

CTAHR RESEARCH NEWS

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Scot Nelson standing beside an *Acacia koa* plant grafted onto an *Acacia mangium* rootstock in Hilo.

**Dreams of
scientific
discovery**

**South China
Agricultural
University**

**CTAHR partners
to assist Iraq's
agriculture**

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From the Associate Dean and Associate Director for Research

Another month has passed and we still have no new update on our budget crisis! As they say: no news is good news; I must admit this is indeed true. Now that the state teacher's union has accepted a 21-day furlough for their 12-month employees, an equivalent of 7.9% salary reduction, most people agree that salary reductions in the form of furloughs will be included in the final UHPA contract; most likely at 5% as proposed in the "last, best and final offer." Any salary reduction will translate into more funds available for our operations. Vice Chancellor Kathy Cutshaw gave a presentation on the UHM budget briefing September 23 to summary what we know. Doug Vincent has put together a primer on this subject for HNFAS staff, and he has agreed to share his piece with us. We will continue to monitor further development and get back to you next month.

CTAHR has a number of international projects, including the Iraq AHEAD project lead by Samir El-Swaify and Ekhllass Jarjees. We talk about their project's progress to date in this issue. CTAHR also hosted 22 visitors from the South China Agricultural University this past summer. Staff from the Student Affairs and our office worked very hard to put together a 4-week program for them, and twenty-five CTAHR faculty provided lectures. We plan to expand this program further next summer. You can learn more about this new program from links included in the article.

Dr. Scot Nelson is our main story this month. Scot is an extension plant pathology specialist in our Plant and Environmental Protection Sciences Department. He is located in the Komohana Research and Extension Center in Hilo. Scot publishes a series of extension bulletins on Hawaii Plant Diseases, which you can access at his website:

<http://www.ctahr.hawaii.edu/nelsons/Hawaii%20Plant%20Disease.htm>. Scot very elegantly describes his work on identification of a new pathogen that caused black flag disease in noni, which took him 10 years to complete! Research is a lonely journey; his story luckily has a happy ending. Passion for our work is what carries us to pursue scientific discovery. Scot's story demonstrates how patience and perseverance are so critical in our research; however, the payback is great. He is sharing this new knowledge with our local growers to help manage their crops and I am sure you will enjoy his story.

It is with great sadness that we have learned of the passing of Harriet Iwamura, former secretary to the Dean. Since we are in the promotion and tenure season right now, Harriet will be especially missed. She spent numerous after work hours to make sure each dossier was properly prepared, and to catch minor errors missed by the faculty and department to avoid potential negative impact on their promotion and tenure. Funeral information is included in Doug's note.

On the last page of this *CRN*, check out some of our outreach efforts on television.

If you have not had your flu shot, please consider getting it today. Washing your hands, and covering your mouth when sneezing are also important practices to follow. Keep healthy!



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Treading new ground: the thrill of discovery

By Scot C. Nelson, Associate Specialist
Department of Plant and Environmental Protection Sciences



Scot Nelson advises a noni grower on the Western Pacific Island of Yap. (photo courtesy Craig Elevitch).

Perhaps the greatest thrill a researcher can experience lies in exploring uncharted territory and planting his flag into the land of new ideas. To be able to lay a claim to new knowledge as an intellectual explorer is the promise made to all who enter the disciplines of science. Each successful scientist eventually achieves this goal and thereby cements a stone to the edifice of facts in which civilization resides. To be one who applies a new method where others have failed, or one who discovers a new form of life hitherto unnoticed are challenges sought by every earnest biological researcher. Here is a brief description of my own journey into this realm.

I serve as Associate Specialist in Plant Pathology on the island of Hawaii and work with a great variety of plant disease problems for a wide array of crops. During the past decade my program has focused on diseases of noni (*Morinda citrifolia*), 'awa (kava, *Piper methysticum*), banana (*Musa spp.*), tropical fruits, coffee (*Coffea arabica*), koa (*Acacia koa*), and palms.

My job is to develop and deliver plant pathology educational programs and materials for farmers and the general public in Hawaii and throughout the tropics. We have authored a variety of publications, including a book, book chapters, research articles, Extension articles, websites, newsletters, blogs, and image galleries, and have developed other products including an online Hawaii host-pathogen database and an illustrated glossary of tropical plant pathology. We employ a range of innovative and creative means for information delivery in order to foster a vibrant presence on the Internet. We also use more traditional methods of imparting information, such as presentations, lectures, workshops, plant clinics, conference participation and farm visits. The two primary foci of my research program are to develop sustainable disease management practices and to describe new diseases and pathogens for our important crops and develop effective management strategies for them. Below is a description of a research project for each of these two foci, and provide of how



Noni leaves infected by *Phytophthora morindae* hang like limp, moist, black flags from branches.

we were able to tread new ground as we explored the tropical universe that is Hawaii.

A new disease and pathogen of noni – black flag, caused by *Phytophthora morindae*

Noni is an important medicinal canoe plant that became widely naturalized throughout the Hawaiian Islands. The plant enjoyed broad use in traditional treatments for human medical conditions throughout the Pacific. In the late 1990s, a number of new noni farms were planted on the island of Hawaii as worldwide demand and prices for noni juice escalated. Buyers in the nutraceutical markets were eager for increased supplies of noni products.

In the winter of 1999, a noni farmer in Opihikao in the lower Puna district on the island of Hawaii submitted blackened noni plant leaves and blighted noni fruits to our Agricultural Diagnostic Service Center in Hilo. Clinician **Brian Bushe** requested my assistance with diagnosis of the disease and to generate crop management recommendations for the grower. Initially,

we suspected a possible bacterial disease etiology because only bacteria emerged in cultures derived from samples originally submitted by the grower. And, blackened leaf veins are a characteristic symptom for some bacterial plant diseases.

I decided to make a visit to the Opihikao noni farm to collect additional diseased noni plant samples and to obtain an accurate diagnosis, to document the types of disease symptoms present on noni plants at the farm, and to survey the area surrounding the farm for additional disease symptoms on naturalized plants in the forests. What I saw and discovered at the farm in 1999 was to propel me on a 10-year research quest that finally culminated in July of 2009.

When I arrived at the farm, there was a field of noni trees displaying symptoms of severe foliar blight. Blackened leaves hung from diseased trees limply as quiescent, mournful flags. Soft, blackened fruits and leaves littered the ground. All photosynthetic tissues, including green stems, were symptomatic. The main leaf veins were blackened in some cases. Leaves could



All photosynthetic noni tissues are susceptible to infection by *Phytophthora morindae*.



Noni trees affected by black flag disease may become denuded of leaves and fruit (Pahoa, Hawaii).

have brownish black spots. This might be a bacterial disease, I thought. Only a bacterium could cause those leaf vein symptoms! But, there were noni fruit “mummies” hanging from trees, dry and shriveled and covered with masses of fungal spores. Might this be a fungal disease?

Driving back to Hilo that day, I peered into the forests of the kipukas adjacent to the coastal highway between Opihikao and Kalapana. There, in mixed stands with kukui nut and pandanus, were scores of naturalized, blighted noni trees. I ventured into the forest and collected additional photographs and diseased plant samples and brought the materials back to my lab for careful analysis. I had rarely seen a disease on any plant so completely devastating as this disease, and I was determined to understand its etiology.

Back at my laboratory in Hilo, we incubated symptomatic plant tissue within moisture chambers. In 1-2 days, a whitish, sporulating growth formed on infected tissues. My microscopic examination of the material revealed lemon-shaped sporangia typical of

the plant pathogenic genus, *Phytophthora*. I suspected that this could be the pathogen causing this noni disease and set about to culture it, test its pathogenicity to noni, and identify it.

I was able to culture the organism and through plant inoculation experiments demonstrated its pathogenicity to noni. Identifying the organism proved to be problematic as its morphology could not be firmly aligned with characteristics of any known species of *Phytophthora*. Other colleagues in UH-CTAHR (the late **Minoru Aragaki**, retired **W. S. Ko**) examined cultures. We came to the tentative conclusion that the noni pathogen was actually *Phytophthora botryosa*. But, I was bothered by a Taiwanese mycologist’s statement that the culture I sent to him shared morphological characteristics with two known *Phytophthora* species, one of which was *Phytophthora botryosa*.

We eventually sent cultures of the pathogen to CABI Biosciences in England for morphological and genetic analysis. Our goal was to compare the noni pathogen with known *Phytophthora* species in their collection.

The results: they found no match, morphologically or genetically, with any species. Unfortunately, the data did not establish a new species, as the CABI collection of species available for genetic analysis was incomplete.

We required access to a complete library of *Phytophthora* species and the cooperation of a molecular biologist to establish that the noni *Phytophthora* was a new species. But, it was not yet possible to fulfill these needs, as the molecular phylogeny of *Phytophthora* was still in its infancy. Eventually, a few years later, we were able to enlist the collaboration of USDA scientist Z. Gloria Abad, who is the lead scientist at the Molecular Diagnostics Laboratory in Beltsville, Maryland.

We established that both morphologically and genetically, the noni pathogen causing black flag disease is a new species. We named it *Phytophthora morindae*; the publication describing this new species is now in press in the journal *Mycologia* (<http://www.mycologia.org/cgi/content/abstract/08-209v1>) and will be published soon in an upcoming issue.

Although it took 10 years to realize my goal and I encountered a number of setbacks not described here, the joy of this journey of discovery was both intense and extremely rewarding. In the interim, we were able to identify appropriate management practices which

allow farmers to now avoid the complete crop loss that can accompany this disease.

The first grafted *Acacia koa*

Acacia koa is beset by a deadly wilt disease in Hawaii. Koa wilt, caused by *Fusarium oxysporum* f. sp. *koae*, is a fungal disease that can kill young trees within 5 years after planting. No koa types have immunity, although some *Acacia* species may.

About 6 years ago I became interested in grafting koa onto resistant rootstocks to manage koa wilt. However, the scientific literature revealed that no success in grafting koa had been realized. A new or different grafting method would have to be applied for any success to be possible.

I have been involved with the UH-CTAHR coffee grafting work, having taught and advocated the method to Kona coffee farmers and having a research project on the topic. With this method, young coffee scions are severed at the seedling stage just below the cotyledons and grafted onto nematode-tolerant rootstock seedlings. I thought that it might be possible to apply this seedling graft method to *Acacia*.

Using seeds acquired from *Acacia koa*, *Acacia mangium*, and *Acacia confusa* from trees growing on the Big Island, **Cheryl Jones** and I quickly discovered that the seedling graft procedure allowed us to successfully graft koa onto koa, *A. mangium* and *A. confusa*. This was the first time this method had been applied to *Acacia* species and was the first time koa had ever been grafted.

We grew the grafted plants in pots in Hilo and about 4.5 years ago transplanted one (*A. koa* grafted onto *A. mangium*) into a pile of rocks atop a pahoehoe lava flow adjacent to UH-CTAHR's Komohana Agricultural Complex. Koa plants do not usually survive past 10 years of age in Hilo at this elevation, due to root-knot nematodes and plant health problems. The plant depicted on the cover of this magazine is healthy, but is stunted and suffered greatly from attack by black twig borers during a drought in 2006.

Only time and experimentation will determine if this grafting method allows cultivation of koa in areas where koa wilt is established. For the time being, we are satisfied to have possibly helped this magnificent monarch of Hawaiian forests.



Seedling grafting method for *Acacia koa*.



Seeds of *Acacia* species used in grafting experiments.

Scot C. Nelson

Hometown: Raleigh, North Carolina

Joined CTAHR: 1992

Educational History: Ph.D., Plant Pathology, North Carolina State University, 1992; M. S., Plant Pathology, Texas A&M University, 1988; B. A. History, Pennsylvania State University, 1979.

Specialization: Plant Pathology

Current Work: Plant pathology extension and research

Languages Spoken: English, Spanish

Recent Publications

Nelson, S. C., and Abad, Z. G. 2009. *Phytophthora morindae*, a new species causing black flag disease of noni (*Morinda citrifolia* L.) in Hawaii. *Mycologia* ([in press](#))



Nelson, S. C. 2006. Grafting of *Acacia koa* Gray onto young seedlings. *Native Plants Journal* 7(2): 137-140.

Nelson, S. C., and Elevitch, C. R. 2006. Noni: The Complete Guide for Consumers and Growers. Permanent Agriculture Resources, Holualoa, Hawaii.

Recent Grants

Wang, K.-H., Hara, A., Nelson, S., Sipes, B. S., Hooks, C. R., Sugano, J. and Keyser, H. 2008-2009. Developing management strategies for a newly found plant-parasitic nematode, *Helicotylenchus multicinctus*, damaging banana plantings in Hawaii. Hawaii Department of Agriculture (\$33,472).

Jackson, M., Nelson, S. C., and Schenk, S. 2006-2007. Selection and improvement of noni germplasm in Hawaii. Hawaii Department of Agriculture (\$83,293).

Cho, Y. and Nelson, S. C. 2008-2011. Assessing population structure and fungicide resistance of *Mycosphaerella fijiensis* in Hawaii. USDA-ARS (\$60,000).

Revitalizing Iraq's agricultural science and technology: the first 5 years

By Samir A. El-Swaify, Emeritus Professor and Director
Ekhlass Jarjees, Manager
Hawaii-Iraq Agricultural Higher Education Partnerships
Department of Natural Resources and Environmental Management

Iraq's enormous oil wealth dominated the country's economy, policies and politics for several decades. However, as was the case throughout history and the glory of the *Fertile Crescent*, Iraq remains predominantly an agricultural nation. The country is endowed with an abundance of natural resources and impressive potential for sustainable agriculture. This sector is the largest source of employment and second largest contributor to the gross domestic product.

Unfortunately, beginning in the early 1980's the health of Iraq's agricultural industries and institutions suffered isolation from the global science mainstream. The capacity of formerly prestigious universities to generate knowledge and deliver the necessary education was negatively impacted by serious losses of well qualified scientists and wide-spread destruction of infrastructure including libraries.

To address this problem, the United States Agency for International Development (USAID) announced a national competition to revitalize Iraqi universities in partnerships with U.S. universities (mid 2003). This competition, titled "Higher Education and Development (HEAD)", attracted proposals from over 45 universities. The proposal by the CTAHR/UH team (Samir El-Swaify, Ekhlass Jarjees, Catherine Chan-Halbrendt, Ali Fares and Sahar Zaghoul, with

assistance from **Brian Turano** as the Grants Specialist) was among the five approved with a funding level of \$3.8 M. Since our focus was to revitalize Agricultural Higher Education and Development, the project's acronym was logically **AHEAD!** UH/CTAHR's partners in Iraq were the University of Mosul College of Agriculture and Forestry (UM/CAF) and University of Dohuk College of Agriculture (UD/CA). **AHEAD's** purpose was to emphasize capacity building at both partner universities via:

- strengthening academic programs in agricultural sciences by rebuilding expertise, human capital and curricula, and
- rehabilitating the infrastructure necessary for supporting effective teaching and research programs.

Successes of the AHEAD partnerships were well noted by other universities in Iraq, a fact that led to the development of follow-up initiatives. The most prominent of these is the **Kurdistan Agricultural Higher Education and Development (KAHEAD)** funded by the Iraq-Kurdistan Regional Government (KRG) to the level of \$5.6 M over four years ending in December, 2010. A distinctive feature of KAHEAD is embracing the Land Grant concept by including Extension



Left to right: Samir El-Swaify, Chancellor Hinshaw, Minister Idris Salih (Higher Education and Scientific Research in Kurdistan-Iraq), Jenny Samaan, Ekhlass Jarjees, Protocol Advisor Riadh Francis during the Minister's visit with CTAHR (March, 2009).



Modernized library facility provided by the AHEAD project at the college of Agriculture, University of Dohuk, Iraq.



AHEAD graduate student Adel Youkhanna (in the middle) briefing the new group of KAHEAD students about his PhD work at the Waimanalo CTAHR research station (Spring 2009).



Iraq traditionally exported more dates than any other country. Rehabilitating the large acreage of date orchards is now a high priority in agriculture development.

programs that are separately housed in the Ministry of Agriculture (MOA).

Detailed work plans were developed after on-site “ground-truthing” and consultation visits with Iraqi partners. Accomplishments of the AHEAD and KAHEAD projects encompassed 10 scopes:

1. **Graduate degree training at UH:** 13 graduate students have been sponsored so far at several CTAHR departments.
2. **Graduate research fellowships at UH and regional partners:** 10 selected PhD students at Iraqi universities were awarded grants to conduct dissertation research at UH and regional partners.
3. **Sabbatical leaves for senior faculty:** 17 faculty received scholarships at UH and regional partners.
4. **Professional development, strategic planning and skill enhancement workshops:** Over 326 Iraqi faculty enrolled in 18 workshops covering the major agricultural disciplines, experimental design, technology transfer, grant writing and library management. 13 CTAHR faculty coordinated or contributed to these workshops.
5. **Mini-grants:** Over \$250K were awarded to 21 faculty to work on selected commodities and key areas of importance for managing agriculture.
6. **Sponsored participation in out-of-country scientific conferences**
7. **Providing modern instrumentation for specialized teaching and research:** Over 600 high priority items were procured in order to restore or enhance partners’ infrastructure.
8. **Enhancing literature retrieval and library capabilities:** 21 New and updated TEEAL (the Essential Electronic Agricultural Library) systems, each containing a digital library of 136 top agricultural journals from 1993–2009 were provided to major universities. In addition, important textbooks were acquired for their libraries. Access to the UHM library system’s collection was facilitated by a dedicated project’s librarian.
9. **Building computer and electronic communication capabilities:** Over 100 computers and 2 broadband systems were provided to UM/CAF and UD/CA.
10. **Leveraging funds from non-project sources:** Partnership success was and continues to be instrumental in attracting funding and/or strategic donations from various new sources. Those funds allowed renovating the former presidential palace in Mosul to accommodate a Learning Center for UM/CAF and donating over 187,000 textbooks to major Iraqi universities.
11. **Success in attracting additional grant funds:** We teamed up with Texas A&M University (TAMU) in a consortium to use our past and current experiences for providing agricultural subject matter expertise to Provincial Reconstruction Teams (PRT) members in Iraq and Afghanistan.

Major challenges continue to be faced during the course of program implementation. These include Iraq’s security and political uncertainties, slow logistical support in shipping and visa processing for students and scholars, banking and fund transfer barriers. Additional difficulties are posed by UH regulations for managing large international projects and housing shortages for accommodating visiting scholars. Nevertheless, the projects have made substantial positive impacts for which CTAHR can be proud.

Budget crisis at UH-Manoa

By Doug Vincent

Department Chair, Human Nutrition, Food and Animal Sciences

You may have seen on the news about the [recent budget briefing](#) by UH-Manoa's Vice Chancellor for Administration, Finance and Operation Kathy Cutshaw. It was standing room only in Hemenway Hall.

The takeaway messages are:

- UH-M is taking a \$66 M (or a 25%) cut in our state general (G) funded budget. This is greater in terms of percentage, and in terms of amounts than the rest of the UH system put together.
- For this fiscal year and beyond, our G-funds, which goes to pay salaries, have been reduced from \$264M in FY2009 to \$198M in FY2010 (the current year). These are “permanent” cuts.
- The good news is that with tuition increases and enrollment increases for Fall Semester, our tuition dollars (Special fund) or S-dollars have increased from \$100M to \$119M.
- The bad news about tuition dollars is 1) not all of it can be used to offset cuts in G-funds. Fifteen (15) percent of tuition dollars must be plowed back into scholarships. There are other restrictions and 2) when tuition (S-funds) dollars are used to pay personnel – it not only means payment for the actual salary but it also has to cover the fringe benefits. So S-fund dollars do not have the same ‘buying’ power as G-funded dollars.
- For this fiscal year, the UH-M administration developed a plan in June of 2009, as we were approaching the new fiscal year to help offset the budget cuts that were coming. Initially, the plan would be that the cuts would be offset by \$14.7M in federal stimulus package dollars; an increase in tuition revenue by \$14M, collective bargaining agreements or furloughs, would reduce faculty and staff salaries by \$14.2M and a 4% cut to schools, colleges and to the administration, amounting to \$23.2M. This would cover the \$66M cut in G-funds.
- The June 2009 plan could not be implemented because the furloughs and/or collective bargaining reductions in salaries were blocked or not agreed to. To compensate for the absence of these cuts, additional cuts had to be made. A small portion of the shortfall, ~\$3M was made up, through executive pay cuts and moving some staff from G-funds to other funds (RTRF). The rest of the burden was placed on schools and colleges. So instead of an across the board cut of 4%, it ballooned, at least for CTAHR, to a 10% cut in our G-funds. Most Schools and Colleges received a 10% cut, some did not. In her budget message to the campus on August 12, 2009, Chancellor Hinshaw indicated that UH-Manoa would be guided by the following principles relative to these budget cuts – to “maintain our major instructional programs to the fullest extent possible, because of their crucial relationship to increasing student success...the further reductions in Arts and Sciences programs will be limited to 2.5%, while the level of reductions in other campus programs will be 6%”. She also exempted a limited number of programs from the cuts because of the campus-wide impacts. The Hawaii‘inuakea School of Hawaiian Knowledge was exempted from the cuts because, “as our newest school, it is still becoming established and is critically important to fulfilling our commitment to our Native Hawaiian Community.” Other programs exempted from cuts were facilities and maintenance and campus security.
- There is still a \$4.4 M shortfall yet to be accounted for.
- There are still unknowns affecting the overall budget:
 - Retirements – if the rates of retirement increase, then the impact on the loss of G-funds may be mitigated somewhat.
 - Collective Bargaining Agreements – if agreements are made, with salary reductions, the impact on the \$66M cuts will be reduced by approximately \$14.2M according to Cutshaw’s figures.

- State Economy – if the economy improves and tax revenues increase, then the impacts may be mitigated.
- Enrollment – if enrollment continues to increase, the increased tuition revenues will increase.
- Legislative action, although not likely to affect this fiscal year – the legislature could raise taxes and increase revenue that way.

2009 to look at short term budget solutions and the Prioritization Committee was formed in July 2008 to look at long term investment strategies. Their efforts have now been combined, to form the [Budget Prioritization Workgroup \(BPW\)](#). The BPW, co-chaired by Vice Chancellors Kathy Cutshaw and Reed Dasenbrock, meets every Friday.

Note: This is adapted from an email sent by Doug Vincent to HNFAS faculty and staff on 9/24/09.

Two work groups at the administration level were working on similar issues, but in parallel – the Prioritization Committee and the Budget Workgroup. The Budget Workgroup was formed in January

Harriet Iwamura

By Doug Vincent
Department Chair, HNFAS

Harriet Iwamura, former CTAHR Dean's Secretary passed away on Saturday, September 19, 2009. This is my personal reflection about Harriet. I had the honor of working with Harriet for over 15 years, and especially, the last 7 years while I was in the Dean's Office. I first met Harriet when she was Secretary for the Associate Dean/Associate Director for Research. When Charles (Chuck) Laughlin was named Dean of CTAHR, Harriet became his secretary. The pairing was electric. Harriet became very close to Chuck and Barbara Laughlin, ranging from Chuck's confidant and teacher as he adapted to Hawaii, to lunch time mah jong partner. When Chuck left us for USDA, they kept close. When Chuck was diagnosed with terminal brain cancer, Harriet was devastated, yet continued to send him thoughtful gifts from Hawaii to raise his spirits. Harriet also

organized CTAHR to fold a 1000 origami cranes to give to Chuck and Barbara Laughlin, in the Japanese tradition of Senbazuru, where if a 1000 origami cranes are folded, the crane will grant a wish, such as recovery from illness. This epitomized Harriet's warmth and aloha spirit. Harriet also served Interim Dean Mike Harrington and Dean Andy Hashimoto, until her retirement in November, 2008. Harriet was joyful, caring, giving of herself, and she had a wonderful self deprecating sense of humor. Her engaging laugh made working in Gilmore very special. Harriet graduated from McKinley High School and CTAHR's Ruddy Wong and Naomi Kanehiro were classmates.

Her family has informed us that funeral services will be held on Saturday, October 10, 2009 at 4:00 pm, at Hosoi Garden Mortuary, 30 N. Kukui Street, Honolulu.



Harriet Iwamura

SCAU students learn at CTAHR

By CY Hu

Associate Dean and Director for Research

South China Agricultural University (SCAU) is located in Guangzhou, China. SCAU celebrates its centennial this year. Over the last hundred years SCAU has grown into a multi-disciplinary, comprehensive university with majors in agriculture, engineering, liberal arts, basic sciences, economics, management, law, education, history and philosophy. It is now adopting a multi-level and multi-approach schooling system and intends to develop into an advanced multi-disciplinary agricultural institute with distinctive tropical and subtropical features. As the name implies, agricultural science is the focus. At SCAU undergraduate and graduate programs are developing concurrently, with teaching and research as the two major missions. SCAU currently has twenty-two colleges. There are more than 2,900 faculty and staff at SCAU, with a student body of almost 40,000, including about 4,000 graduate students.

Guangdong province in southern China has a very similar climatic environment to our own. Since tropical fruits and flowers in both places are facing similar challenges, such as invasive species, it makes sense that both universities will benefit from exchange and collaborative programs. Our formal relationship with SCAU was established in 1991 with a MOU signed by Dean **Ned Kefford** and President Al Simone. A renewal was signed by Senior VP Alan Teramura in 1999 for five years. Although the MOU expired in 2004, exchanges have not stopped and several SCAU faculty members have spent their sabbatical leaves in CTAHR laboratories. CTAHR faculty members, such as Drs. **Robert Paull** (TPSS), **Jim Brewbaker** (TPSS), **Qing Li** (MBBE), and **John Hu** (PEPS), and **Jinzeng Yang** (HNFAS), have also visited their collaborating SCAU faculty members during the last several years. A three-member delegation (Drs. **Qing Li**, **Sylvia Yuen**,



Dr. CY Hu (left in green shirt) and Dr. John Hu (middle in blue shirt), take a moment with SCAU students.



SCAU students field trips included one to CTAHR's Waimanalo Station. Dr. Brewbaker gave a lesson on corn and leuceana breeding.

and Robert Paull) visited SCAU in 2005 and a renewal MOU was signed by **Dr. Hashimoto** during his visit to SCAU in 2007.

SCAU initially proposed to establish a summer study program for their undergraduates in Hawaii during our visit in 2007. However, it did not materialize until this year. I began to work with the SCAU international office in January to set up a program. With the able assistance provided by the CTAHR Academic and Student Affairs Office, we were able to complete the planning and execution of the summer program. Twenty students (nine juniors, nine sophomores, and two freshmen) and two faculty escorts arrived on July 10. They stayed in Frear Hall (which they liked very much), and ate in the cafeteria (which they endured) for four weeks. They departed on August 6, with teary eyes. We have designed this program to highlight the breadth of our program by showcasing as many faculty member as we can. Although many faculty were traveling during the summer time, we were successful in recruiting twenty five CTAHR faculty to present a lecture in the summer program. Three of the nine junior students have decided to pursue their graduate study at CTAHR, and have already contacted specific faculty members as major professors. We hope to see them joining the CTAHR family next year. We anticipate additional refinements and expansion of this summer program in future years. We hope to expand our

relationship further to include research collaborations with these students as a catalyst. We also would like to include students from other sister universities in future years, so stay tuned.

Related links:

South China Agricultural University: <http://english.scau.edu.cn/>

SCAU news release on CTAHR Summer Program: http://english.scau.edu.cn/News/t20090917_40749.htm

CTAHR website on Summer Study Program for SCAU students: <http://www.ctahr.hawaii.edu/scau/>



Professor Whittington shares her wisdom on money matters.

Guiding principles for managing the T-STAR program

By Po-Yung Lai
Special Program Director for Grants and Contracts

The opportunity that the Dean has provided me to work for CTAHR again after being away for 12 years is much appreciated. Assuming the responsibilities of the Special Program Director from Dr. Douglas Vincent is a challenge. This task would not be fulfilled without the cooperation and assistance from the entire faculty and staff of CTAHR and other institutions in the Pacific region. To ensure that the responsibilities entrusted to me are properly carried out, there are a few guiding principles adopted for my approach to handling or managing the T-STAR and other related programs. The principles are:

1. **Accountability** – Since I am entrusted with the important responsibility of managing the T-STAR and other related programs, I should be held accountable to the Dean and C. Y. Hu, who is my immediate supervisor. In addition, I should also be held accountable to the stakeholders, the entire faculty and staff of CTAHR, and other institutions in the Pacific region, in my handling of the grant programs.
2. **Fairness** – The recent worldwide financial downturn has seriously impacted the dwindling resources available for research communities. Many international organizations are faced with this hardship; therefore, more attention and efforts are being placed on competition for funding from these organizations. Because of the scarcity of funds, competition for funding will be keen. Thus, assisting faculty in accessing the seed money

provided under the T-STAR program and using it as leverage for competing funds available elsewhere has become ever more important. As such, I pledge to exercise fairness in handling and processing grant applications by following the guidelines established for the program.

3. **Transparency** – I am a firm believer of being transparent in managing the T-STAR program. I also believe that decisions made on the final selection of proposals to be funded may not be fully agreeable to faculty, but communication between my office and faculty on the proposal selection process should not and will not be a barrier; thus becoming reasons for complaint from faculty. This is a commitment that I would like to pledge to the entire faculty.
4. **Emphasis of**

Productivity – Productivity is an important yardstick used to measure accomplishments of a program. The T-STAR program is no exception as it is required to demonstrate measurable productivity and/or accomplishments in order to justify and safeguard its continued funding from Congress. I will work with faculty to ensure that T-STAR funded projects are productive and their intended objectives are adequately accomplished.

I look forward to working with you to facilitate the preparation and selection of proposals for funding under the T-STAR and other related programs.

(<http://www2.ctahr.hawaii.edu/t-star/>)



The grant season to start soon!

By Sharee Pepper
Grant coach

The following list includes some current funding opportunities that may be of interest to CTAHR faculty. If the deadline is too short for this year, it is still a good indication of the likely due date for next year. **Let us know if we can be of any assistance with developing and editing your grant application.**

For information on submitting grants electronically on grants.gov the following publication may be useful. **USDA, CSREES Grants.gov Application Guide – A guide for the preparation and submission of CSREES applications via grants.gov.**
http://www.csrees.usda.gov/funding/grant_forms/electronic_app_guide.pdf

Agriculture, Rural and Community Development Grants

\$ - USDA, CSREES - Agriculture and Food Research Initiative (AFRI) Competitive Grants Program (Note: includes prior NRI grants)

Deadline: all have expired (use as guide for 2010)

http://www.csrees.usda.gov/funding/afri/pdfs/program_announcement.pdf or
<http://www.csrees.usda.gov/funding/afri/afri.html>

\$ - USDA, Western Sustainable Agriculture Research and Education (SARE) - Farmer Rancher Grant (FRG)

Deadline: Dec 04, 2009

https://wsare.usu.edu/grants/RFA/FRG_10.pdf

\$ - USDA, Western Sustainable Agriculture Research and Education (SARE) - Professional + Producer Grant (PPG)

Deadline: Dec 04, 2009

https://wsare.usu.edu/grants/RFA/PPG_10.pdf

\$ - USDA – CSREES, AFRI – Agriculture and Food Research Initiative - Soil Processes

Deadline: January 16, 2010

<http://www.csrees.usda.gov/fo/soilprocessesafri.cfm>

\$ - USDA, CSREES, AFRI - Plant Biology: Environmental Stress

Deadline: January 29, 2010

<http://www.csrees.usda.gov/fo/plantbiologyenvironmentalstressafri.cfm>

\$ - USDA, CSREES, AFRI – Microbial Biology: Microbial Associations with Plants

Deadline: February 16, 2010

<http://www.csrees.usda.gov/fo/microbialbiologyplantmicrobeassociationsafri.cfm>

\$ - USDA, CSREES, AFRI - Plant Biology: Growth and Development

Deadline: March 2, 2010

<http://www.csrees.usda.gov/fo/plantbiologygrowthanddevelopmentafri.cfm>

\$ - USDA, CSREES, AFRI - Animal Genome: Genetics and Breeding

Deadline: March 5, 2010

<http://www.csrees.usda.gov/fo/animalgenomegeneticsandbreedingafri.cfm>

\$ - USDA, CSREES, AFRI – Integrated Solutions for Animal Agriculture

Deadline: March 16, 2010

<http://www.csrees.usda.gov/fo/integratedsolutionsforanimalagricultureafri.cfm>

\$ - USDA, CSREES, AFRI - Biology of Weedy and Invasive Species in Agroecosystems

Deadline: April 20, 2010

<http://www.csrees.usda.gov/fo/weedyandinvasivespeciesafri.cfm>

\$ - USDA, CSREES - Western Sustainable Agriculture Research and Education Program

Sustainable Agriculture Tours

Deadline: Open until funding is exhausted

http://wsare.usu.edu/grants/docs/RFA_SAT.pdf

\$ - USDA, Rural Development

Community Facilities Loan and Grant Program

Deadline: Applications accepted on an ongoing basis

<http://www.rurdev.usda.gov/rhs/cf/cp.htm>
http://www.rurdev.usda.gov/rhs/cf/brief_cp_grant.htm

\$ - Farm Foundation Grants

Deadline: Applications accepted on an ongoing basis

http://www.farmfoundation.org/news/templates/comm_template.aspx?articleid=357&zoneid=67

Education

\$ - USDA, Western Sustainable Agriculture Research and Education (SARE) -

Professional Development Program Grant (PDP)

Deadline: November 03, 2009

https://wsare.usu.edu/grants/RFA/PDP_10.pdf

\$ - NSF -ADVANCE: Increasing the Participation and

Advancement of Women in Academic Science and Engineering

Careers (ADVANCE)

Deadline: November 12, 2009

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5383&org=NSF&sel_org=NSF&from=fund

\$ - **NSF** - East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI)

Deadline: December 8, 2009

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5284&org=NSF&sel_org=NSF&from=fund

\$ - USDA, CSREES - Secondary and Two-Year Postsecondary Agriculture Education Challenge Grants Program (SAECP-001053)
Deadline: December 15, 2009
<http://www.csrees.usda.gov/fo/educationchallengesecondaryhep.cfm>

\$ - NSF -Tribal Colleges and Universities Program (TCUP)
Deadline: December 20, 2009
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5483&org=NSF&sel_org=NSF&from=fund

\$ - NSF -Research Initiation Grants to Broaden Participation in Biology (RIG BP)
Deadline: January 11, 2010
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=10676&org=NSF&sel_org=NSF&from=fund

\$ -NSF -Undergraduate Research and Mentoring in the Biological Sciences (URM)
Deadline: March 2, 2010
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=500036&org=NSF&sel_org=NSF&from=fund

\$ - Human Frontier Science Program – Short Term Fellowship Program
Deadline: rolling – applications accepted year round
http://www.hfsp.org/how/appl_forms_STF.php

\$ - NSF – Active Funding Opportunities
Deadline: Multiple
http://www.nsf.gov/funding/pgm_list.jsp?org=NSF&ord=date

Environment, Water, Energy, Invasive Species Grants

\$ - NOAA Broad Agency Announcement (for special projects)
Due September 30, 2009 (closes but applications accepted on a rolling basis)
NOAA Office of Education:
<http://apply07.grants.gov/apply/opportunities/instructions/oppNFA-NFA-2008-2001388-cid2112140-instructions.pdf>
National Marine Fisheries Services
<http://apply07.grants.gov/apply/opportunities/instructions/oppNFA-NFA-2008-2001388-cid2112136-instructions.pdf>
National Environmental Satellite Data Information Service
<http://apply07.grants.gov/apply/opportunities/instructions/oppNFA-NFA-2008-2001388-cid2112133-instructions.pdf>
National Ocean Service
<http://apply07.grants.gov/apply/opportunities/instructions/oppNFA-NFA-2008-2001388-cid2112139-instructions.pdf>

\$ - U.S. Fish and Wildlife Service - Coastal Programs
Deadline: September 30, 2009
<http://apply07.grants.gov/apply/opportunities/instructions/oppCOASTAL-09-cfda15.630-instructions.pdf>

\$ -PND Honor the Earth Seeks Funding Proposals for Building Resilience in Indigenous Communities Initiative
Deadline: September 30, 2009
<http://www.honorearth.org/building-resilience>

\$ - SeaWorld & Busch Gardens Conservation Fund Offers

Funding for Wildlife Conservation

Deadline: December 1, 2009
<http://www.swbg-conservationfund.org/grantInfoA.htm>

\$ - USDA, CSREES – Air Quality
Deadline: March 5, 2009
<http://www.csrees.usda.gov/fo/airqualityafri.cfm>

\$ - National Forest Foundation: Community Assistance Program Local Forest Partnerships Fund
Deadline: proposals accepted on a rolling basis throughout year
http://www.natlforests.org/consp_05_cap.html

Families, Youth and Children Grants

\$ -Applications Invited for State Farm's Youth Advisory Board Service-Learning Grants Program
Deadline: October 2, 2009
<http://www.statefarmyab.com/apply.php>

\$ - USDA, CSREES - Children, Youth & Families at Risk Sustainable Community Projects
Deadline: October 23, 2009
<http://www07.grants.gov/search/search.do?&mode=VIEW&flag2006=false&oppld=49366>

\$ - CHS Foundation
Rural Youth and Leadership Development
Deadline: rolling – applications accepted year round
<http://www.chsfoundation.org/programs/ryld.htm>

Financial Grants

\$ - Money Management International Financial Education Foundation,
Financial Education Grants
Deadline: rolling – applications accepted year round
<http://www.mmifoundation.org/GrantSeekers.asp>

\$ - Hitachi Foundation: Business and Communities Grants Program
Grants Address Economically Isolated Communities
Interested organizations may submit an online inquiry to provide information about project ideas **at any time** and the Foundation's will determine if it fits their priorities.
<http://www.hitachifoundation.org/grants/guidelines/index.html>

Health, Nutrition, Food & Biomedical Grants

\$ - Centers for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health (NIOSH) - Centers for Agricultural Disease and Injury Research, Education, and Prevention (U50)
Deadline: November 30, 2009
<http://grants.nih.gov/grants/guide/pa-files/PAR-06-057.html>

Science Grants

\$ - USDA, CSREES, AFRI – Arthropod and Nematode Biology and Management: Tools, Resources, and Genomics

Deadline: April 1, 2010

<http://www.csrees.usda.gov/fo/arthropodnematodetoolsresourcesgenomicsafri.cfm>

NSF – Active Funding Opportunities

Deadline: Multiple

http://www.nsf.gov/funding/pgm_list.jsp?org=NSF&ord=date

\$ - National Geographic Society – Waitt Grants Program

Deadline: Rolling

<http://www.nationalgeographic.com/field/grants-programs/waitt-grants-application.html>

UH, Hawaii and Regional Grants

\$ - UH, University Research Council - Faculty Travel Funds

Proposal Deadline: rolling – applications must be in >4 weeks before travel.

http://www.hawaii.edu/urc/pdf/factravel_g.pdf
http://www.hawaii.edu/urc/pdf/factravel_f.pdf

Faculty publications

Greg Bruland (NREM)

Bruland, G.L., and G. DeMent. 2009. Phosphorus sorption dynamics in coastal wetlands of Hawaii. *Estuaries and Coasts* 32:844-854.

Bantilan-Smith, M., G.L. Bruland, R.A. MacKenzie, A. Henry, and C. Ryder. 2009. A Comparison of the vegetation and soils of natural, restored, and created coastal lowland Hawaiian wetlands. *Wetlands* 29:1023-1035.

Vasudevan, D., G.L. Bruland, B.S. Torrance, V. Upchurch, and A.A. MacKay. 2009. Ciprofloxacin sorption to soils: pH dependence of interaction mechanism and soil factors influencing sorption. *Geoderma* 151:68-76.

Bruland, G.L., C.M. Bliss, S. Grunwald, N.B. Comerford, and D.G. Graetz. 2008. Soil nitrate-nitrogen in forested versus non-forested land-uses in a mixed-use watershed. *Geoderma* 148:220-231.

Hartman, W.H., C.J. Richardson, R. Vilgalys, and G.L. Bruland. 2008. Environmental and anthropogenic controls over bacterial communities in wetland soils. *Proceedings of the National Academy of Sciences* 105(46):17842-17847.

Carrasquillo, A.J., G.L. Bruland, A.A. MacKay and D. Vasudevan. 2008. Sorption of tetracycline and fluoroquinolone zwitterions to soils and soil minerals: Influence of compound structure. *Environmental Science and Technology* 42:7634-7642.

Ashley Stokes (HNFAS)

Linardi RL, Stokes AM, Barker SA, Short C, Hosgood G, Natalini C. 2009. Pharmacokinetics of the injectable formulation of methadone hydrochloride® 2 administered orally in horses. *J Vet Pharm Therap*, 32, 492-497.

Lori Yancura (FCS)

Yancura LA, Aldwin CM. 2009. Stability and change in retrospective reports of childhood experiences over a 5-year period: findings from the Davis Longitudinal Study. *Psychol Aging*. 2009 Sep; 24(3):715-21.

Jinzeng Yang (HNFAS)

Zhao B, Li EJ, Wall RJ, Yang J. 2009. Coordinated patterns of gene expression for adult muscle build-up in transgenic mice expressing myostatin propeptide. *BMC Genomics*. 10:305-315.

Li Z, Zhao B, Kim YS, Hu CY, Yang J. 2009. Administration of a mutated myostatin propeptide to neonatal mice significantly enhances skeletal muscle growth. *Mol. Reprod. Dev.* Published online, September 9, 2009.

Watanabe S, Zhao B, Ako H, Yang J. 2009. Identifications of expressed sequence tags from Pacific threadfin (*Polydactylus sexfilis*) skeletal muscle cDNA library. *Aquaculture Research* Published online, July 22, 2009.

Sweeeeet! - CTAHR scores 82 grants for \$11.6M!

Awards to CTAHR from 03/21/2009 to 09/25/2012 as reported by UHM Office of Research Services

Last Name	First Name	Department	Proposal Title	Sponsor Name	Award Amount
Alvarez,	Anne M	Department of Plant and Environmental Protection Sciences	Ralstonia Solanacearum Race 3 biovar 2: Detection, Exclusion, and Analysis of a Select Agent Pathoge	Wisconsin Madison, University of	\$69,573
Alvarez,	Anne M	Department of Plant and Environmental Protection Sciences	Pineapple Heart Rot Disease Containment and Management Through Pathogen Detection and Exclusion from	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	140,674
Bingham,	John-Paul	Department of Molecular Biosciences and Bioengineering	Investigating the Application of Peptide Pesticides: Diversifying Molluscicide Targeting Capabilities	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	100,000
Borthakur,	Dulal	Department of Molecular Biosciences and Bioengineering	Identification of Fusarium with Resistance in Acacia Koa	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	155,572
Bruland,	Gregory Lee	Department of Natural Resources and Environmental Management	Using Diffuse Reflectance Spectroscopy to Quantify and Predict Soil Carbon Content in Agricultural S	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	197,772
Cho,	Yangrae	Department of Plant and Environmental Protection Sciences	Engineering a Signal Transduction Pathway in a Fungus for Industrial Protein Production	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	165,340
Dunn,	Michael A	Department of Human Nutrition, Food and Animal Sciences	Identifying Tropical Plant-Derived Sources of Dietary Iron: Linking Tropical Food Production and Con	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	67,703
Evensen,	Carl I	Department of Natural Resources and Environmental Management	Assessment of Coral and Fish Disease in Three Priority Watersheds in Relationship to Land-Based Poll	Land & Natural Res, Dept - HI	20,000
Fares,	Ali	Department of Natural Resources and Environmental Management	Evaluation of Flash Flood Prediction Models for Small Watersheds in Tropical Islands	Commerce, Dept/ NOAA - Natl Weather Service	124,999
Fares,	Ali	Department of Natural Resources and Environmental Management	Environmentally Accepted and Economically Viable Nitrogen and Water Best Management Practices for Tr	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	119,948
Fong,	Grace	Department of Family and Consumer Sciences	Learning to Grow 2008-2009	Human Services, Dept - HI	450,910
Grace,	Jack Kenneth	Department of Plant and Environmental Protection Sciences	Integrated Management Strategies for Invasive Social Insects in Hawaii and the Pacific Basin	Agriculture, Dept - Agricultural Research Svc-FED	53,878
Grace,	Jack Kenneth	Department of Plant and Environmental Protection Sciences	Biology and Control of the Formosan Subterranean Termite	Agriculture, Dept - FED	131,136
Grace,	Jack Kenneth	Department of Plant and Environmental Protection Sciences	Funding for Mutual Interest	Agriculture, Dept - Agricultural Research Svc-FED	4,448

Hara,	Arnold H	Department of Plant and Environmental Protection Sciences	University of Hawaii Extension IPM Program 2009	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	70,477
Hara,	Arnold H	Department of Plant and Environmental Protection Sciences	Detection Techniques and Quarantine Treatments for High Risk Commodities Identified by the Kahului A	Transportation, Dept - HI	149,000
Hashimoto,	Andrew G	College of Tropical Agriculture and Human Resources	Value-added Products and Post-harvest Treatments Development for Hawaii	Agriculture, Dept - FED	242,090
Hashimoto,	Andrew G	College of Tropical Agriculture and Human Resources	University of Hawaii Agribusiness Education, Training and Incubator (AETI) Project	Agriculture, Dept - FED	1,528,630
Hashimoto,	Andrew G	College of Tropical Agriculture and Human Resources	Agricultural Development in the American Pacific Year 22	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	326,664
Heusel,	Gary	Department of Family and Consumer Sciences	Get Moving for Health	National 4-H Council	50,000
Hu,	Ching Yuan	College of Tropical Agriculture and Human Resources	Tropical and Subtropical Agricultural Research (TSTAR) for Hawaii: Management 2009	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	335,000
Hu,	Ching Yuan	College of Tropical Agriculture and Human Resources	Environmental Effects of Tephritid Fruit Fly Control and Management	Agriculture, Dept - Agricultural Research Svc-FED	179,744
Hu,	Ching Yuan	College of Tropical Agriculture and Human Resources	Control of Minor Crop Pests and Diseases	Agriculture, Dept - Agricultural Research Svc-FED	221,732
Hu,	Ching Yuan	College of Tropical Agriculture and Human Resources	Management and Control of Banana Bunchy Top Virus (BBTV) Through Resistant Cultivars	Agriculture, Dept - Agricultural Research Svc-FED	94,867
Hu,	Ching Yuan	College of Tropical Agriculture and Human Resources	Hawaii Floriculture Research Grant - 2009	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	226,546
Hu,	John	Department of Plant and Environmental Protection Sciences	Multiple Resistance to Viral and Fungal Diseases of Banana Using Gene Silencing	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	175,728
Ikeda,	Carol S	Department of Family and Consumer Sciences	Sustainable Communities Project Through Successful Community Partnerships	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	100,000
Ikeda,	Carol S	College of Tropical Agriculture and Human Resources	Keaukaha Community Resource Center	Kamehameha Schools	55,000
Jun,	Soojin	Department of Human Nutrition, Food and Animal Sciences	Design of a Continuous Flow Microwave Pasteurizer	University of Hawaii Foundation	8,700
Jun,	Soojin	Department of Human Nutrition, Food and Animal Sciences	Innovative Nanoparticulate Surface Coating Technology to Minimize Fouling and Electrochemical Reacti	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	124,696

Jun,	Soojin	Department of Human Nutrition, Food and Animal Sciences	Development of Combined Continuous-Flow Microwave and Pulsed Ohmic Heating Technologies for Rapid an	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	374,798
Kanehiro,	Naomi A	CTAHR Cooperative Extension Service	Nutrition Consultation and Review	Human Services, Dept - HI	75,000
Khanal,	Samir K	Department of Molecular Biosciences and Bioengineering	Lignocellulosic Biomass Conversion into Ethanol through Syngas Fermentation with Simultaneous Recove	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	144,807
Krushelnycky,	Paul D	Department of Plant and Environmental Protection Sciences	Population Dynamic and Pollination Ecology of the Threatened Haleakala Silversword	Interior, Dept - U.S. Geological Survey	36,161
Krushelnycky,	Paul D	Department of Plant and Environmental Protection Sciences	Haleakala Silversword Research to Slow the Invasion of Argentine Ants in Silversword Habitat	Interior, Dept - National Park Service	140,000
Kutara,	Pamela B C	College of Tropical Agriculture and Human Resources	University of Hawaii Financial Literacy Project	Institute for Higher Education Policy	14,000
Leary,	James	Department of Natural Resources and Environmental Management	Invasive Weed Management Strategies using Herbicide Ballistic Technology	Agriculture, Dept - Ntrl Resources Conservation Svc -FED	48,588
Lepczyk,	Chris	Department of Natural Resources and Environmental Management	Research to Improve Estimates of Game Harvests and Hunting Participation in the State of Hawai'i Yea	Land & Natural Res, Dept - HI	15,000
Lepczyk,	Chris	Department of Natural Resources and Environmental Management	Research to Improve Estimates of Game Harvests and Hunting Participation in the State of Hawai'i Yea	Land & Natural Res, Dept - Div of Forestry & Wildlife-HI	15,000
Leung,	Ping Sun	Department of Molecular Biosciences and Bioengineering	An Exploratory Application of Agent Based Modeling for Policy Evaluations in Hawaii's Longline Fishe	Commerce, Dept - Natl Oceanic & Atmospheric Adm (NOAA)	199,528
Leung,	Ping Sun	Department of Molecular Biosciences and Bioengineering	An Exploratory Application of Agent Based Modeling for Policy Evaluations in Hawaii's Longline Fishe	National Science Foundation	287,437
Leung,	Ping Sun	Department of Molecular Biosciences and Bioengineering	Evaluating the Marketing Channel and Food Safety of Fish and Seafood Products in Hawaii	Commerce, Dept - Natl Oceanic & Atmospheric Adm (NOAA)	142,025
Li,	Qingxiao	Department of Molecular Biosciences and Bioengineering	Air Sampling and Analysis for Pesticides Residues and Odorous Chemicals in the Air in the Waimea Are	Agriculture, Dept - HI	100,000
Li,	Qingxiao	Department of Molecular Biosciences and Bioengineering	Air Sampling and Analysis for Pesticides Residues and Odorous Chemicals in the Air in the Waimea Are	County of Kauai	50,000
Li,	Qingxiao	Department of Molecular Biosciences and Bioengineering	Investigation of Wet Tropical Forest Ecosystems in the Pacific Remote Islands Complex	Interior, Dept - U.S. Fish & Wildlife Service	150,000
Li,	Qingxiao	Department of Molecular Biosciences and Bioengineering	Proteomics Study of Tropical Plants	Hawaii Agriculture Research Center	32,000

Li,	Yong	Department of Human Nutrition, Food and Animal Sciences	Detection and Control of Salmonella in Ahi and Pacific White Shrimp	Commerce, Dept - Natl Oceanic & Atmospheric Adm (NOAA)	101,432
Litton,	Creighton	Department of Natural Resources and Environmental Management	An Experimental Test of the Impacts of Rising Temperature on Carbon Input, Allocation, and Loss in M	National Science Foundation	13,800
Litton,	Creighton	Department of Natural Resources and Environmental Management	Effects of Mean Annual Temperature on Carbon Storage and Fluxes in Native Forests of Hawaii	Agriculture, Dept - Forest Service-FED	88,000
Litton,	Creighton	Department of Natural Resources and Environmental Management	The Invasive Species/Wildfire Cycle: Fuel Loads, Microclimate, Fire Potential, and Fire Behavior in	Agriculture, Dept - Forest Service-FED	170,000
Litton,	Creighton	Department of Natural Resources and Environmental Management	Impacts of Nonnative Ungulates on Plant Invasions and Ecosystem Goods and Services in Native Hawaiia	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	135,222
Messing,	Russell H	Department of Plant and Environmental Protection Sciences	Indirect Effects of Biological Control: Competition, Multi-parasitism and Hyper-parasitism Among Aph	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	157,000
Miura,	Tomoaki	Department of Natural Resources and Environmental Management	Vegetation Phenology and Vegetation Index Products from Multiple Missions and Satellite Sensors	Arizona, University of	85,307
Miyasaka,	Susan C	Hawaii County CTAHR Extension and Research Office	Innovative Practices to Sustain Sweet Potato Production	County of Hawaii	8,000
Nakamoto,	Stuart T	Department of Human Nutrition, Food and Animal Sciences	Feasible Analysis of Ohelo as a Specialty Crop for Hawaii	Agriculture, Dept - Agricultural Research Svc-FED	10,500
Nakatsuka,	Claire M	College of Tropical Agriculture and Human Resources	Operation Military Kids	Kansas State University	80,000
Novotny,	Rachel	Department of Human Nutrition, Food and Animal Sciences	Work, Weight, and Wellness Program -- The 3W Program ("Study")	Kaiser Permanente - HI	9,834
Novotny,	Rachel	Department of Human Nutrition, Food and Animal Sciences	Pacific Kids DASH for Health (PacDASH)	Kaiser Permanente - HI	245,607
Novotny,	Rachel	Department of Human Nutrition, Food and Animal Sciences	Cardiovascular Research Network	Kaiser Permanente - HI	17,462
Paull,	Robert E	Department of Tropical Plant and Soil Sciences	Construction of a High Density Genetic Map of Pineapple for Genome Sequencing and Marker-Assisted Se	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	149,952
Radovich,	Theodore J.	Department of Tropical Plant and Soil Sciences	Vermicompost-based Media to Enhance Organic Vegetable Seedling Vigor, Yield, Crop Quality and Grower	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	351,028
Rubinoff,	Daniel Z	Department of Plant and Environmental Protection Sciences	EDRR Proposal to Survey for Invasive Bark Beetles (Scolytinae) in Hawaii	Agriculture, Dept - Forest Service-FED	25,000

Rubinoff,	Daniel Z	Department of Plant and Environmental Protection Sciences	Ecological Diversity, Systematics, and Conservation of Hawaii's Endemic Hyposmocoma	National Science Foundation	421,886
Rubinoff,	Daniel Z	Department of Plant and Environmental Protection Sciences	Evaluating the Efficacy, Biological Interference and Nontarget Impacts of a Fireweed Biological Cont	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	207,632
Settlage,	Becky	College of Tropical Agriculture and Human Resources	East Hawaii 4-H Program	Agriculture, Dept - FED	1,000
Stern,	Ivette	College of Tropical Agriculture and Human Resources	Youth Opportunities Initiative Readiness Assessment	Hawaii Community Foundation (HCF)	20,000
Su,	Wei-Wen Winston	Department of Molecular Biosciences and Bioengineering	Recombinant Oligomeric Antimicrobial Peptides with Enhanced Activities	HCF-Medical Research Funds	50,000
Tamaru,	Clyde S	College of Tropical Agriculture and Human Resources	Improving Outputs in the Commercial Scale Production of Swordtails - Year 3	Oceanic Institute - Ctr for Tropical & Subtrpcl Aquaculture (CTSA)	35,000
Tamaru,	Clyde S	Department of Molecular Biosciences and Bioengineering	Establishing Water Quality Parameters to Address Wet Weather Flow Impacts, Pathogens, and NPDES Prog	Health, Dept - HI	117,740
Teves,	Glenn I	Department of Tropical Plant and Soil Sciences	Sustaining Molokai Native Hawaiian Family Farms	Utah State University	47,420
Uehara,	Goro	Department of Tropical Plant and Soil Sciences	Field Evaluation of Oil Seed Crops at Benchmark Locations	Hawaii Agriculture Research Center	25,000
Uehara,	Goro	Department of Tropical Plant and Soil Sciences	Regional Biomass Feedstock Partnership - Herbaceous Bioenergy Crop Field Trials	South Dakota State University	16,000
Vincent,	Douglas L	College of Tropical Agriculture and Human Resources	Agricultural Diversification: Hawaii Tropical Specialty Fruit Research and Development -2009	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	142,640
Wang,	Ming-Li	Department of Molecular Biosciences and Bioengineering	Coffee Improvement Using Molecular Approaches for Hawaii	Hawaii Agriculture Research Center	20,520
Wieczorek,	Anna M.	Department of Tropical Plant and Soil Sciences	Assessing Risks of Cross-Pollination from Genetically Engineered Crops to Endemic Hawaiian Species	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	181,550
Wieczorek,	Anna M.	Department of Tropical Plant and Soil Sciences	Biotechnology Outreach Program	Agriculture, Dept - FED	55,976
Yuan,	Sarah	Center on the Family	Community Needs Assessment	Health, Dept - HI	206,882
Yuen,	Sylvia H L	Center on the Family	Early Childhood Comprehensive Systems (ECCS) Website	Health, Dept - HI	8,000
Yuen,	Sylvia H L	Center on the Family	MOA Between UH and Hawaii Public Housing Authority, Homeless Program Branch	Human Services, Dept - HI	41,160
Yuen,	Sylvia H L	Center on the Family	Memorandum of Agreement Relating to Quality Care for Home-Based and Center-Based Child Care Provider	Human Services, Dept - HI	517,022

Yuen,	Sylvia H L	Center on the Family	Services to Evaluate and Monitor Substance Abuse Service Outcomes and Process Evaluation Activities	Health, Dept - Alcohol & Drug Abuse Div-HI	234,283
Zee,	Julia M	Department of Human Nutrition, Food and Animal Sciences	Hawaii Diabetes Detection and Prevention Project	Agriculture, Dept - Coop State Rsch, Ed, & Ext Svc (CSREES)-FED	70,668
Award Count: 82					\$11,583,694

CTAHR on television

Check out these great stories about how the public is able to learn about CTAHR efforts out in our communities.

Beefing Up the Taste of the Hawaiian Range

Written by Ramsay Wharton - rwharton@kgmb9.com
September 16, 2009 06:25 AM

14th Annual Mealani: Taste of the Hawaiian Range & Agriculture Festival

Mark your calendar for the 2009 Mealani's Taste of the Hawaiian Range and Agriculture Festival. Come and toast our 14th anniversary on September 18, 2009 at the Hilton Waikoloa Village Resort on the beautiful Kohala Coast of Hawaii Island. As usual, the Taste itself will open to the public at 6:00 p.m. and run 'til it's all gone or to 8:00 p.m., which ever comes first.

Indulge your appetite and show your support of local agriculture as the finest culinary talents in Hawaii showcase the bounty and diversity of Hawaii island's agricultural products. Featured chefs will create extraordinary dishes using locally grown range-fed meats utilizing every part from the tongue to the tail. In addition, lamb, pork, mutton, and goat will be prepared, all complemented by fresh fruits and vegetables from Hawaii Island farmers. Exceptional food products like Kona coffee, specialty teas, micro brewed soda, ice cream, candies, malasadas and other prepared foods will round out the evening's fare.

For ticket information, [click here.](#)

For main food event, Taste of the Hawaiian Range, \$40 presale, \$80 at the door
For cooking demonstration, \$10 presale, limited to 100 people.
For more information, on tickets contact University of Hawaii at Manoa, College of Tropical Agriculture and Human Resources (CTAHR) Cooperative Extension Service at (808) 981-5199.
Or go to the website at: www.ctahr.hawaii.edu/taste



Field day promotes sustainable agriculture

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By Duane Shimogawa - [bio](#) | [email](#)

WAIMANALO (KHNL) - With the economy unable to sprout out of its slump, more and more people are turning to sustainable agriculture.

The University of Hawaii is giving the public a closer look at some exciting research and outreach activities.

UH-Manoa's College of Tropical Agriculture hosted its 20th Annual Waimanalo Research Station Field Day.

Its goals are to get people to do their own farming and grow their own food.

Corn seed is the number one agricultural crop in Hawaii. Researchers say that's why it's important to continue to develop new technologies to grow it.

"A really important part of our day and our program is to talk about improved sweet corn for Hawaii, you simply can't buy corn from New York State and grow it in Hawaii," UH-Manoa professor James Brewbaker said.

From growing corn hybrids to combat viruses to teaching people about how to grow their own food, this field day is a learning experience for everyone who attended.

"We'd like to get the people familiar with agricultural research that the university is doing and also how important agriculture is to the State of Hawaii," Event organizer Ray Uchida said.



James Brewbaker



Ray Uchida



Martha Coleman

The Waimanalo Field Day videos are here:
<http://www.khnl.com/global/story.asp?s=11205808>

Watch the videos for Taste of the Hawaiian Range:
<http://kgmb9.com/main/content/view/21152/110/>