2007 American Samoa Community College Combined Research and Extension Annual Report

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I. Report Overview

1. Executive Summary

American Samoa is submitting a joint Research and Extension report.This report covers activities supported by Hatch and Smith Lever funds. In addition, there are programs and new projects that are joint efforts with Hatch, Smith Lever, Smith Lever 3-d, Forestry and other federal funding.The other source of funding is given under sections C Sources of Funding. Moreover, American Samoa received a Risk Management Grant award from WashingtonStateUniversity in 2005.

Total Actual Amount of professional FTEs/SYs for this State

Year:2007	Extension		Research	
	1862	1890	1862	1890
Plan	27.3	0.0	15.3	0.0
Actual	10.4	0.0	11.7	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

An Investigator proposing a new research project was required to submit a Project Outline detailing the justification, objectives, procedures and other pertinent information that would allow someone with research experience to adequately evaluate the proposal. The Research Coordinator distributed this Project Outline to appropriate faculty and staff within the college and to professional researchers in other agencies. A cover letter explained the necessity for a merit review, listed three criteria by which to judge the proposal, and gave an assurance of anonymity. The Research Coordinator collected the reviews and returned them to the Investigator. The Investigator then chose to modify the proposal, based on the reviews, before resubmitting it to the Research Coordinator. The Research Coordinator accepted the proposal, provided a Project Number, and submitted the proposal via the CRIS Web Site.

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 selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals

Brief Explanation

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

Brief Explanation

Inputs and recommendations from advisory committees, external focus groups, surveys, workshops evaluations, and needs assessments were used 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

During FY 2007, ASCC-CNR staff collected stakeholder inputs from more than 3,000 clients 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

Inputs from stake holders have been used 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; and implementation of new programs to address stakeholders inputs and recommendations.

Brief Explanation of what you learned from your Stakeholders

The results of the stakeholders' inputs sessions recommended the following priorities:

•Need to have a Community Health Center to address health issues such as obesity, lack of physical activity, poor nutrition, and diet related and life style diseases •Need to establish additional satellite office (central site on the island of Tutuila) that focuses on Health, Obesity, Agriculture, Youth Development, Family and Consumer Sciences, and other programs forclients in the Eastern and Central areas of Tutuila •Need to visit the Manu'a islands on a quarterly basis and conduct programs in all project areas •Need greenhouses in high schools and at the proposed central satellite office to assist with vegetables and fruit trees projects •Need to continue programs in the following areas:

•F4HN (Families, 4-H, and Nutrition Program) •Health •Nutrition •Obesity •Food Safety •Physical Activity

•Vegetable Gardening •"Sewing for Kids" program in schools •4-H and Youth Development •Need to strengthen village clubs •Need to address Youth at Risk Issues •Computer literacy •Math and Arts •Entrepreneurship •Job Readiness •Samoan Culture and language (oratory) preservation •Parenting •Drugs and Alcohol •Samoan Culture and Indigenous art

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•Agriculture Extension Program •Need to continue work on Waste Management systems for piggery project •Fruit trees •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 •Vegetable Gardening •Need disease resistant varieties •Need to continue seed orders and sales

•Needto 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 producion (improve stock with AI)

•Conservation education and sustainable agricultural practices •Flouriculture •Leptospirosis •Pesticides Safety

•Farm Safety •Risk Management

•Need to provide staff capacity building opportunities •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

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
863537	0	1221606	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	64045	0	72051	0
Actual Matching	64045	0	72051	0
Actual All Other	0	0	0	0
Total Actual Expended	128090	0	144102	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

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: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	4.9	0.0	2.4	0.0
Actual	3.1	0.0	4.8	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
19090	0	29559	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
19090	0	29559	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 trials
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.
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

2. Brief description of the target audience

Small and resource-limited farmers and ranchers, and all 4-H youth

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	2000	5000	500	2000
2007	800	3500	375	1500

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

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of research projects completed

Year	Target	Actual
2007	1	1

Output #2

Output Measure

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

Year	Target	Actual
2007	10	34

Output #3

Output Measure

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

Year	Target	Actual
2007	1000	3708

Output #4

Output Measure

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

Year	Target	Actual
2007	30	24

Output #5

Output Measure

- Number of vegetable variety trials completed

Year	Target	Actual
2007	4	3

Output #6

Output Measure

- Number of new fruit tree varieties introduced

Year	Target	Actual
2007	15	0

Output #7

Output Measure

- Number of fruit tree propagation workshops

Year	Target	Actual
2007	4	2

Output #8

Output Measure

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

Year	Target	Actual
2007	50	12

Output #9

Output Measure

- Number of directories published

Year	Target	Actual
2007	4	0

Output #10

Output Measure

- NUmber of pesticide efficacy tests conducted

Year	Target	Actual
2007	4	3

Output #11

Output Measure

- Number of Pesticide Applicator's Training workshops conducted

Year	Target	Actual
2007	6	8

Output #12

Output Measure

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

Year	Target	Actual
2007	0	0

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
2007	200	92

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Taro and banana producers now have greater diversity of disease-resistant varieties to choose from.

What has been done

We conducted laboratory and field trial tests on 34 taro varieties and 21 banana varieties. Taste tests have also been conducted to identify the better tasting varieties.

Results

Thirty taro varietes performed well against taro leaf blight disease. Of these, 17 varieties were eventually accepted by local taro producers. Of the 21 banana varieties tested for resistance/tolerance to banana leaf streak disease, 3 varieties were popular with producers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants
202	Plant Genetic Resources

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
2007	20	16

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Experienced farmers and extension agents can usually identify common pest problems and usually know how to manage them. They may require help, however, for less common pests or pests that are new to the area. A qualified plant pathologist or entomologist with a fully-equipped laboratory can be invaluable in such cases.

What has been done

ASCC CNR established its plant clinic in 2000, utilizing the equipment and expertise in its plant pathology and entomology laboratories. Recently the service has been strengthened by technical and financial support through the USDA's National Plant Diagnostics Network (NPDN) and the associated Pacific Islands Distance Diagnostics and Recommendation System. This combination of local expertise and facilities with national and regional support make for a powerful resource now available to assist American Samoa's agricultural producers and home gardeners.

Results

Accurate and authoritative diagnoses along with management recommendations help farmers and homeowners choose the most effective control methods that work. In addition, the plant clinic, in conjunction with regional and national expertise available through NPDN, can detect pests that are new to the territory and facilitate efforts to eradicate them or mitigate their impacts. An example is the Cuban slug, which was reported from Ta'u Island for the first time in late 2006. Although the slug was detected too late for eradication, ASCC CNR extension agents are able to advise the island's residents on ways to minimize its impact.

4. Associated Knowledge Areas

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants
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
2007	10	94

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Farmers care because it reduces their costs. Consumers care because they purchase a safer and cheaper product. Both Farmer and consumer benefit.

What has been done

Seeds of vegetable varieties that perform well are ordered and sold to the farming community by extension.

Results

Because of the work done by extension, vegetable varieties are identified that perform well in the hot, humid tropics. Varieties that are multiple disease resistant, have tolerance/resistance to hot humid wet conditions. Because of the work that extension has done, farmers can be assured that the varieties purchased will perform well on their farms

4. Associated Knowledge Areas

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

Outcome #4

1. Outcome Measures

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

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	150	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Available fruit varieties in the back yard. Parents are concerned that their children have enough fresh fruits to eat. Ag students polish their plant propagation skills.

What has been done

Homemaker and students have successfully airlayered and budded a number of citrus varieties and have planted them in their back yards to be available for their families.

Results

When these varieties of fruit trees begin bearing fruits in the next couple of years, the children in the neighborhood will be able to eat these fresh fruits free of charge. Moms and Dads won't have to purchase too many imported fruits to ensure that the children have enough minerals and vitamins especially vitamin C that are found in fruits. The family food dollar can be stretched to purchase other things needed by the family.

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

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
2007	25	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

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.

What has been done

Because of the lack of an animal person, no artificial insemination has been conducted.

Results

Pigs from CNR's herd have been traded with farmers to introduce diversity introduced in the late 1990's where some sows were successfully artificially inseminated. Four farmers have received our stock and CNR received stock from these farmers. Both farmers and CNR piggeries have benefited from the trade by increasing the diversity in their gene pools.

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
2007	2	2

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

ASCC CNR has conducted field trials of reduced-risk pesticide products to evaluate their efficacy under local conditions.

Results

During FY 2007 three environmentally safe products were identified as potentially useful for local farmers and gardeners. Two of these are already readily available and can be recommended as viable control options. Of equal importance, four products were shown to be ineffective for the pests against which they were tested, and they will no longer be among the options considered potentially useful.

4. Associated Knowledge Areas

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods 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
2007	75	92

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 conducted 8 pesticide applicator safety workshops. The local EPA Pesticide Officer also attended these workshops to certify the participants.

Results

During FY 2007, 92 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
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants

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 (Staffing changes)

Brief Explanation

•Prolonged wet, stormy weather disrupted two pesticides trials which had to be redone. •Plant pathologist resigned. •Fruit extension agent resigned, position remains vacant. •Marketing extension agent resigned, position remains vacant. •New animal extension agent position has not yet been filled.

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

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	40%		40%	
135	Aquatic and Terrestrial Wildlife	60%		60%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	0.6	0.0	0.0	0.0
Actual	0.6	0.0	0.9	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
3695	0	5542	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
3695	0	5542	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

Collected stream water samples for determining coliform and E. coli levels; assisted local EPA office in mapping piggeries; monitored 'red tide' algae bloom in Pago Harbor and identified the causitive organism (a dinoflagellate, Ceratium furca) and the nutrient source (excess applications of nitrogen and phosphorus fertilizer on an athletic field adjacent to the harbor head); published four full-color posters of stream fauna and distributed them to all schools and other public agencies and institutions for maximum exposure; mentored high school honors student on a science fair project to determine phosphate levels in laundry products sold in the territory.

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
2007	30	100	10	2000

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

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	7	0	7

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Percent of piggeries mapped using GPS

Year	Target	Actual
2007	80	100

Output #2

Output Measure

- Number of schools visited

Year	Target	Actual
2007	15	39

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 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	30	10

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The prevalence of the serovar associated with leptospirosis in a sample of American Samoans is 17%, or twice that of the worldwide average. The vector for this pathogen is the pig. Leptospirosis is found in infected pigs' urine.

What has been done

Over 100 piggeries have been closed because of being within 50 ft of a stream.

Results

After initial opposition to enforcement by the EPA, piggery farmers have accepted the inevitable and are complying.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
135	Aquatic and Terrestrial Wildlife

Outcome #2

1. Outcome Measures

Percent of piggeries with adequate water disposal system.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	30	90

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Leptospirosis is a public health issue affecting pig farmers, their families, and children who play in or near streams.

What has been done

The pathogen, Leptospirosis, was discharged directly into streams when farmers flushed feces and urine from their piggeries directly into streams. Closing of such piggeries (about 10% of all) elimanated this problem.

Results

Although the pathogen cannot be measured in stream water samples, the coliform and E. coli (indicator indexes) load in streams have fallen.

4. Associated Knowledge Areas

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife
112	Watershed Protection and Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Government Regulations

Brief Explanation

Pigs are an important part of Samoan culture. The owners of some of the largest piggeries are politicians, who rely on their stock for providing food during campaign rallies. Therefore, there was a lack of political will by the Dept. of Health to enforce a standing regulation to exclude piggeries within 50 ft of water bodies and human dwellings. A handful of deaths attributed to the leptospirosis pathogen galvanized the public to demand enforcement. Under the leadership of the local EPA office, an educational program was initiated to gradually bring farmers into compliance by incremental pressures.

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

1. Evaluation Studies Planned

- Time series (multiple points before and after program)

Evaluation Results

By monthly sampling of streams for levels of coliform and E. coli bacteria, we can determine a decrease in their loads and, by implication, the amount of piggery waste entering the streams. We share this information with the local office of the EPA, who conduct monitoring operations of their own. The EPA also tracks which piggeries are removed and which are targeted for enforcement.

Key Items of Evaluation

Before enforcement, we assisted the EPA in mapping piggeries using GPS. Over 8,000 pigs were found among 997 piggeries. During fiscal year 2007 the EPA successfully closed 68 piggeries that were out of compliance. Over 100 piggeries have been closed over the calendar year. Currently there are 1024 piggeries with an estimated 90% in compliance.

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: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	5.1	0.0	0.4	0.0
Actual	3.8	0.0	3.5	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
23401	0	21554	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
23401	0	21554	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, primarily Aedes polynesiensis.
Communicate results via research reports, brochures, seminars, TV, and individual contacts with other agencies.

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

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	1205	5500	700	6000
2007	1980	7000	1500	8000

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

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	2	1	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of research projects completed

Year	Target	Actual
2007	1	1

Output #2

Output Measure

- Number of Nutrition educational workshops

Year	Target	Actual
2007	10	75

Output #3

Output Measure

- Number of vegetable gardening workshops

Year	Target	Actual
2007	5	15

Output #4

Output Measure

- Number of vegetable gardens established

Year	Target	Actual
2007	25	72

Output #5

Output Measure

- Number of different recipes using local produce given out

Year	Target	Actual
2007	10	21

Output #6

Output Measure

- Number of food safety workshops conducted

Year	Target	Actual
2007	10	75

Output #7

Output Measure

- Number of publications/brochures/posters/calendars

Year	Target	Actual
2007	6	25

Output #8

Output Measure

- Number of exercise and physical activity programs completed

Year	Target	Actual
2007	10	80

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 econo9mical 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 knowledgeof 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
2007	300	3376

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 professional and paraprofessional staff provided nutrition education programs to youth, homemakers, community residents, and other traditional and nontraditional clients. F4HN staff conducted 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

3376 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
2007	150	350

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 collaboration with the F4HN program, agriculture extension staff continued with 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.

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 established 72 vegetable gardens as a result of the program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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 Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	200

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 collaboration with the F4HN program, agriculture extension staff continued with 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 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

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 econo9mical 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
2007	300	2350

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 2007, F4HN staff conducted 75 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. During FY 2007, F4HN staff conducted 75 Nutrition educational workshops. Moreover, the F4HN personal 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

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.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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

Year	Quantitative Target	Actual
2007	300	2350

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

F4HN staff conducted 75 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

Twenty-one (21) different recipes were given out to the participants. 2350 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
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
703	Nutrition Education and Behavior
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
2007	300	2350

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

F4HN staff conducted 75 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

2350 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
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
2007	300	1980

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 80 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

1980 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.

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
2007	300	500

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 80 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

500 program clients lost weight and improved self-esteem.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
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
2007	300	1500

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 80 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

1500 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 acqired 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
724	Healthy Lifestyle
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
703	Nutrition Education and Behavior

Outcome #10

1. Outcome Measures
Number of people increasing knowledgeof leptospirosis

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	15000	15000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

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, we along with other agencies published two brochures each in English and in Samoan educating the public about this disease. Signs were installed at stream mouths warning the public of the risk of infection.

Results

Public awareness of this disease has made the removal of out-of-compliance piggeries more acceptable.

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
2007	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-vectored viral disease which can be fatal in its most severe form.

What has been done

Dengue can be prevented by reducing populations of the mosquito species that transmit it. Research at ASCC CNR, conducted with assistance from the American Samoa Department of Health and the US Centers for Disease Control and Prevention, has helped identify the most important breeding sites of dengue-carrying mosquitoes in local villages. The research results and resulting control recommendations were made available to the public through a 30-minute television program describing the research results, a 10-minute public service television spot urging the public to eliminate key breeding sites and ways to mitigate them. The research findings and control recommendations were discussed with public health officials and health care providers in meetings with the local epidemiology task force, a presentation to the health departments environmental health division, and a segment on a morning television talk show. Other agencies, including the local health department and the local environmental protection agency, have also implemented their own public awareness and enforcement campaigns.

Results

Anecdotal evidence and ad hoc interviews suggest that many of the public are aware of key vector mosquito breeding sites and what to do about them. Reductions in breeding sites have been observed in some areas but not in others. The dengue outbreak had begun to wane by the end of the fiscal year, but it is unclear the degree to which mosquito breeding site reductions may have affected the course of the epidemic.

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
- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)
- Other (Staffing)

Brief Explanation

•Dengue outbreak in 2007 •Changes in collaborators' abilities or willingness to continue as partners •Recruitment for a nutritionistlocally was unsuccessful due to limited number of available qualified professionals •Recruitment for a nutritionist offisland was also unsuccessful due to low salary ranges

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

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, Fam	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: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual	2.9	0.0	2.5	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
17859	0	15396	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
17859	0	15396	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

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	200	500	400	1000
2007	450	1200	850	3000

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

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of entrepreneurial and job readiness workshops

Year	Target	Actual
2007	10	16

Output #2

Output Measure

- Number of apprenticeship and career shadowing programs

Year	Target	Actual
2007	3	6

Output #3

Output Measure

- Number of sewing workshops and demonstrations

Year	Target	Actual
2007	10	45

Output #4

Output Measure

- Number of arts and crafts workshops and demonstrations

Year	Target	Actual
2007	10	30

Output #5

Output Measure

- Number of vegetable gardening and marketing projects

Year	Target	Actual
2007	5	28

Output #6

Output Measure

- Number of Samoan cultural workshops and demonstrations

Year	Target	Actual
2007	10	22

Output #7

Output Measure

- Number of vegetable gardens established

Year	Target	Actual
2007	25	73

Output #8

Output Measure

- Number of parenting and character counts workshops

Year	Target	Actual
2007	10	32

Output #9

Output Measure

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

Year	Target	Actual
2007	2	4

Output #10

Output Measure

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

Year	Target	Actual
2007	10	30

Output #11

Output Measure

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

Year	Target	Actual
2007	5	39

Output #12

Output Measure

- Number of publications/brochures/posters/calendars

Year	Target	Actual
2007	3	24

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, Damoan 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, Damoan 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
2007	300	850

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 than 58.3% of American Samoa's families are considered poor and below the U.S. poverty level. Uunemployment 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

F4HN staff conducted 16 entrepreneurial and job readiness workshops, 45 sewing workshops/demonstrations, 30 arts and crafts workshops/demonstrations, 32 parenting and character counts workshops, 30 youth at risk issues workshops, 22 Samoan cultural workshops/demonstrations. Moreover, F4HN staff hosted four 4-H fairs, camps, and summer programs; distributed 24 publications/fact sheets, brochures, posters; and completed 39 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 28 vegetable gardening and marketing projects.

Results

More than 800 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
806	Youth Development
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Fam

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
2007	5	200

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

F4HN staff conducted 16 entrepreneurial and job readiness workshops, 45 sewing workshops/demonstrations, and 30 arts and crafts workshops/demonstrations. F4HN staff also hosted four 4-H fairs, camps, and summer programs; distributed 24 publications/fact sheets, brochures, posters; and completed 39 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 28 vegetable gardening and marketing projects.

Results

200 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 73 vegetable gardens as a family revenue generating enterprise.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
806	Youth Development

Outcome #3

1. Outcome Measures
Number of participants starting home-based and small businesses

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	3	20

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

F4HN staff conducted 16 entrepreneurial and job readiness workshops, 45 sewing workshops/demonstrations, and 30 arts and crafts workshops/demonstrations. F4HN staff also hosted four 4-H fairs, camps, and summer programs; distributed 24 publications/fact sheets, brochures, posters; and completed 39 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 28 vegetable gardening and marketing projects.

Results

20 participants started home-based and small businesses such as sewing shops, arts and crafts shops, cookies shops, vegetables and fruits roadside market stalls.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
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 Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	28

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

F4HN staff conducted 16 entrepreneurial and job readiness workshops, 45 sewing workshops/demonstrations, and 30 arts and crafts workshops/demonstrations, and 6 career shadowing and apprenticeship programs. F4HN staff also hosted four 4-H fairs, camps, and summer programs; distributed 24 publications/fact sheets, brochures, posters; and completed 39 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 28 vegetable gardening and marketing projects.

Results

28 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 73 vegetable gardens as a family revenue generating enterprise.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
806	Youth Development

Outcome #5

1. Outcome Measures

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

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	200

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

F4HN staff conducted 16 entrepreneurial and job readiness workshops. Agriculture extension staff also conducted 28 vegetable gardening and marketing projects. F4HN staff hosted four 4-H fairs, camps, and summer programs; distributed 24 publications/fact sheets, brochures, and posters; and completed 39 public awareness programs (radio, TV, newspapers).

Results

200 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 reulted in the establishment of 73 vegetable gardens, which served as family revenue generating enterprises.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development
801	Individual and Family Resource Management
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
2007	10	220

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

F4HN staff conducted 32 parenting and character counts workshops and 30 youth at risk issues workshops. F4HN staff also distributed 24 publications/fact sheets, brochures, posters, and completed 39 public awareness programs (radio, TV, newspapers) on parenting, youth character, youth at risk issues, and other topics.

Results

220 program participants improved parent and children relationships. 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
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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	680

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

F4HN staff conducted 22 Samoan cultural workshops and demonstrations, 32 parenting and character counts workshops, and 30 youth at risk issues workshops. F4HN staff also distributed 24 publications/fact sheets, brochures, posters, and completed 39 public awareness programs (radio, TV, newspapers) on Samoan culture and language, parenting, youth character, youth at risk issues, and other topics.

Results

680 program clients developed a sense of pride and appreciation of the Samoan culture. 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
806	Youth Development
803	Sociological and Technological Change Affecting Individuals, Fam
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 Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Resource management, parenting, culture, and youth at risk issues are 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

F4HN staff conducted 16 entrepreneurial and job readiness workshops, 45 sewing workshops, 30 arts and crafts workshops, 32 parenting and character counts workshops, 30 youth at risk issues workshops, 22 Samoan cultural workshops. Moreover, F4HN staff hosted four 4-H fairs, camps, and summer programs; distributed 24 publications/fact sheets, brochures, posters; and completed 39 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 28 vegetable gardening and marketing projects.

Results

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

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development
801	Individual and Family Resource Management
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
2007	10	150

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

F4HN staff conducted 16 entrepreneurial and job readiness workshops, 45 sewing workshops, 30 arts and crafts workshops, 32 parenting and character counts workshops, 30 youth at risk issues workshops, 22 Samoan cultural workshops. Moreover, F4HN staff hosted four 4-H fairs, camps, and summer programs; distributed 24 publications/fact sheets, brochures, posters; and completed 39 public awareness programs (radio, TV, newspapers). Ag Extension staff also conducted 28 vegetable gardening and marketing projects.

Results

150 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

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 (staffing culture)

Brief Explanation

•A 4-H agent resigned, position remains unfilled, leaving only one agent responsible for the planned program. •Some topics such premarital sex, STDs, teen pregnancy 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