual contacts with other agencies  
 Develop designs to construct new facility for health programs.

Provided research-based information on dengue vector control to local department of health, environmental protection agency, other agencies, and the public through one-on-one contacts, interagency meetings, television appearances, TV public service announcements, informational brochures, and presentations to students and community groups. Published research findings in refereed journals.

**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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	1500	7000	1500	8000
<b>Actual</b>	2000	10000	3000	10000

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

**Patent Applications Submitted**

Year: 2009  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2009	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	2	2

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of research projects completed

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	0	2

**Output #2**

**Output Measure**

- Number of Nutrition educational workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	50	772

**Output #3**

**Output Measure**

- Number of vegetable gardening workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	10	68

**Output #4**

**Output Measure**

- Number of vegetable gardens established

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	50	176

**Output #5**

**Output Measure**

- Number of different recipes using local produce given out

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	20	80

**Output #6**

**Output Measure**

- Number of food safety workshops conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	30	772

**Output #7**

**Output Measure**

- Number of publications/brochures/posters/calendars

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	5	3

**Output #8**

**Output Measure**

- Number of exercise and physical activity programs completed

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	40	540

**Output #9**

**Output Measure**

- Number of publications/brochures/posters/calendars distributed

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	{No Data Entered}	8706

**Output #10**

**Output Measure**

- Number video of video productions.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	{No Data Entered}	1

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O. No.</b>	<b>OUTCOME NAME</b>
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 people continuing to grow vegetables as a result of the vegetable gardening project
4	Number of program participants that prepared and consumed more economical and nutritious meals.
5	Number of program clients that adopted balance diets utilizing local produce and healthy foods.
6	Number of program clients who adopted safer food handling, storage, and preparatin practices
7	Number of program clients that increased participation in physical activities and exercises
8	Number of program clients that lost weight and improved self-esteem
9	Number of program clients that lived healthier lifestyles
10	Number of people increasing knowledge of leptospirosis
11	Number of villages using ASCC CNR generated information to control mosquitoes.

**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 Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	1000	5807

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

In 2009, 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**

Similar to 2008, F4HN professional and paraprofessional staff continued to provide nutrition education programs 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. Also conducted a Bi-Weekly Nutrition Radio "Talk-show" Program with nutrition quizzes & Local healthy recipes on nutrition and food safety issues and topics.

**Results**

5807 program participants acquired knowledge and developed skills in nutrition, vegetable gardening, nutritious meal preparation, food safety and health and physical activities. Conducted more than 12 Bi-Weekly Nutrition Radio "Talk-show" programs.

**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
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	300	6027

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

In 2009, the diets in American Samoa continued 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**

Similar to 2008, the F4HN program continued to collaborate with Agriculture Extension staff in the vegetable gardening project workshops in the community and in schools. In a multidisciplinary effort, Agriculture Extension encouraged homemakers and community residents to grow more vegetables in their backyard in an effort to address the obesity issue and related problems. "Putting Food on the Table" brochures with step by step instructions on how to grow your own vegetables in addition to cooking recipes using these vegetables continued to be developed and distributed to clients. Agriculture extension staff continued to encourage homemakers to grow their own tomatoes, bell peppers, beans, cucumbers and distributed spices (free of charge) such as basil and oregano seedlings. Continued to place orders of seeds from reliable sources and sold the seeds at break-even prices to encourage people to grow more vegetables. Continued with farm visitations to assist not only start-up and subsistence farmers, but also hobby and commercial vegetable growers.

**Results**

Similar to 2008, program participants's supply of fresh vegetables from their own gardens and consumption of vegetables increased. Participants attended 68 vegetable gardens workshops and established 176 vegetable gardens as a result of the program. 6027 continued to consume more vegetables as result of the vegetable gardening project. 442 participants continued to grow vegetables. 4195 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 #3**

**1. Outcome Measures**

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

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	100	442

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The diets in American Samoa continued 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 life style 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 2009, the F4HN program continued to collaborate with Agriculture Extension staff in the vegetable gardening project workshops in the community and in schools. In a multidisciplinary effort, Agriculture Extension encouraged homemakers and community residents to grow more vegetables in their backyard in an effort to address the obesity issue and related problems. "Putting Food on the Table" brochures with step by step instructions on how to grow your own vegetables in addition to cooking recipes using these vegetables continued to be distributed to clients. Additionally, agriculture extension staff continued to encourage homemakers to grow their own tomatoes, bell peppers, beans, cucumbers and spices such as basil and oregano seedlings. Placed orders of seeds from reliable sources and sold the seeds at break-even prices to encourage people to grow more vegetables. Conducted farm visitations to assist not only start-up and subsistence farmers, but also hobby and commercial vegetable growers.

**Results**

Similar to 2008, participants acquired knowledge and developed skills in growing vegetables. Moreover, participants enjoyed the nutritional, health, and economic benefits of growing their own vegetables. As a result, 442 people continue to grow and consume more vegetables. Hence, participants lived healthier life styles.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

724 Healthy Lifestyle

**Outcome #4****1. Outcome Measures**

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

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	1000	4195

**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**

During FY 2009, F4HN staff conducted 772 Nutrition educational workshops. Moreover, the F4HN staff continued to distribute nutrition educational handouts, recipes, brochures, posters, and other nutrition materials to traditional and non-traditional clients. "Putting Food on the Table" brochures with step by step instructions on how to grow your own vegetables in addition to cooking recipes using these vegetables continued to be developed and distributed to clients. Moreover, the F4HN staff continued to distribute nutrition educational handouts such as Pacific Food Guide Pyramid, recipes, brochures, posters, and other nutrition materials to Food Stamp recipients, students, teachers, homemakers, and other clients. Community Awareness programs on the negative impacts of obesity, overweight, poor nutrition, lack of physical activity continued to be implemented. In a multidisciplinary effort, agriculture extension staff continued to encourage homemakers and community residents to grow more vegetables in their backyard in an effort to address obesity and related health problems.

**Results**

Similar to 2008, program participants continued to acquire knowledge and develop skills in purchasing and preparing safe, economical, and nutritious meals. Further, participants were able to better manage their food resources especially food stamps, WIC vouchers, and others. With fresh vegetables available from their own gardens in the back yard, the consumption of vegetables increased. With a better diet, diet related diseases are reduced. Similar to 2008, participants have shown improvements in diet, knowledge and food related behavior. Moreover, participants learned how to use local fruits and vegetables in preparing economical and nutritious recipes. Participants attended 68 vegetable gardens workshops and established 176 vegetable gardens as a result of the program. 6027 continued to consume more vegetables as result of the vegetable gardening project. 442 participants continued to grow vegetables. 4195 participants prepared and consumed more economical and nutritious meals.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
724	Healthy Lifestyle

**Outcome #5**

**1. Outcome Measures**

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

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2009	1000	5335

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

As reported in 2008, 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 2009, F4HN staff conducted 772 workshops, presentations, and demonstrations in the villages, schools, churches, government agencies, and community groups on developing and testing recipes using locally grown produce. "PuttingFood on the Table" brochures with step by step instructions on how to grow your own vegetables in addition to cooking recipes using these vegetables continued to be developed and distributed to clients.

**Results**

80 different recipes using local produce were given out to the participants. 5335 participants adopted recipes and diets using local produce and healthy foods. More vegetables were consumed and more participants' health improved. Participants have shown improvements in diet, knowledge and food related behavior. Moreover, participants learned how to use local fruits and vegetables in preparing economical and nutritious recipes.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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 who adopted safer food handling, storage, and preparatin practices

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	1000	5157

**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 the health of people with limited resources has long been recognized in American Samoa.

**What has been done**

In 2009, F4HN staff conducted 772 food safety workshops and demonstrations about safe food handling, storage and preparation to youth, childcare providers, WIC participants, Food Stamp clients, homemakers, and other clients. Demonstrations on the correct way to wash hands to prevent food borne illness continued to be conducted to school age children and adults.

**Results**

5157 program participants adopted safer food handling, storage, and preparation practices. Teachers and parents reported that more students are washing their hands before preparing family meals and consumption of food.

**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 #7**

**1. Outcome Measures**

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

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	1000	3447

**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**

During FY 2009, F4HN staff conducted 540 exercise and physical activity programs in schools, villages, community groups, government agencies, churches, and other community settings. Community awareness programs on the negative impacts of obesity, overweight, poor nutrition, lack of physical activity, and food safety issues continued to be implemented. Moreover, sports, aerobics, and other exercise programs were implemented in schools, work place, and village settings as alternative physical activity programs.

**Results**

3447 program clients increased their participation in physical activity and exercise programs; hence, reduced the incident of high blood pressure, diabetic, heart disease, and related illnesses.

**4. Associated Knowledge Areas**

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

**Outcome #8**

**1. Outcome Measures**

Number of program clients that lost weight and improved self-esteem

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	400	216

**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 2009, F4HN staff conducted 540 exercise and physical activity programs in schools, villages, community groups, government agencies, churches, and other community settings. Community awareness programs on the negative impacts of obesity, overweight, poor nutrition, lack of physical activity, and food safety issues continued to be implemented. Moreover, sports, aerobics, and other exercise programs continued to be implemented in schools, work place, and village settings as alternative physical activity programs.

**Results**

216 program clients lost weight and improved self-esteem.

**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 #9**

**1. Outcome Measures**

Number of program clients that lived healthier lifestyles

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	1000	4205

**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**

Similar to 2008, F4HN staff conducted 540 exercise and physical activity programs in schools, villages, community groups, government agencies, churches, and other community settings. Community awareness programs on the negative impacts of obesity, overweight, poor nutrition, lack of physical activity, and food safety issues continued to be implemented. Moreover, sports, aerobics, and other exercise programs were implemented in schools, work place, and village settings as alternative physical activity programs.

**Results**

In 2009, 4205 program participants lived healthier lifestyles as evident by participants' increased in physical activities, weight loss and improved self-esteem, adoption of food safety practices, and consumption of balanced and nutritious meals. Also, participants acquired knowledge and developed skills in nutritious and balanced meals preparation, vegetable gardening, 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 #10**

**1. Outcome Measures**

Number of people increasing knowledge of leptospirosis

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	20000	68

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As reported in 2008, Leptospirosis continued to be a potentially deadly bacterial disease. Pigs, rodents, and dogs are its main vectors. Urine from these animals is channeled into streams, where the bacteria can infect humans--children in particular--who use the streams for recreation.

**What has been done**

Similar to 2008, CNR continued to work with ASEPA, DOC, DOA, and other agencies in conducting educational outreach activities and keeping piggeries away from riparian areas. Moreover, ASEPA funded the renovation of the ASCC-CNR piggery to establish a demonstration site for the 3 options available to piggery owners to bring their operations into compliance with the local laws. With the 3 demonstration systems already in place, it is hoped that many farmers will adapt these systems as approved by the local EPA. The intent is to ensure that all piggeries in the territory follow proper waste management practices. ASCC CNR Agriculture Extension staff joined forces with the local EPA staff in outreach programs to protect the health and welfare of the residents and the environment of American Samoa.

**Results**

Similar to 2008, public awareness of this disease has made the removal of out-of-compliance piggeries more acceptable. 68 people indicated an increase in knowledge of Leptospirosis by attending joint-outreach programs by ASCC-CNR, ASEPA, and other agencies and non-government groups. Several farmers adopted one of the 3 recommended piggery waste management systems.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
721	Insects and Other Pests Affecting Humans
722	Zoonotic Diseases and Parasites Affecting Humans

**Outcome #11****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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2009	{No Data Entered}	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

ASCC CNR Entomologist and staff continued to participate in collaborative research on disease-carrying mosquitoes to strengthen the scientific basis for vector control efforts

against endemic filariasis and potential exotic threats, including dengue, Ross River virus, West Nile virus, and chikungunya virus.

**What has been done**

Provided research-based information on dengue vector control to local department of health, environmental protection agency, other agencies, and the public through one-on-one contacts, interagency meetings, television appearances, TV public service announcements, informational brochures, and presentations to students and community groups.

**Results**

Published research findings in refereed journals.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
721	Insects and Other Pests Affecting Humans

**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
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Staff Recruitment)

**Brief Explanation**

The impacts of the September 29, 2009 earthquake and tsunami delayed and/or cancelled program activities.

Loss of staff reduced program capacity.

Entomology technician promoted to another position in the department.

Increase in dengue caused increase in interest in vector control. An outbreak of dengue caused increased public interest in dengue prevention.

In the process of recruiting for: Nutritionist, Plant Pathologist, Forestry Researcher, Forestry Program Manager, Animal Specialist, Fruit Tree Specialist, and Marketing Specialist.

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

**1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

## **Evaluation Results**

### **Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 4**

**1. Name of the Planned Program**

Families, Youth and Communities

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

**V(C). Planned Program (Inputs)**

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	1.2	0.0	0.3	0.0
Actual	1.9	0.0	1.0	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
65847	0	31921	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
65847	0	31921	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, seminars, TV, and individual contacts with other agencies.

**2. Brief description of the target audience**

Similar to 2008, 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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	500	1000	600	1500
Actual	2500	10000	3500	10000

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

**Patent Applications Submitted**

Year: 2009

Plan: 0

Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of entrepreneurial and job readiness workshops

Year	Target	Actual
2009	20	147

**Output #2****Output Measure**

- Number of apprenticeship and career shadowing programs

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	5	162

**Output #3****Output Measure**

- Number of sewing workshops and demonstrations

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	30	130

**Output #4****Output Measure**

- Number of arts and crafts workshops and demonstrations

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	20	122

**Output #5****Output Measure**

- Number of vegetable gardening and marketing projects

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	10	96

**Output #6****Output Measure**

- Number of Samoan cultural workshops and demonstrations

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	20	144

**Output #7****Output Measure**

- Number of vegetable gardens established

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	40	127

**Output #8****Output Measure**

- Number of parenting and character counts workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	20	181

**Output #9**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	3	23

**Output #10**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	20	44

**Output #11**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	10	67

**Output #12**

**Output Measure**

- Number of publications/brochures/posters/calendars

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	5	3

**Output #13**

**Output Measure**

- Number of videos

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2009	1	1

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O. No.</b>	<b>OUTCOME NAME</b>
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
8	Number of program clients that became self-reliant, productive, and contributing members of the society
9	Number of program clients that 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
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	400	1150

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As reported in 2008, 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 2009, F4HN staff conducted 147 entrepreneurial and job readiness workshops, 130 sewing workshops/demonstrations, 122 arts and crafts workshops/demonstrations, 181 parenting and character counts workshops, 44 youth at risk issues workshops, and 144 Samoan cultural workshops/demonstrations. Moreover, F4HN staff hosted 23 4-H fairs, camps, and summer programs; and completed 67 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 96 vegetable gardening and marketing projects. Established 127 vegetable gardens.

**Results**

1150 program participants acquired knowledge and developed skills in resource management, parenting, 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
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	100	395

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As reported in 2008, 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 2009, F4HN staff conducted 147 entrepreneurial and job readiness workshops, 130 sewing workshops/demonstrations, and 122 arts and crafts workshops/demonstrations. F4HN staff also hosted 23 4-H fairs, camps, and summer programs; and completed 67 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 96 vegetable gardening and marketing projects. Established 127 vegetable gardens.

**Results**

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 127 vegetable gardens as a family revenue generating enterprise. 255 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
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	5	23

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As reported in 2008, 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 2009, F4HN staff conducted 147 entrepreneurial and job readiness workshops, 130 sewing workshops/demonstrations, and 122 arts and crafts workshops/demonstrations. F4HN staff also hosted 23 4-H fairs, camps, and summer programs; and completed 67 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 96 vegetable gardening and marketing projects. Established 127 vegetable gardens.

**Results**

In 2009, 23 participants started home-based and small businesses such as sewing shops, arts and crafts shops, cookie shops, vegetables and fruits roadside market stalls. 255 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
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	3	54

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

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 2009, F4HN staff conducted 147 entrepreneurial and job readiness workshops, 130 sewing workshops/demonstrations, and 122 arts and crafts workshops/demonstrations, and 162 career shadowing and apprenticeship programs. F4HN staff also hosted 23 4-H fairs, camps, and summer programs; and completed 67 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 96 vegetable gardening and marketing projects. Established 127 vegetable gardens.

**Results**

54 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 127 vegetable gardens as a family revenue generating enterprise. 255 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
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	100	255

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

As reported in 2008, 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 2009, F4HN staff conducted 147 entrepreneurial and job readiness workshops. Agriculture extension staff also conducted 96 vegetable gardening and marketing projects. Established 127 vegetable gardens.

**Results**

255 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 127 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
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	100	346

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

As reported in 2008, 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 2009, F4HN staff conducted 181 parenting and character counts workshops and 44 youth at risk issues workshops. F4HN staff also completed 67 public awareness programs (radio, TV, newspapers) on parenting, youth character, youth at risk issues, and other topics.

**Results**

346 program participants improved parent and children relationships. Similar to 2008, 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

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	300	861

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As reported in 2008, 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'aSamoa 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 Scienc programs need to be continued.

**What has been done**

In 2009, F4HN staff conducted 144 Samoan cultural workshops and demonstrations, 181 parenting and character counts workshops, and 44 youth at risk issues workshops. F4HN staff also completed 67 public awareness programs (radio, TV, newspapers) on Samoan culture and language, parenting, youth character, youth at risk issues, and other topics.

**Results**

861 program clients developed a sense of pride and appreciation of the Samoan culture. Similar to 2008, 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 that became self-reliant, productive, and contributing members of the society

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	200	521

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Similar to 2008, 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 2009, F4HN staff conducted 147 entrepreneurial and job readiness workshops, 130 sewing workshops, 122 arts and crafts workshops, 181 parenting and character counts workshops, 44 youth at risk issues workshops, 144 Samoan cultural workshops. Moreover, F4HN staff hosted 23 4-H fairs, camps, and summer programs; and completed 67 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 96 vegetable gardening and marketing projects. Established 127 vegetable gardens.

**Results**

521 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 that made successful transition from youth at risk behaviors to clean, healthy, and esteemed lifestyles

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2009	50	593

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As reported in 2008, the American Samoa 2001 Youth Risk Behavior Survey of 914 high school students in six schools reported: 21% of the students carried a weapon, 37.3% smoked cigarettes, 8.7% drank alcohol, 21.7% used marijuana, 23.4% had sexual intercourse, and 20.9% attempted suicide. Juvenile crime is increasing. High school dropout in 2003 was 3%. 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 2009, F4HN staff conducted 147 entrepreneurial and job readiness workshops, 130 sewing workshops, 122 arts and crafts workshops, 181 parenting and character counts workshops, 44 youth at risk issues workshops, 144 Samoan cultural workshops. Moreover, F4HN staff hosted 23 4-H fairs, camps, and summer programs; and completed 67 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 96 vegetable gardening and marketing projects.

**Results**

In 2009, 593 program participants made successful transition from youth at risk behaviors to clean, healthy, and esteemed lifestyles. Similar to 2008: 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
- Public Policy changes
- Government Regulations
- Competing Public priorities
- 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.

Entomology technician promoted to another position in the department.

In the process of recruiting for: Plant Pathologist, Forestry Researcher, Forestry Program Manager, Animal Specialist, Fruit Tree Specialist, Marketing 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 and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)

### **Evaluation Results**

### **Key Items of Evaluation**