

2010 American Samoa Community College Combined Research and Extension Plan of Work

Status: Accepted
Date Accepted: 05/07/09

I. Plan Overview

1. Brief Summary about Plan Of Work

American Samoa Community College (ASCC) Division of Community and Natural Resources (CNR) is submitting this joint Extension and Research Plan of Work Update for the period 2010-2014.

This plan focuses on the Hatch and Smith-Lever projects being implemented as a result of stakeholder and program inputs. The "Planned Programs" include Small Farms, Ecosystem, Human Health and Well-being and Families, Youth and Communities. New foci include aquaculture and aqua-ponics, promotion of vegetable gardening and planting of improved cultivars of taro, bananas sweet potatoes (yams), and fruit in an effort to strengthen food security and nutrition in American Samoa. This can be made a reality by taking on a coordinated and multi-sectoral approach including interagency networking, public-private partnerships, village collaboration, and even regional cooperation. There remain underserved and marginalized segments of the population in American Samoa and CNR will continue its work on helping to improve the quality of life for Families, Youth, and Communities especially in the area of non-communicable chronic diseases, obesity, and malnutrition.

Because of increasing food prices, unstable economic conditions, climate change, fuel price upheavals, and a heavy reliance on imported and processed foods, American Samoa must consider Food Security a priority. CNR must also play a major role in reclaiming traditional and cultural knowledge in local harvesting and production. Food security exists when all people at all times have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

The Land and the People

American Samoa is an unincorporated, unorganized Territory of the United States of America. It is the only American soil south of the equator. It is comprised of five mountainous, volcanic islands and two coral atolls in the Pacific Ocean between 11 and 14 degrees South latitude and 168 and 171 degrees West longitude. The main island of Tutuila is approximately 2,300 miles southwest of Hawaii and approximately 1,600 miles northeast of New Zealand. American Samoa lies just east of the International Dateline and is six time zones behind Washington, DC.

The total landmass of the Territory is approximately 76 square miles (48,767 acres) with Tutuila being the largest island of 49 square miles. The three islands of the Manu'a group comprise 22 square miles with Aun'uu Island, and Rose and Swain Atolls being about 1 square mile each. Two-thirds of the five volcanic islands have slopes greater than 30%, which are covered by paleotropical rain forest and surrounded by the fringing coral reef, extending in some areas to 2,000 feet offshore. The climate is hot and humid with over 200 inches of rain annually with temperatures ranging from a high of 94o F in February to a low of 73o F in August. American Samoa is subject to periodic hurricanes. Hurricanes Ofa and Val devastated the territory in 1990 and 1991 with sustained winds of over 120 miles per hour, and Heta struck the Territory in January 2004 causing an estimated \$150 million in damage. The winds blew at the rate of 165 to 170 miles per hour, damaged 70% of residents' homes and destroyed approximately 50% of agricultural development and rainforest. A year later, Hurricane Olaf wreaked destruction in the Manua Islands. With gusts of 190 miles per hour, the category 5 storm sent waves 30 – 40 high onto the shores of Ta'u, Ofu and Olosega Islands destroying homes, schools, roads and a large area of agriculture crops.

In the last 35 years, the population grew from 27,159 to 65,500 (estimate for June 2005), and the population density more than doubled from 357 to an estimated 862 people per square mile. According to the 2000 Population Census of American Samoa, the population is 88.2% Samoan with the median age being 21. The average household size was 6.1 people. The per capita income was \$4,357 with 5,072 of the 8,706 families (58.3%) with income below the poverty level.

Agriculture and Natural Resources

According to the 2003 Agriculture Census of American Samoa, there were 7,094 farms that generated \$58,196,832 in agricultural commodities. These commodities, either sold on the local market, used for family consumption, or as contributions to *faalavelave* (cultural events including funeral, births, weddings, and chief title bestowals), were valued at an average of \$8,204 per farm. The average farm size declined from 7.1 acres in 1990 to 2.8 acres in 2003. The number of farmers, however, increased during that period from 1,126 to 7,094, in part due to the number of native Samoans returning from the US mainland after retirement to farm their communal lands. As population pressure forces farming up the steep slopes, issues regarding erosion, landslides, flooding, habitat destruction, and watershed loss become more important. Traditional methods of soil conservation and crop sustainability are no longer viable. With less land available for farming, for example, soil is no longer allowed to lay fallow for a few growing seasons to recover lost nutrients.

Human Health and Well-Being

Obesity and overweight, poor nutrition and lack of exercise, food safety issues, filariasis, and leptospirosis are major health problems in American Samoa (AS). In 2003, the World Health Organization in its publication "Diet, Food Supply and Obesity in the Pacific" found that 83.6% of the males and 87.6% of the females in AS had a body mass index greater than 25. In a similar yet to be published study in 2005, Davison et.al. found in a stratified random sample of 380 AS adolescents aged 11 to 18 years old that 32% and 34% were overweight and obese respectively. "These are by far, the highest rate documented for children of any ethnic group, now or in the past." the authors write in the study conducted in 2005. Moreover, a survey of 424 children between the ages of 1-10 years old in AS conducted in 2003 by a team from the University of Hawaii and Uniformed Services University, Maryland reported that: 11% of the 1-4 years old were too heavy for their height, 30% of the 5-10 year old children were overweight, and 15% were at risk of being overweight. The survey also found that 9% had blood sugar levels higher than recommended and more than 55% had blood cholesterol levels higher than recommended. The diets in AS are high in meats, starches, sugars, and fats and tend to be very low in vegetables, fruits and dairy products

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 (American Samoa 2000 Census). Additionally, 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 (Population Census 2000), people need to manage family resources wisely and take advantage of economic opportunities to maintain and increase their quality of life. 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. 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. The Samoan youth are expected to serve their elders with respect and obedience with no back-talk. However, youth who grew up in Hawaii and the mainland United States have difficulties in accommodating their American lifestyles and expectations of parents and other family members. 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. According the Population Census 2000 the median age was 21. 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.

Issues

Because of its geographic isolation and the Territory's limited resources, there are no services making available different line of pigs to prevent inbreeding. Inbreeding in our swine industry is one cause of low production and slower growth rates. Typically, in the US mainland, pig farmers can purchase stud service from others, easily purchase different lines of pigs from other farmers, or purchase frozen semen and artificially inseminate their own stock. In American Samoa, most farmers raise Samoan pigs of a similar breed. Off-island stock was brought in to address this problem just three times in the past 25 years - twice in the form of live animals and once through artificial insemination. These introductions brought genetic variability to

our livestock industry. More genetic variability needs to be introduced to prevent further inbreeding. The agriculture extension plan to revive the pig program has been hampered by the lack of qualified local expertise. Positions advertised locally go unfilled. When advertised elsewhere, the positions still go unfilled because of the low salary issue. The revived pig program will offer boar services, sell extension's animals to farmers to reduce their inbreeding, and buy or trade stock with farmers so that inbreeding is reduced. Also frozen semen will be imported for artificial insemination to benefit all. However, in late FY 2006, ASCC-CNR staff assisted the American Samoa Environmental Protection Agency (ASEPA) in a territorial wide piggery survey identifying the location, the kind of operation, the total number of pigs, in addition to determining if the piggery was in compliance with the local laws. Of the 1,000 piggeries identified, 710 of them including the CNR piggery was not in compliance due to inadequate waste management system. This has necessitated a slight change in priorities. In FY 2009, the CNR piggery was renovated through a cooperative agreement with ASEPA to demonstrate the animal waste options that are being recommended to the local pig farmers. The first option - the portable piggery that will accommodate up to two large pigs or a litter of piglets; the second option - the dry litter system (using a 7% sloped floor and wood chips to compost the manure) along with collection alley and bins for composting the wood chip/manure mix; the third option and the washdown system with locally made solid waste separator, a septic and a drainfield; and the fourth option another wash down system with a double solid waste separator with a holding tank for the liquid effluent (using gravity flow the liquid effluent will be fed to fruit tree and vegetable crops). Through this demonstration, farmers will be able to learn about the different options. In another cooperative agreement with the AS Soil and Water Conservation District and the Coral Reef Advisory Group, CNR has acquired a commercial wood chipper and has been providing a service to pig farmers. Using wood chips to compost the pig waste is a component part of all of the ASEPA recommended options. CNR has been demonstrating the use of composted pig manure in the growing of taro, and vegetable crops. Using the liquid effluent, bananas, papayas and some vegetables will be fertigated as a demonstration. These demonstrations of the waste management systems and uses of the liquid effluent and composted pig manure will help local pig farmers decide which option to adopt in bringing their operations into ASEPA compliance. This will be the first priority in the animal industry with the effort to address the inbreeding issue to follow for the compliant operations. An animal specialist has not yet been hired to spearhead the effort in addressing this issue.

For the crop industry, cultivars of leaf blight resistant taro and black leaf resistant bananas will continue to be introduced in tissue culture, tested and released to the farming community to increase genetic variability. Field tests of imported tissue-cultured plantlets and taste tests will be continued in the effort to introduce a broad based disease resistant genetic diversity to the territory in addition to finding varieties that taste like the preferred Samoan varieties of old, i.e. Talo Niue and Talo Manu'a. These varieties and banana varieties of the FHIA lines are being disseminated in an effort to address the food security issue. We have reestablished the vegetable seed sales to our clients. Vegetable variety demonstrations to identify cultivars that will perform well in our hot, humid and wet tropical environment will continue. Thus far three varieties of tomatoes, 4 varieties of long beans, and 4 of eggplant have been identified, with their names and sources being forwarded to the local department of agriculture and to the ACE American Industries, the local business that is the only seller of agriculture seeds. For the fruit industry, the priority was to rejuvenate the program's fruit tree orchard by introducing new fruit tree varieties. For the varieties that performed well, workshops would have been conducted to teach farmers and interested homemakers the different methods of asexual propagation so that each home will have a diverse variety of fruits for the children to enjoy. A fruit tree greenhouse will be constructed in FY 2009. With a variety of fruit trees in the back yard to enjoy, parents would not have to purchase apples and oranges, peaches and pears or other imported fruits. We were hoping that this would affect an import replacement scheme for the Territory. The program has been hampered by the inability to recruit a fruit tree specialist. Pesticide efficacy tests of reduced risk chemicals will continue to complement the IPM strategies for the different economic crops. Because of its geographic isolation and relative small natural resource base, there has been no effort to develop an agriculture export industry. Instead, the American Samoa Marketing and Local Producers' directories was to have been revived to address the local marketing issue. This program has been on hold because a marketing person has not yet been identified to spearhead this effort.

Because of the steep slopes and high rainfall, a natural terracing demonstration has been installed using vetiver grass (*Veteverial zizanioides*) as a vegetative barrier. Work on this will continue with vegetables planted in the alley between the barriers.

Monitoring the health of our streams will continue to be a focus. In addition, to stream water chemistry, flora, and fauna, we have added coliform and *E. coli* monitoring. It is hoped that with the water quality program ASCC-CNR and their partners will be able to assist villagers and landowners in identifying sources of contamination through GIS mapping of piggeries and advise leaders on either relocating point-sources of contamination or mitigating their impact on streams through approved sewage treatment systems. Information on water quality will also be provided to aquaculture farmers utilizing indigenous species, who

use the streams as a source of water for their operations. ASCC-CNR will continue to be strong advocates for promoting watershed stewardship practices, especially among school children, by making the public aware of the rich inheritance of stream animals that sustained their ancestors and that may offer commercial opportunities for present and future generations.

Families, 4-H and Nutrition (F4HN) professional and paraprofessional staff will use an integrated approach to provide nutrition education program to youth, homemakers, community residents, and other traditional and nontraditional clients. The 4-H program also has been hampered by personnel attrition and the unsuccessful search for replacements. The Agriculture Extension Service staff will continue to emphasize the production of local vegetables in their effort to help F4HN clients begin gardening projects. F4HN staff will continue to conduct workshops, presentations, and demonstrations in the villages, schools, churches, to government agencies, and community groups on developing and testing recipes using locally grown produce. Recipes have been given out to the participants with the rationale that if more fresh vegetables are readily available, more will be used in home meals. More vegetables cooked at home translate to more vegetables eaten and improved health of families. The F4HN personnel will continue to distribute nutrition educational handouts such as the Pacific Food Guide Pyramid, newly published English/Samoan recipe book, calendars, 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, and food safety issues will be implemented. Sports, aerobics, and other exercise programs are planned for schools, work place, and village settings as alternative physical activity programs. Furthermore, F4HN staff will conduct 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 will be provided to school age children and adults on the correct way to wash hands to prevent food borne illness. F4HN personnel will continue to partner with local, regional, and national agencies, organizations, and institutions in planning, developing, and implementing programs to address obesity and overweight, poor nutrition and lack of physical activity, and food safety issues for both youth and adults in American Samoa. The inability of the F4HN program to recruit a nutritionist has greatly reduced the impacts of the program.

In all of the planned program areas, i.e. small farms, ecosystem, human health and well-being and families, youth and communities, interagency cooperation and collaboration will increase. More joint projects will be undertaken with the AS Department of Agriculture, the Samoan Affairs Office, AS Department of Education, AS Environmental Protection Agency, AS Public Health, AS Department of Commerce, the AS Soil and Water Conservation District and of course the USDA local offices of NRCS, FSA and RC&D. Cooperative work with other land grant universities in Hawaii, Guam, Northern Marianas and Micronesia will also increase.

A priority issue has been the recruitment of qualified professionals. Positions in plant pathology, nutrition, fruit extension, marketing extension, livestock extension, 4-H personnel, and F4HN agents have yet to be filled which have set back our program expectations and impacts tremendously. There is need for a two pronged approach where we must offer higher salaries for these positions so that these can be filled by off-island contractors. While this is being implemented, there is a need to build local capacity in staff development. Program funds must be allocated and approved for these capacity building efforts.

ASCC CNR has two offices in Manu'a, one on the large island of Ta'u and another in Luanu'u (Ofu and Olosega islands). The only office on the main island of Tutuila is at the CNR offices. Feedback from clients in the central and eastern districts of Tutuila have expressed a need for a satellite office more convenient to them. This has been placed on hold due to the lack of personnel.

Another issue continues to be a need to consult with our neighbors in addressing similar concerns and issues that are being experienced by the 22-member South Pacific Community (SPC). Being able to use program funds for foreign travel is of importance in learning from our neighbors who share much of our local problems, i.e. social issues such as nutrition and obesity, and agriculture issues the high cost of inputs because of the geographic isolation, the hot, wet and humid climate, tropical temperatures, soil types and year round pest problems. Addressing these important issues will greatly enhance our programs locally.

These are the priority issues that will be addressed by the Hatch and Smith-Lever Programs in American Samoa 2010-2014 Plan of Work.

Families, Youth and Communities

Estimated Number of Professional FTEs/SYs total in the State.

Year	Extension		Research	
	1862	1890	1862	1890
2010	11.0	0.0	10.0	0.0
2011	12.0	0.0	12.0	0.0
2012	12.0	0.0	12.0	0.0
2013	12.0	0.0	12.0	0.0
2014	12.0	0.0	12.0	0.0

II. Merit Review Process

1. The Merit Review Process that will be Employed during the 5-Year POW Cycle

- Combined External and Internal University External Non-University Panel

2. Brief Explanation

Research and Extension initiatives are client-driven, that is, based upon the latest stakeholder input survey. Owing to our limited number of staff, which serves a population of 65,000, each researcher and Extension agent tries to match his/her knowledge skills and expertise to a high priority client concern that also would meet federal grant requirements.

The proposal is then given to the Research or the Extension Coordinator, who distributes it to knowledgeable professionals both within and outside of the institution. If an off-island expert can also be found who is willing to review the proposal, gratis, this source of review is also sought.

The Director will be included in the final review of the proposals.

III. Evaluation of Multis & Joint Activities

1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

Not required to report

2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

Not required to report

3. How will the planned programs describe the expected outcomes and impacts?

Not required to report

4. How will the planned programs result in improved program effectiveness and/or efficiency?

Not required to report

IV. Stakeholder Input

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

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

Brief explanation.

Where ever and when our stake holders gather for programs, they will be asked to evaluate and give inputs regarding followup workshops and direction.

2(A). A brief statement of the process that will be 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
- Other (formative and summative evaluations of workshops)
- Needs Assessments
- Use External Focus Groups
- Use Surveys

Brief explanation.

All workshops conducted by CNR extension will be evaluated for information regarding What next? and Where do we go from here?.Focus groups are being planned for our underserved clients in the Manu'a Islands.All farm visits conducted by CNR Agriculture Service will be documented and will contain sections where farmers will identify their problem areas.This information will be used to direct resources in research.The CNR advisory group's responsibility is to prioritize and bring focus to the stakeholder concerns.

2(B). A brief statement of the process that will be 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 the general public (open meeting advertised to all)
- Meeting with traditional Stakeholder individuals
- Meeting with traditional Stakeholder groups

Brief explanation

ASCC-CNR staff will continue to collect stakeholder inputs from 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 will be considered

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

Brief explanation.

Inputs from stake holders will be used to direct programs in both extension and research, with the CNR advisory group being the means to prioritize CNR resources. Once the priorities have been determined, the information will be forwarded to CNR administration and program managers to make changes in the budgets and programming.

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

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

Small Farms

2. Brief summary about Planned Program

According to the 2003 Agriculture Census of American Samoa, there were 7,094 farms that generated \$58,196,832 in agricultural commodities. These commodities, either sold on the local market or used for family consumption including contributions to Samoan cultural events were valued at an average of \$8,204 per farm. The average farm size declined from 7.1 acres in 1990 to 2.8 acres in 2003. The number of farmers, however, increased during that period from 1,126 to 7,094, in part due to the number of native Samoans returning from the US mainland after retirement to farm their communal lands. In addition, two-thirds of the territory's 76 square miles have slopes greater than 30% and annual rainfall ranges from 125 to 300 inches. As population pressure forces farming up these slopes, issues regarding erosion, landslides, flooding, habitat destruction, and watershed loss become more important. Traditional methods of soil conservation and crop sustainability are no longer viable. With less land available for farming, for example, soil is not allowed to lay fallow for a few growing seasons to recover lost nutrients.

The projects included in the SMALL FARMS planned program are aimed at helping subsistence and commercial farmers and ranchers increase yields and maintain sustainability. New varieties of disease-resistant vegetables and traditional crops are being imported to reduce inputs and maximize returns. Tissue cultured sweet potatoes from the Centre for Pacific Crops and Trees of the Secretariat of the Pacific Community have been imported and are being distributed to the farming community. Without a fruit tree person, the fruit tree project is in limbo. Inbreeding of swine is a cause of low production. We will reduce inbreeding by making boar services available, buying or trading stock between our extension program and the farming community and implementing artificial insemination services. To expand the marketing opportunities of our growers, the publication of the local producers' and marketing directories will be revived. Work on the efficacy of reduced risk pesticides will continue, along with efforts to find biological control agents for the economically important pests. Our plant clinic identifies new and existing pests and diseases and recommends integrated management tactics. We will continue to import leaf blight resistant taro breeding lines with improved taste and diverse resistance genes and to search for acceptable varieties of cooking bananas resistant to black leaf streak disease. This effort supports the development of a food security program. New focus include but are not limited to projects in food security in collaborative projects with the local Department of Agriculture, the Office of Samoan Affairs, the local Department of Education and the local Soil and Water Conservation District to augment ongoing projects with other agencies. A new program in aquaculture in collaboration with the University of Hawaii Sea Grant Program has been initiated. This program will focus on production of Nile tilapia, giant clams, Pacific threadfin and the mangrove crab.

3. Program existence : Mature (More than five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
133	Pollution Prevention and Mitigation	2%		0%	
202	Plant Genetic Resources and Biodiversity	8%		15%	
205	Plant Management Systems	40%		40%	
211	Insects, Mites, and Other Arthropods Affecting Plants	7%		20%	
212	Pathogens and Nematodes Affecting Plants	7%		10%	
215	Biological Control of Pests Affecting Plants	7%		5%	
307	Animal Production Management Systems	10%		10%	
315	Animal Welfare, Well-Being and Protection	2%		0%	
401	Structures, Facilities, and General Purpose Farm Supplies	1%		0%	
601	Economics of Agricultural Production and Farm Management	7%		0%	
604	Marketing and Distribution Practices	7%		0%	
903	Communication, Education, and Information Delivery	2%		0%	
	Total	100%		100%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

In the late FY 2006, ASCC-CNR staff assisted the American Samoa Environmental Protection Agency (ASEPA) in a territorial wide piggery survey identifying the location, the kind of operation, the total number of pigs, in addition to determining if the piggery was in compliance with the local laws. Of the 1,000 piggeries identified, 710 of them including the CNR piggery was not in compliance due to inadequate waste management system. This has necessitated a slight change in priorities. In FY 2008, the CNR piggery will be renovated to bring it into compliance and to demonstrate to farmers, the three waste management

options that are approved by ASEPA, i.e. the portable pigpen that will accommodate up to two large pigs, the dry litter system (using a 7% sloped floor and wood chips to compost the manure) and the washdown system with solid waste separator and a drainfield (for feeding the liquid effluent to fruit tree and vegetable crops). These demonstrations will assist local pig farmers bring their operations into ASEPA compliance. CNR will assist pig farmers as they adopt any of these systems that will bring their swine operation into compliance with the local laws. This will be the first priority in the animal industry with the effort to address the inbreeding issue to follow as local operations become compliant to the local laws. A livestock specialist is being sought to spearhead the effort in addressing this issue. For the crop industry, cultivars of leaf blight resistant taro and black leaf resistant bananas will continue to be introduced in tissue culture, tested and released to the farming community to increase genetic variability. We have reestablished the vegetable seed sales to our clients. Vegetable variety demonstrations to identify cultivars that will perform well in our hot, humid and wet tropical environment will continue. For the fruit industry, the priority is to rejuvenate the program's fruit tree orchard by introducing new fruit tree varieties. For the varieties that perform well workshops will be conducted to teach farmers and interested homemakers the different methods of asexual propagation so that each home will have a diverse variety of fruit for the children to enjoy. Then parents will not have to purchase apples and oranges, peaches and pears to feed their children thereby effecting an import replacement scheme for the Territory. The program has been hampered as explained above in being able to recruit qualified personnel. Because of the steep slopes and high rainfall, soil erosion studies along with contour hedgerows and other soil conservation methods will be employed in trials and demonstrations. The demonstrations of 5 different species of planting materials have been replaced by vetiver grass (*Vetiveria zizanioides*), one of the five, which showed the greatest promise in reducing soil erosion and creating "natural" terraces. Pesticide efficacy tests of reduced risk chemicals are being conducted to complement the IPM strategies for the different economic crops. Aquaculture, a new emerging program within ASCC-CNR. The local staff will work with the University of Hawaii Sea Grant College Program Extension Agent in continuing regional aquaculture activities. Major challenges for the Territory include identifying an economical solution to procuring aqua-feeds, identifying new aquafarmers, assisting new farmers in procuring start-up funding, reducing agricultural pollution, and poor education. Because of its geographic isolation and relative small natural resource base, there has been no effort to develop an export industry. Instead, the American Samoa Marketing and Local Producers' directories will be revised to address the local marketing issue. This program has been on hold because a marketing person has not yet been identified to spearhead this effort.

2. Scope of the Program

- In-State Research
- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Programs that we will implement are what the farmers need and want to improve their operations.
 Farmers want to improve their operations and will participate in the programs made available to them.
 Farmers will invest time and money to improve their operation.
 Funding for CNR activities will remain adequate.
 Priorities will not change.
 CNR will have the qualified personnel necessary to maintain its activities.
 There will be a need for Samoan translations.

2. Ultimate goal(s) of this Program

To increase farm returns and the well-being of rural farm life, while improving sustainability and protecting the environment and human health.

To improve crop quality/crop security through pest and disease monitoring and genetic diversity.

To improve public understanding of agriculture and marine science, including their impacts on the land and sea

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2010	6.0	0.0	4.0	0.0
2011	6.0	0.0	4.0	0.0
2012	6.0	0.0	4.0	0.0
2013	6.0	0.0	4.0	0.0
2014	6.0	0.0	4.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

- Multiplication, evaluation and distribution of improved taro and banana varieties.
- Laboratory bioassay for foliar plant diseases.
- List of plant-parasitic nematodes on taro, their distribution and management.
- Vegetable variety evaluation demonstrations
- Budding, grafting and airlayering workshops for citrus and other fruit trees
- Pig project to reduce inbreeding of farmers' animal operations - buying/selling or trading of stock, boar services, artificial insemination (work with U.H. in re-starting this program).
- Tissue culture of traditional staples and increasing genetic diversity to improve crop security.
- Plant clinic diagnoses and recommendations
- Pest surveys
- Testing of reduce-risk pesticides
- Biological control studies of economically important pests
- Technical assistance with nuisance bee problems and assessment of apiculture
- Tilapia breeding program
- Evaluation of native freshwater fish and crustaceans for intensive aquaculture
- Feeds lab maintenance
- Manu'a High School aquaponics course
- Technical assistance with disease and nutrition issues for aquaculture farmers
- Technical assistance with aquaponics and integrated pig-tilapia aquaculture

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Demonstrations ● Workshop ● Other 1 (Plant Clinic Diagnoses) ● Other 2 (On-farm research plot) ● Group Discussion ● Education Class ● One-on-One Intervention 	<ul style="list-style-type: none"> ● TV Media Programs ● Other 1 (Brochures) ● Other 2 (video) ● Public Service Announcement ● Newsletters

3. Description of targeted audience

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

V(G). Planned Program (Outputs)

1. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	1100	6500	700	3000
2011	1100	6500	700	3000
2012	1100	6500	700	3000
2013	1100	6500	700	3000
2014	1100	6500	700	3000

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

Expected Patent Applications

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2010	1	0	0
2011	0	0	0
2012	1	0	0
2013	0	0	0
2014	1	0	0

V(H). State Defined Outputs

1. Output Target

- Number of research projects completed

2010 :1 2011 :1 2012 :1 2013 :1 2014 :1

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

2010 :30 2011 :30 2012 :30 2013 :30 2014 :30

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

2010 :4000 2011 :4000 2012 :5000 2013 :6000 2014 :6000

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

2010 :30 2011 :30 2012 :30 2013 :30 2014 :30

- Number of vegetable variety demonstrations completed

	2010	2011	2012	2013	2014
● Number of new fruit tree varieties introduced	5	5	:5	5	5
● Number of fruit tree propagation workshops	3	0	:5	5	5
● Number of pigs sold/traded and piglets born from AI	30	40	:40	45	45
● Number of directories published	0	0	:2	2	2
● Number of pesticide efficacy tests conducted	1	1	:1	1	1
● Number of Pesticide Applicator's Training workshops conducted	6	6	:6	6	6
● Number of biological control species introduced or augmented to control local pests.	1	0	:0	1	0
● Number of video production	1	2	:2	2	3
● Number of Tilapia released from breeding program	50	50	:50	50	50
● Number of candidate species culture trials completed	1	2	:2	2	2
● Number of tilapia feed trials completed	1	1	:1	1	1
● Number of semesters that MSC 200 was taught	2	2	:2	2	2
● Number of collaborative projects with other government agencies	10	12	:15	15	15

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of farmers growing improved varieties of taro, bananas and sweet potatoes
2	Number of farmers targeting problems according to recommendations on plant clinic form
3	Number of farmers growing improved vegetable cultivars
4	Number of people growing improved budded/grafted or airlayered fruit trees in their back yards.
5	Number of pig farmers upgrading their stock
6	Number of reduced risk pesticides recommended for use.
7	Number of pesticide applicators trained and certified
8	Number of farmers growing improved genetic stocks of tilapia
9	Number of farmers upgrading their farms to aquaponics
10	Number of farmers making their own tilapia feeds
11	Number of students enrolled in MSC 200
12	Number of students enrolled in Manu'a High School Aquaponics course
13	Number of farmers integrating their piggeries with tilapia culture
14	Number of farmers/stakeholders involved with collaborative projects

Outcome #1

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

2010 :100 **2011** : 100 **2012** : 100 **2013** :100 **2014** :100

3. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

4. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources and Biodiversity
- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants
- 601 - Economics of Agricultural Production and Farm Management

Outcome #2

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

2010 20 **2011** : 20 **2012** : 20 **2013** 20 **2014** :20

3. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

4. Associated Knowledge Area(s)

- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants

Outcome #3

1. Outcome Target

Number of farmers growing improved vegetable cultivars

2. Outcome Type : Change in Action Outcome Measure

2010 :100 **2011** : 100 **2012** : 100 **2013** :100 **2014** :100

3. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

4. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources and Biodiversity
- 205 - Plant Management Systems
- 215 - Biological Control of Pests Affecting Plants
- 601 - Economics of Agricultural Production and Farm Management

Outcome #4

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

2010 : 0 **2011 :** 0 **2012 :** 40 **2013 :** 40 **2014 :** 40

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management
- 604 - Marketing and Distribution Practices

Outcome #5

1. Outcome Target

Number of pig farmers upgrading their stock

2. Outcome Type : Change in Condition Outcome Measure

2010 : 5 **2011 :** 10 **2012 :** 10 **2013 :** 10 **2014 :** 10

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 307 - Animal Production Management Systems
- 601 - Economics of Agricultural Production and Farm Management

Outcome #6

1. Outcome Target

Number of reduced risk pesticides recommended for use.

2. Outcome Type : Change in Condition Outcome Measure

2010 : 1 **2011 :** 1 **2012 :** 1 **2013 :** 1 **2014 :** 1

3. Associated Institute Type(s)

•1862 Extension
•1862 Research

4. Associated Knowledge Area(s)

- 211 - Insects, Mites, and Other Arthropods Affecting Plants

Outcome #7

1. Outcome Target

Number of pesticide applicators trained and certified

2. Outcome Type : Change in Action Outcome Measure

2010 : 90 **2011 :** 90 **2012 :** 90 **2013 :** 90 **2014 :** 90

3. Associated Institute Type(s)

•1862 Extension
•1862 Research

4. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants

Outcome #8

1. Outcome Target

Number of farmers growing improved genetic stocks of tilapia

2. Outcome Type : Change in Action Outcome Measure

2010 3 **2011** : 5 **2012** : 5 **2013** 5 **2014** :5

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 307 - Animal Production Management Systems
- 315 - Animal Welfare, Well-Being and Protection
- 601 - Economics of Agricultural Production and Farm Management

Outcome #9

1. Outcome Target

Number of farmers upgrading their farms to aquaponics

2. Outcome Type : Change in Action Outcome Measure

2010 :1 **2011** : 1 **2012** : 2 **2013** 2 **2014** :2

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 205 - Plant Management Systems

Outcome #10

1. Outcome Target

Number of farmers making their own tilapia feeds

2. Outcome Type : Change in Action Outcome Measure

2010 2 **2011** : 2 **2012** : 2 **2013** 2 **2014** :2

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 307 - Animal Production Management Systems
- 315 - Animal Welfare, Well-Being and Protection
- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 601 - Economics of Agricultural Production and Farm Management

Outcome #11

1. Outcome Target

Number of students enrolled in MSC 200

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :15 **2011** : 15 **2012** : 20 **2013** 20 **2014** :20

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 903 - Communication, Education, and Information Delivery

Outcome #12

1. Outcome Target

Number of students enrolled in Manu'a High School Aquaponics course

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :10 **2011** : 10 **2012** : 10 **2013** :10 **2014** :10

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 903 - Communication, Education, and Information Delivery

Outcome #13

1. Outcome Target

Number of farmers integrating their piggeries with tilapia culture

2. Outcome Type : Change in Action Outcome Measure

2010 :1 **2011** : 2 **2012** : 2 **2013** 2 **2014** :2

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 307 - Animal Production Management Systems
- 315 - Animal Welfare, Well-Being and Protection
- 601 - Economics of Agricultural Production and Farm Management

Outcome #14

1. Outcome Target

Number of farmers/stakeholders involved with collaborative projects

2. Outcome Type : Change in Action Outcome Measure

2010 :500 **2011** : 500 **2012** : 750 **2013** 750 **2014** :800

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 215 - Biological Control of Pests Affecting Plants
- 601 - Economics of Agricultural Production and Farm Management
- 604 - Marketing and Distribution Practices
- 903 - Communication, Education, and Information Delivery

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

The two fish canneries close down and there is a mass migration off-island

Cyclones and tsunamis hitting American Samoa

Staff or funding changes, i.e. loss of USDA-CSREES formula funds

Introduction of exotic pests

Changes in institutional priorities and access to research and extension facilities, equipment and land.

Changes in ASCC and/or CNR policies detrimental to planned programs

Unresolved experiment station land boundary issues
 funding for UH Sea Grant personnel
 government agencies does not bear fruitful agreements

Loss of
Networking with other

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

1. Evaluation Studies Planned

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

Description

All workshops, demonstrations, field days will be evaluated for summative and formative information.

Qualitative information gathered from farm visits and interviews

Sampling data on pest infestation levels

Qualitative (banana) and quantitative (taro) evaluation of disease resistance
 sampling data from feed trials and candidate species culture trials

Quantitative

2. Data Collection Methods

- Unstructured
- Telephone
- Whole population
- Structured
- Sampling
- Tests
- On-Site

Description

V(A). Planned Program (Summary)

Program #2

1. Name of the Planned Program

Ecosystem

2. Brief summary about Planned Program

We plan to continue monitoring streams for coliform and E. coli which lie outside the interest of the ASEPA and to share our data with that agency. We hope to assist villagers and landowners in identifying sources of contamination through GIS mapping of piggeries and advise village leaders and ASEPA on either relocating point-sources of contamination or mitigating their impact on streams through approved sewage treatment systems. We plan to provide pertinent information to villagers interested in small-scale aquaculture projects utilizing indigenous species, using streams as a source of clean water. We plan to continue to be strong advocates for promoting watershed stewardship practices, especially among schoolchildren, by making the public aware of the rich inheritance of stream animals that sustained their ancestors and that may offer commercial opportunities for the present and future generations.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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	60%		0%	
133	Pollution Prevention and Mitigation	40%		0%	
	Total	100%		0%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The integrity of American Samoa’s streams continues to be an important issue with the public and several federal and local government agencies. The abuse of streams and drainage channels as receptacles of household trash and piggery effluent have led to flooding caused by clogged conduits and bridges, and a handful of deaths attributed to the water-borne bacterial disease, leptospirosis, found in the urine of infected pigs, dogs, and rats. The AS Environmental Protection Agency monitors the mouth of several streams and adjacent beaches for coliform, each month notifying the public which beaches have unacceptably high bacterial counts. ASEPA also monitors reservoirs for outlying villages dependent upon streams for their potable water. Again, several times each year these villagers are advised to boil their drinking water owing to excessive bacterial counts. The Natural Resources Conservation Service works with many pig farmers through its EQIP program to mitigate the pig waste load in streams, diverting it, instead, towards improving on-site soil fertility. Recently, the AS Dept. of Commerce established an Ocean Resource Management Council, headed by the Lt. Governor, that focuses on stream waste management and control. Our recent studies of stream water chemistry, flora, fauna, and currently coliform and E. coli contamination, have made us a leading agency for advising policy makers on watershed resources and a prime conduit of water quality information for the public.

2. Scope of the Program

- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

ASEPA will continue efforts to enforce the law requiring piggeries to be set back from streams and human dwellings by 50 feet or more.

Village mayors will prevent residents from using streams for the disposal of household trash, motor oil, and scrap metal.

The likelihood of contracting leptospirosis and other infectious diseases will not be a serious deterrent to using streams as a source of water for aquaculture.

Samoan Translation of materials will be needed.

2. Ultimate goal(s) of this Program

To mitigate stream water pollution and contamination in order to reduce the threat of infectious diseases, prevent flooding, and expand economic opportunities in the wise use of clean water.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2010	1.0	0.0	2.5	0.0
2011	2.0	0.0	3.0	0.0
2012	2.0	0.0	3.0	0.0
2013	2.0	0.0	3.0	0.0
2014	2.0	0.0	3.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Group Discussion ● Workshop ● Demonstrations ● Education Class ● One-on-One Intervention 	<ul style="list-style-type: none"> ● Public Service Announcement ● Other 1 (video production) ● TV Media Programs ● Newsletters ● Web sites

3. Description of targeted audience

Pig farmers, government agencies, volunteer groups, schoolchildren.

V(G). Planned Program (Outputs)

1. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	50	100	50	2000
2011	50	100	50	2000
2012	50	100	50	2000
2013	50	100	50	2000
2014	50	100	50	2000

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

Expected Patent Applications

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2010	0	0	0
2011	0	0	0
2012	0	0	0
2013	0	0	0
2014	0	0	0

V(H). State Defined Outputs

1. Output Target

- Percent of streams sampled

2010 80 2011 90 2012 :90 2013 90 2014 90

- Percent of schools visited

2010 30 2011 40 2012 :50 2013 50 2014 60

V(I). State Defined Outcome

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

Outcome #1

1. Outcome Target

Number of streams with reduced loads of coliform bacteria.

2. Outcome Type : Change in Condition Outcome Measure

2010 :10 **2011** : 15 **2012** : 20 **2013** 20 **2014** :20

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation

Outcome #2

1. Outcome Target

Number of streams with high biotic integrity.

2. Outcome Type : Change in Condition Outcome Measure

2010 :10 **2011** : 15 **2012** : 20 **2013** 20 **2014** :20

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Competing Public priorities

Description

Feral pigs may continue to pollute streams even after piggeries which discharge effluent directly into streams are removed.

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

1. Evaluation Studies Planned

- Time series (multiple points before and after program)

Description

Monthly monitoring of stream mouths for coliform and E. coli contamination will allow us to determine whether or not bacterial loads are reduced.

2. Data Collection Methods

- Sampling

Description

Collect 100 mL water samples each month and determine most probable number (MPN) of bacteria per 100 mL using IDEXX brand Colisure and Enterolert enzyme substrate tests.

V(A). Planned Program (Summary)**Program #3****1. Name of the Planned Program**

Human Health and Well-being

2. Brief summary about Planned Program

Projects under the Human Health and Well-being planned program are tailored to address obesity and overweight, poor nutrition, lack of physical activity, food safety and food security issues, vector control against lymphatic filariasis, leptospirosis and other diseases. F4HN professional and paraprofessional staff will use an integrated approach to provide nutrition education program to youth, homemakers, community residents, and other traditional and nontraditional clients. The Agriculture Extension Service staff will continue to emphasize the production of local vegetables in their effort to help F4HN clients begin gardening projects. Agriculture Extension will continue their efforts in disseminating the disease resistant varieties of taro and bananas to help address the food security issue. Once a tropical fruit person is on board the emphasis will include propagating fruit trees for the back yard. Improved fruit trees stocks and high nutritional value citrus and acai palms will be imported and propagated for distribution to the public. F4HN staff will conduct workshops, presentations, and demonstrations in the villages, schools, churches, government agencies, and community groups on developing and testing recipes using locally grown produce. Recipes will be given out to the participants with the rationale that if more fresh vegetables are readily available, more will be used in home meals. More vegetables cooked at home translate to more vegetables eaten and improved health of families. The F4HN personnel will continue to distribute nutrition educational handouts such as the Pacific Food Guide Pyramid, newly published English/Samoan recipe book, calendars, 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, and food safety issues will be implemented. Sports, aerobics, and other exercise programs will be implemented in the schools, work place, and village settings as alternative physical activity programs. Furthermore, F4HN staff will conduct 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 will be provided to school age children and adults on the correct way to wash hands to prevent food borne illness. When a nutritionist is hired, the partnering with local, regional, and national agencies, organizations, and institutions in planning, developing, and implementing programs to address obesity and overweight, poor nutrition and lack of physical activity can be addressed. ASCC CNR will continue to join forces with the local departments of public health, EPA, agriculture, and USDA NRCS in developing a media campaign focused on what people can do to safeguard their families from contracting leptospirosis. When an animal extension person is on board, work will continue on the leptospirosis issue. Because of our success in bringing programs and information to the villages, the local office of homeland security has asked ASCC CNR to join with them in developing an overall avian influenza strategy for the Territory. ASCC CNR Entomologist and staff will participate in collaborative research on disease-carrying mosquitoes to strengthen the scientific basis for vector control efforts against endemic filariasis and potential exotic threats, including dengue, Ross River virus, West Nile virus, and chikungunya virus.

How successful the effort in addressing the issues in this planned program will be, is dependent on the recruitment of a nutritionist, a tropical fruit person and a livestock person. How long term the impacts will be will also be dependent on the capacity building efforts for the local staff, i.e. using Smith Lever funds to send staff off-island to Hawaii or the US mainland for Bachelor's, Masters and PhD degrees. As explained in the overview, American Samoa has had problems hiring and retaining qualified professionals.

3. Program existence : Mature (More than five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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 (Situation and Scope)

1. Situation and priorities

Obesity and overweight, poor nutrition and lack of exercise, food safety issues, filariasis, and leptospirosis are major health problems in American Samoa (AS). Food security, also, is of great concern as 95 - 97% of all foods are imported. This will be a new focus in the 2009 - 2014 POW. In 2003, the World Health Organization in its publication "Diet, Food Supply and Obesity in the Pacific" found that 83.6% of the males and 87.6% of the females in AS had a body mass index greater than 25. In a similar yet to be published study in 2005, Davison et.al. found in a stratified random sample of 380 AS adolescents aged 11 to 18 years old that 32% and 34% were overweight and obese respectively. Moreover, a survey of 424 children between the ages of 1-10 years old in AS conducted in 2003 by a team from the University of Hawaii and Uniformed Services University, Maryland reported that: 11% of the 1-4 years old were too heavy for their height, 30% of the 5-10 year old children were overweight, and 15% were at risk of being overweight. The survey also found that 9% had blood sugar levels higher than recommended and more than 55% had blood cholesterol levels higher than recommended. The diets in AS are high in meats, starches, sugars, and fats and tend to be very low in vegetables, fruits and dairy products. Food safety related issues such as improper food handling and storage contributed to 1,299 cases of unspecified diarrhea reported in 1994. Furthermore, 14 cases of salmonellosis and six cases of food poisoning reported by LBJ (2004) could be attributed to improper food handling. Many cases of food borne illness are self treated and are not reported. The new focus in food security is being addressed by making available staple food planting materials to anyone who has available land and is interested in cultivating them. Disease resistant cultivars of taro and bananas in addition to nutrient dense traditional crops including Soa'a, and Sulasula bananas and sweet potatoes (yams) are being disseminated.

A 1999 survey by PacELF found 17% of residents had been infected with the parasite that causes lymphatic filariasis. Over 3,000 cases of dengue occurred in the territory during a 3-month period of the most recent dengue outbreak in 2001, and about 44% of the territory's people were infected in the 1979-1980 regional outbreak of Ross River virus. These diseases can be vectored by mosquito species occurring in AS. Source reduction—the elimination of water-holding containers that serve as breeding sites for the vectors—is recommended as the best way to control these vectors. CNR research seeks to help improve mosquito control efforts in the territory by collaboratively working to answer key questions about the efficacy and feasibility of source reduction. Therefore, programs addressing obesity and overweight as major health problems; poor nutrition and lack of physical activity as unhealthy behaviors; food safety issues; filariasis and other mosquito-borne disease threats; and leptospirosis are top priority issues for the next five years. Because of the additional hatch funding in FY 07, American Samoa is planning to design and build a new facility.

2. Scope of the Program

- In-State Research
- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Funding and staffing will continue.
 Community coalitions and agency collaborations and partnerships will continue.
 Clients will learn and change behaviors and lifestyles.
 Obesity and overweight can be prevented and managed.
 If more vegetables are easily available in home gardens, more will be cooked, more eaten with better health resulting.
 With more practical information on leptospirosis given out to the public by the various agencies, because we all "sing the same song" and no confusing, conflicting information is disseminated, people will implement what is recommended.
 Priorities will not change.
 Mosquitoes can be controlled
 Samoan translation of materials will be needed
 Need to seek CSREES approval of new facility to house health program

2. Ultimate goal(s) of this Program

To live healthier lifestyles.
 To have a backyard garden in every household
 To have a variety of fruit trees grown in every backyard.
 To provide knowledge base for effective mosquito vector control.
 To assure that local food production is encouraged to offset the down turn in the global economy.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2010	2.0	0.0	2.5	0.0
2011	2.0	0.0	3.0	0.0
2012	2.0	0.0	3.0	0.0
2013	2.0	0.0	3.0	0.0
2014	2.0	0.0	3.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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.
 Research biology and control of disease-carrying mosquitoes.
 Communicate results via research reports, brochures, seminars, TV, and individual contacts with other agencies

Develop designs to construct new facility for health programs.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Group Discussion ● One-on-One Intervention ● Workshop ● Education Class ● Demonstrations 	<ul style="list-style-type: none"> ● Other 1 (video produced program) ● Newsletters ● TV Media Programs

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	1500	7000	1500	8000
2011	1500	7000	1500	8000
2012	1500	7000	1500	8000
2013	2000	7000	1500	8000
2014	2000	7000	1500	8000

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

Expected Patent Applications

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2010	0	0	0
2011	0	0	0
2012	0	0	0
2013	0	0	0
2014	0	0	0

V(H). State Defined Outputs

1. Output Target

● Number of research projects completed				
	2010 :1	2011 0	2012 :1	2013 0
				2014 0
● Number of Nutrition educational workshops				
	2010 :50	2011 50	2012 :50	2013 50
				2014 50
● Number of vegetable gardening workshops				
	2010 5	2011 5	2012 :5	2013 5
				2014 5
● Number of vegetable gardens established				
	2010 :50	2011 50	2012 :50	2013 50
				2014 50
● Number of different recipes using local produce given out				
	2010 :20	2011 20	2012 :20	2013 20
				2014 20
● Number of food safety workshops conducted				
	2010 :30	2011 30	2012 :30	2013 30
				2014 30
● Number of publications/brochures/posters/calendars				
	2010 5	2011 5	2012 :5	2013 5
				2014 5
● Number of exercise and physical activity programs completed				
	2010 :40	2011 40	2012 :40	2013 40
				2014 40
● Number of nutrient-dense traditional crop varieties disseminated				
	2010 :12	2011 12	2012 :12	2013 12
				2014 12
● Number of collaborative projects with other agencies/organizations				
	2010 3	2011 3	2012 :3	2013 4
				2014 4

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of program participants that acquired knowledge and developed skills in nutrition, vegetable gardening, nutritious meal preparation, food safety and health and physical activities
2	Number of people eating more vegetables as a result of the vegetable gardening project
3	Number of program participants that prepared and consumed more economical and nutritious meals.
4	Number of program clients that adopted balance diets utilizing local produce and healthy foods.
5	Number of program clients who adopted safer food handling, storage, and preparation practices
6	Number of program clients that increased participation in physical activities and exercises
7	Number of program clients that lost weight and improved self-esteem
8	Number of program clients that lived healthier lifestyles
9	Number of clients involved in collaborative projects

Outcome #1

1. Outcome Target

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. Outcome Type : Change in Action Outcome Measure

2010 :1000 **2011 :** 1000 **2012 :** 1000 **2013 :**1000 **2014 :**1000

3. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

4. Associated Knowledge Area(s)

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

Outcome #2

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

2010 :300 **2011 :** 300 **2012 :** 400 **2013 :**400 **2014 :**400

3. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

Outcome #3

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :1000 **2011 :** 1000 **2012 :** 1000 **2013 :**1000 **2014 :**1000

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

Outcome #4

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

2010 :1000 **2011 :** 1000 **2012 :** 1000 **2013 :**1000 **2014 :**1000

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

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

Outcome #5

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

2010 :1000 **2011 :** 1000 **2012 :** 1000 **2013 :**1000 **2014 :**1000

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

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

Outcome #6

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

2010 :1000 **2011 :** 1000 **2012 :** 1000 **2013 :**1000 **2014 :**1000

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

Outcome #7

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

2010 :400 **2011 :** 500 **2012 :** 500 **2013 :** 500 **2014 :**500

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

Outcome #8

1. Outcome Target

Number of program clients that lived healthier lifestyles

2. Outcome Type : Change in Condition Outcome Measure

2010 :1000 **2011 :** 1000 **2012 :** 1000 **2013 :**1000 **2014 :**0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

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

Outcome #9

1. Outcome Target

Number of clients involved in collaborative projects

2. Outcome Type : Change in Action Outcome Measure

2010 :300 **2011 :** 300 **2012 :** 400 **2013 :**400 **2014 :**500

3. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 721 - Insects and Other Pests Affecting Humans
- 724 - Healthy Lifestyle

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Natural disasters: hurricanes, cyclones, tsunamis, flooding and others
 Changes in funding (loss of formula funds)
 Changes in staffing (loss of staff)
 Changes in institutional priorities and access to facilities
 Changes in collaborators' abilities or willingness to continue as partners
 Clients' family and church obligations

Health
Politics
Cultural Acceptance
Exotic pests and diseases

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

1. Evaluation Studies Planned

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

Description

{NO DATA ENTERED}

2. Data Collection Methods

- Sampling
- Observation
- Telephone
- Structured

Description

{NO DATA ENTERED}

V(A). Planned Program (Summary)

Program #4

1. Name of the Planned Program

Families, Youth and Communities

2. Brief summary about Planned Program

4-H will address the youth-at-risk issues with programs in 4-H clubs and church youth organizations in the community, clubs in the schools and summer youth programs. Using and modifying the educational materials developed for US mainland youth, these lessons will be brought to the territorial youth on issues including but not limited to cigarette, alcohol, and drug use, teen pregnancy, suicide and high school dropout. Other topics will include parenting, entrepreneurship, sewing, arts and crafts, vegetable gardening and marketing projects. These lessons will be taught in workshops, in group discussions, on-to-one interventions, demonstrations, 4-H fairs, camps and summer programs and will reach youth and adults including parents, village and church women, farmers along with business people. TV and newsletters and brochures will help to spread the word. These direct and indirect methods will be in both English and Samoan.

It is hoped that with youth involvement in these programs, they will acquire knowledge and develop entrepreneurial and job readiness skills, obtain knowledge to start their own home-based businesses to become self-reliant, productive and contributing members of society.

Because of personnel attrition, there is only one 4-H agent. Other agents need to be hired. Finding local qualified staff has been difficult. How great the outcomes and impacts will be is dependent on the ability to hire and retain qualified personnel. Program funds need to be made available for local staff to continue their studies to obtain Bachelor's, Masters and PhD degrees in counseling, human development, sociology and their related fields.

3. Program existence : Mature (More than five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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%		0%	
802	Human Development and Family Well-Being	10%		0%	
803	Sociological and Technological Change Affecting Individuals, Families and Communities	10%		0%	
806	Youth Development	40%		0%	
	Total	100%		0%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

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 (American Samoa 2000 Census). Additionally, 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 (Population Census 2000), people need to manage family resources wisely and take advantage of economic opportunities to maintain and increase their quality of life. 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. 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. The Samoan youth are expected to serve their elders with respect and obedience with no back-talk. However, youth who grew up in Hawaii and the mainland United States have difficulties in accommodating their American lifestyles and expectations of parents and other family members. 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. According the Population Census 2000 the median age was 21. 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.

2. Scope of the Program

- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

- Funding and staffing will continue.
- Community coalitions and agency collaborations and partnerships will continue.
- Clients will learn and change behaviors, attitudes, practices, and lifestyles.
- Clients will take advantage of economic and educational opportunities.
- Youth at risk issues can be prevented and treated.
- Priorities will not change.
- Volunteers will assist with program implementation
- Materials will need to be translated into Samoan

2. Ultimate goal(s) of this Program

- To become self-reliant, productive, and contributing members of the society
- To acquire knowledge and develop entrepreneurial and job readiness skills
- To become employable in the private and public sectors
- To start home based and small businesses
- To generate supplemental revenues
- To improve parent and children relationship
- To develop a sense of pride and appreciation of the Samoan culture
- To makesuccessful transition from youth at risk behaviors to clean, healthy, and esteemed lifestyles

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2010	2.0	0.0	1.0	0.0
2011	2.0	0.0	2.0	0.0
2012	2.0	0.0	2.0	0.0
2013	2.0	0.0	2.0	0.0
2014	2.0	0.0	2.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

- 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. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Demonstrations ● Other 1 (Competitions) ● Other 2 (Summer programs) ● Workshop ● One-on-One Intervention ● Group Discussion 	<ul style="list-style-type: none"> ● TV Media Programs ● Other 2 (videos) ● Other 1 (Brochures/Handouts) ● Newsletters

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	500	1000	700	1500
2011	500	1000	700	1500
2012	500	1000	1000	1700
2013	500	1000	1000	2000
2014	500	1000	1000	2000

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

Expected Patent Applications

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2010	0	0	0
2011	0	0	0
2012	0	0	0
2013	0	0	0
2014	0	0	0

V(H). State Defined Outputs

1. Output Target

- Number of entrepreneurial and job readiness workshops

2010 :20 2011 :20 2012 :20 2013 :20 2014 :20

- Number of apprenticeship and career shadowing programs

2010 :5 2011 :5 2012 :5 2013 :5 2014 :5

- Number of sewing workshops and demonstrations

2010 :30 2011 :30 2012 :30 2013 :30 2014 :30

- Number of arts and crafts workshops and demonstrations

2010 :20 2011 :20 2012 :25 2013 :25 2014 :25

- Number of vegetable gardening and marketing projects

2010 :10 2011 :10 2012 :10 2013 :10 2014 :10

- Number of Samoan cultural workshops and demonstrations

2010 :20 2011 :20 2012 :25 2013 :25 2014 :25

- Number of vegetable gardens established

2010 :50 2011 :50 2012 :50 2013 :50 2014 :50

- Number of parenting and character counts workshops

2010 :20 2011 :20 2012 :20 2013 :20 2014 :20

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

2010 :3 2011 :3 2012 :3 2013 :3 2014 :3

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

2010 :20 2011 :20 2012 :20 2013 :20 2014 :20

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

2010 :10 2011 :10 2012 :10 2013 :10 2014 :10

- Number of publications/brochures/posters/calendars

2010	5	2011	5	2012	.5	2013	5	2014	5
------	---	------	---	------	----	------	---	------	---

- Number of videos

2010	.1	2011	2	2012	.2	2013	2	2014	2
------	----	------	---	------	----	------	---	------	---

V(I). State Defined Outcome

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 Target

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

2. Outcome Type : Change in Condition Outcome Measure

2010 :450 **2011** : 500 **2012** : 550 **2013** 550 **2014** :550

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

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

Outcome #2

1. Outcome Target

Number of participants generating revenues from resource management activities

2. Outcome Type : Change in Action Outcome Measure

2010 :100 **2011** : 100 **2012** : 100 **2013** :100 **2014** :100

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 806 - Youth Development

Outcome #3

1. Outcome Target

Number of participants starting home-based and small businesses

2. Outcome Type : Change in Action Outcome Measure

2010 5 **2011** : 5 **2012** : 6 **2013** 6 **2014** :6

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 806 - Youth Development

Outcome #4

1. Outcome Target

Number of participants securing employment in the private and public sectors

2. Outcome Type : Change in Condition Outcome Measure

2010 :5 **2011** : 5 **2012** : 6 **2013** :10 **2014** :10

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 806 - Youth Development

Outcome #5

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

2010 :100 **2011** : 100 **2012** : 100 **2013** :100 **2014** :100

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

Outcome #6

1. Outcome Target

Number of program participants that improved parent and children relationship

2. Outcome Type : Change in Condition Outcome Measure

2010 :100 **2011** : 100 **2012** : 100 **2013** :100 **2014** :100

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being
- 806 - Youth Development

Outcome #7

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

2010 :350 **2011** : 350 **2012** : 350 **2013** :350 **2014** :350

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 806 - Youth Development

Outcome #8

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

2010 200 **2011** : 200 **2012** : 200 **2013** 200 **2014** :0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

Outcome #9

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

2010 50 **2011** : 100 **2012** : 150 **2013** :150 **2014** :150

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Other (culture)
- Public Policy changes
- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Government Regulations
- Competing Public priorities

Description

Natural disasters: hurricanes, cyclones, tsunamis, flooding and others
 Changes in funding (loss of formula funds)
 Changes in staffing (loss of staff)
 Changes in institutional priorities and access to facilities
 Changes in collaborators' abilities or willingness to continue as partners
 Clients' family and church obligations

Health
Politics
Cultural Acceptance

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

1. Evaluation Studies Planned

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

Description

Pre/Post tests
Summative and formative evaluations
Accomplishment reports
Enrollment forms
Visitation reports
Focus group sessions
Annual surveys by ASCC CNR CES
Qualitative information gathered from home and village visits and interviews
Business records and licenses
Employment records

2. Data Collection Methods

- Observation
- Sampling
- Whole population
- Structured
- Tests

Description

{NO DATA ENTERED}