Agricultural Development in the American Pacific (ADAP) Project

Project Progress Reports



Work from the period January 2006 to June 30, 2006

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Monterey, California

January 2006 to June 2006 Progress Report

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Healthy Living in the Pacific Islands

Principal Investigator: Dr. Rachel Novotny (University of Hawai'i)
Project Administrator: Nicola Davison (University of Hawai'i)

Co-PI's: Ansina Kony (College of Micronesia-FSM/Chuuk, Cooperative Research &

Extension), Julie Timothy (College of Micronesia-Kosrae, Cooperative Research & Extension), Janet Nemra (Ministry of Health and Environment, Majuro, RMI) & Nelly Lakabung (College of the Marshall Islands), Josepha Tutii (Palau Community College, Cooperative Research & Extension), Pat Coleman (Northern Marianas College, CNMI Cooperative Research, Extension & Education Service), Peter Barcinas (University of Guam, College of Agriculture

& Life Sciences), Eric Enos (Learning Center at Ka'ala Farms).

Funding Amount: Year 16 \$0

Year 17 \$25,000 + \$20,000

Year 18 \$9,775 Year 19 \$0

PROBLEM STATEMENT AND POTENTIAL SOLUTION

The HLPI Project is working to reduce the disparity in prevalence of chronic (lifestyle) diseases in Pacific Island communities. Specific objectives are: to increase production and consumption of local foods, to increase physical activity and to increase local food production capacity.

HLPI implements programs tailored to the unique environment of each island. These programs also build the capacity of our local partners. Initiatives for monitoring and surveillance of health, particularly in the child population, provide baseline data for designing programs and interventions.

HLPI received \$340,300 as start up funds through the Agricultural Development in the American Pacific (ADAP Years 13-18) (2000-2005). These funds were instrumental in leveraging \$70,000 from Centers for Disease Control and Prevention and \$52,000 from University of Uniformed Services for nutritional assessment work (2003). A recent \$1 million USDA National Research Initiative (NRI) grant (2004-2008) partners HLPI with the Cancer Research Center of Hawaii, Johns Hopkins Bloomberg School of Public Health, Wai'anae Coast Comprehensive Health Center (Hawai'i) and Waimanalo Health Center.

Early funding from ADAP allowed each country to implement their own programs, within the three specific HLPI objectives. Current USDA-NRI funding ties each island's programs to NRI grant objectives – a Pacific diet tracker computer program ('PacTrac') and a food system intervention to increase healthy food availability

During Year 17, we focused on two key activities: follow up to nutritional assessment work, and staff professional development. Following the work done on nutritional assessment in American Samoa and CNMI, the information needed to be more widely distributed and communicated to various sectors of the community. HLPI personnel made site visits to American Samoa (Feb 2005) and CNMI (Dec 2005) to make presentations to community leaders/legislators, healthcare professionals, educators, and communities members. By sharing the information collected by the HLPI project, the island communities will become more aware of the problems associated with sub-optimal nutrition in their children, offering an opportunity to

make changes at many levels (legislative, institutional, community and individual). We continue to work with these communities to ensure the information is available for targeted project activities and program planning in the future.

In our efforts to increase staff development, awards of up to \$1,000 each were made to HLPI co-PI's for staff development and capacity building. During the 2005 HLPI workshop we were able to offer co-PI's the opportunity to receive training in MS Excel, MS Powerpoint and grant writing. The MS Excel will help staff when preparing budgets, the Microsoft PowerPoint will enable staff to prepare educational materials to enhance communication with the community and clientele). The grant writing workshop will be used as the basis for a participatory grant writing process, to take place in early 2006, with the goal of submitting a jointly written and submitted proposal to the Robert Wood Johnson Foundation for a physical activity grant. This will address our goal of capacity building within the institution and region, for longer term project sustainability.

During the January 2005 Board Meeting, an additional \$20,000 (Year 17) was allocated to HLPI. The additional ADAP HLPI funds have enabled the sites to build on previous HLPI activities which are not related to the NRI grant. Most of the activities involve educational programs which are targeted towards increasing knowledge among the local communities, using locally adapted and culturally appropriate materials.

Year 18, HLPI proposed the inclusion of Kosrae as a second community outreach and research center in the Federated States of Micronesia. Funding support from ADAP for one year has allowed the co-PI from Kosrae to attend the October 2005, HLPI meeting and will allow Kosrae to implement HLPI project activities in 2005-2006.

RESULTS AND ACCOMPLISHMENTS FROM THE PRINCIPAL INVESTIGATOR: JANUARY 2006 TO JUNE 2006

Chuuk

- Cooking demonstrations using only local foods
- Monthly walk-a-thon with Chuuk campus students and staff
- Training on home gardening for high school drop-outs

Kosrae

- Aired 4 radio programs
- Collected 20 food recalls
- 30 students and staff participated in weight loss competition

RMI

New partnership between Land Grant, MOHE and Youth to Youth in Health (NGO) Youth Health Leadership Training Seminar, June 13-July 3, 2006 (increasing physical activity, increasing access to healthier foods)



Chuuk Walk-a-thon



Kosrae weight loss competition

CNMI

Co-funded (with WHO) CNMI Co-PI attendance at The 5th International Course on Physical Activity & Public Health Experience

University of Hawaii

Partnership with SPC (including matching funds) on Pacific Islander physical activity video, partial draft reviewed at HLPI meeting in June 2006; completion date August 2006.

Additional Activities Funded by the USDA CSREES – NRI grant From the Principal Investigator: January 2006 to June 2006

Palau

Collected 54 diet recalls and 10 recipes

Guam

Completed 37 Food Source Survey checklists – information about healthier food choice availability in local stores

CNMI

Additional results from the 2005 nutrition survey were shared with leaders and community in Saipan in June 2006, including preliminary results of diet recalls.

CNMI DPH and NMC staff working with UH staff to prepare manuscripts on CNMI breastfeeding practices for publication. We were successful at attracting the regional WHO representative (Fiji) to our annual HLPI meeting in Saipan this year; for the first time.

American Samoa

Collected 30 diet recalls

Collected 17 Food Source Survey checklists

Collected recipes and yields for 10 recipes

University of Hawaii

New version of the computerized dietary analysis program ('PacTrac') has been modified to include 85 Guam recipes and 40 CNMI recipes collected by HLPI partners in Guam and CNMI. The program can be used over the internet.

Implementation of the Healthy Foods Hawaii intervention in 2 communities (Oahu and Big Island), targeting healthier drinks and healthier snack choices.

RESULTS AND ACCOMPLISHMENTS FROM THE SITE COORDINATORS: JANUARY 2006 TO JUNE 2006

American Samoa Community College

Mrs. Siaunofo Logologo, ASCC CNR Families, 4-H & Nutrition Program Manager and Ms. Eseneiaso Misiaita, ASCC CNR Nutrition Assistant attended the 5th Annual HLPI meeting June 28 & 29, 2006 & EFNEP 26th & 27th in Saipan, Commonwealth of the Northern Marian Islands.

College of Micronesia

All four cooperators from Palau, Chuuk, Kosrae, and the Marshall Islands continue with the implementation of their respective plans of work.

The central office in Pohnpei kindly requests status of activities being implemented at the various sites in Micronesia. We rarely receive updates from the cooperators or the Hawaii office. With the ever increasing in lifestyle related diseases in our part of the world, this project is very important to us. We are sure the projects that our cooperators are undertaking will provide significant support to the communities. We would appreciate periodic updates on activities of programs, so that we can provide additional support when appropriate.

University of Guam

Guam's POW for 2006 consisted of HLPI's objective 2: To Increase knowledge about health and nutrition. Using the concept of University of Hawaii's "Food Source Checklist" surveys we conducted our own entitled "Healthy Food Guam Project". The Food Source Checklist Surveys were done on Island at one convenience store per village (19); Sub-village stores (3); Large Supermarkets (5); Roadside Stands (3); Farmer's Market (2); Food Courts (3) and Institutional Cafeterias (2). A total of 37 food surveys were completed on island and the data gathered will be used to identify food sources in regards to nutritious foods available to our island communities

GOALS FOR THE PROJECT FOR THE NEXT SIX MONTHS: JULY 2006 TO DECEMBER 2006

Please see proposal for activities in Year 19.

Project Proposal: Healthy Living in the Pacific Islands (Year 19)

Principal Investigator: Dr. Rachel Novotny (UH) Project Administrator: Nicola Davison (UH)

Co-PI's: Ansina Kony (College of Micronesia-FSM/Chuuk, Cooperative Research &

> Extension), Julie Timothy (College of Micronesia-Kosrae, Cooperative Research & Extension), Janet Nemra (Ministry of Health and Environment, Majuro, RMI) & Nelly Lakabung (College of the Marshall Islands), Josepha Tutii (Palau Community College, Cooperative Research & Extension), Pat Coleman (Northern Marianas College, CNMI Cooperative Research, Extension & Education Service), Peter Barcinas (University of Guam, College of Agriculture

& Life Sciences), Eric Enos (Learning Center at Ka'ala Farms).

Funding Requested: \$19,102

PROBLEM STATEMENT AND POTENTIAL SOLUTION

2006-2007 will be a transitional year for the HLPI project, with PI Rachel Novotny moving to Kaiser Permanente Center for Health Research – Hawaii in October 2006. It is anticipated that she will remain as PI for the HLPI project for at least the next year. She will retain an appointment at UH of some type, the details of which are still being clarified/negotiated.

At the June 2006 HLPI meeting implications of Rachel's move was discussed and the following is the suggested plan.

During this next year a thorough evaluation of the past 6 years of HLPI activities will be conducted and presented at the June 2007 meeting where a follow-on 5 year plan will be developed.

The current NRI funding will be expended about March 2007. There is a need for a PI to continue to seek funds. Rachel has submitted one project for the HLPI group (a competitive renewal of the NRI) through Kaiser already.

There is need to identify an on-going PI, and desire was expressed by the HLPI group for Rachel to continue in that role. Possibly Rachel could maintain a small percentage of her FTE at UH (say 10%), at least for this year. Further, when she moves to Kaiser on October 1, she will still owe a quarter of a year of pay back to UH for last year's sabbatical. Alternatively, PI-ship might remain with Rachel from Kaiser or perhaps another PI could be identified, who will continue to seek funds and to work cooperatively with the Land Grant system. At this time no alternate PI has been identified.

There is need for funding to support the HLPI Project Administrator beyond March 2007 (unless the NRI renewal proposal is approved, which includes funding for this position). Therefore partial support (25% FTE) for the Project Administrator is requested for Year 19, to provide continued logistical and administrative support for the project.

The Co-PI's indicated they would like to see the project continue and to continue utilizing the Land Grant system and UH as the coordinating center, but this will mean identifying funding options to support HLPI coordination, workshop planning and implementation, program planning, grant writing and reporting. In Year 18 we initiated another participatory grant writing process to seek other funding for project activities. Unfortunately we were unsuccessful in our

first submission of that proposal (a physical activity grant). However, we plan to continue to seek new sources of support for the HLPI project and its coordination.

We request further funding to support the inclusion of Kosrae in the HLPI group. The Kosrae Co-PI was able to attend the June HLPI meeting and has drawn up a plan of work for 2006-2007, which can only be implemented if supported by ADAP funds (\$2,500). Kosrae has been included in the NRI renewal proposal recently submitted which, if successful, will provide funding for activities in Kosrae. We are requesting ADAP funds to ensure the Kosrae Co-PI will have project funds through 2007 to ensure continuation of activities until alternative funding is secured.

Travel funding is requested for Rachel to attend the HLPI annual meeting in June 2007. The UH travel funds in the NRI grant will be exhausted by early 2007. There will not be funding from Kaiser to allow Rachel to travel to the HLPI annual meeting (currently rotated to occur in Palau). The Co-Pl's and Project administrator will travel using NRI funds.

Proposed Budget for Year 19	
FSM –Kosrae project activities	\$2,500
Salary 25% FTE Project Administrator with Fringe benefits @ 36%	14,602
Travel for PI to HLPI meeting 2007	2,000
TOTAL REQUEST	\$19,102

Better Crops in the Pacific Islands

Principal Investigator Dr. Craig Smith (NMC)

Dr. Larry Hirata (ASCC) Dr. Flodeliza Javier (COM)

Funding Amount Year 16 \$10,000 ASCC \$3000

Year 17 \$0 NMC \$4000 Year 18 \$0 COM \$3000

Year 19 \$0

PROBLEM STATEMENT AND POTENTIAL SOLUTION

Many people in the Pacific Insular areas have stopped raising vegetables because it has become too difficult for vegetable farming to remain a viable occupation. Because of pests and diseases, multiple harvest crops such as beans, cucumbers, bitter gourd, and tomatoes grow for a few months before prematurely succumbing to disease and dying. The situation is not as bad for crops where harvesting is able to begin early, such as cucumbers and bitter gourd in American Samoa. However, other crops are not able to begin a harvest before the plants begin to die, such as beans and tomatoes in American Samoa. Premature crop failure has kept many Pacific Islanders from continuing to grow vegetables. Sources of locally available seeds are usually retail packets from the major seed companies with older versions of non-hybrid varieties bred for cold regions. These low-cost seeds usually do not perform well in the tropics. Consequently, to keep a supply of fresh vegetables, wholesalers and retail stores usually import their own supplies because the local producers are not reliable in quality and quantity. As a result, a larger share of the family food dollar goes to pay for the imported vegetables. More locally-grown vegetables are needed to help decrease the rise of diet-related diseases in the Pacific Islands, such as diabetes, obesity and gout.

Our Project intends to identify better varieties of local favorite commodities than currently available in the areas served by American Samoa Community College (ASCC), the College of Micronesia (COM) and the Northern Marianas College (NMC). Focus will be on nutrientdense vegetables that produce greater yields under current conditions of disease, pests, rainfall, humidity and temperature. Once concluded, information on the better performing varieties and better farming practices will be distributed to local communities. To increase the likelihood that these better quality seeds will be available within the communities, testing results will be made available to international seed companies. Elsewhere in the world, successful commercial growers have adopted hybrid vegetable seed because of greater yields, adaptation to local growing conditions, and multiple-disease resistance. Worldwide, the most successful vegetable growers use hybrids. For the past 10 - 20 years, Asian seed companies such as Takii and Sakata seed companies in Japan, Known-You Seed Company in Taiwan, China Tai Seed Company in Thailand, and organizations such as the Asian Vegetable Research and Development Center (AVRDC) in Taiwan, have done remarkable work in developing vegetable seed hybrids for the hot, humid wet tropics. Tropical areas have a 12-month growing season for both the crop, and the attacking pests and diseases. Many retail US seed companies appear to be content with their market share of selling non-hybrid varieties that were adapted to temperate countries decades ago. To serve the immigrant market, some US seed companies are now reselling hybrids developed and grown by Asian companies for tropical climes.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: JANUARY 2006 TO JUNE 2006

American Samoa Community College (ASCC)

Different varieties of tomatoes, bell peppers, spinach and won bok cabbage were ordered along with planting trays, potting mix and fertilizers. Two trials are "in the ground" at this writing – 6 varieties of won bok cabbage and 5 varieties of bell peppers. On June 27, the won bok trial was harvested. A workshop with students will be conducted followed by a taste test. The bell pepper trial consists of 3 green pepper varieties, 1 red and 1 yellow variety. The trial was transplanted in mid June. Because of limited land for conducting field research at ASCC Land Grant, the tomato and spinach trials will be planted after the pepper trial is completed.

The project will not be completed by July 31, 2006. However, trials using the varieties purchased with funding from ADAP will be conducted throughout the upcoming year to determine seasonality of the cultivars.

The overall goal of identifying cultivars of bell peppers, tomatoes, won bok cabbage and spinach that will perform well in American Samoa have not yet been attained.

College of Micronesia (COM)

- Seeds from UH and KANEKO were received in February and April
- Sowing of seeds in the nursery started in March and still sowing of the long beans
- Field planting of cucumber, bush beans, head cabbage, pechay, etc. started in April
- To be planted in the field are long beans, squash, water melon and corn
- Nursery and management are continuing

Northern Marianas College (NMC)

 Seeds and supplies have been purchased, depleting project funds, and field trials are beginning.

GOALS FOR THE PROJECT FOR THE NEXT SIX MONTHS: JULY 2006 TO DECEMBER 2006

Plant crops, collect data, and report results to farmers.

Bioresidue Resources Assessment

Principal Investigator: Dr. Charles Kinoshita (UH)
Co-PI: Dr. Lee Yudin (UOG)

Funding Amount: Year 18 \$35,610 + \$6871

Year 19 \$0

Project Withdrawn

PROBLEM STATEMENT AND POTENTIAL SOLUTION

In tropical and sub-tropical regions having abundant solar insolation but lacking fossil fuel resources, biomass-based energy systems can reduce dependence on imported petroleum and coal, and improve balance of payments. Biomass production and conversion activities stimulate local economies by providing new employment opportunities for the local work force, and product and market opportunities for agribusinesses. Having relatively low sulfur content and being carbon-dioxide neutral, biomass offers environmental advantages over many fossil fuels. Also, using biomass wastes for energy can provide cost-effective alternatives to certain practices that are gaining disfavor by the public such as open-field-burning of crop residues or land-filling of wastes. These attributes — end-use versatility, favorable feedstock qualities, environmental advantages, and economic and social benefits — make biomass an attractive, sustainable resource.

Biomass can be especially competitive with fossil fuels in those instances where the costs of collecting and/or transporting biomass to a central location are fully or partially defrayed as activities associated with the processing requirements of a primary product, e.g., with rice, palm, or wood products. Not only do such circumstances present the most favorable economic conditions for harnessing biomass energy in the near term, they could provide significant supplies of biomass feedstocks, which can contribute to the local energy mix.

Information on bioresidue resources has already been collected for selected large Southeast Asian countries (Kinoshita et al., 1997; Ishimura et al., 1999). It does not appear that comparable information has been collected for the American-affiliated Pacific Island countries of Guam, American Samoa, Micronesia, and the Commonwealth of the Northern Marianas. It is thus proposed that an inventory be prepared of biomass/bioresidue resources and utilization, and potential energy-related end uses of these resources in the American-affiliated Pacific Island countries. The information in the inventory would help identify opportunities for better utilizing biomass resources and expanding markets for agriculture in this region.

The following information will be compiled for each island nation listed above:

- 1. Locations, types, amounts, and present uses of bioresidues.
- 2. Potential energy-related end-uses for bioresidues and other potential end uses.
- Best combinations of bioresidues and end-uses.
- 4. Government policies and regulations relating to energy production and utilization.

This investigation will build upon institutional structures and activities already existing in the island nations and on data collected previously by CTAHR and others. In order to validate information already collected and to be obtained from the literature and from collaborators, and in order to gather additional information needed for assessing bioresidue resources, energy-related end uses and policies, project personnel will visit each of the aforementioned island nations and confer with ADAP representatives, government officials, and members of the

agricultural sector. The information gathered will be compiled in a database and reported to ADAP members for review and comment. Additionally, the database will be made available for subsequent retrieval and analysis by researchers, government agencies, and businesses.

REFERENCES

Kinoshita, C.M., S.Q. Turn, J. Tantlinger, and M. Kaya, "Potential for Biomass Electricity in Four Asian Countries," *Proceedings of the 32nd Intersociety Energy Conversion Engineering Conference*, Vol. 3, pp. 1779-1784, 1997.

Ishimura, D.M., C.M. Kinoshita, S.Q. Turn, M.H. Kaya, J. Tantlinger, and J.P. Dorian, "Review of Asia/Pacific Rim Renewable Energy Market Assessments by the State of Hawaii," *Proceedings of the Fourth Biomass Conference of the Americas*, pp. 1611-1617, 1999.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: JANUARY 2006 TO JUNE 2006

After great consideration, Dr. Charly Kinoshita alerted us that his original ADAP Biomass Resources Assessment project would not accomplish what he had hoped. He has withdrawn the project without spending the funds.

Dr. Charly Kinoshita would like to propose an alternative project, Bioenergy Feedstock Assessment.

Substitute Project

Project Proposal: Bioenergy Feedstock Assessment

Principal Investigator: Dr. Goro Uehara (UH)
Co-PIs; Dr. Robert Paull (UH)

Dr. Mari Marutani (UOG)

Project Manager: Dr. Richard Ogoshi (UH)

Funding Requested: \$47,742

PROBLEM STATEMENT AND POTENTIAL SOLUTION

Pacific Island nations are particularly vulnerable to the supply shortages and volatile prices of fossil fuels. Most islands import more than 90% of their transportation and energy fuels. Thus, there is an urgent need to develop local energy production capacity. Vegetal based fuels or biofuels produced from locally generated biomass on small to medium farms are a possible solution to decrease fossil fuel dependency in the Pacific Islands. Biofuels have significant environmental benefits over fossil fuels including low sulfur content, being carbon-dioxide neutral, and decreasing waste entering land-fills. Furthermore, establishment of biomass-based energy systems will create new jobs and improve local economies.

Biodiesel and ethanol are two promising candidate biofuels suitable for transportation and energy generation. The development of domestic feedstocks for conversion into biofuels is essential for increasing island energy security. An important challenge is the identification of feedstocks and conversion technology amenable for commercial production on small to medium farms with the environmental resources available on tropical and subtropical islands. ADAP-member nations contain a diversity of non-traditional plants that have potential as energy feedstocks whose yields could surpass traditional energy crops. The combination of the University of Hawaii's and University of Guam's experience in bioenergy, agricultural production, and soil science makes a strong team to identify energy feedstocks for the Pacific Islands. The proposed project will evaluate oil crops, cellulosic biomass, and commercial waste for use as feedstocks for bioenergy production. This investigation will provide baseline data essential for future studies to improve the energy security in the Pacific Islands.

SCOPE OF WORK

The purpose of the project is to provide the foundation for developing solutions to reduce fossil fuel importation to the Pacific Islands. To that end, we will investigate candidate energy crops, commercial waste streams, and small scale conversion technology that have the potential to be a part of the solution. The project will focus primarily on Jatropha curcus, coconut (Cocos nucifera), and fish oil for biodiesel production and Panicum maximum (guinea grass) for ethanol production. Jatropha, coconut, and guinea grass were chosen for their low resource input requirements, especially water, and their ability to thrive on poor soils, which promotes land reclamation and inhibits soil erosion. Crops, waste streams, and conversion technologies will be evaluated for small scale and larger production potential to reflect the range of environmental resources found in the Pacific Islands. The project will accomplish the following objectives:

• Evaluate the technical and economic feasibility for producing biodiesel from Jatropha curcas, coconut oil, and fish oil, and ethanol from guinea grass in the Pacific Islands.

• Evaluate the potential application of commercial waste streams and small scale conversion technology for energy production in the Pacific Islands.

PROPOSED ACTIVITIES

Objective 1

Climate and growing conditions have profound influence on crop yields which ultimately will determine the economic feasibility of the crops. Thus, the project will determine crop yields under various climatic/environmental conditions. Local varieties will be tested for optimal density, irrigation, and seed and fruit development.

Oil crops

Seeds and cuttings will be collected from *Jatropha curcas* varieties on Guam and the Hawaiian Islands. Test plots will be installed to evaluate growth rates under various conditions and seed and oil yields determined. Oil samples will be sent to Pacific Biodiesel for conversion into biodiesel and testing. Commercially available coconut oil and fish oil will also be sent to Pacific Biodiesel for conversion into biodiesel and testing. Pacific Biodiesel will submit biodiesel samples derived from Jatropha, coconut, and fish oil to a national laboratory for certification that the biodiesel meets international fuel standards.

Ethanol crops

A mower/baler will be rented and dry yields for *Panicum maximum* will be determined. Ethanol yields will be reported using standard estimates. Crop yields under various conditions and the effect of repeated re-cuttings will be determined.

The information gathered will be compiled in a database and reported to ADAP members for review and comment. Additionally, the database will be made available for subsequent retrieval and analysis by researchers, government agencies, and businesses.

Objective 2

A survey will be conducted to determine the availability of commercial waste streams such as restaurant waste oil and coconut husks for conversion into bioenergy. It is anticipate that some islands have significant amounts of restaurant waste oil and coconut husks, while others will have small amounts.

An online review of small scale conversion technology will be conducted to determine possible technologies for converting feedstocks into bioenergy. Results from this investigation will aid in the design of demonstration scale bioenergy refineries and highlight future areas for research and develop.

PERSONNEL

Drs. Goro Uehara, Robert Paull, and Richard Ogoshi will be responsible for surveying, collecting and testing local Hawaiian varieties of oil and ethanol crops. Dr. Richard Ogoshi will be responsible for reviewing small scale conversion technology for energy crops. Dr. Mari Marutani will be responsible for surveying, collecting and testing local Guam varieties of oil and ethanol crops. Dr. Marutani will travel to the other ADAP-member islands (except Hawaii) and assess the availability of commercial wastes. She will also travel to Hawaii to participate in field trials and discuss Hawaiian and Guam project results. Oil samples will be sent to Pacific Biodiesel on Maui for conversion to biodiesel and then to a national laboratory for certification of fuel standards.

Timeline				
Activity	Month(s)			
Collect Jatroha seeds and cuttings, germinate, and cultivate	1-2			
2. Install experimental Jatropha plots	2-3			
3. Evaluate growth rates and seed and oil yields	2-12			
Conversion of oils into biodiesel and testing	1-12			
5. Cut wild guinea grass and determine dry yield	1			
Re-seed guinea grass plots, determine yields under irrigation and various treatments	2-12			
Survey commercial waste streams for bioenergy production	1-12			
Review small scale conversion technologies commercially available	2-6			
9. Report finding to ADAP	12			

SUMMARY

The project will generate baseline yield data for potential energy crops in climatic/ environmental conditions and farm sizes found in the Pacific Islands. In addition, the project will assess the availability of commercial waste streams in ADAP-member islands and small scale conversion technology for bioenergy production. It is expected that the baseline data generated by this project will lead to larger, more comprehensive collaborations in the future. This information will be valuable for developing possible solutions for Hawaii and Pacific Island nations to decrease their fossil fuel dependency and increase their energy security.

Bioenergy Feedstock Assessment	
Personnel	
1. Project Manager (@.20FTE)	\$10,610
2. Student help	\$2,000
Fringe	
1. Project Manager	\$2,679
2. Student help	\$23
Materials and Supplies	
a. Field	
Field plot	\$600
Fertilizer, pesticides, and field related materials and supplies	\$1,500
b. General	
Oil extractor	\$1,500
Supplies	\$2,300
Sample analysis (ADSC)	\$1,500
Shipping samples to Pacific Biodiesel	\$200
National Laboratory Fuel Standard testing	\$3,000
Other	
Equipment rental and machine operator	\$5,000
Travel	
a. Airfare (Hawaiian islands (6@200)	\$1,200
b. Per diem (6@\$130)	\$780
c. Car rental (3@\$50)	\$150
d. Airfare (Hawaii to Guam)	\$2,000
Subcontract (U Guam)	
i. Materials and supplies	\$2,375
ii. Airfare (Guam to Hawaii)	\$2,000
iii. Per diem (5@\$225)	\$1,125
IV. (Guam to other ADAP islands (3) except Hawaii)	\$6,000
V. Per diem (6@200)	\$1,200
Total	\$47,742

Distance Education Opportunities Project / Cari-Pac Update

Coordination Team: Dr. Lee Yudin, Annie Santos (University of Guam), and Regional Coordinators

Funding Amount: Year 16 \$15,000

Year 17 \$0 Year 18 \$0 Year 19 \$0

PROBLEM STATEMENT AND POTENTIAL SOLUTION

Distance Education is a powerful tool in providing learning opportunities for individuals living in distant or isolated communities. This project is designed to explore and evaluate different models for providing learning opportunities to Pacific Island people.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: JANUARY 2006 TO JUNE 2006

From UOG: Lucyann Kerry, Extension Agent with CES and charged with overseeing the development of a distance education program at UOG, reports that a pilot DVD was produced for the Introduction to Agriculture course. She also reports that she is ready to commence work on production on the telecourse or videotaped course of AG101.

Pacific Emergency Management Preparedness and Response Information Network and Training Services (Pacific EMPRINTS)

Principal Investigator Ann Sakaguchi, MPH, PhD Leveraged Funds

ADAP Coordination Team: ADAP Project Manager and Regional Coordinators

Funding Amount Sub-award from HRSA, \$76,000 + \$54,000

PROBLEM STATEMENT AND POTENTIAL SOLUTION

The U.S. Health and Human Services Health Resources and Services Administration (HRSA) awarded the grant to Dr. Ann Sakaguchi. The purpose of the grant is to fund the development of a health care workforce with knowledge, skills, abilities, and core competencies to recognize indications of terrorist attack; meet acute care needs of patients; participate in coordinated, multidisciplinary response to health events and to rapidly and effectively alert the public health system and local communities of such an event. The proposed project work will take place during the period from September 1, 2005 through August 31, 2008.

The subaward in the grant was written in as follows: "ADAP/Paravet Program at CTAHR - A subaward will be made to the UH- CTAHR ADAP/Paravet Program to fund three U.S.- Affiliated Pacific Islands (USAPI) projects in efforts to expand knowledge in bioterrorism and other public health threats.

- 1. Animal Health First Identifier and Response Project Training (includes travel to/from Hawaii from/to American Samoa, Majuro, Pohnpei, Guam, Saipan and Palau); travel costs of participants from other islands to one of these aforementioned workshops;
- 2. GPS training in USAPI;
- 3. GIS mapping of animal and plant farms in USAPI.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: JANUARY 2006 TO JUNE 2006

American Samoa Community College (ASCC)

 Mr. Tipisone Faalogo, ASCC CNR Agricluture Extension Agent II and Ms. Amio Mavaega-Luvu, Agriculture Extension Agent II (Farm Safety) will be participants from ASCC.

Northern Marianas College (NMC)

• Six participants from the CNMI will be participating in the Avian Influenza training in August 2006. All expenses were paid through this project. All training will be held at the University of Hawaii Manoa Campus. The participants chosen to attend the training were those who had completed the Paravet Training that was conducted on Saipan.

University of Guam (UOG)

• Two individuals recommended to participate in the Avian Influenza Workshop are Dr. Robert Haddock, Territorial Epidemiologist, and Dr. Manuel Duguies, Extension Agent/Animal

Health. Dr. Yuming Wen, Assistant Professor with WERI, was recommended to attend the GIS workshop.

University of Hawaii (UH)

- Selected 22 participants for the Avian Influenza training and 15 participants for the Geographic Information Systems (GIS) training. Participants have been asked to contact a travel agent in Honolulu to arrange their travel.
- Hired Dr. Thomas Poole, Guam Territorial Veterinarian as the primary instructor.
- Distributed first draft of the Avian Influenza Preparedness and Response Training Manual for review by Dr. Seiji Yamada (JABSOM), Dr. Arlene Buchholz (Hawaii Department of Health), and Dr. Theirry Work (USGS), Dr. Jeff Burgett (FWS), and others as requested.
- Prepared proposal for second year activities.

GOALS FOR THE PROJECT FOR THE NEXT SIX MONTHS: JULY 2006 TO DECEMBER 2006

University of Hawaii (UH)

- Avian Influenza training workshop, August 1-5, 2006.
- Geographic Information Systems training workshop, August 1-5, 2006.
- Finalize Pacific EMPRINTS: Avian Influenza Preparedness and Response Training Manual

Pacific Islands Distance Diagnostic and Recommendation System (http://www.dddi.org/pacific/)

Principal investigator: Mark G. Wright (University of Hawai'i)

Funding Amount: Year 16 \$25,000

Year 17 \$25,000 Year 18 \$0 Year 19 \$0

PROBLEM STATEMENT AND POTENTIAL SOLUTION

The impacts of invasive insect pests, plant pathogens, weeds and other organisms on island ecosystems are severe, not only in terms of natural ecosystems, but also agricultural production and other human activities. The islands of the Pacific have been subjected to extensive invasion by pest species, and most agricultural practices have been impacted.

The newly developed and implemented Pacific Islands Distance Diagnostics and Recommendation System (PIDDRS) has the potential to contribute significantly to improving diagnostic services throughout the Pacific, as well as providing a database system for predicting the movement of invasive organisms, training staff in isolated locations, and building the capacity of local agricultural personnel.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: JANUARY 2006 TO JUNE 2006

At the <u>University of Guam</u>, Distance Diagnostics service continues to be utilized by faculty and researchers. It has been beneficial in assisting with identification of insects, plant diseases, etc.

GOALS FOR THE PROJECT FOR THE NEXT SIX MONTHS: JANUARY 2006 TO JUNE 2006

At the <u>College of Micronesia</u>, Dr. Mark Wright will be visiting COM in August/September 2006 to do an Integrated Pest Management (IPM) workshop (utilizing non-ADAP funds). During the visiti, Dr. Wright will reinforce training on PIDDRS equipment and the use of the PIDDRS website.

At the <u>University of Hawaii</u>, we will continue to maintain and update the PIDDRS website and database and provide microscope cleaning kits for each workstation

ADAP/SPC/USP Distance Learning ParaVeterinary Training

Coordination Team: ADAP Project Manager and Regional Coordinators

Funding Amount: Year 16 \$0

Year 17 \$0 Year 18 \$0 Year 19 \$0

PROBLEM STATEMENT AND POTENTIAL SOLUTION

Diseases and poor management of livestock have been recognized as major limitations to animal production in the Pacific Islands. As significant as public health and food security are to these countries, there is also an urgent need for in-country, in-service training for animal industry and extension workers, farmers and the community, to meet basic veterinary service requirements in rural areas. Our continuing effort is to develop and distribute effective distance learning ParaVeterinary training materials to provide a basic level of animal health and husbandry education to local extension personnel and to community leaders.

PARAVET UPDATE

The Secretariat of the Pacific Community (SPC) continues to promote the Paraveterinary training level 1 Program. SPC has recently completed training sessions in Vanuatu.

Luisa Castro will be making a presentation on the ParaVet program at the American Veterinary Medical Association Meeting, July 14, 2006 - July 20, 2006. We look forward to using this opportunity to seek out additional funding, and national and international collaborators.

ParaVeterinary Training Level 1 Graduates			
Country / Island	ParaVet		
(training dates)	Graduates		
American Samoa (2004)	4		
Cook Islands & Tuvalu Islands (2005)	27		
CNMI (2004)			
Saipan:	5		
Tinian:	3		
Rota:	3		
FSM (2004)			
Chuuk:	1		
Kosrae:	1		
Pohnpei:	1		
Yap:	6		
Marshall Islands (2004)	2		
Palau (2004)	4		
Samoa (2004)	12		
Solomon Islands (2005)	23		
Vanuatu (2006)	?		
Total	92		

Management Services

Coordination Team: ADAP Project Manager and Regional Coordinators

Funding Amount: Year 16 \$229,642

Year 17 \$216,353 Year 18 \$215,781

Year 19 \$252,317 (\$28,000 pending allocation)

PROBLEM STATEMENT AND POTENTIAL SOLUTION

Administrative services and program support are essential for planning and implementing ADAP activities for the five Land Grant institutions to collaborate on research, extension and training activities. Management Services is the primary means of collaboration for the ADAP Project.

Management Services includes the home office staff (project manager, coordinator and educational specialist) based at the University of Hawai`i and the regional coordinators from each ADAP institution. The home office is responsible for organizing, planning, coordinating and providing overall support services for the ADAP project. They administer the USDA grant through the Research Corporation of the University of Hawai`i (RCUH). Funds are allocated to the ADAP institutions in accordance with the plans of work, but distributed on a cost reimbursement basis. The home office maintains a fiscal system consistent with the needs of participating fiscal institutions, RCUH and USDA. They also prepare technical and administrative reports that promote the functions and accomplishments of ADAP. The home office oversees the functions of the Communication, Information, and Publication Service (CIPS). The regional coordinators are the link for the home office to communicate with the ADAP directors and project personnel throughout the region. They also provide support services to the project principal investigators and cooperators.

Management services is responsible for organizing the semi-annual ADAP board of directors meetings, at which the ADAP directors, project manager and coordinators plan, organize and make policy decisions for the project. They also maintain collaborative ties with other agencies.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: JULY 2005 TO DECEMBER 2005

American Samoa Community College (ASCC)

- Hosted Board of Director's 2006 Winter Meeting in Pago Pago, American Samoa on January 13 – 14, 2006.
- Provided administrative support for ADAP projects.
- Assisted in the planning and organizing of the first ASCC CNR Summer Institute Program.

College of Micronesia (COM)

- Completion and submission of the 2007-2011 POW to CSREES-USDA
- Drafting an on-line COM activity report interface to support the new POW starting in 2007; to be linked, hopefully, with the ADAP Database—if it can be worked out.

 Pearl project commenced actual transfer of oysters to commercial pearl farms in Pohnpei under its commercialization phase.

Northern Marianas College (NMC)

- Bonnie Royal, ADAP Coordinator met with Annie Santos, UOG ADAP Coordinator in February to discuss about ADAP Project and get a brief overview of a coordinator's duties.
- Margaret Tudela, CREES ADAP Director attended the Winter ADAP Director's Meeting in American Samoa.

University of Guam (UOG)

- UOG-ADAP Director and Coordinator attended the Winter 2005 Board of Directors Meeting in Pago Pago, American Samoa, on January 13 – 14, 2006.
- Submitted Balance Summary and Request for Reimbursement Reports for period ending February 28, 2006 and May 24, 2006.
- A full-time employee was hired to assist in the administrative functions of the program.

University of Hawaii (UH)

- Jim Hollyer facilitated UOG's strategic plan, June 12-16, 2006. These plans were made with full participation of the community and map out work for the next 5 years.
- The Home Office provided administrative support to our collaborators and colleagues. Additionally, Jim Hollyer has been receiving financial support from the Pacific EMPRINTS project (25% FTE), thus reducing the salary/fringe expenses within the Home Office. Vanessa Troegner (25% FTE) and Sharee Pepper (25% FTE) have been receiving financial support from the Agribusiness Incubator Program, thus further reducing the salary/fringe expenses within the Home Office. Dennis Miyahara has been receiving financial support from the Healthy Child / Healthy Living in the Pacific Islands program (25% FTE).
- The ADAP website (http://www2.ctahr.hawaii.edu/adap2/) and the Pacific Islands Networking website (http://www2.ctahr.hawaii.edu/adap2/Pacific_Initiative/index.htm) were updated periodically. Interest in the Pacific Networking site and the email distribution list has continued to be moderate, with a request for the distribution list coming in about once every two weeks. The distribution list has been used to raise awareness of the tuition increase at the University of Hawaii for Pacific Islanders, and to raise interest in the President's Advisory Commission on Asian Americans and Pacific Islanders, Technical Assistance Conference in Honolulu, Hawai'i.

ESTIMATED IMPACT OF THE PROJECT TO DECEMBER 2005

American Samoa Community College (ASCC)

 Management Services project has improved the working relationships between faculty, staff and students of the college.

College of Micronesia (COM)

- Updated ADAP project expenditures reports and ADAP equipment inventory
- Completion of travel arrangements and travel documents for Micronesian cooperators to the HLPI annual meeting in Saipan.

• Initiated the process of selecting agriculture, aquaculture, and home economics major students at the 3 colleges for next school year's scholarship program for college students

Northern Marianas College (NMC)

The Acting Director and the Coordinator continue to oversee and track the progress of the ADAP Projects. This project has given us the opportunity to improve our approach in addressing our workload, as well as, teamwork and communication with the ADAP Central Office, internal/external institutional collaborations and improved collaborations our NMC-CREES Advisory Councils on all three islands of Rota, Tinian and Saipan. It also greatly improved our overall services to the community.

University of Guam (UOG)

ADAP funds are closely monitored to ensure expenditures of funds are in line with the intended purpose as allocated under each core project, and that all funds expended are accounted for.

University of Hawaii (UH)

The Pacific Islands Land Grant Database – Project Accountability and Reporting System (PARS) will improve research and extension services in the Pacific region. Also, the PARS system will facilitate collaboration between institutions by providing a searchable database of professional interests, and expertise.

The Pacific Islands Networking website has increased awareness of Pacific programs and increased communication across the Pacific region.

By diversifying the Home Office, and providing support to other programs, we have lessened the salary and fringe expenses drawn from ADAP and reinvested the funds in the ADAP programs.

GOALS FOR THE PROJECT FOR THE NEXT SIX MONTHS: JANUARY 2006 TO JUNE 2006

American Samoa Community College (ASCC)

• Continue to coordinate and monitor ADAP projects within the college to improve services to faculty, staff, students as well as our wide range of clientele in the community.

College of Micronesia (COM)

- Reinstate the high school research/extension summer apprenticeship program
- Begin scholarship support for Mr. Robert Jackson for his Masters Degree program with San Diego State University online program.
- Continue facilitation/support for ADAP project cooperators in the implementation of their respective projects closure of Better Crops project.

Northern Marianas College (NMC)

- Continue to maintain open communication and track progress of approved ADAP Projects.
- Coordinate meetings and trainings to improve overall services to the community.

University of Guam (UOG)

- Utilize full-time employee hired under the program to input data on research faculty into Pacific Land Grants Database.
- Organize ADAP files in office.
- More effective communication goals.

University of Hawaii (UH)

- Maintain project's financial accounts, and update subcontracts.
- Update and expand ADAP's and the Pacific Islands Network websites to improve usability.
- Prepare ADAP Year 19 Subcontractor Agreements.

Leadership Development Opportunties

Coordination Team: ADAP Project Manager and Regional Coordinators

Funding Amount: Year 16 \$34,000

Year 17 \$34,000 Year 18 \$78,075 Year 19 \$83,000

PROBLEM STATEMENT AND POTENTIAL SOLUTION

The establishment of the Pacific Land Grants, especially American Samoa Community College, College of Micronesia, Northern Marianas College, and the University of Guam, has been critically important to these small but growing regions of the Pacific. One of the areas that are often overlooked in building such an institution from the ground-up is the consistent development of leadership qualities within the staff. Without such skills, these institutions, including the College of Tropical Agriculture and Human Resources at the University of Hawai'i, will not make the organizational strides required by their clients.

ADAP will send one representative from each ADAP institution to the ESCOP/ACOP leadership Development program as often as funding is available.

In the ADAP Year 18 proposal, additional funds were provided to each institution to cover the increased program costs, increased registration costs, and increased travel costs. For the current candidates to the LEAD21 (2005-2006), funds in Year 16 and Year 17 should be completely expended, before requesting additional funds. Should any institution require additional funds for 2005-2006 candidates, please forward a request to the Home Office. Year 18 funds will become available in September for the Leadership candidates beginning their programs in June 2006 (application deadline April 2006).

At the January 2006, ADAP Board of Director meeting, the board voted to allow each institution the opportunity to use Year 17 funds for the Leadership Development in the 21st Century (LEAD21) classes, or to use the same funding for specific leadership development activities. The Board of Directors requested that each institution either submit the name of their LEAD21 participant, or a description of the individualized leadership development programs.

CANDIDATES FOR LEAD 21 CLASS 2006-2007

UOG: Dr. James McConnell, professor in Ornamental Horticulture, CNAS/AES

UH: Dr. Halina Zaleski, Department Chair, Human Food, Nutrition, and Animal

Sciences (HFNAS), CTAHR

ALTERNATIVE LEADERSHIP OPPORTUNITIES:

American Samoa Community College (ASCC)

Eseta Su'a-Kalio, ASCC CNR Office Manager/ADAP Coordinator graduated from the LEAD 21 Leadership Development inaugural class, March 2006. ASCC will not be sending a candidate to the next LEAD 21 program, instead ASCC will generate its funding to support the ASCC CNR Summer Institute Program, send a candidate to complete a undergraduate/

graduate degree program off-island or on a on-line degree program and increase students majoring at ASCC associate of science degree in general agriculture, agribusiness, natural resources and consumer sciences degrees.

College of Micronesia (COM)

COM is looking to provide management training opportunities to our key management staff. At the moment we plan to participate in a management training to be conducted by NMC.

Northern Marianas College (NMC)

Northern Marianas College (NMC) and College of Micronesia (COM) have developed a Leadership Development Training/Workshops using Year 18 approved funds for specific Leadership Development activities.

Dr. Singeru Singeo, ADAP Director for COM and Ms. Margarita D. Tudela, Acting ADAP Director for NMC agreed to conduct two Leadership Development training and workshops. The first Leadership Development Training/Workshops will take placed on Saipan and the second will be decided at a later date.

Ms. Tudela has already developed a tentative Program, identified trainer/presenter and NMC-CREES will assist with hotel accommodations for COM participants. The approved topics for the Leadership Development Training/Workshops on Saipan are as follows: Essential Skills of Leadership, Resolving Conflicts, Essential Skills of Communicating and Managing Complaints. Throughout the workshops, managers and team leaders will review video presentations and case studies, participate in group discussions, practice new skills and receive immediate feedback. Managers will leave the session with implementation tools, troubleshooting guides, and additional resources to help them immediately apply their new skills on the job. These 4-to-5 hour workshops and are designed for 6 to 18 participants.

Enrichment Opportunity Project

Coordination Team: ADAP Project Manager and Regional Coordinators

Funding Amount: Year 16 \$35,000

Year 17 \$35,000 Year 18 \$35,000 Year 19 \$35,000

PROBLEM STATEMENT AND POTENTIAL SOLUTION

The ADAP Enrichment Opportunity Project fills the need to increase institutional and governmental capability and credibility for regional agricultural development. Oftentimes, new initiatives must be implemented which usually require new guidelines and new regulations. There is a continuing need to provide staff development or training opportunities to enhance the productivity and efficiency of appropriate institutional and governmental employees. The successful transfer and adoption of knowledge will enhance the productivity and efficiency of those employees. To strengthen, improve and increase their skills, the land-grant directors need discretionary training funds to expand ADAP-sponsored activities or have staff and government employees partake in professional development or training activities.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: JANUARY 2006 TO JUNE 2006

American Samoa Community College (ASCC)

Funding reserved to support potential ASCC faculty, staff or student candidate for the undergraduate/graduate degree program at a Land Grant College/University off-island.

College of Micronesia (COM)

No activities during this period.

Northern Marianas College (NMC)

The funds from the Enrichment Opportunities were used to cover the venues for the Papaya workshop and the EFNEP Meeting. Funds were also used to cover some minimal travel expenses not covered by the University of Hawaii for Allan Sabaldica and Jacob Muna's participantion in the Avian Influenza training in August, 2006.

University of Guam (UOG)

We will be utilizing monies under this project to once again fund our Summer Research Apprenticeship Program. This summer will be our sixth summer offering this program, which involves high school students and has them working alongside our research scientists in a research laboratory environment.

University of Hawaii (UH)

Jim Hollyer, Vanessa Troegner, Donna Shaver, and Luisa Castro attended a two-day workshop on Project Management techniques.

Jim Hollyer attended the Association for Communication Excellence in agriculture, natural resources, and life and human sciences (ACE) conference. Jim made valuable contacts for the ADAP project, CTAHR, and the EMPRINTS project. As a result of his efforts, Dr. Laura Miller of the Leopold Sustainablity Center, Iowa State University, will be speaking at CTAHR. Also, the USDA has provided the Pacific EMPRINTS – Avian Influenza (AI) project, with expert advice and promotional materials for the students.

ESTIMATED IMPACT OF THE PROJECT TO JUNE 2006

American Samoa Community College (ASCC)

None for this reporting period.

College of Micronesia (COM)

None for this reporting period

Northern Marianas College (NMC)

The project has given opportunities for staff and several farmers to gain new skills and knowledge through the Papaya workshop. This is the first-time ever CNMI have hosted the EFNEP/HLPI Regional Meetings. The overall planning and coordination of the event was a success.

University of Guam (UOG)

Past participants of the research apprenticeship program, who already express a strong interest in the field of science, come away with hands-on experience working in an agricultural research laboratory assisting a research scientist conducting experiments, analyzing specimen, collecting data, conducting fieldwork, etc. It is our desire that by participating in such a program, it will have some influence in their pursuit of a college education in agriculture or other related fields.

University of Hawaii (UH)

Jim Hollyer, Vanessa Troegner, Donna Shaver, and Luisa Castro learned how to better plan, prepare, manage, and meet project goals. The knowledge and skills will be put to good use as all the participants take on greater responsibilities.

GOALS FOR THE PROJECT FOR THE NEXT SIX MONTHS: JULY 2006 TO DECEMBER 2006

American Samoa Community College (ASCC)

The dean will select students to enroll in undergraduate/graduate degree program off-island.

College of Micronesia (COM)

Portion of the funds will be used to support Robert Jackson to attend the session on curriculum mapping at the Pacific Educational Conference (PEC) in Palau as part of our new initiative in examining the process of developing a curriculum for extension educators.

Continue to announce the availability of enrichment opportunities funds and prioritization of areas of staff development needs.

Northern Marianas College (NMC)

To continue providing necessary trainings and meetings for staff and collaborators.

University of Guam (UOG)

Oversee the 2006 Summer Research Apprenticeship Program. This summer will are able to offer five slots to high school students on Guam. These students will be hired to work full-time under our Agricultural Experiment Station with our research faculty as well as other faculty under the college. The program will run for six weeks starting June 26 – August 4, 2006.

University of Hawaii (UH)

UH will continue to focus on staff development, specifically in computer graphics and web design skills. Additionally, by keeping up with technology and software advances, we hope to continue to improve the quality and accessibility of the ADAP website.

Human Resources & Capacity Building Project (For Non-UH institutions)

Coordination Team: ADAP Project Manager and Regional Coordinators

Funding Amount: Year 16 \$60,000

Year 17 \$60,000 Year 18 \$60,000 Year 19 \$60,000

PROBLEM STATEMENT AND POTENTIAL SOLUTION

The American Pacific Land Grant institutions and government agencies want to increase their levels of trained and competent staff in order to enhance the institution and government services and to advance local agricultural development (or its allied fields). One way to help increase the number of qualified employees is to provide high school and college students, i.e. potential future employees, and current government or ADAP institution employees, with the opportunity to compete for educational scholarships. ADAP has developed programs targeted at different stages of educational development. The funds are available to all Pacific Land Grants except University of Hawaii. The titles of the three educational scholarship programs are:

Financial Assistance for an Extension/ Research High School Apprenticeship Program

Justification: Low enrollment in agriculture and home economics classes in ADAP region high schools continues to deprive ADAP countries of future employees who are knowledgeable in these areas. A cursory survey of students reveals a lack of awareness of the educational opportunities and careers available in agriculture, home economics, and related fields.

Financial Assistance for attending a 2- or 4-Year College or an Accredited Virtual University Program

Justification: Local college scholarships are limited and awards are typically based on prioritized field of studies. At the present time, agriculture and home economics are not priority fields in most ADAP countries. Financial assistance can be used for U.S. or foreign institutions, but students going to Land Grant colleges are given preference. On-line or virtual degree programs are also considered for this assistance.

Financial Assistance for an Advanced Degree Studies Program

Justification: Land Grant staff is limited in the ability to expand or strengthen programs and to advance professionally. ADAP scholarships for advanced degrees are made available to meet this need. Financial assistance can be used for U.S. or foreign institutions, but students going to Land Grant colleges are given preference. On-line or virtual degree programs are also considered for this assistance.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: JANUARY 2006 TO JUNE 2006

American Samoa Community College (ASCC)

 Mr. Saitumua Frost, ASCC ADAP Scholar graduated from the American Samoa Community College with an Associate of Science Degree in Natural Resources, May 19, 2006. • Enrolled twenty (20) students in the ASCC CNR 2006 Summer Institute Program.

College of Micronesia (COM)

Mr. Mark Kostka is still performing satisfactorily at UH-Hilo campus and is expected to complete requirements for a BA degree in December 2006 and the enrollment of Mr. Robert Jackson with the SDSU online Master Degree program on Educational Leadership.

Northern Marianas College (NMC)

Mr. Ross Manglona, our Acting Associate Director for FCS has completed his last three courses for his Masters Degree Program. He is expected to graduate in Fall 2006. Ms. Patricia Coleman, EFNEP Educator is pursuing her undergraduate degree and is a first time recipient of the scholarship. Three other recipients of the HR & Capacity Building project continue to attend classes majoring in Natural Resource Management.

University of Guam (UOG)

Two full-time employees of UOG who were recipients of financial assistance under this project graduated this Spring 2006 semester. They are Mr. Jesse B. Rosario, who received his Bachelor of Science degree in Public Administration, and Ms. Janet T. Dirige, who received her Bachelor of Arts degree in Consumer and Family Sciences. Mr. Rosario is the Administrative Officer with the College of Natural and Applied Sciences. Ms. Dirige was formerly with the Dean's Office of the then College of Agriculture and Life Sciences and is now working with the Senior Vice President of Academic and Student Affairs as a Program Coordinator.

Additionally, the Agricultural Experiment Station held a Strategic Planning Retreat on June 14 – 16, 2006 at the Guam Hilton Hotel. Mr. James Hollyer, ADAP Program Manager, at the request of Dr. Lee Yudin facilitated the planning session.

ESTIMATED IMPACT OF THE PROJECT TO JUNE 2006

American Samoa Community College (ASCC)

Increased public awareness of agriculture degree programs at ASCC. Improved student interest to enroll at ASCC and major in CNR degree programs.

College of Micronesia (COM)

Mr. Kostka's enrollment for summer sessions to complete requirements for his BA degree in tropical agriculture.

Northern Marianas College (NMC)

Through the financial assistance from the project, our very own Acting Director for FCS and Agriculture Ext. Agent, Mr. Ross Manglona, was able to achieve his goal and have completed his Masters degree program requirements. The project continues to provide funds to students who wish to pursue higher education in fields related to agriculture and family and consumer sciences.

University of Guam (UOG)

Employees provided financial assistance to pursue a degree at the University of Guam could apply the knowledge they acquire on the job, and upon completion of their degree program, may result in enhanced work performance and possible advancement.

GOALS FOR THE PROJECT FOR THE NEXT SIX MONTHS: JULY 2006 TO DECEMBER 2006

American Samoa Community College (ASCC)

- Award certificate of completion to twenty students of the 2006 Summer Institute Program.
- Increase enrollment of students in the Fall '06 ASCC CNR degree programs.
- Retain students in degree programs.

College of Micronesia (COM)

- Provide enticement for additional staff who would be interested to continue their education either through on-campus or on-line programs.
- Search for regional and international programs to support human resource development needs of current staff.
- Finalize selection and provide financial support to college students who are majoring in agriculture, home economics, and related fields.

Northern Marianas College (NMC)

- Continue to promote and recruit students to major in Agriculture and Family Consumer Sciences or related fields.
- Encourage and provide staff the opportunity to pursue their degrees or to enhance their skills and knowledge in their field of work.

University of Guam (UOG)

- Evaluate academic progress of remaining recipients and establish timeline when they will complete their degree program.
- Look into other uses of monies under this project.
- Solicit stakeholder input for the best use of these funds.

Communications, Information and Publications Services (CIPS)

Coordination Team: ADAP Project Manager and Coordinators, Eileen Herring (UH Hamilton

Library), UOG Librarian

Funding Amount: Year 16 \$63,030

Year 17 \$63,190 Year 18 \$20,730 Year 19 \$20,030

PROBLEM STATEMENT AND POTENTIAL SOLUTION

The ADAP Communications, Information and Publications Service (CIPS) project was created to coordinate and address the information needs of the ADAP institutions, communities and clientele on a regional basis. This project will help provide and make accessible, appropriate information and materials that will benefit the American Pacific region and encourage economic and agricultural sustainability. As a result of more open and immediate access to information, duplication of work in the region will be reduced, leading to more efficient use of fiscal and human resources. The increased utilization of electronic communication capabilities can greatly reduce travel costs for various meetings, training, and workshops.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: JULY 2005 TO DECEMBER 2005

American Samoa Community College (ASCC)

Paid for internet usage for ASCC CNR faculty, staff and staff both in Tutuila and the Manua Island.

College of Micronesia (COM)

No activity to report.

Northern Marianas College (NMC)

No activity to report.

University of Guam (UOG)

No activity to report.

University of Hawaii (UH)

ADAP CIPS 01/01/06 – 06/30/06 Library Services Statistics

Location	Searches	Articles	Book Loans	Hours	Value*
ASCC	2	43	0	20.5	\$843.75
COM-FSM					
Kosrae	5	0	0	1.5	\$90.00
Pohnpei	2	0	0	1.0	\$120.00
Yap	0	8	0	3.5	\$137.75
CMI	0	1	0	1.5	\$19.80
NMC					
Tinian	3	8	0	4.5	\$243.25
PCC	1	1	0	1.5	\$75.00
UOG	2	29	0	8.0	\$555.00
SPC-Fiji	11	14	0	4.5	\$271.75
-					
Total	16	104	0	46.5	\$2,356.30

^{*}The figures given in the "Value" column are based on the current rate schedule of the University of Hawaii at Manoa Library's External Services Program. (ESP). ESP provides library services for non-UH Manoa patrons. ESP charges fees on a cost-recovery basis.

In addition to the services outlined in the table above, during the past six months, the ADAP librarian, Eileen Herring, attended the annual Agriculture Network Information Center (AgNIC) Annual Coordinating Committee Meeting on ADAP's behalf. This year the meeting was held at the National Agricultural Library (NAL) in Beltsville, Maryland from 27 - 28 April 2006. Attendance at this meeting is mandatory for the continued inclusion of the ADAP supported Traditional Pacific Island Crops Web site in NAL's AgNIC program. During this meeting, Eileen met with Lori Finch of NAL about updating the NAL Thesaurus to include even more tropical crop descriptors. This will be valuable when she starts adding new CTAHR resources to the AgNIC database as well as for others who use the thesaurus to index information on tropical crops. Eileen also met with Luz Alvare of CGIAR (Head Librarian, IFPRI) and talked about resources that they might have that are available in the Pacific. Carlos Echevarria from Inter-American Institute for Cooperation on Agriculture (IICA) was also at the meeting and Eileen discussed some of their digital initiatives on tropical agriculture information.

The Traditional Pacific Island Crops Web Site (AgNIC Partner) (http://libweb.hawaii.edu/libdept/scitech/agnic/)

This ADAP supported project provides access to Pacific relevant full-text electronic resources about 12 traditional Pacific Island Crops:

- Bananas and Plantains (Musa sp.)
- Betel Nut (Areca catechu)
- Breadfruit (Artocarpus altilis)
- Cassava (Manihot esculenta)

- Coconut (Cocos nucifera)
- Kava (Piper methysticum)
- Noni (Morinda citrifolia)
- Pandanus (Pandanus sp.)
- Sugarcane (Saccharum officinarum)
- Sweet Potato (Ipomoea batatas)
- Taro (Colocasia esculenta) and other Edible Aroids
- Yam (Dioscorea sp.)

The Web site contains links to quality World Wide Web resources that deal with the production, marketing, and research aspects of these twelve important traditional Pacific Island crops. Related marketing and statistical sites, databases, and other reference sources are also included. The emphasis is on collecting full-text resources so that Pacific Islanders who have Web access but do not have access to library print resources can find the information they need to grow and market these crops. Each of the included resources has been identified and evaluated by Eileen for the quality of their information and relevance to Pacific island agriculture.

During the past six months, these pages have received 24,251 page requests (that translates into 44,197 "hits"). Sugar cane and noni were the most popular crops during this period with about 2,500 page requests each. Among the worldwide users of this information, the following Pacific island domains accessed these Web pages:

```
.au (Australia)
.ck (Cook Islands)
.fj (Fiji)
.fm (Micronesia)
.nc (New Caledonia)
.nz (New Zealand)
.pf (French Polynesia)
.pg (Papua New Guinea)
.sb (Solomon Islands)
.vu (Vanuatu)
.ws (Samoa)
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During the past six months, the ADAP librarian answered 17 email reference questions from users throughout the world concerning these twelve crops.

In June, Eileen Herring attended an Outreach College workshop on Greenstone Digital Library software. Several other UHM librarians also attended and UHM Library has made the Greenstone software available on a server for librarians to test. In the next few months, Eileen will be experimenting with converting the current Web site into a Greenstone Digital Library. One of the big advantages to this would be that the entire suite of documents and associated searching capability could be delivered via CD-ROM to Pacific libraries and extension offices that do not have reliable or affordable Internet access.

Pacific Library Training Institute

On June 27, the ADAP Librarian made a presentation to the librarians attending the Pacific Library Training Institute. Because a majority of the attendees represented ADAP institution libraries, Eileen's presentation covered all of the major current ADAP initiatives. She

also encouraged these librarians to contact their campus ADAP personnel and become more knowledgeable about these programs. This Institute was funded by an IMLS grant and cosponsored by PREL and the UH Manoa Library Pacific Collection. There were 19 attendees representing academic and public libraries from throughout the US affiliated Pacific region. ADAP institutions represented included: ASCC, NMC, COM-FSM National Campus, COM-FSM Chu'uk, COM-FSM Kosrae, COM-FSM Yap, UoG, PCC, and CMI.

ESTIMATED IMPACT OF THE PROJECT TO JUNE 2006

American Samoa Community College (ASCC)

Internet access is a positive impact on the coordination, management and implementation of ADAP projects at ASCC.

University of Hawaii (UH)

With increased access to research and extension information through the Agricultural Document Delivery Service, ADAP institutions are better able to serve their communities and their clients.

GOALS FOR THE PROJECT FOR THE NEXT SIX MONTHS: JULY TO DECEMBER 2006

American Samoa Community College (ASCC)

Continue to utilize the CIPS project to strengthen the communication process at the college and its clients.

College of Micronesia (COM)

- The COM on-line Activity Report Interface, under a separate services contract with Yvonne Garcia, is being developed with hope that it will be linked with the ADAP Pacific Land Grants Reporting and Accountability Database.
- Continue to assess the needs at the 3 colleges for communication, information and publications
- Support the proposed on-line activity report interface—with the goals of improving communication, timeliness and accuracy of reports, facilitate communication among and between project collaborators.

Northern Marianas College (NMC)

Update and reprint CREES Personnel Directory and Programs' brochures. Mass printing of program materials, flyers, brochures, booklets and posters.

University of Guam (UOG)

Monies will be used to help produce our most recent AES strategic planning publications.

University of Hawaii (UH)

Distribute three agricultural textbooks to each of the nine Land Grant college libraries of the Pacific (ASCC, NMC, UOG, CMI, PCC, COM-Yap, COM-Chuuk, COM-Kosrae, COM-FSM). Each library will given a list of twenty titles from which to pick their three. Continue to provide Agricultural Document Retrieval Services.

Grant Coaching Services

Coordination Team: Dr. Sharee Pepper, ADAP Project Manager and Regional Coordinators

Funding Amount: Part of the CIPS budget

PROBLEM STATEMENT AND POTENTIAL SOLUTION

Grant Development and Capacity Building Project – The American Pacific Land Grant institutions and government agencies would like to increase the level of funding for their research, education and extension projects. Increasing the amount of funding from competitive grants is increasingly important and capacity building to facilitate professional development is essential to compete successfully.

RESULTS AND ACCOMPLISHMENTS FOR THE PERIOD: DECEMBER 2006 TO JUNE 2006

University of Hawaii (UH): Dr. Sharee Pepper's Activities

- Attended CTAHR workshop on Securing and Managing Extramural Funding (2 hrs/month March –June, 2006).
- Compile and e-mail two newsletters every few weeks as the information becomes available.
 During the past six months 23 news letters have been generated with information on 1020 grants per newsletter. One version describes currently available funding opportunities
 of interest to over 40 Pacific Land Grant staff and faculty and the second version of the
 newsletter was begun in January with a focus on grant opportunities (related to agricultural
 and nutrition) for the UH community college system which is now being sent to over 25
 representatives from the ten campuses throughout Hawaii.
- Assistance with all aspects of grant development and submission are provided to those requesting support. For example, consultations with some recent clients included: Amy Brown, CTAHR; Diane Myazoe, COM, CMI; Jim Currie, COM, FSM; Glen Hontz, Kauai CC; Kathy McKenzie, Oahu Resources Conservation & Dev. Council; Nicky Davison, CTAHR; Tracy Sylva, CTAHR; Jackson Phillip, COM, FSM; Lee Yudin, UOG; Nat Tuivanvalagi, CMI; Mari Marutani, UOG; Mele Letuli-Savea, ASCC; Melvin Wong, CTAHR.
- As a member of the Human Use Committees (or Internal Review Board, IRB) for the UH and Queens Medical Center, I attend monthly committees meeting to review all UH research that includes the use of human subjects (which provides an opportunity to stay current with UH research and issues). Also, judged UH medical student and faculty research posters.
- Compiled and edited the FY2006 renewal application to the USDA Alaska Native-Serving and Native Hawaiian-Serving Institution Education Grants Program titled "University of Hawaii Agribusiness Education, Training and Incubator (AETI) Project" submitted by a consortium of 9 UH community colleges and the UH Manoa CTAHR. (Due 4/21/06) (total package was over 300 pages)
- Provided support and brief presentations for the Oahu Agricultural Development Program (4/13 & 5/18/06).
- Coordinate with Steven Chiang, Director, Agribusiness Education, Training and Incubation Program re: assisting local agriculture-related businesses.
- SARE overview (4/10/06)

At <u>College of Micronesia</u> the Grant Coaching services has increased awareness of research and extension staff on currently available funding opportunities. At the <u>University of Guam</u>, grant opportunities information received from Dr. Pepper via email are forwarded to CNAS faculty. We have not received any feedback from faculty, although if they do see something of interest they would just click on the sight provided in Dr. Pepper's emails.

ESTIMATED IMPACT OF THE PROJECT TO JUNE 2006

- Contributing to capacity building in the Pacific Island Land Grant institutions, the UH CTAHR
 staff and faculty, and the UH community college agriculture related staff and faculty by
 providing training on how to write successful grants and identifying possible funding sources,
- Increasing the resources and funding for agriculture related education, research, and extension programs and projects by supporting the development, and submission of grants for the UH and Pacific Land Grant institutions.
- Supporting the goals and accomplishments of the UH Agribusiness Education, Training
 and Incubator Project by compiling and submitting the required annual reports and FY 06
 renewal for this USDA grant composed of a consortium of nine Hawaii college campuses.

IMPROVEMENTS AND RECOMMENDATIONS:

University of Guam (UOG)

Need to re-evaluate the use and effectiveness of the Grant Coaching Services.

Campus Report for American Samoa Community College

What were the changes within your institution or island nation that would influence the operations of the ADAP project? Please describe items such as new state legislation, significant staff changes, institutional reorganization, natural disaster, new agricultural initiatives, and development of new agribusinesses, emergence of agricultural diseases, and new challenges or goals at your institution.

- Tapa'au Dr. Daniel Mageo Aga, ASCC Dean & Director was appointed as the Assistant Executive Director for the American Samoa Government Political Status Commission for the Governor of American Samoa.
- Mr. John Gonzales started at ASCC in early June as the new Sea Grant Program Coordinator.

IMPORTANT:

If additional funds become available from Year 17, Year 18, or Year 19 budgets, what are some ideas of ways we can spend it and benefit the project?

- 1. .
- 2. .
- 3.

Campus Report for College of Micronesia

What were the changes within your institution or island nation that would influence the operations of the ADAP project? Please describe items such as new state legislation, significant staff changes, institutional reorganization, natural disaster, new agricultural initiatives, and development of new agribusinesses, emergence of agricultural diseases, and new challenges or goals at your institution.

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IMPORTANT:

If additional funds become available from Year 17, Year 18, or Year 19 budgets, what are some ideas of ways we can spend it and benefit the project?

- 1. Additional funding to the Kosrae site to enable the cooperator to continue with her projects since she is not eligible for NRI funding.
- 2.
- 3.

Campus Report for Northern Marianas College

What were the changes within your institution or island nation that would influence the operations of the ADAP project? Please describe items such as new state legislation, significant staff changes, institutional reorganization, natural disaster, new agricultural initiatives, and development of new agribusinesses, emergence of agricultural diseases, and new challenges or goals at your institution.

Northern Marianas College Campus Report

Prepared by: Margarita D. Tudela, Acting Director, NMC-CREES Program

On March 22, 2006, the Board of Regents at its regular meeting unanimously approved the proposed austerity measures submitted by President Guerrero. The proposal called for a freeze in the hiring of certain vacant positions throughout the college as well as budget reduction in operations budget. The Board further authorized the President to conduct internal reviews of college programs for further budget reductions.

The Board of Regents also approved an increase in tuition and fees for the college. Tuition was increase for resident students to \$30, and \$60 for non-resident students. Tuition increase will commence Fall 2006. Course fees for School of Education and Nursing high maintenance courses were increased to a flat fee of \$300 per course. Class fees increases will begin Summer 2006.

The Students Services program conducted training and workshop to assist students apply for federal and financial aid so that they can be able to meet the high tuition costs. On January 13, 2006, the NMC was officially removed from the HCM2 method of payment and has been returned to the advanced method of payment.

NMC President, Antonio V. DeLeon Guerrero notified the NMC Board of Regents of his decision to retire from government service and step down as the President of the Northern Marianas College effective August 25, 2006. The Board officially accepted his retirement notification.

NMC-CREES

NMC-CREES is still without a permanent Director with over ten (10) positions frozen. The shortage of manpower hampered the daily operations and services of many CREES programs, especially in the Agriculture and Research areas.

Students majoring in NRM continue to be eligible for ADAP scholarship under the Human Resources and Capacity Building. Seven (7) students registered for the NRM class this Summer. Six (6) had declared NRM as their major program of study. Five (5) students withdrew due to conflict of work schedules and insecurity of losing their jobs.

NMC-CREES will continue to reach out to NMC students, employees from the Department of Lands and Natural Resources, Division of Environmental Quality and Coastal Resources Management in an effort to recruit more students to major in NRM and Family Consumer Sciences.

NMC-CREES hosted the first EFNEP Pacific Region Conference and Training on June 26-27, 2006. The HLPI Annual Conference was also held on Saipan on June 28-29, 2006.

IMPORTANT:

If additional funds become available from Year 17, Year 18, or Year 19 budgets, what are some ideas of ways we can spend it and benefit the project?

- 1. Seed money to reactivate the Artificial Insemination Program in the CNM I.
- 2. Funds to hire Research Scientists on Professional Service Contract for one year. Priority needs Food Scientist.
- 3. Funds to assist with the construction of NMC-CREES new Experiment Station at the As Perdido, Saipan.

Campus Report for University of Guam

What were the changes within your institution or island nation that would influence the operations of the ADAP project? Please describe items such as new state legislation, significant staff changes, institutional reorganization, natural disaster, new agricultural initiatives, and development of new agribusinesses, emergence of agricultural diseases, and new challenges or goals at your institution.

Create a MOU between the College and Guam Cooperative Extension. The Agricultural
Experiment Station has created a new mission statement and is in the process of changing
their name. One possibility is the Western Pacific Tropical Research Center (WPTRC).
Money woes still strap the University of Guam and as of date the University is owed by the
general fund nearly 10 million dollars of their 30 million dollar budget. Two new classrooms
will be built one for Math and the other for distant learning.

IMPORTANT:

If additional funds become available from Year 17, Year 18, or Year 19 budgets, what are some ideas of ways we can spend it and benefit the project?

- 1. Capacity building for both faculty and staff in areas of need.
- 2. Support demonstration plots for local farmers
- 3. Funds to support new letters and open communication between the college and the community

Campus Report for University of Hawaii

Award Banquet: CTAHR's 18th Annual Awards Banquet was held on May 4, 2006, at the Hilton Hawaiian Village. Emcees Derek Kurisu (Vice President of KTA Superstores, founder of the Mountain Apple brand and the 2002 Outstanding Alumnus) and Bree Shimizu (Family Resources student and winner of this year's Mabel Inada Ito Scholarship) welcomed about 480 guests. Among this year's speakers were: City and County of Honolulu Mayor Mufi Hannemann, UH President David McClain, and UH Manoa (UHM) Interim Chancellor Denise Konan. Dr. Po-Yung Lai – a former CTAHR assistant dean for cooperative extension – was named the 2006 Outstanding Alumnus. Herbert 'Monty' Richards – a former UH Regent, and our current Hawaii CARET representative – was the recipient of the 2006 Ka Lei Hano Heritage award. Both Lai and Richards were recognized by Representative Jerry Chang (on behalf of the State House of Representatives), Senator Russell Kokubun (on behalf of the State Senate), and Mr. James Nakatani (on behalf of Congressman Ed Case).

Board of Regents: Marlene Hapai, who served CTAHR as Associate Dean for Academic and Student Affairs from 2000 to 2003, has been appointed by Governor Linda Lingle to serve as a member of the UH Board of Regents. Hapai is the second regent who has ties to CTAHR. Ramon de la Pena, a former CTAHR faculty, was appointed a regent in 2004. Both Hapai and de la Pena are CTAHR alumni.

Capital Improvement Projects: CTAHR received almost \$18 million for CIP projects. At UHM, a certified kitchen is being renovated at the Agricultural Science building for \$627,228. In Hilo, the Komohana Research and Extension Center (Hawaii County) has been recently awarded \$12,648,000 to renovate a 12,696 sq.ft., two-story building and one wing of the existing three-wing complex, and construction of a new 14,596 sq.ft. two-story laboratory building as the 4th-wing – completing the existing C-layout to an O-layout. On Molokai (Maui County), a new 2,200 sq.ft. Cooperative Extension office building will be constructed for approximately \$1,113,500. Pending a summer contract bidding at the Mauka Campus at UHM is the Magoon Laboratories Greenhouses Repair project, estimated at about \$3,400,000 to repair twelve greenhouses. Also awaiting contract bidding is the installation of a septic tank for the Kona Extension Office (Hawaii County), which is estimated at about \$193,000.

Enrollment: Reorganization of college's academic programs was announced in print in 2002. Since that time, total enrollment in the college (undergraduate and graduate majors) increased by 13% in the first year, 14% in the second year, and 4% in the third year. We anticipate the college's enrollment to be flat to slightly lower in Fall 2006: reflecting the anticipated decrease in enrollment campus wide. Part of the reduction in enrollment is attributable to major increases in tuition (by nearly 40%) that are scheduled over the next three years. To offset the potential impact that the significant tuition increases above might have on future enrollment in the college, efforts are underway to increase recruitment and retention, broaden student opportunities for extracurricular learning, and further strengthen our academic programs.

Grants and Contracts: During fiscal year 2006, CTAHR faculty and staff members received 171 extramural awards totaling more than \$19.9 million: an increase of 34 awards and \$3.2

million over the previous year. FY2006 represents the college's second most productive year for extramural funding.

Legislative Session: CTAHR had a successful year with the 2006 Legislative Session. Five new faculty positions: two full-time equivalents (FTE) in Family and Consumer Sciences (FCS), two FTE in Natural Resources and Environmental Management (NREM), and one FTE for a new program in turfgrass and landscape management in Tropical Plant and Soil Sciences (TPSS). CTAHR was successful during the last Legislative Session to add nine new positions. With these new additions, CTAHR will be able to fill some major gaps created by many years of budget reductions.

Taro Issues: On March 2, 2006, several hundred demonstrators came to campus to deliver a letter to the UH President David McClain, requesting that the university abandon CTAHR's three taro patents. We have been working vigorously with Native Hawaiian communities to resolve this issue. UH has filed terminal disclaimers with the U.S. Patent Office that, in effect, dissolve all university proprietary or ownership interests of any kind in three taro varieties created by UH research work. The disclaimers were filed on June 16; 2006, and as of that date, neither UH nor anyone else can "own" an interest in the taro varieties. Anyone may now grow these three varieties freely.

Hawaii Produce Workshop: An inaugural Hawaii Produce Workshop was held in April 2006, to improve communications and working relationships between local farmers, retailers, and government agencies. Produce buyers from most of the supermarket chains in Hawaii were present.

Hawaii Organic Farming Training: A series of two-day "Organic Farming Academy" classes will begin in August 2006 on four islands, to provide information to new organic farmers and to conventional farmers who may be considering converting at least part of their farms to organic farming.

Hawaii Area-Wide Fruit Fly IPM: The very successful Hawaii Area-Wide Fruit Fly Integrated Pest Management (IPM) program – a partnership between USDA ARS, Hawaii Department of Agriculture and CTAHR – received the Team Achievement Award from the Fifth National IPM Symposium. The project received two additional years of funding and is expanding to the island of Molokai, and has already started several new projects including a papaya production area.

Position Vacancies: CTAHR is in the process of recruiting three County Administrators on Hawaii, Oahu and Kauai islands. County Administrators manage and administer the College's research and extension resources on each of the counties. More information is available at CTAHR's website: http://www.ctahr.hawaii.edu/ctahr2001/Faculty/JobVacancies/index.html