

2008 American Samoa Community College Combined Research and Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

"Food Security" emerged as a priority during 2008. The planned programs of American Samoa's Community & Natural Resources division began to coalesce 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 re-newed and 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. This provides the necessary baseline data need to monitor its efforts at increasing the percent of piggeries to be removed from riparian areas, and attempting to increase the percent of piggeries with adequate water disposal systems. A joint piggery waste management project with American Samoa local Environmental Protection Agency is scheduled for opening in May 2009.

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 2008 provided opportunities for more exercise activities.

One of the greatest challenges during 2008 was dengue fever epidemic. By the end the year 2008, there were more than 680 reported cases of dengue fever and one death. CNR collaborated 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:2008	Extension		Research	
	1862	1890	1862	1890
Plan	17.5	0.0	2.8	0.0
Actual	10.4	0.0	9.3	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

Brief Explanation

Similar to 2007, 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 (Workshops evaluations)

Brief Explanation

In 2008, 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

In FY 2008, ASCC-CNR staff collected stakeholder inputs from more than 5,800 clients (2,162 adults & 3,639 youth) 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 was 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 2008, our instituion 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; develpment 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

In 2008, stakeholders' inputs sessions recommended the following priorities:

Need to establish additional satellite office (central site on 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 continue work on 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

Production and distribution of Acai palms to address health problems

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

Pesticides Safety

Farm Safety

Risk Management

Organic Agriculture

Container gardening

Aquaculture

Composting

Need to provide staff capacity building opportunities

Need to collaborate with Department of Agriculture, Department of Education, 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 agriculture 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
830829	0	753287	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	342251	0	236916	0
Actual Matching	342251	0	236916	0
Actual All Other	0	0	0	0
Total Actual Expended	684502	0	473832	0

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

V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	Small Farms
2	Ecosystem
3	Human Health and Well-being
4	Families, Youth and Communities

Program #1

V(A). Planned Program (Summary)

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	40%		40%	
211	Insects, Mites, and Other Arthropods Affecting Plants	12%		12%	
212	Pathogens and Nematodes Affecting Plants	10%		10%	
215	Biological Control of Pests Affecting Plants	7%		7%	
307	Animal Management Systems	7%		7%	
601	Economics of Agricultural Production and Farm Management	7%		7%	
604	Marketing and Distribution Practices	7%		7%	
Total		100%		100%	

V(C). Planned Program (Inputs)

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	5.9	0.0	2.4	0.0
Actual	5.6	0.0	4.0	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
162027	0	115376	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
162027	0	115376	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.
 Vegetable variety trials
 Budding, grafting and airdlayering 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.
 Pig project to demonstrate the 3 recommended waste management systems.
 Tissue culture of traditional staples and increasing genetic diversity to improve crop security.
 Pesticides Applicator Safety Training
 Farm Safety
 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

2. Brief description of the target audience

Subsistence (Small and resource-limited farmers and ranchers) and 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

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	2500	5000	500	2000
2008	900	3000	2600	5000

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

Patent Applications Submitted

Year	Target
Plan:	0
2008 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	0	
2008	0	0	0

V(F). State Defined Outputs

Output Target

Output #1**Output Measure**

- Number of research projects completed

Year	Target	Actual
2008	1	1

Output #2**Output Measure**

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

Year	Target	Actual
2008	10	8

Output #3**Output Measure**

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

Year	Target	Actual
2008	2000	8131

Output #4**Output Measure**

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

Year	Target	Actual
2008	30	19

Output #5**Output Measure**

- Number of vegetable variety trials completed

Year	Target	Actual
2008	5	24

Output #6**Output Measure**

- Number of new fruit tree varieties introduced

Year	Target	Actual
2008	10	10

Output #7**Output Measure**

- Number of fruit tree propagation workshops

Year	Target	Actual
2008	5	7

Output #8**Output Measure**

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

Year	Target	Actual
2008	150	26

Output #9**Output Measure**

- Number of directories published

Year	Target	Actual
2008	4	0

Output #10**Output Measure**

- Number of pesticide efficacy tests conducted

Year	Target	Actual
2008	4	1

Output #11**Output Measure**

- Number of Pesticide Applicator's Training workshops conducted

Year	Target	Actual
2008	6	4

Output #12

Output Measure

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

Year	Target	Actual
2008	1	1

Output #13

Output Measure

- Number of video production

Year	Target	Actual
2008	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 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

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
2008	300	288

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

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 importation of improved (disease resistant) varieties, taro and banana producers now have greater diversity of disease-resistant varieties to choose from.

What has been done

Agriculture Extension, in collaboration with Research, conducted a series of 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

The Extension staff distributed 8,131 improved taro sets and banana planting materials from the 8 cultivars of disease resistant taros and bananas to 288 farmers. More than 100 farmers entered taro and banana competitions during the 2008 Food and Farm Fair that was co-hosted by ASCC-CNR (Land Grant Program), local Department of Agriculture, and the Secretariat of the Pacific Community (SPC) headquartered in Fiji.

4. Associated Knowledge Areas

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

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
2008	20	24

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In 2008, 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 additional recommendations.

What has been done

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.

Results

The plant clinic made 19 diagnoses and recommendations for pest and disease problems submitted by residents and extension agents. Technical assistance was provided to several residents to help solve termite and feral honey bee problems in buildings.

4. Associated Knowledge Areas

KA Code	Knowledge Area
215	Biological Control of Pests Affecting Plants
211	Insects, Mites, and Other Arthropods Affecting Plants
205	Plant Management Systems
212	Pathogens and Nematodes 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
2008	50	204

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Growing improved vegetable varieties benefit the farmers 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 members and community.

What has been done

Agriculture Extension staff provided small quantities of different vegetable seeds/seedlings to homemakers interested in growing their own vegetables. Also, staff conducted visitations to provide follow up assistance both to back-yard farmers and commercial vegetable growers. Moreover, vegetable seeds of good quality were being sold 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 24 vegetable variety trials.

Results

Extension staff have 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.

4. Associated Knowledge Areas

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

Outcome #4

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	200	15

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There is a great need to increase consumption of fruits to address the many non-communicable diseases such diabetes, hypertension, heart disease, obesity, and others. Parents are concerned 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 revived the fruit tree orchard by introducing new fruit tree varieties. The recommended varieties will be multiplied and distributed to the farmers and interested homemakers. Extension staff also ordered a 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 to increase the availability of diverse varieties of fruits for the people of American Samoa. Agriculture Extension planned to team up with EFNEP and 4-H to conduct a 'Fruit of Life' program to increase the consumption of vegetables and fruits in order to address the poor nutrition problem and lifestyle diseases.

Results

Introduced 10 new fruit tree varieties. Conducted 7 fruit tree propagation workshops. Placed order for new greenhouse for fruit trees multiplication and propagation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

604	Marketing and Distribution Practices
601	Economics of Agricultural Production and Farm Management
202	Plant Genetic Resources

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	Quantitative Target	Actual
2008	75	22

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Similar to 2007, 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 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

Extension collaborated with ASEPA to fund the renovation of the CNR piggery to demonstrate the three recommended waste management systems. The portable pigpen demonstration unit is now in place. The CNR pigs are now placed under shelters of some CNR pig-farmers/clients while the piggery is under renovation. The renovated piggery will serve as a demonstration site for the pig farming community regarding their options should they want to keep their piggeries operational. Once these piggeries gain compliance with the local laws, the intent is to work with the farmers to upgrade their stock to reduce inbreeding by making available boar service and selling to them some of our own improved stock.

Results

The dedication ceremony for the renovated piggery is scheduled for May 8, 2009. Extension hired an Animal Extension Agent to be responsible for the renovated piggery demonstration projects and related programs. 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.

4. Associated Knowledge Areas

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

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
2008	2	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

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. Farmers requires, and agriculture extension agents must help provide, proven pest control recommendations that are environmentally sound.

What has been done

Completed one trial of reduced risk insecticides for control of melon aphid on cucumbers. Completed survey to assess the status of outbreak of Seychelles scale insect on breadfruits and other trees on Ta'u Island. Introduced a biological control agent, *Rodolia pumila*, to Ta'u Island to help control the scales. Continued the exotic fruit fly quarantine surveillance program, trapping and identifying 73,140 fruit flies. Fortunately no exotic flies were found. Provided assistance to territorial department of agriculture quarantine division before, during, and after the Pacific Arts Festival, helping with inspections, identifications, and supplementary fruit fly surveillance trapping. Pest survey found 5 pest scale insect and mealybug species previously undocumented from the territory.

Results

ASCC CNR Entomologist conducted one pesticide efficacy test.
 Introduced one (1) biological control species to control local pests.
 Conducted 19 plant clinic diagnoses and recommendations to local (24) farmers.

Pest survey found 5 pest scale insect and mealybug species previously undocumented from the territory.

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
2008	100	61

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

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

The ASCC-CNR Pesticide Instructor and Assistant conducted 4 pesticides applicator safety workshops. The local EPA Pesticide Officer also attended these workshops to certify the participants. The Farm Safety Agent conducted 3 Progressive Agriculture Safety days this year for 306 students and 27 teachers.

Results

During FY 2008, 61 participants were trained and certified. 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
211	Insects, Mites, and Other Arthropods Affecting Plants
205	Plant Management Systems
215	Biological Control of Pests Affecting Plants
212	Pathogens and Nematodes Affecting Plants
601	Economics of Agricultural Production and Farm Management
307	Animal Management Systems

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 retirement and resignation)

Brief Explanation

Major effort to assist with biosecurity activities before, during, and after Pacific Arts Festival forces postponement or cancelation of some other activities.

Plant pathologist and Forester resigned.

Fruits extension agent resigned, position remains vacant.

Marketing extension agent resigned, position remains vacant.

New animal extension specialist position has not yet been filled.

Forestry Program Manager retired.

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

1. Evaluation Studies Planned

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Evaluation Results

Key Items of Evaluation

Program #2

V(A). Planned Program (Summary)

1. Name of the Planned Program

Ecosystem

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	50%		10%	
133	Pollution Prevention and Mitigation	50%		10%	
135	Aquatic and Terrestrial Wildlife	0%		80%	
Total		100%		100%	

V(C). Planned Program (Inputs)

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	0.6	0.0	0.0	0.0
Actual	0.9	0.0	2.3	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
46974	0	47351	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
46974	0	47351	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

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

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	100	2000	2000	2000
2008	130	2000	0	0

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

Patent Applications Submitted

Year	Target
Plan:	0
2008 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	0	
2008	1	1	2

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Percent of piggeries mapped using GPS

Year	Target	Actual
2008	80	100

Output #2

Output Measure

- Number of schools visited

Year	Target	Actual
2008	15	5

Output #3

Output Measure

- Number of video production

Year	Target	Actual
2008	1	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Percent of piggeries removed from riparian area
2	Percent of piggeries with adequate water disposal system.

Outcome #1

1. Outcome Measures

Percent of piggeries removed from riparian area

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	20	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Removing piggeries from riparian areas diminishes the chance that humans will contract leptospirosis and ailments associated with coliform bacteria.

What has been done

Piggery owners have either moved their piggeries beyond 50 ft of a riparian area or, lacking space, closed their piggeries altogether.

Results

Initial counts of coliform and E. coli in stream samples have decreased slightly from historic records.

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife
112	Watershed Protection and Management

Outcome #2

1. Outcome Measures

Percent of piggeries with adequate water disposal system.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	20	23

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wastewater from piggeries is the major source of intestinal bacteria in streams.

What has been done

Removing piggeries from within 50 ft of streams has reduced the chance that runoff from piggeries enters the streams.

Results

Lower counts of coliform and E. coli bacteria.

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife
112	Watershed Protection and Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Competing Public priorities

Brief Explanation

Like all States and Territories, American Samoa has been falling short of revenues and must allocate monies among several equally critical public priorities. Unless there is a sudden rise in illnesses and deaths due to leptospirosis, this topic will not receive increased funding during the foreseeable future.

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

1. Evaluation Studies Planned

- Time series (multiple points before and after program)

Evaluation Results

Monthly streams samples are taken from 44 streams to test for coliform and E. coli levels. Many of the streams show a slight decrease in the Most Probable Number of bacteria per 100 mL sample. Some, though, show that the small number of piggeries removed from the riparian area have had little effect on the bacterial counts.

Key Items of Evaluation

Stream levels of coliform and E. coli bacteria are responding slowly, if at all, to the removal of piggeries from riparian areas.

Program #3

V(A). Planned Program (Summary)

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

V(C). Planned Program (Inputs)

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	3.4	0.0
Actual	2.0	0.0	2.3	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
76694	0	47351	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
76694	0	47351	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
 Food safety workshops
 Local produce (vegetable & fruit) recipe development and testing workshops
 Vegetable gardens were established with interested homemakers and other clients
 Demonstrations of vegetable dishes with recipes distributed
 Food preparation, handling, and storage demonstrations.
 Food safety workshops and demonstrations
 Nutrition awareness media (radio, TV, newspaper) programs
 Physical activity programs (exercise programs)
 Development, translation, and distribution of calendar, posters, brochures, and other educational materials
 Leptospirosis brochures were developed cooperatively with ASEPA, ASPH, ASDOA and USDA NRCS
 Research biology and control of disease-carrying mosquitoes, primarily Aedes polynesiensis.
 Communicated results via research reports, brochures, seminars, TV, and individual contacts with other agencies
 Developed designs to construct new facility for health programs.

2. Brief description of the target audience

Similar to 2007, 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

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	1260	5570	770	6005
2008	4525	7000	3639	8000

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

Patent Applications Submitted

Year	Target
Plan:	0
2008 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	0	
2008	0	2	2

V(F). State Defined Outputs

Output Target

Output #1**Output Measure**

- Number of research projects completed

Year	Target	Actual
2008	1	1

Output #2**Output Measure**

- Number of Nutrition educational workshops

Year	Target	Actual
2008	20	356

Output #3**Output Measure**

- Number of vegetable gardening workshops

Year	Target	Actual
2008	10	34

Output #4**Output Measure**

- Number of vegetable gardens established

Year	Target	Actual
2008	35	141

Output #5**Output Measure**

- Number of different recipes using local produce given out

Year	Target	Actual
2008	15	38

Output #6**Output Measure**

- Number of food safety workshops conducted

Year	Target	Actual
2008	20	353

Output #7**Output Measure**

- Number of publications/brochures/posters/calendars

Year	Target	Actual
2008	5	32

Output #8**Output Measure**

- Number of exercise and physical activity programs completed

Year	Target	Actual
2008	20	356

Output #9**Output Measure**

- Number of designs for the new facility

Year	Target	Actual
2008	1	1

Output #10**Output Measure**

- Number of video production

Year	Target	Actual
2008	1	1

Output #11**Output Measure**

- Number of publications/brochures/posters/calendars distributed.

Year	Target	Actual
2008	{No Data Entered}	6562

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 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
2008	350	4525

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Obesity and overweight, poor nutrition, lack of exercise, and food safety issues are major health problems for both adults and youth in American Samoa.

What has been done

Similar to 2007, 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.

Results

4525 program 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
724	Healthy Lifestyle
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

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
2008	210	3601

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 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 were developed and distributed to clients. Agriculture extension staff encouraged homemakers to grow their own tomatoes, bell peppers, beans, cucumbers and distributed spices (free of charge) such as basil and oregano seedlings for encouragement. 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 farmers but commercial vegetable growers.

Results

With fresh vegetables available from their own gardens in the back yard, the consumption of vegetables increased. With a balanced and nutritious diet, diet related diseases (cases) are reduced. Participants attended 34 vegetable gardens workshops and established 141 vegetable gardens as a result of the program. 3601 continued to consume more vegetables as result of the vegetable gardening project. 244 participants continued to grow vegetables. 3040 participants prepared and consumed more economical and nutritious meals.

4. Associated Knowledge Areas

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

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	25	244

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 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 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 were developed and distributed to clients. Agriculture extension staff encouraged homemakers to grow their own tomatoes, bell peppers, beans, cucumbers and distributed spices (free of charge) such as basil and oregano seedlings for encouragement. 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 farmers but commercial vegetable growers.

Results

Similar to 2007, 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, more 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 Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	350	3040

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Obesity and overweight, poor nutrition, lack of exercise, and food safety issues are 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 2008, F4HN staff conducted 356 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 were 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 were implemented. 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 health 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 were developed and distributed to clients.

Results

Similar to 2007, program participants acquired knowledge and developed 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. 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 34 vegetable gardens workshops and established 141 vegetable gardens as a result of the program. 3601 continued to consume more vegetables as result of the vegetable gardening project. 244 participants continued to grow vegetables. 3040 participants prepared and consumed more economical and nutritious meals.

4. Associated Knowledge Areas

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

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 Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	350	4030

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 2008, F4HN staff conducted 356 workshops, presentations, and demonstrations in the villages, schools, churches, government agencies, and community groups on developing and testing recipes using locally grown produce. '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 were developed and distributed to clients.

Results

38 different recipes using local produce were given out to the participants. 4030 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

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

Outcome #6

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	350	4030

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Obesity and overweight, poor nutrition, lack of exercise, and food safety issues are 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 2008, F4HN staff conducted 356 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 were also conducted to school age children and adults.

Results

4030 program participants adopted safer food handling, storage, and preparation practices. Teachers reported that more students are washing their hands before preparing family meals and consumption of food.

4. Associated Knowledge Areas

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

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 Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	350	2510

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 2008, F4HN staff conducted 356 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 were also implemented. Moreover, sports, aerobics, and other exercise programs were implemented in schools, work place, and village settings as alternative physical activity programs.

Results

2510 program clients increased their participation in physical activity and exercise programs. A Healthy lifestyle program was established for the CNR staff to promote physical activity and live healthy lifestyles, hence; reduced the incident of high blood pressure, diabetic, heart disease, and related illnesses. Hired a physical activity research assistant to assist with program.

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 Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	350	118

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Obesity and overweight, poor nutrition, lack of exercise, and food safety issues are major health problems for both adults and youth in American Samoa.

What has been done

F4HN staff conducted 356 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 were also implemented. Moreover, sports, aerobics, and other exercise programs were implemented in schools, work place, and village settings as alternative physical activity programs.

Results

118 program clients lost weight and improved self-esteem. 2008 participants lived healthier lifestyles.

4. Associated Knowledge Areas

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

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
2008	350	2800

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Obesity and overweight, poor nutrition, lack of exercise, and food safety issues are major health problems for both adults and youth in American Samoa.

What has been done

F4HN staff conducted 356 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 were also implemented. Moreover, sports, aerobics, and other exercise programs were implemented in schools, work place, and village settings as alternative physical activity programs.

Results

2800 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.

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
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

703 Nutrition Education and Behavior
 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
2008	15000	56

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

As reported in 2007, Leptospirosis is 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

In addition to removing piggeries away from riparian areas, ASCC-CNR staff continued to work with other government agencies (ASEPA, DOA,PH, etc...) representatives in educating the public about the impacts of this disease to humans.

Results

Similar to 2007, public awareness of this disease has made the removal of out-of-compliance piggeries more acceptable. 56 people indicated an increase in knowledge of Leptospirosis by attending joint-outreach programs by ASCC-CNR, ASEPA, and other agencies and non-government groups.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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 Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	0	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

American Samoa experienced an outbreak of dengue fever in 2007. There is no vaccine or cure available for dengue, a mosquito-vectorred viral disease which can be fatal in its most severe form. In 2008, more than 600 cases of dengue fever were reported by the local hospital (LBJ).

What has been done

Continued to disseminate results of research on dengue vector breeding sites and their elimination through distribution of brochures in Samoan and English and continuing collaborations with other agencies.

Results

In 2008, many of the public are aware of key vector mosquito breeding sites and what to do about them as a result of a joint-outread programs by ASEPA, Department of Agriculture, Public Health, ASCC-CNR, and other government and non-government organizations. Reductions in breeding sites have been observed in some areas but not in others.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)
- Other (Renewed interest in dengue fever control)

Brief Explanation

After a brief decline in interest in managing the spread of dengue fever, we were asked by the Dept of Health and the local EPA to again press the public to participate in our 3D program: Drain containers with standing water, Dress in long sleeves and pants, and use DEET products.

Recruitment for an Extension Nutritionist was unsuccessful due to low salary ranges.

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

1. Evaluation Studies Planned

- Time series (multiple points before and after program)

Evaluation Results

Key Items of Evaluation

Program #4

V(A). Planned Program (Summary)

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

V(C). Planned Program (Inputs)

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	0.0	0.0
Actual	1.9	0.0	0.8	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
56556	0	26838	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
56556	0	26838	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, 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 2007, 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

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	300	500	500	1500
2008	2162	5000	3639	8800

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

Patent Applications Submitted

Year	Target
Plan:	0
2008 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	0	
2008	0	0	0

V(F). State Defined Outputs

Output Target

Output #1**Output Measure**

- Number of entrepreneurial and job readiness workshops

Year	Target	Actual
2008	20	54

Output #2**Output Measure**

- Number of apprenticeship and career shadowing programs

Year	Target	Actual
2008	5	41

Output #3**Output Measure**

- Number of sewing workshops and demonstrations

Year	Target	Actual
2008	20	65

Output #4**Output Measure**

- Number of arts and crafts workshops and demonstrations

Year	Target	Actual
2008	20	92

Output #5**Output Measure**

- Number of vegetable gardening and marketing projects

Year	Target	Actual
2008	10	46

Output #6**Output Measure**

- Number of Samoan cultural workshops and demonstrations

Year	Target	Actual
2008	20	13

Output #7**Output Measure**

- Number of vegetable gardens established

Year	Target	Actual
2008	35	141

Output #8**Output Measure**

- Number of parenting and character counts workshops

Year	Target	Actual
2008	20	45

Output #9**Output Measure**

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

Year	Target	Actual
2008	3	4

Output #10**Output Measure**

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

Year	Target	Actual
2008	20	26

Output #11**Output Measure**

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

Year	Target	Actual
2008	10	30

Output #12

Output Measure

- Number of publications/brochures/posters/calendars

Year	Target	Actual
2008	5	32

Output #13

Output Measure

- Number of videos

Year	Target	Actual
2008	1	2

Output #14

Output Measure

- Number of publications/brochures/posters/calendars distributed

Year	Target	Actual
2008	{No Data Entered}	6562

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
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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	350	591

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

As reported in 2007, 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 2008, F4HN staff conducted 54 entrepreneurial and job readiness workshops, 65 sewing workshops/demonstrations, 92 arts and crafts workshops/demonstrations, 45 parenting and character counts workshops, 26 youth at risk issues workshops, 13 Samoan cultural workshops/demonstrations. Moreover, F4HN staff hosted four 4-H fairs, camps, and summer programs; distributed 32 publications/fact sheets, brochures, posters; and completed 30 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 46 vegetable gardening and marketing projects. Established 141 vegetable gardens.

Results

More than 500 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
803	Sociological and Technological Change Affecting Individuals, Families and Communities
802	Human Development and Family Well-Being
801	Individual and Family Resource Management
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 Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	10	238

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 2008, F4HN staff conducted 54 entrepreneurial and job readiness workshops, 65 sewing workshops/demonstrations, and 92 arts and crafts workshops/demonstrations. F4HN staff also hosted four 4-H fairs, camps, and summer programs; distributed 32 publications/fact sheets, brochures, posters; and completed 30 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 46 vegetable gardening and marketing projects. Established 141 vegetable gardens.

Results

238 participants generated revenues from resource management activities (vegetable gardening, sewing projects, arts and crafts sales, bake sales, marketing projects, home based and small businesses, and employment in the private and public sectors. Program participants also established 141 vegetable gardens as a family revenue generating enterprise. 241 participants continue to grow and sell vegetables as a result of the vegetable gardening and marketing project.

4. Associated Knowledge Areas

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

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 Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	3	13

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.

What has been done

In 2008, F4HN staff conducted 54 entrepreneurial and job readiness workshops, 65 sewing workshops/demonstrations, and 92 arts and crafts workshops/demonstrations. F4HN staff also hosted four 4-H fairs, camps, and summer programs; distributed 30 publications/fact sheets, brochures, posters; and completed 30 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 46 vegetable gardening and marketing projects. Established 141 vegetable gardens.

Results

13 participants started home-based and small businesses such as sewing shops, arts and crafts shops, cookie shops, vegetables and fruits roadside market stalls. 241 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
802	Human Development and Family Well-Being
801	Individual and Family Resource Management
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	Quantitative Target	Actual
2008	3	24

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 2008, F4HN staff conducted 54 entrepreneurial and job readiness workshops, 65 sewing workshops/demonstrations, and 92 arts and crafts workshops/demonstrations, and 41 career shadowing and apprenticeship programs. F4HN staff also hosted four 4-H fairs, camps, and summer programs; distributed 32 publications/fact sheets, brochures, posters; and completed 30 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 46 vegetable gardening and marketing projects. Established 141 vegetable gardens.

Results

24 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 141 vegetable gardens as a family revenue generating enterprise. 241 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
806	Youth Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities

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 Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	25	241

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 2008, F4HN staff conducted 54 entrepreneurial and job readiness workshops. Agriculture extension staff also conducted 46 vegetable gardening and marketing projects. Established 141 vegetable gardens.

Results

241 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 141 vegetable gardens, which served as family revenue generating enterprises.

4. Associated Knowledge Areas

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

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 Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	20	272

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

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 is a major concern. There is a need to help parents become better parents and for the children to remain respectful of their parents.

What has been done

In 2008, F4HN staff conducted 45 parenting and character counts workshops and 26 youth at risk issues workshops. F4HN staff also distributed 32 publications/fact sheets, brochures, posters, and completed 30 public awareness programs (radio, TV, newspapers) on parenting, youth character, youth at risk issues, and other topics.

Results

272 program participants improved parent and children relationships. Similar to 2007, appreciation and respect for parents by the children were reported. 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
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development
801	Individual and Family Resource Management

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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	150	235

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

As American Samoa becomes more westernized, families 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, learning opportunities should be provided to preserve the Samoan culture, language, and family values.

What has been done

In 2008, F4HN staff conducted 13 Samoan cultural workshops and demonstrations, 45 parenting and character counts workshops, and 26 youth at risk issues workshops. F4HN staff also distributed 32 publications/fact sheets, brochures, posters, and completed 30 public awareness programs (radio, TV, newspapers) on Samoan culture and language, parenting, youth character, youth at risk issues, and other topics.

Results

235 program clients developed a sense of pride and appreciation of the Samoan culture. Similar to 2007, 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
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

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

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	20	110

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Similar to 2007, 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 2008, F4HN staff conducted 54 entrepreneurial and job readiness workshops, 65 sewing workshops, 92 arts and crafts workshops, 45 parenting and character counts workshops, 26 youth at risk issues workshops, 13 Samoan cultural workshops. Moreover, F4HN staff hosted four 4-H fairs, camps, and summer programs; distributed 32 publications/fact sheets, brochures, posters; and completed 30 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 46 vegetable gardening and marketing projects. Established 141 vegetable gardens.

Results

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

4. Associated Knowledge Areas

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

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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	20	300

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

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 2008, F4HN staff conducted 54 entrepreneurial and job readiness workshops, 65 sewing workshops, 92 arts and crafts workshops, 45 parenting and character counts workshops, 26 youth at risk issues workshops, 13 Samoan cultural workshops. Moreover, F4HN staff hosted four 4-H fairs, camps, and summer programs; distributed 32 publications/fact sheets, brochures, posters; and completed 30 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 46 vegetable gardening and marketing projects.

Results

300 program participants made successful transition from youth at risk behaviors to clean, healthy, and esteemed lifestyles. Participants acquired knowledge and developed skills in dealing with youth at risk issues. Moreover, 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
806	Youth Development
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families and Communities

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
- Competing Programmatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)
- Other (Staffing, Culture)

Brief Explanation

A 4-H Agent resigned and the position remains vacant, leaving only one Agent to be responsible for the 4-H program.

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(l). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Time series (multiple points before and after program)

Evaluation Results

Key Items of Evaluation