INTRODUCTION

Overview of the Plan of Work

American Samoa Community College (ASCC) Division of Agriculture, Human and Natural Resources is submitting a joint Extension and Research Plan of Work. This plan will focus on the Hatch and Smith Lever funds that the college has been receiving for several years as well as the McIntire Stennis funds that the college is eligible to receive in FY 00. The Smith Lever 3-d funds will be covered in their separate reports.

ASCC has 1862 land-grant status. However as a territory, the multistate and integrated research and extension activities follows the guidelines for the territories. Due to the geographic isolation of American Samoa, there is no multistate activity in the formula funds. However, there are joint research and extension projects involving American Samoa and the American Pacific through ADAP (Agriculture Development in the American Pacific, which received funding through USDA) projects and a CYFAR (Children, Youth and Families at Risk) project. ASCC does submit their reports for these grants to the project principal investigator.

Overview of American Samoa

American Samoa is an unincorporated, unorganized territory of the United States of America. (This language reflects the legal description.) It is the only American soil south of the equator. It is comprised of five mountainous, volcanic island and two coral atolls in the south Pacific Ocean between 11 degrees south (Swains Island) and 14 degrees south and 171 degrees west (Tutuila and Aunu'u islands) to 168 degrees west longitude (Rose Atoll). The three islands of the Manua group (Ofu, Olosega, and Ta'u) lie between Tutuila and Rose Atoll. 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 (assuming EST).

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 Manu'a group comprises 22 square miles with Rose and Swain Atolls being about 1 square mile each. Two-thirds of the five volcanic islands have slopes greater than 30% which is covered by paleotropical rain forest and surrounded by the fringing coral reef extending in some areas to 2,000 feet off shore. The climate is hot and humid with over 200 inches of rain annually. 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.

The National Park of American Samoa, America's newest and least known park, is a wild, scenic, rainforest, and coral reef area that is spread out across the three islands of Tutuila, Ofu, and Ta'u. These three units of the park total nearly 9,000 acres with 1,000 of these acres being offshore water extending to the edge of the coral reefs. Unlike more traditional national parks where the federal government owns and manages the land, all lands in the National Park of American Samoa are leased from nine villages and the American Samoan government. Traditional, subsistence farming is allowed within the park. The park consists of superb native rainforest extending from the ocean's edge up to the mountaintops in the misty cloud forests.

There are miles of some of the most spectacular shoreline on earth. The long white sand beaches with overhanging palm trees contain sea cliffs and secluded coves overlooking the tropical blue ocean out to the edge of the reefs. The national park also provides important habitat for two species of flying foxed (fruit bats), which act as major pollinators of rainforest plants.

The population has almost doubled in the last 30 years to almost 60,000 people. The population density in 1995 was 736 per square mile. The population is 89% Samoan with the median age being 21. The minimum wage set in October 1998, ranges from $2.57 for miscellaneous activities to $3.87 for shipping and transportation. In 1996, 13,949 people were employed with over 5,000 being employed by the Government of American Samoa and 4,542 by the two canneries. The unemployment rate is high at 17.2%.

The English language is spoken by most people with Samoan being the first language of the vast majority of the population and widely spoken. The Samoan culture is still intact in spite of foreign influence. The society is communal and organized into extended family units (*aiga*) headed by a chief (*matai*). Approximately 80% of the land are communal land. The use of this land is determined by the *matai* which extends to where houses and farms are placed as well as who has access to them.

Goal 1: An agricultural system that is highly competitive in the global economy. Through research and education, empower the agricultural system with knowledge that will improve competitiveness in domestic production, processing, and marketing.

EXTENSION

A. Statement of the Issue

Given the landmass of 76 square miles of which two thirds have slopes greater than 30% and a population of 60,000 people, it is doubtful that American Samoa will ever be highly competitive in a global economy. However, we can reduce our dependence on imported foods. Many of the traditional crops of taro, giant taro, and green bananas are imported from (Western) Samoa. The importation of such staple foods continues to expand to other Pacific islands (Niue, Tonga, Fiji). Tomatoes, broccoli, cauliflower, leafy greens, and beans are imported from the United States. The 1996 statistics compiled by the American Samoa Department of Commerce has revealed that green bananas and taro accounted for $283,639 of food imports while fresh vegetables represented $691,177. These figures indicate a gigantic demand for these food items. All of the locally grown produce is subject to plant pests and diseases. In addition, vegetables that grow well in the US often do not grow as well in this hot and humid climate.

After the farmers grow their crops, marketing is often an issue. Outlets are not stable, farmers cannot always meet the larger clients' demand (tuna fishing fleets, hotels, restaurants, and school lunch) and farmers do not always feel that produce should meet a certain minimum standard.

Agriculture has been very much part of Samoan society. Crops are harvested on special occasions and play a very important role in supplying staples to all households. Farming basically reflects a form of agroforestry, in addition to the production of tropical vegetables. Many local farmers have not advanced with increased yields and reduced inputs per unit for a variety of reasons. The major factors are small land area, resistance to new ideas and inadequate capital. Extension education is a promising approach to provide guidance and awareness to the farming community. Many farmers learn and adopt management skills and marketing knowledge through non-formal instruction. Efforts by extension to increase agricultural production have been supported by an overwhelming number of farmers who contributed to this attempt. With the population increases posing added pressures on land use, agriculture will continue to move up the mountain, utilizing friendly and sustainable methods on steep slopes.

B. Performance Goal

- To annually increase domestic production of both traditional crops and vegetables and to identify market outlets for produce sale.

q Key program Component

- Cooperative Extension Service (CES) efforts will focus on stakeholder inputs and on-going farmer contact activities in collaboration with internal and external affiliations as stated in goals 3,4, and 5. Programs will be designed to minimize any clashes with cultural values to insure full execution to meet expected goals. CES will put more emphasis on the production and management in which marketing is strongly stressed. Following is a synopsis of proposed and on-going involvement's for the next five years.

Outreach Programs

1. Extension Education
   a. Pesticide Applicator Training (PAT)
   b. Swine Production/Management Training
   c. Traditional Crop Production/Management Training
   d. Vegetable Production/Management Training
   e. Marketing/Record Keeping Training

2. Information Dissemination
   a. Farm Visitation
   b. School Career Days Presentation
   c. Television Agricultural Programs/News Spots
   d. Production and Distribution of Factsheets/Brochures/Pamphlets
   e. News Paper Articles (Land Grant Column)
   f. Research Station and On-farm (village) Demonstrations

3. Community Service/Projects and Partnerships
   a. Community Vegetable Garden Plot
   b. Village Swine Breeding Program
   c. Seedling Production
   d. Taro, Giant Taro & Banana Multiplication for Planting Materials
   e. Public Health Diabetic Group Vegetable Gardening
   f. Elementary and High School Vegetable Production
   g. Special Education Vegetable Gardening
   h. Banana Collection Demonstration Project
   i. Tool/Equipment loan program
   j. Farm Service Agency networking
   k. Chamber of Commerce Small Business/Marketing assistance
   l. Assistance to grant recipients of Association for Native Americans (ANA)
   m. Star Kist Samoa Health and Safety Fair
   n. Farmers' Cooperatives Monthly Meetings
   o. School Science Fair projects
   p. American Samoa Food and Farm Fair
   q. Veterans Financial Assistance Program for the Disabled

r. Internal and External Linkages

- Cooperative Extension Service works cooperatively with the Agriculture Experiment Station to provide technical assistance to the farming community on both internal and external collaborations with other institutions.

q Target Audiences

- Subsistence and Commercial farmers of American Samoa. CES will also focus on these groups as well; private and commercial pesticide applicators, diabetic and disabled groups, Association for Native Americans' groups, Farmers' cooperatives, schools, Home economic and EFNEP groups, 4-H clubs and church groups.

q Evaluation Framework

- Evaluation of each proposed program will depend upon the nature of activities. Quarterly accomplishment reports will be able to reflect changes in each program from time to time. However, emphasis will be given to the following methodologies for data collection.

    a. Through farm visitations, the agents will document the actual count of farmers adopting new practices or technology.
    b. Participation on non-formal education will be based on actual count.
    c. Television programs and materials will be based on actual count.
    Actual Feedback's from farmers on the impacts of materials on their production and management will be recorded.
    d. Farm visitation reports will document actual count of new farmers; and existing ones who continue to expand their production with good management.
    e. Actual count of non-government organizations that join in an effort to promote the production of crops and vegetables will be recorded. Actual count of individual members in a group will also be considered.
    f. A survey to find out the number of actual farmers who receive financial assistance.
    g. A survey through farm visitation will be conducted to find out those who actually keep good records of their production.
    h. Actual count of new markets will be recorded.
    i. Actual count of new processing businesses as a result of expanding markets will be recorded.

j. Output Indicators

Total number of farmers completing all non-formal education programs and presentations, and adopting new practice or technology on an annual basis.

Year	# completing Non-formal educ. Prog		# adopting practice or technology	
Baseline	Target	Actual	Target	Actual
1999	120		30	
2000	150		45	
2001	180		60	
2002	190		72	
2003	250		90	

Indicator 2

Total number of materials (newspaper articles, fact sheets/phamplets), and television programs produced on topics related to improving productivity and global competitiveness of the US production system.

Year	# of materials	
Baseline	Target	Actual
1999	20	
2000	24	
2001	29	
2002	35	
2003	40	

Indicator 3

Total number of farmers loaned equipment/tools and buying vegetable cultivars and fertilizers and pesticides from local businesses, Department of Agriculture and us (AHNR).

Year	# of farmers (tools)		# of farmers buying seeds/seedlings	
Baseline	Target	Actual	Target	Actual
1999	12		25	
2000	20		40	
2001	25		65	
2002	32		80	
2003	40		90	

Indicator 4

Total number of farmers increasing production of both traditional crops and vegetable as a result of increase market outlets.

Year	# of farmers	
Baseline	**Target**	**Actual**
1999	4	
2000	7	
2001	10	
2002	13	
2003	15	

Indicator 5

Total number of organizations/groups joined in an effort to improve health (nutrition) and subsidize income, and to sell excess to local markets.

Year	# of groups	
Baseline	**Target**	**Actual**
1999	2	
2000	3	
2001	4	
2002	5	
2003	7	

Indicator 6

Total number of farmers receiving financial assistance to develop existing enterprise and to increase production.

Year	# of financial recipients	
Baseline	**Target**	**Actual**
1999	3	
2000	5	
2001	7	
2002	8	
2003	10	

- It is anticipated that more subsistence farmers will increase their production through acquiring knowledge and skills on improved production methods and better management as a result of non-formal education.
- Most farmers will be enriched with the information on improving production through fact sheets, pamphlets, newspaper articles, office visitations, farm visitations, farmers' coop meetings, television programs and other annual events.
- Farmers who cannot afford tools and equipment will have the opportunity to rent or borrow these materials. An increase in seeds and seedlings (planting materials) sale is expected to move at a very fast rate.
- As a result of increase market outlets, farmers' attitude towards increase production will be enhanced in a more positive way.
- More usage of crops and vegetables in family meals thus saving money on weekly shopping. The group efforts will result in utilizing existing markets.
- Financial assistance may lead farmers to commercialization and even show more impacts as more farmers begin to develop small scale processing businesses to increase market outlets.

q Program Duration

- Long term (over five years)

q Allocated Resources

- Approximately 10 FTE and 30% of the budget would support achieving this goal. It is anticipated that American Samoa will receive a waiver from having to match federal funds for FY 00. Therefore, the expenditures of non-formula funds are not addressed.

- Human resources include researchers, extension agents, research assistants, extension assistants directly involved in programming; and the administrative, clerical, and farm staff who offer support to the those persons and projects. The primary responsibility for this goal is that of the agriculture research and the agriculture extension units.

- Fiscal resource expenditures include payroll for research, extension, and supporting staff; and materials, supplies, and equipment to support research and extension projects and programs in producing and marketing local produce. In addition, funds will be spent on both local and off-island training to support the staff in carrying out their programs.

Goal 2: A safe and secure food and fiber system. To ensure an adequate food and fiber supply and food safety through improved science based detection, surveillance, prevention, and education.

EXTENSION

The programming for this goal in American Samoa is covered under the 3-d Food Safety and Quality (FSQ) initiative and EFNEP (Expanded Food and Nutrition Education Program). Therefore, this goal will not be addressed. The FSQ and the EFNEP reports will include proposed activities and accomplishments for food safety education. At this point in time, there are no researchers having responsibilities relating to food safety and food security.

The traditional culture in American Samoa is still intact. In this communal society, people share food with others. There are federal food programs such as WIC (Women, Infants, and Children) and food stamps (for low-income, blind, disabled, and elderly,) which benefits about 7,500 individuals. Normally, the food benefits are shared within family groups. Almost everyone has access to food, though individuals may not be well nourished.

Food safety standards are not the same in American Samoa as in the states. Food safety education through EFNEP and FSQ is making good progress, but there are problems that education cannot totally change. The Department of Public Health is responsible for enforcing food safety laws in the territory and certifying food handlers. There is no food safety education required to receive a food handler's card. Not all food safety regulations are enforced. It is common to find foods in the grocery store past the pull dates. Often, frozen foods are stored in the aisles. Locally made egg and tuna sandwiches, hot dogs and hamburgers are displayed on the grocery store counter. When preparing meats for a large crowd of people, it is common practice to thaw the frozen meat (most of the meat is imported and very little of it is fresh) in large plastic containers with marinade overnight for cooking the next day. After the meat is cooked, it is plated and sits at room temperature until served.

The incident of food borne illnesses is compiled by the LBJ Tropical Medical Center. Other than LBJ, there is only one after-hours private clinic staffed by LBJ doctors. Given the way food is handles, it is very likely that the 1,299 cases of unspecified diarrhea reported in 1994 (latest records available) were due to improper food handling. Certainly, the 14 cases of salmonellosis and six cases of food poisoning reported by LBJ can be attributed to improper food handling. There are many cases of food borne illness that are self treated and therefore are not accounted for by the hospital with the identified cases are the tip of the iceberg.

While EFNEP provides food safety education for homemakers and youth, the FSQ program reaches additional adults and youth as well as day care providers, school food service personnel, and restaurant workers. FSQ has achieved good working relationships with the restaurants in spite of the fact that food safety education is not required for food handling certification. The restaurants normally allow instruction for their employees on "company time".

Goal 3: A healthy, well-nourished population. Through research and education on nutrition and development of more nutritious foods, enable people to make health promoting choices.

EXTENSION

A. Statement of the Issue

Health is the well being of the nation and good nutrition is an essential component of health. Food and nutrition problems include a decline in local food production, high levels of food import and large quantities of imported high fat foods. Non-communicable, diet-related diseases such as hypertension, diabetes, and obesity are increasing. Diet recalls indicate that meals are primarily fattening, high in protein and carbohydrate, and lacking in fruits and vegetables. The diet is composed of locally grown and imported foods. The main staples are green bananas, breadfruit, taamu, white bread, white rice and products made from white flour. Fresh and canned beef, pork, and fish provide most of the protein in the average diet. Eggs and milk are used occasionally. Coconut cream, butter and lard are all-important sources of fat. Some fresh vegetables are eaten, but fresh fruit is seldom consumed.

The most abundant vegetables are cucumbers, long beans and eggplant. Other than Chinese cabbage, much work remains to be done on growing nutrient rich vegetables and developing recipes that would be acceptable to Polynesians. Diets could be greatly enhanced with the increased production and consumption of locally grown nutrient rich vegetables.

The goal for a health, well nourished population in American Samoa is to return to a more traditional diet of lean meats and fish, consuming more fresh fruits, vegetables, local starch crops, supplemented with low fat dairy products.

Through non-formal education in communities, people are aware of the importance of fruits and vegetables in a diet. To maintain body weight, reduce dietary fat, prevent high blood pressure and diabetes, and reduce risk of heart disease, we encourage homemakers and students to grow their own vegetables and to observe proper cooking methods.

B. Performance Goal

- To increase the production and consumption of locally grown nutrient dense vegetables.

q Key program Component

- Programs will be offered in the following areas:

    1. Vegetable Gardening
    2. How to Prepare Food
    3. Buy and Save Food
    4. Nutrients in Food
    5. Meal Planning
    6. Food Safety
    7. Food Storage
    8. Knowledge of Nutrition
    9. Food Sanitation
    10. Nutrition Facts.

- The key component for the success of the program is providing educational opportunities throughout the community on different lessons mentioned for improving the skills, knowledge and attitudes and changed behavior necessary to improve their diets in normal nutrition. Inputs from stakeholders will be utilized to address issues such as increasing consumption of locally grown vegetables. Nutrition fact sheets, posters, recipes and coloring books for children will be distributed to the target audiences.

q Internal and External Linkages

- N/A

q Target Audiences

- Homemakers
- Day Care Providers
- 4-H Youth
- Women's Groups
- Teachers
- Food Stamp Clients

q Evaluation Framework

- Prepared pre/post tests, accomplishment reports, enrollment forms, media exposures, and visitation reports will be used to evaluate homemaking and nutrition programs. Food Recalls will be used to evaluate and monitor the changes in a client's diet.

q Output Indicators

- Number of homemakers and youths that completed non-formal educational programs on eating a balanced meal and increase knowledge of the essential of human nutrition.
- Number of persons completing non-formal nutrition education programs that provide Dietary guidance, number of these persons who plan to adopt one or more recommended dietary guidelines within six months after completing one or more of these programs.
- Number of families who completed non-formal education programs that provide knowledge and understanding of the production and consumption of fruits and vegetables.

q Outcome Indicators

- Homemakers will increase their knowledge of food and nutrition to help improve the diets and health of the total family.
- Food Stamp clients will increase the ability to manage resources that relate to food, including federal assistance programs such as Food Stamp.
- Families will promote vegetable gardening for food consumption that will provide more nutrients.
- Care Providers will increase their awareness of providing nutritious meals for children and gain new knowledge of demonstrating recipes.

- **Program Duration**

  - Long term (over 5 years)

- **Allocated Resources**

  - Approximately 7 FTE and 20% of the budget would support achieving this goal. It is anticipated that American Samoa will receive a waiver from having to match federal funds for FY 00. Therefore, the expenditures of non-formula funds are not addressed.

  - Human resources include researchers, extension agents, research assistants, and extension assistants directly involved in programming; and the administrative, clerical, and farm staff who offer support to the projects. The research is limited to agricultural research supporting the production of local produce, as there is no nutrition researcher on staff. The prime responsibility for this goal would be the agriculture research staff and the agriculture, and families, 4-H, and nutrition extension staff.

  - Fiscal resource expenditures include payroll for research, extension, and supporting staff; and materials, supplies, and equipment to support research and extension projects and programming promoting the consumption of local produce to improve health. In addition, funds will be spent on both for local and off-island training to support the staff in carrying out their programs.

Goal 4: Greater harmony between agriculture and the environment. Enhance the quality of the environment through better understanding of and building on agriculture's and forestry's complex links with soil, water, air, and biotic resources.

RESEARCH

A. Statement of the Issue

The health of American Samoa's natural resources is rapidly deteriorating. Wetland areas have been reduced by more than 25% of the past 40 years; an additional 15% of the United States' only paleotropical rain forest has become "disturbed" during the last 25 years; and several marine and terrestrial species are threatened or endangered.

Over 96% of the Territory's 62,000 people live on the largest island, Tutuila. About 65% of Tutuila's 33,920 acres have a slope greater than 30%, resulting in an effective population density of about 2,500 persons per square mile. This population is increasing at the alarming annual rate of 3.7%.

Agriculture is primarily multicrop subsistence farming with coconut, banana, taro, and an assortment of garden vegetables grown for the immediate needs of the family and for use as gifts. Owing to the rough terrain, there is little mechanization. The volcanic soils are fertile and well drained, but long term use eventually exhausts nitrogen, potassium, and phosphorous. Slashing, but not burning, native or secondary forests periodically establish new plantations. Transportation costs make U.S. manufactured agrochemicals expensive, so many farmers import fertilizers and smuggle in non-USEPA-approved pesticides from neighboring Western Samoa where they are available at subsidized prices.

Through public education programs, many people are aware of Integrated Pest Management strategies and of our many successful biological control programs. Therefore, some farmers have dramatically reduced their use of insecticides. Herbicides and fungicides, however, are still widely used.

B. Performance Goal

- To maintain the resource base upon which agriculture depends by maximizing resource conserving inputs from within the farm system.

q Key program Component

- To study the ecological interactions occurring in traditional farming systems in order to quantify short- and long-term indicators of soil regeneration processes and to identify internal regulating mechanisms of disease and pest management.

D. Internal and External Linkages

- We participate in several partnerships for sharing information and resources related to promoting low-input, environmentally benign disease and pest management and nutrient cycling practices. They include the following:

1. Sustainable Agriculture Research and Education – the USDA's competitive grants program that works to expand knowledge and adoption of sustainable agriculture practices that are economically viable, environmentally sound, and socially acceptable.
    a. Professional Development Program
    b. Farmer/Rancher Research Grants Program
        i. Canco Hill Screen House
        ii. Tilapia Farm -Aoloau
        iii. Leone Greenhouse
        iv. Amalau Valley Fruit Tree and Native Tree Nursery
        v. Self-Sustaining Swine Production Operation

B. Agriculture Development in the American Pacific Project – a research, extension, and instructional program of USDA/CSREES supporting the Land Grant institutions of the Pacific.
    a. Demonstration of Breeding Swine Through Use of Artificial Insemination
    b. Uniform Taro Variety Trials
    c. Food Choices for Healthy Living: Training Materials and Workshops
    d. Animal Health Survey for Guam, Northern Marianas Islands, Palau, Federated States of Micronesia and American Samoa
    e. Management of Livestock Waste to Enhance Environment and Sustainability in American Pacific
    f. Market Information System Coordination and Development of Agricultural Statistics Systems
    g. Island Food and Healthy Foods: Guides for Nutritious Diets
    h. American Pacific Pesticide Information Retrieval System

3. Pacific Community – a consortium of 12 South Pacific nations working to enhance the economic and social well-being of the people of the South Pacific by fostering cooperation between governments and between international agencies.
    a. The use of *Rodalia limbata* (Coleoptera: Coccinellidae) for the control of the breadfruit mealybug, *Icerya seychellarum* (Hemiptera: Margarodidae)

4. Natural Resources Conservation Service *et al.* – several federally funded agencies operate in American Samoa with whom we cooperate in environmental issues.
    a. Environmental Protection Agency – water quality
    b. Marine and Wildlife Agency – habitat preservation
    i. Department of Commerce – coastal zone management

E. Target Audiences

- Subsistence and commercial growers of American Samoa.

F. Evaluation Framework

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G. Output Indicators

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H. Outcome Indicators

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I. Program Duration

- Long term (over five (5) years).

J. Allocated Resources

- Approximately 11 FTE and 35% of the budget would support achieving this goal. It is anticipated that that American Samoa will receive a waiver from having to match federal funds for FY 00. Therefore, the expenditures of non-formula funds are not addressed.

- Human resources include researchers, extension agents, research assistants, and extension assistants directly involved in programming; and the administrative, clerical, and farm staff who offer support to the projects. The research is limited to agricultural research supporting producing local produce, as there is no nutrition researcher on staff. The prime responsibility for this goal would be the agriculture research staff and the agriculture, and families, 4-H, and nutrition extension staff.

- Fiscal resource expenditures include payroll for research, extension, and supporting staff; and materials, supplies, and equipment to support research and extension projects and programming promoting the consumption of local produce to improve health. In addition, funds will be spent on both for local and off-island training to support the staff in carrying out their programs.

q Education and Outreach Programs

- Research results are disseminated in the following ways:

    1. Formal Professional Development seminars for agriculture professionals on research conducted in the Territory, Hawaii, Saipan, or California.

    2. Public service announcements through local television and radio.

    3. Articles in the local newspaper.

Goal 5: Enhanced economic opportunity and quality of life for Americans. Empower people and communities, through research-based information and education, to

address economic and social challenges facing our youth, families, and communities.

EXTENSION

A. Statement of the Issue

American Samoa's estimated mid-year population as of July 1, 1996 was 58,070; an increase of over 2,000 people compared to the mid-year 1995 estimate of 56,000, reflecting an annual growth rate of 3.7 percent. With only about 76 square miles of land area, American Samoa has a population density of 736 per square mile. The average family size was 7.4 individuals. The median household income for 1989 was $16,114 resulting in a per capita income of $3, 039. Of the 6, 301 families in 1989, 56 percent had incomes below the poverty level as determined by the U.S. Bureau of Census. More than 90 percent of families below the poverty level had children under 18 years of age.

Since 1982, the current index registered at 153.8 index points as of the fourth quarter of 1996. This means that the cost of living has increased by close to 54 percent, or an annual average of about 3.8 percent. A single household in American Samoa spent an average of about $18, 318 in 1988 compared to $12, 235 in 1982. More than 50 percent of these average spending were for food and housing. Special expenditures such as church donations, gifts, family affairs (*fa'alavelave)* remained a significant portion of Samoan household spending.

Incomes are low in American Samoa with many persons looking for ways to supplement family wages. For many homemakers, sewing and fabric arts skills are necessary. Uniforms are needed for many occasions from school uniforms to those for church, work, family, and civic organizations. The uniforms cost from $10.00 to $30.00 plus the fabric and notions to have sewn.

American Samoa's population is very young. The median age for the territory remained at around 21 years, compared to about 33 years for the U.S. In the census of 1990, 16,132 persons (35 percent of the population) were enrolled in school. Approximately 10 percent of the elementary school aged children were not in school in 1990. Similarly, about 30 percent of those in high school ages were not in school. Juvenile offenses increased by approximately 40 percent in 1996 (147 cases) as compared to 1995 (105 cases).

There are many economic and social challenges that face Samoan families. More goods and services are increasingly becoming available with more spending choices than ever before. Families are trying to merge the *fa'aSamoa* (Samoan way of life) with western cultures. With cable television coming to the territory in 1995, exposure to western ways increased dramatically. Many families have returned from the US mainland bringing with them both good and bad habits. As the society changes, there is a great need to offer support to families in the areas of youth at risk and parenting.

4. Performance Goal

- To offer programming that enhances family economic and social stability.

q Key program Component(s)

- Programs will be offered in the following content area:

1. Youth at Risks
2. Parenting
3. Youth Development
4. Entrepreneurship
5. Home based business
6. Cottage industry
7. Family Finances
8. Environmental Education
9. Samoan Culture & arts/crafts
10. Sewing
11. *Elei* Fabric art printing
12. Vegetable gardening
13. Consumer education
14. Indoor Air Quality
15. Community Service

- Programs will be implemented and delivered to the target audiences in schools, villages, churches, and other social settings through the following methods:

1. Training/Workshops
2. After school programs
3. Hands on Learning
4. Summer program
5. School enrichment
6. Mentoring
7. Field trips/tours
8. Presentations
9. Meetings
10. Demonstrations
11. Group discussions
12. Newspaper articles
13. TV and radio programs
14. Project visitations
15. Service Learning
16. Printed materials
17. Fairs/bazaars/open houses

- Partnerships and collaborations with local government and non-government organizations, regional institutions, and CSREES-USDA in program development

and delivery are key components to the success of the programs. Program development and delivery must also be consistent and sensitive to the Samoan culture and traditions. Awareness programs utilizing the mass media and other avenues are important for program publicity and image building.

q Internal and External Linkages

- N/A

q Target Audiences

- Children, Youth, Home makers, Parents, Families, schoolteachers, Volunteers, Non-Government Organizations (NGO's). Also the programs and services will be extended to other ethnic minorities (89% of the population in 1990 were Samoans), disabled population, and other under-served and under-represented individuals and organizations.

q Evaluation Framework

- Evaluation instruments such as pre/post tests, surveys, questionnaires, enrollment reports, record books, success stories, meeting minutes, personal contacts and interviews, project and visitation reports, accomplishment reports and other evaluation tools will be utilized to determine and evaluate the impacts of the programs as reflected in the output and outcome indicators.

G. Output Indicators

- Number of children and youth who completed youth at risks programs, number of youth at risk issues developed into modular educational packages, number of community organizations in collaborations and coalition members that use the materials to address these issues, and number of youth that benefited from youth at risk issues where 4-H has been the clearing house of information and services available within the territory.

- Number of persons completing programs, number of these persons who plan to adopt one or more principles, behaviors, or practices, and the number of these persons who

actually adopt one or more principles, behaviors, or practices within six months after completing one or more of these programs:

1. Parenting
2. Youth Development
3. Entrepreneurship
4. Home based business
5. Cottage industry
6. Family Finances
7. Environmental Education
8. Samoan Culture & arts/crafts
9. Sewing
10. *Elei* Fabric Art Printing
11. Vegetable Gardening
12. Consumer Education
13. Indoor Air Quality

H. Outcome Indicators

- CHILDREN will have their basic physical, social, emotional, and intellectual needs met.

- YOUTH will demonstrate knowledge, skills, attitudes, and behavior necessary for fulfilling contributing lives.

- PARENTS will take primary responsibility for meeting their children's physical, social, intellectual needs and provide moral guidance and direction

- FAMILIES will promote positive, productive, and contributing lives for all family members

- HOMEMAKERS AND YOUTH will demonstrate knowledge and skills in home-based business management, family finances, entrepreneurship, sewing, *elei* fabric art printing, and Samoan culture and traditional arts/crafts.

- COMMUNITIES will provide safe and secure environments for children, youth, and families. Family economic and social stability will be enhanced.

q Program Duration

- Long term (over 5 years)

q Allocated Resources

- Approximately 6 FTE and 15% of the budget would support achieving this goal. It is anticipated that American Samoa will receive a waiver from having to match federal funds for FY 00. Therefore, the expenditures of non-formula funds are not addressed.

- Human resources include extension agents directly involved in programming, and the administrative, clerical, and farm staff who offer support to the projects. The prime responsibility for this goal would be the families, 4-H and nutrition extension agents. These persons have direct responsibility for programs that enhance family economic and social stability. While increasing farm income promotes family economic stability, farming issues are addressed in goals 1, 3, and 4. There is no research related to this goal due to the lack of research staff in this area.

- Fiscal resource expenditures include on payroll for research, extension, and supporting staff; and materials, supplies, and equipment to support extension programs that enhance family economic and social stability. In addition, funds will be spent on both for local and off-island training to support the staff in carrying out their programs.

Section II: Stakeholder Input Process

Stakeholder input was obtained through a variety of methods. There were face to face island wide public meetings, district meetings, village meetings, program group meetings, and individual clients meetings. In addition, phone calls were made to stakeholders for input and client comments were obtained from extension agents farm reports.

The media was used to help insure attendance at the meetings. Public service announcements were on television, radio, and in the newspaper. Television interviews of the AHNR staff appeared on the evening TV Samoan and English news. During the Tutuila (Main Island in American Samoa) island wide meeting, the TV news personnel taped parts of the meeting and interviewed the two staff members and a stakeholder to air on the evening news.

Since the population of American Samoa is 89% Samoan and 4% other Polynesian (1990 census as reported in the American Samoa Statistical Yearbook 1996), most of the persons participating in the stakeholder input process are from this ethnic group. The other ethnic groups to a large extent form the merchant, technical and professional classes. Few persons from this "other" group participate in the AHNR programs.

The Samoan/Polynesian program participants cross all socio-economic groups especially the lower income levels and included some persons with questionable immigration status. There is good success in being able to serve those persons normally considered the "undeserved" and persons from this category participated in the input process.

All persons residing in American Samoa (including the main island of Tutuila and the Manu'a Island Group of Ofu, Olosega, and Ta'u) were given the opportunity to participate in the stakeholder-input process. However, due to the public perception of AHNR and the interaction of the AHNR staff with their clients, most of the persons participating in the process fell into what would be considered the "normal client base".

The meetings/interviews were usually held in the Samoan language. The goals for American Samoa were translated into Samoan and given to the participants and/or were placed on posters in the front of the room. Each goal area was discussed in turn. The information was recorded, translated into English, and distributed to each goal team leader. The team leaders used this information in developing the text for their goal area.

A total of 386 persons participated in the process. The four major islands of Tutuila, Ofu, Olosega, and Ta'u were covered. There were 35 villages visited, 361 individual visited and 12 phone interviews.

The following is a summary of the stakeholder inputs:

Goal 1

- Four methods were used to obtain agriculture and related topics from stakeholders. They were farm visitation, farmers' office visitation, farmers' call-ins and farmers' group meetings. The combination of these techniques provides a variety of issues that are used to device this plan of work. The stakeholders recommended the following topics to focus programs on: Traditional Crop production and Vegetable Gardening; Marketing of local produce and Record keeping; Farm Financing/grants; Swine Production and Management; Improved Seeds and seedling production; Technical assistance; Planting materials and improved cultivars (Taro, banana, giant taro & vegetable seeds); Improved boars for breeding; Slaughter house; Meat processing & curing; Crop & Vegetable Processing; Pests and Diseases of crops/vegetables; Farm tools & equipment; Pesticides and fertilizers; Tree production for firewood, windbreak, contour hedgerows, ocean mist barrier and soil improvement; Farmer training in all needed areas; and transportation of produce from Manu'a islands. The proposed plan of work has collectively reflected these inputs in the outreach action plan. The Cooperative Extension Service and the Experiment Station will continue to collaboratively work with both internal and external partnerships to insure our commitment to goal 1.

Goal 3

- Stakeholders inputs strongly recommended the following programs and activities: Cooking Demonstrations; Vegetable Gardening Workshops; Health and Nutrition Workshops; Developing and promoting local vegetables and fruits recipes that are attractive, nutritious and acceptable to youth and families; Community Garden; and Radio & TV programs. The stakeholders also suggested the idea of organizing bazaars, fairs, and field days to allow the target audiences to display project items, compete in related categories and/or sell their produce and products. Stakeholders also shared the need to incorporate vegetable gardening, home economics, and health and nutrition in the early childhood and elementary school curriculum. Stakeholders expressed the need to encourage the local school lunch program to use locally grown vegetables and fruits for students' meals. Moreover, the Food Stamp recipients should be encouraged to purchase locally grown vegetables and fruits. Incentive programs to promote vegetable gardening such as; free seeds, seedlings, tools, fertilizers, and other inputs were recommended. Vegetable projects for villages, churches, schools, youth groups, and other organizations were also suggested.

Goal 4

- Stakeholders recommended research programs to focus on the following areas: Crop (vegetable and traditional staples) Production; Major pests and diseases of local crops and livestock; Biological Control (breadfruit mealy bug); Pesticides Residues; Local crops variety trials; Integrated Pest Management Practices (IPM); Pesticide Safety; Samoan Traditional Farming Practices; Agroforestry Practices; Non Timber Forest Products (medicine, perfumes, handicrafts, garlands); Firewood; Cultivation of local garland plants (Moso'oi, Lagaali, Avapui, Seasea); Fruit trees propagation; Processing of *nonu* plant (*Morinda citrifolia*) for its medicinal use and possible export to the US and other markets; Multiplication of taro *Colocasia esculenta* planting materials; Processing plants for meat (slaughter house for pigs) and plant products (taro chips, fruit juice, canned breadfruit); and Preservation of indigenous plant species.

- Stakeholders also indicated the need to conduct workshops and awareness programs about research projects; and publicize research findings and experimental results through the media, meetings, field days, fairs, and distribution of printed materials.

Goal 5:

- Feedback from the stakeholders indicated the need to offer programs in the following areas: Youth at Risk issues, Parenting, Entrepreneurship, Home-Based Businesses, Cottage Industry Program, Science and Technology, Family Finances, Environmental Education, Samoan Culture and Arts/Crafts, Sewing, *Elei* Fabric Art Printing, Vegetable Gardening, Consumer Education, Child Care, Youth Development, and Indoor Air Quality. The stakeholders also suggested the idea of organizing fairs, bazaars, and open houses to allow youth, homemakers, and other program participants to display and show case their projects and/or sell their produce and products. Moreover, the stakeholders recommended public awareness programs and collaborations in program delivery. Stakeholders requested that extension agents visit clients more often and spend more time with them. Inclusion of the Samoan Culture in program development and delivery was strongly recommended.

Section III: Program Review Process

A program review process is being established for Hatch Grants and Smith Lever Extension Programs. All proposed Hatch grants would be evaluated by a panel identified by the research program coordinator. The panel will include the director, the research program manager (except for his/her grants), and the extension program manager. Additional members will be selected on an ad hoc basis based on their expertise in the subject being reviewed. The research program coordinator with the approval of the director will select these persons. The ad hoc group would involve a researcher, an ASCC science faculty member, a member of the local science community, and a community member. The research program coordinator with input from the researchers, the extension program coordinator, and the director will be responsible for developing the peer review evaluation form.

A similar procedure to the Hatch grant peer review will be developed for the Smith Lever program merit review. A panel identified by the extension program coordinator will evaluate all proposed Smith Lever extension programs. The panel will include the director, the extension program manager (except for his/her programs), and the research program manager. Additional members will be selected on an ad hoc basis based on their expertise in the subject being reviewed. The extension program coordinator with the approval of the director will select these persons. The ad hoc group would involve an extension program manager, an extension agent, an ASCC faculty member, a member of the local professional community, and a community member. The extension program coordinator with input from the extension program managers and extension agents, the research program coordinator, and the director will be responsible for developing the merit review evaluation form.

Section IV: Multi State Research and Extension Activities

N/A

Section V: Integrated Research and Extension Activities

N/A