American Samoa (American Samoa Community College)

Plan of Work for 2023-2027

Status: Final (Approved 9/29/2022)

Executive Summary Overview

American Samoa is an unincorporated, unorganized territory of the United States of America. It is the only inhabited

American land 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. American Samoa has a total landmass of about 76 square miles (48,767 acres) and a population of 55,519. Approximately 90% (69 square miles) of the land in American Samoa is communally owned and about 3% (2 square miles) is individually owned. Communal land cannot be purchased or sold under present American Samoa land tenure law. Use of, or access to, family land, whether for dwelling, agriculture, government projects, business activities, or any other purpose is determined by the matai (chief) of the family. Agriculture is mainly based on the communal land tenure system. Approximately 92% of the population is of Samoan ethnic origin; 88.2% are full blood Samoan, 3.5% are part Samoan, and about 91% of the population speak Samoan at home. Most Samoans speak both Samoan and English.

The American Samoa Community College (ASCC), Agriculture, Community & Natural Resources Division (ACNR) will continue to focus on the following critical issues: Agricultural Sustainability and Food Security, Ecosystem, Family and Community Resiliency, Health and Wellness, and Youth Development.

Factors that will affect program and project implementation in 2023 include the COVID-19 pandemic; shortage of academically and professionally qualified local personnel to fill ACNR scientists, specialists, research assistants, extension agents and technician positions; shortage of professionals in STEM areas (science, technology, engineering, mathematics); delays in the ASCC procurement process, especially when most of the needed materials, supplies, equipment, scientific apparatus, and related resources must be ordered from the United States; limited air and sea transportation services delaying the delivery of ACNR's programs and services to the Manu'a islands; delays in settling the ASCC Land Grant Experiment Station land boundary disputes resulting in limited access to land for demonstration and research plots due to the encroachment of unauthorized people; and the need for translators to conduct workshops and translate materials in Tongan, Filipino, Chinese, and other Asian and Pacific Island languages as the population of these ethnic groups increase.

American Samoa's great distance from the rest of the US makes recruiting and retaining contract specialists challenging. To help with these efforts, ASCC will continue to offer housing rental assistance

when it is necessary to recruit and hire specialists from off-island. This great distance also means that American Samoa shares much more in common with other countries in the South Pacific than with any part of the US. Therefore, it is important for ASCC ACNR to participate in regional meetings, trainings, and collaborations which may require international travel, and ACNR will continue to support such travel when necessary. Resolution of Experiment Station land boundary disputes may require additional land survey and formal registration of the resulting agreed upon boundaries.

Agricultural Sustainability and Food Security

Sustaining agriculture and food security is a unique challenge given American Samoa's isolated location, limited land mass, traditional land tenure system, climate change, frequent natural disasters, favorable environment for agricultural pests and diseases, ecological susceptibility to invasive species, heavy reliance on imported and processed food, and high food prices. Research and extension programs and services are vital to addressing the agriculture sustainability and food security critical issue, and its close ties in the community make ASCC ACNR uniquely qualified to offer these services

Ecosystem

American Samoa's natural and managed ecosystems are affected by sea level rise, ocean acidification and long-term changes in weather patterns due to climate change; major disruptions from frequent tropical cyclones and occasional earthquakes and tsunamis; and the establishment and spread of invasive plant and animal species. Prudent and informed land stewardship is essential to mitigate adverse effects from groundwater depletion and contamination, soil erosion, flooding, habitat destruction, loss of native trees, and the decline of coral reefs. Active local research and extension programs are essential to fostering wise stewardship of the territory's natural resources, mitigating invasive species impacts, and enhancing American Samoa's ecological and economic vitality. ASCC ACNR's Forestry, Agriculture Extension, and associated research staff work together across programs to address these challenges.

Family and Community Resiliency

Issues impacting family and community resiliency in American Samoa include poverty, parenting, Samoan culture, and youth-at-risk areas. ASCC ACNR Extension programs and services address the challenges of poverty, parenting, Samoan culture, and youth at risk issues through programs in 4-H and youth, family and consumer sciences, agriculture and farm safety, and nutrition.

Health and Wellness

Childhood and adult overweight and obesity are risk factors leading to an alarming non-communicable diseases epidemic in American Samoa. Food safety is another health and wellness issue that needs to be addressed. Additionally, outbreaks of mosquito-borne diseases such as chikungunya, Zika, and dengue have affected thousands of residents in American Samoa. The many impacts of the ongoing COVID-19 pandemic must continue to be addressed. Research and extension programs and services in child and adult healthy living, nutrition, physical activity, 4-H, agriculture, and vector biology and control are focused on these issues affecting community health and wellness.

Youth Development

Issues affecting youth development in American Samoa include youth at risk areas such as juvenile crimes, drug and alcohol abuse, teen suicide, teenage pregnancy, excessive fixation on social media, cigarette smoking, school dropouts, poor student performance in the STEM (science, technology, engineering, mathematics) areas, childhood obesity, and maintaining social and Samoan cultural values. All ASCC ACNR extension programs and services address the youth development critical issue.

Merit and Scientific Peer Review Processes

Research and extension initiatives are client-driven, that is, based upon the latest stakeholder inputs. Owing to our limited number of staff, which serves a population of over 55,000, each Researcher and Extension Agent tries to match his/her knowledge, skills and expertise to high priority client concerns according to federal grant requirements. All Researchers have joint research-extension responsibilities, which also helps ensure research remains focused on addressing important community needs. An investigator proposing a new research project is required to submit a project outline detailing the justification, objectives, procedures, and other pertinent information that would allow someone with relevant experience to adequately evaluate the proposal. The Research Coordinator then distributes this project outline to three or more appropriate scientists, extension professionals, or other staff within the college and to scientists and others with suitable expertise in other agencies. A cover letter explains the necessity for a merit review, lists three criteria by which to judge the proposal, and gives an assurance of anonymity. The three criteria are: 1. How important is the proposed activity to advancing knowledge and understanding of agricultural or health-related issues in American Samoa and other Pacific islands? 2. Is the project based on sound scientific principles? Are the proposal's arguments supported by verifiable facts? 3. Are sufficient resources available to bring the project to a successful conclusion? How well qualified is the individual or team to conduct the project? Are sufficient funds, facilities, equipment, and assistance available? The Research Coordinator collects the reviews and returns them to the investigator. The investigator may then choose to modify the proposal, based on the reviews, before resubmitting it to the Research Coordinator. The Research Coordinator accepts or rejects the proposal. If the latter, the investigator may appeal to the Director, who makes the ultimate decision. If the Research Coordinator accepts the proposal, it is forwarded to the Director for final approval or rejection. Merit review of extension programs is an ongoing process. As described in the Stakeholder Input section, formal and informal solicitation of feedback is a part of extension workshops, activities, meetings, trainings, and farm visits. These inputs help Extension Agents and Program Managers assess the effectiveness of programs and identify ways to improve them. The Agriculture, Forestry, Family and Consumer Sciences, and 4-H Extension Program Managers oversee ongoing programs and evaluate new initiatives to ensure they are effectively addressing client needs. Annual performance reviews provide additional opportunities for Program Managers to evaluate programs and provide useful feedback to the Extension Agents. Ongoing programs and new initiatives must be approved by the Extension Coordinator and responsibility for final approval of all proposed extension activities rests with the Director.

Stakeholder input: Action Taken to Seek Stakeholder Input

All extension programs will be coordinated to have stakeholder feedback during or after workshops, activities, training or any other type of outreach in the community. At any extension outreach, staff will

be evaluating and gathering information and data from the stakeholders. Stakeholder participation will be encouraged through media announcements (television stations, newspapers, radio station); targeted invitations (through letters, phone calls, personal visits) to traditional and nontraditional stakeholder groups and individuals; and surveys of the general public. These surveys will include selected groups and individuals; one-on-one consultation, group meetings, and community workshops in which participants will be asked to evaluate the programs and make suggestions for needs and improvements. The stakeholders are expected to be from a wide range of groups/individuals who are traditional and nontraditional constituents, including non-governmental agencies, community-based organizations, and government agencies. Social media will be used to solicit and obtain stakeholder input. With improved wireless service around the territory, iPhones, iPads and Android devices can easily be used to record statements, surveys, assessments, photos, and other forms of data.

Stakeholder input: Methods to Identify Individuals and Groups

All extension programs will continue to use inputs and recommendations from advisory committees, external and internal focus groups, surveys, workshops evaluations, and needs assessments to identify stakeholder groups and individuals. Moreover, recommendations from program staff and administrators will also be utilized. Workshops and activities conducted by extension programs will be evaluated for information regarding the critical issue, what was done, what was accomplished, and what is next.

Focus groups continue to be planned for the underserved clients in the Manu'a islands. All farm visits conducted by Extension Agriculture Program Service will continue to be documented by using the visitation form which contains sections where farmers can identify problem areas. The Extension Forestry Program will continue to visit landowners for the Forest Stewardship Program, and the Urban Community Forestry Program will continue to conduct outreach for, and receive inputs from, the youth regarding agroforestry, environment and climate change. This information will be used to direct resources in research. All extension advisory groups' responsibilities are to prioritize and bring focus to the stakeholder concerns.

Stakeholder input: Methods for Collecting Stakeholder Input

Methods for collecting stakeholder input:

Meeting with traditional stakeholder groups,

Survey of traditional stakeholder groups

Meeting with traditional stakeholder individuals,

Survey of traditional stakeholder individuals

Meeting with the general public (open meeting advertised to all)

Survey of the general public

Meeting specifically with non-traditional groups

Survey specifically with nontraditional groups

Meeting specifically with non-traditional individuals

Survey specifically with non-traditional individuals

Meeting with invited selected individuals from the general public

Survey of selected individuals from the general public

The extension programs will continue to collect stakeholder inputs from clients through focus group sessions and survey questionnaires during workshops (schools, villages, community groups, government agencies, churches, and other sites), as well as demonstrations, presentations, pesticide training, public and council meetings, exercise and physical activity sessions, field trips, summer camps, tours, school visits, science fairs, field days, career days, farm and client visitations and individual consultation.

To maintain social distance during times of uncertainty such as the COVID-19 pandemic, the extension programs will continue using technology and online services in collecting stakeholder input. If needed, there will be training for the stakeholders as well as the staff in communication and data collection using technology and online services.

Stakeholder input: A Statement of How the Input Will Be Considered

The stakeholder input will be considered in the budget process, to identify emerging issues, to redirect extension programs, to redirect research programs, for staff hiring, for action plans, and to set priorities.

Inputs from stakeholders will be used to direct and improve programs in both extension and research, with the advisory group being the means to prioritize the extension program resources. Once the priorities have been determined, the information will be forwarded to extension administration and program managers to make changes in the budgets and programming. More specifically, inputs will be considered in recruiting and hiring of new staff; acquisition of new equipment and materials and supplies; improvement of existing programs and facilities; development and implementation of new programs; and construction of new facilities to address stakeholder inputs and recommendations.

Critical Issues

Agricultural Sustainability and Food Security

Initiated on: Nov 26, 2019
State: American Samoa

Term Length: Long-term (>5 years)

The limited land area of 76 square miles (48,767 acres), much of it with slopes of more than 30%; the traditional land tenure system; climate change; agricultural pests and diseases; rising food prices; unstable economic conditions; reliance on imported and processed food; natural disasters (e.g., the tsunami of 2009 and hurricane Gita in 2018); farm and food safety; waste management; pesticides safety; and ecological susceptibility to invasive species are some of the factors that will continue to affect agriculture sustainability and food security in American Samoa. American Samoa's year-round

high rainfall, high humidity, and high temperatures make management of agricultural pests and diseases highly challenging. Many of the territory's most serious agricultural pests do not occur elsewhere in the U.S. states or territories, creating unique challenges due to a limited research knowledge base and lack of locally relevant labeling on crop protection products. The islands' ecological susceptibility to invasive species and a weak, under-resourced biosecurity regime lead to a continuous onslaught of exotic pests threatening food security and economic viability. Pest diagnostics, pest surveillance, and locally-based and appropriate research and extension services are essential to assist agricultural producers in this challenging environment.

Science Emphasis Area

Food Safety, Human Nutrition, Sustainable Agricultural Production Systems

Ecosystem

Initiated on: Nov 26, 2019
State: American Samoa

Term Length: Long-term (>5 years)

American Samoa is a U.S Territory that truly values its unique ecosystems and natural resources. Its primary ecosystems include tropical rain forests and freshwater systems, which are both beneficial to the islands culture, economy, and health. Currently, there are numerous issues affecting the islands' ecosystems. The effects of climate change have resulted in extreme weather events such as tropical cyclones, rainfall variability, and warm, humid days and nights all year. These extreme events impact the islands' ecosystems altering native species abundance, agricultural production, harvest cycles, and invasive species distribution. The high frequency of rainfall and rugged topography can alter landscapes within riparian zones. Impacts on watersheds include excessive flooding, eroding slopes, and landslides in streams which can all increase sedimentation and nutrient runoff. The depletion of native trees from land use change affects the islands' water quality and habitats in urban forests, montane forests, and riparian zones. Implementing restoration and management efforts to maintain and promote a sustainable montane and riparian ecosystem is critical to the islands' overall environmental and human health. American Samoa's unique island ecosystems and inadequate biosecurity infrastructure make it highly susceptible to exotic species invasions that threaten both ecosystems and the overall economy. Maintaining the research and extension infrastructure to detect, respond to, and mitigate invasive species is thus critical to the territory's ecological and economic viability. Vegetation maps are an important resource for forestry program managers and researchers when trying to detect and assess forest health and change over time. However, creating vegetation maps for American Samoa is a costly and arduous process.

Science Emphasis Area

Agroclimate Science, Bioeconomy, Bioenergy, and Bioproducts, Environmental Systems, Sustainable Agricultural Production Systems

Family and Community Resiliency

Initiated on: Nov 26, 2019
State: American Samoa

Term Length: Long-term (>5 years)

Resource management (poverty), parenting and child relationship, and respect for cultural values 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. The local economy is 90% dependent on US and foreign imports, and average prices of selected commodities throughout the years have increased due to oil prices. In 2005, the per capita income was at $5266 (Population Census 2000). Families need to manage resources wisely and take advantage of economic opportunities to maintain and increase their quality of life. Moreover, parent and child relationship are an area of concern 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. Extension programs and learning opportunities will be provided to assist with resource management and poverty, and to preserve the Samoan culture, language, and family values.

Science Emphasis Area

Environmental Systems, Family & Consumer Sciences, Food Safety, Human Nutrition, Sustainable Agricultural Production Systems, Youth Development

Health and Wellness

Initiated on: Nov 26, 2019
State: American Samoa

Term Length: Long-term (>5 years)

Overweight and obesity (OWOB) affects all age groups in American Samoa—children, adolescents, and adults. Among 2 to 10-year-old children, some communities had 42% OWOB rates. About 63% of high school students were OWOB. And roughly 93% of adults were OWOB. These OWOB rates are alarming and pose many public health concerns that should be addressed by all members of society. Food safety, poor nutrition, and lack of physical activity are also major concerns that need to be addressed by all members of society.

Mosquito-borne illnesses pose an increasing threat to the people of American Samoa. Filariasis is endemic in the islands, and arbovirus epidemics are becoming more frequent. From 2014 to 2018 the territory suffered outbreaks of chikungunya, Zika, and two outbreaks of dengue which sickened thousands of residents. Preventing these diseases requires local research and extension efforts focusing on American Samoa's unique mosquito fauna and unique social, cultural, and environmental context.

The impacts of the recent Measles epidemic in 2019 and the current COVID-19 pandemic on the health of the people of American Samoa need to be addressed. Research and Extension programs and services will address the health and wellness critical issue.

Science Emphasis Area

Environmental Systems, Family & Consumer Sciences, Food Safety, Human Nutrition, Sustainable Agricultural Production Systems, Youth Development

Youth Development

Initiated on: Nov 26, 2019
State: American Samoa

Term Length: Long-term (>5 years)

Youth Development is a critical issue in American Samoa. Over the years, juvenile crimes have increased in American Samoa. According to the Youth Risk Behavior Survey (YRBS) by CDC (2013), 8.6% of students used a needle to inject an illegal drug, 48.9% were in a physical fight, 24.1% carried a weapon, 19.4% attempted suicide, 24% currently drank alcohol, 14.3% currently used marijuana, 19.4% currently smoked cigarettes, 9% used cocaine, 8% used methamphetamines, and 35.1% had sexual intercourse. About 52% of family, drug and alcohol cases filed were juvenile delinquents. The offenses committed by juveniles incresed by 1.9% in 2011. There is a need to address youth-at-risk issues because youth are meant to be productive, self-reliant and be contributing members of society. According to the SY 2017/2018 American Samoa Center for education and workforce statistics, 46.7% of elementary students scored below basic level in English and 39.5% below Basic Math. There is a high demand for teachers in the areas of Science and Math. The low test scores of students in these areas and the high demand for STEM focused careers indicates the need to focus on STEM areas. At the same time, there is still a need to maintain social and cultural values. Another major issue is childhood and adolescent obesity. According to CDC High School YRBS (2013), 41.5% are considered obese and 21.8% are considered overweight.

Science Emphasis Area

Education and Multicultural Alliances, Environmental Systems, Family & Consumer Sciences, Food Safety, Human Nutrition, Youth Development