CTAHR Research News

September 2006
Volume 2, Issue 7

The life work of Goro Uehara

CTAHR grant numbers up close

International genetic resources treaty

Goro Uehara checks on the progress of growth trials of *Jatropha curcas*. Oil, extracted from seeds, are a potential biofuel source for the Pacific.

In this issue

From the Associate Dean and Associate Director for Research

Ching Yuan (CY) Hu
Associate Dean and
Associate Director for
Research

This month, we celebrate the first anniversary of *CTAHR Research News*. Upon first arriving here, I visited our faculty in their offices and laboratories to get a feeling of our research capacity, and I felt strongly that we have many good stories to tell. Yet, many of our staff are not aware of the research of their colleagues in different buildings, and people outside of the college are even less aware. From my conversations with faculty, there was an apparent need to improve communication. It was evident that we needed a newsletter to spread the good news of faculty achievements and deliver useful information to our research faculty. It was not an easy challenge, but fortunately Jim Hollyer was (and still is) here to help. And so, here we are a year later.

CTAHR has many success stories, and an outstanding example is this month's cover story on Dr. Goro Uehara. Goro's USAID Soil Management Collaborative Research Soil Program (SM CRSP) alone brought in $2.8 million this year! As we celebrate our centennial next year, Goro will celebrate his 60 year association with CTAHR, starting from his undergraduate studies in 1947. As SM CRSP is winding down, Dr. Uehara has been working harder than ever with biomass energy projects, and would undoubtedly say that bioenergy is the future. Goro has dedicated his career to helping people in Hawaii and around the world, and there is no stopping him now that he has found another worthy cause to work on. I, for one, am looking forward to seeing the fruits of his new research. Thank you, Goro, for serving as an excellent example for all of us.

As promised, we begin to provide some analyses of the grant and contract data we have been collecting. Brian Turano presents these data by units and also separates congressional earmarks from the total grants to show potential impact on individual units in the post-Inouye era. Our objective remains: to maintain our special grant accounts and to expand our competitive grant accounts. We will continue to update you throughout the year.

Vice Chancellor Gary Ostrander announced in early June, that UH has filed terminal disclaimers on the three taro patents, and released these three taros to allow free public access. Who owns the improved plant varieties developed by researchers derived from public available varieties? This issue will continue to challenge us, and is an issue we need pay attention to. Thanks to Luigi Guarino's update on the International Treaty of Genetic Resources in Food and Agriculture. This international treaty is the first one to recognize the intellectual right for the farmers and indigenous people, and examines how they can have access to and share the benefit of the newly developed crops. A link to his full paper is provided for your reading.

Rounding out the issue, Doug Vincent provides another edition of the research calabash: grants received, papers published, and funding opportunities are listed for your perusal. Please keep sending your items to me when they are available. Thanks to Jackie, Lynnet, Vanessa, Dennis, Sharee and Lindsey for their contributions to make this newsletter possible. Happy 1st birthday *CRN*!

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Of soils and simulations

By Goro Uehara
Professor, Tropical Plant and Soil Science (TPSS)

Growing up in Kohala in the late 1930's, I never dreamed I would have the opportunity to travel to many foreign countries and impact the lives of so many farmers around the world. And yet, that is where my career has taken me, since working at CTAHR in November 1959. Actually, my time with UH started as a freshman in 1947, and after serving in the Korean War in 1951, I returned to UH to receive my masters in Soil Science in 1953. After completing my PhD on soils at Michigan State University, I was hired by CTAHR – then called the "College of Agriculture" – in 1959, and have been here since.

One of my first major projects in the early years was to write a book on soils and their behavior titled *The Chemistry, Physics and Mineralogy of Tropical Soils with Variable Charge*. Writing this book, I learned to spend equal time on the three purposes of doing research: (1) to understand process in nature; (2) to use this understanding to make predictions; and (3), to enable others to use these predictions to control and manage the environment in a sustainable manner.

My first international project began in 1974, working on soils analysis for a potential USAID (US Aid in Development)-funded dam building project in the Mekong Delta in Thailand. The project team included Big Island Extension Agent **Mel Nishina**, who was a graduate student in the then Department of Agronomy and Soil Science at that time. It was a great project because it exposed me to the problems and conditions in developing countries, as well as to the powers and limitations of science and technology in combating poverty and injustice in the world. The project also helped establish my reputation in international development circles: connections that have benefited me for the last 30 years!

Our first major international grant came in around 1975, with funds of $500,000. It was a USAID 211d Institutional Development Grant, set up to train faculty on many aspects of international development work. The next project was the Benchmark Soils Project, or BSP. This project ran from 1975-1985, and was established to discover whether similar soils, in vastly different areas of the world, behaved in the same manner. If so, it would mean that we could transfer successful crops and agricultural practices from other parts of the world to Hawaii on the basis of similarly classified soils. We

Raised water tables from soils and water conservation measures enable women in Mali, West Africa, to grow and market vegetables to raise household incomes during the dry season (Photo courtesy of Russell Yost).

called this "technology transfer by analogy." It worked well for similar types of soils, but did not allow transfer among dissimilar soils.

We took our interest in soils and systems-modeling to the next step in the USAID-funded grant: International Benchmark Sites Network of Agrotechnology Transfer (IBSNAT), which ran from 1985-1995. In IBSNAT, we proposed to create a computer program that was capable of modeling crop-specific production yields in any location. We collected data about the soil, plant atmosphere continuum and plant inter-reactions with the environment; and successfully wrote the software we dreamed about, called the Decision Support System for Agrotechnology Transfer (DSSAT). DSSAT can reliably predict yields of about a dozen of the world's most important food and fiber crops including rice, wheat, barley sorghum, soybean, peanut, phaseolus bean, taro, potato and several others. DSSAT has become the best-known crop simulation software in the world, and the sales of the software allow us to bring a team of international researchers to Manoa to work on further developments. We also have an international consortium – the International Consortium for Agriculture Systems Application (ICASA) – that continues to develop this software for the betterment of humankind.

Our most recent, large-scale project has been the Soil Management Collaborative Research Soil Program (SM CRSP), a collaboration of Cornell University, Montana State University, North Carolina University, University of Florida, and UHM/CTAHR. We began working with this project in the 1980's, but in 1997, we had the opportunity to manage this USAID-funded project. The focus of our work is to find ways to do global research and application on a site-specific basis. This means being able to develop a landscape/production decision-support/modeling framework that is applicable anywhere in the world that has not been specifically modeled before. In the last few years, we have had the good fortune of working in East Timor in an effort to help farmers get back on their feet after centuries of Portuguese and Indonesian rule. We even got to do a bit of business "matchmaking," by connecting Oils of Aloha's Dana Gray with East Timor farmers who could provide high quality kukui nut oil to Dana's Oahu operation. It was a great feeling, helping develop a win-win business partnership!

East Timorese Extension Officers learn to diagnose soil nutrient deficiencies with an inexpensive, portable soil test kit.

But, this will soon be in the past for me. In 2007, SM CRSP is concluding so I am looking to greener pastures for research ideas. And, I have found it in biofuels. With the rising prices of all types of fuels, there is a need – and now a potential opportunity – for alternative fuels to become economically feasible. We are working with several local land owners and with the Agricultural Development in the American Pacific (ADAP) project on a number of interrelated reconnaissance, field trial and bench-scale work. This type of research requires interdisciplinary teamwork and we see a great opportunity for biofuels in tropical and subtropical environments because of the year-round growing conditions. With help from CTAHR Grant Specialist, **Brian Turano**, we hope to garner funding for our research endeavors in this exciting and expanding field.

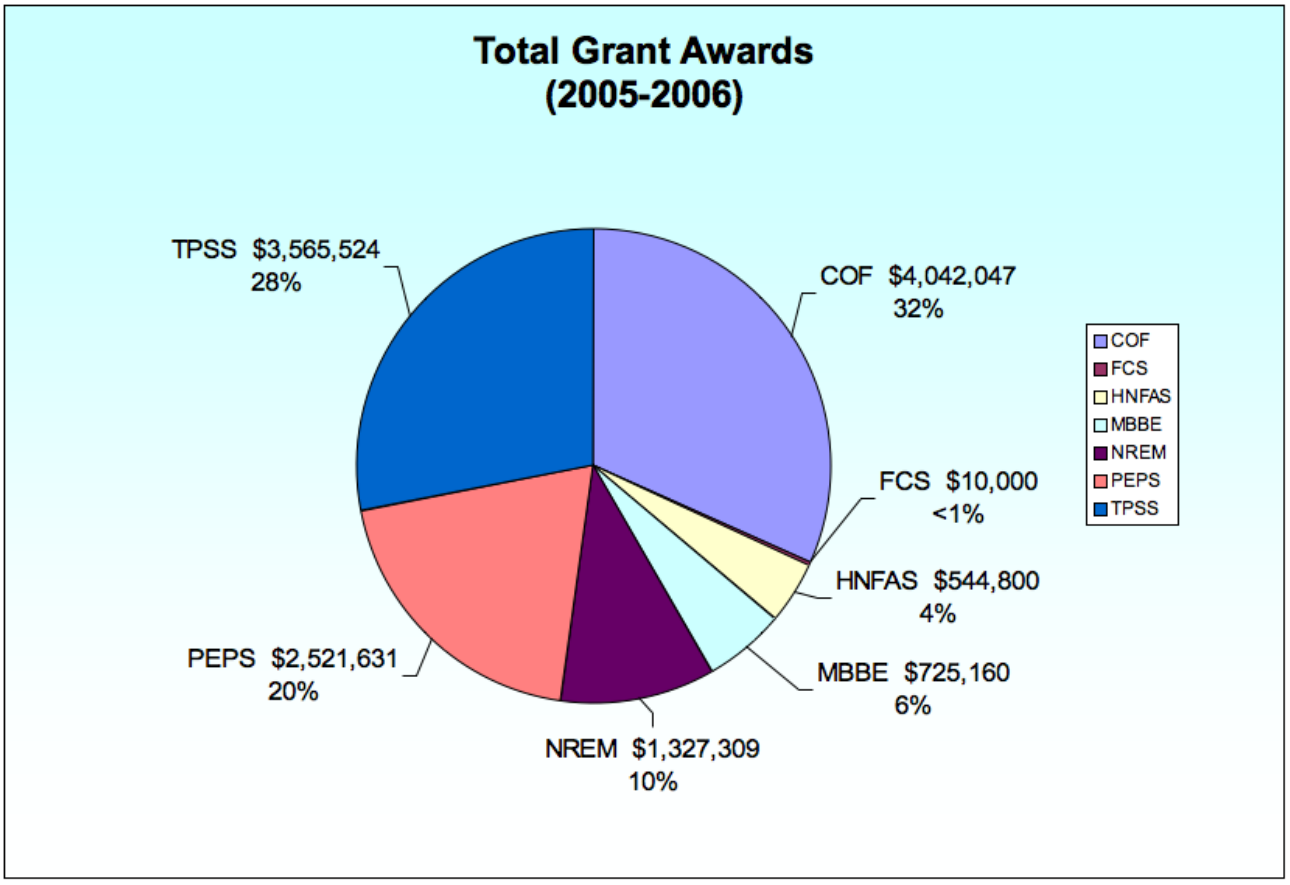
In the final analysis, teaching and research are about enabling our customers, whether they be students, farmers or policy-makers, to make better for themselves and for the society in which they live. And, to me, that's what's exciting about the type of work we do at CTAHR!

Crunching the CTAHR grant numbers

By Brian Turano
CTAHR Grant Specialist

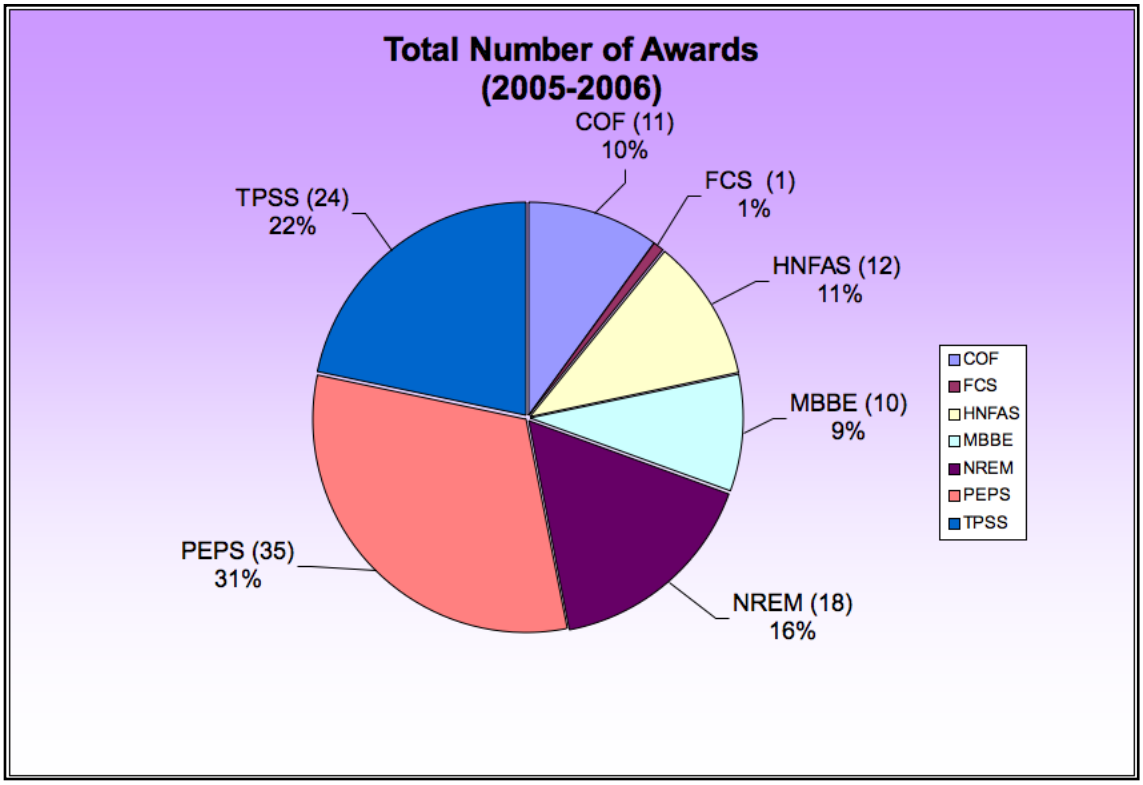
The CTAHR Research Office has embarked on a journey to determine how our faculty are faring in obtaining funding for their research programs. The performance of each unit and individual faculty member is critical to the overall success of CTAHR. It is hoped that through understanding our success in funding our research programs we can stimulate additional growth and increase our impacts. Periodically, we will present analysis of submitted and awarded proposals to highlight our successes and underscore areas for new opportunities. This first installment covers CTAHR grant awards from January 1, 2005 to January 1, 2006. In future installments, we will revert to the state fiscal year to be consistent with our usual updates. All data for this piece were obtained from the UH Office of Research Services (ORS) (http://www.hawaii.edu/ors/filecabinet_reports.html) and this office's Proposal Tracker databases.

In 2005, faculty brought in $12,736,471 in grant awards. (Due to the focus on the units' achievements in this article, grant dollars awarded to the administration were not included.) The ORS grant award database was queried for each CTAHR unit for the 2005 calendar year. Results showed that the Center on the Family (COF) was the big bread winner, bringing in more than $4 million, followed closely by Tropical Plant and Soil Sciences (TPSS). The pie chart below shows the breakdown of award dollars by unit.



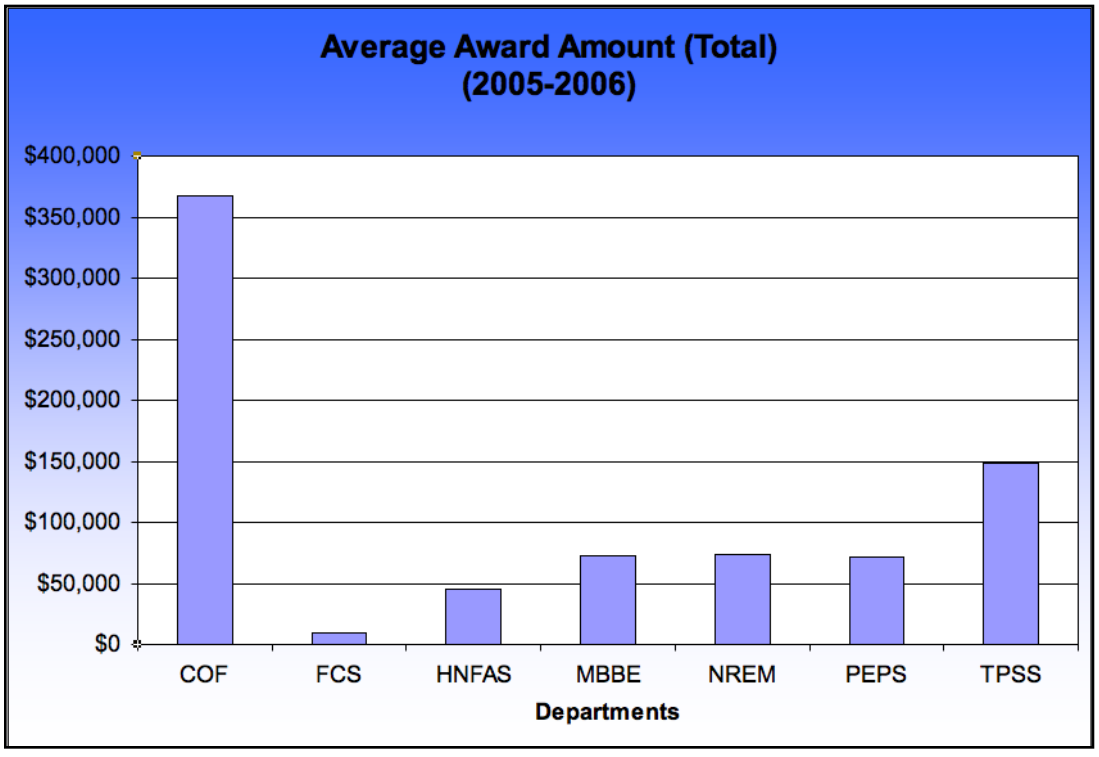
Total 2005-2006 amount of grants by unit.

CTAHR faculty secured 111 awards in this time period. The total number of awards for the units ranged from 35 for Plant and Environmental Protection Sciences (PEPS) to one for Family and Consumer Sciences (FCS). The pie chart below shows the breakdown by unit.



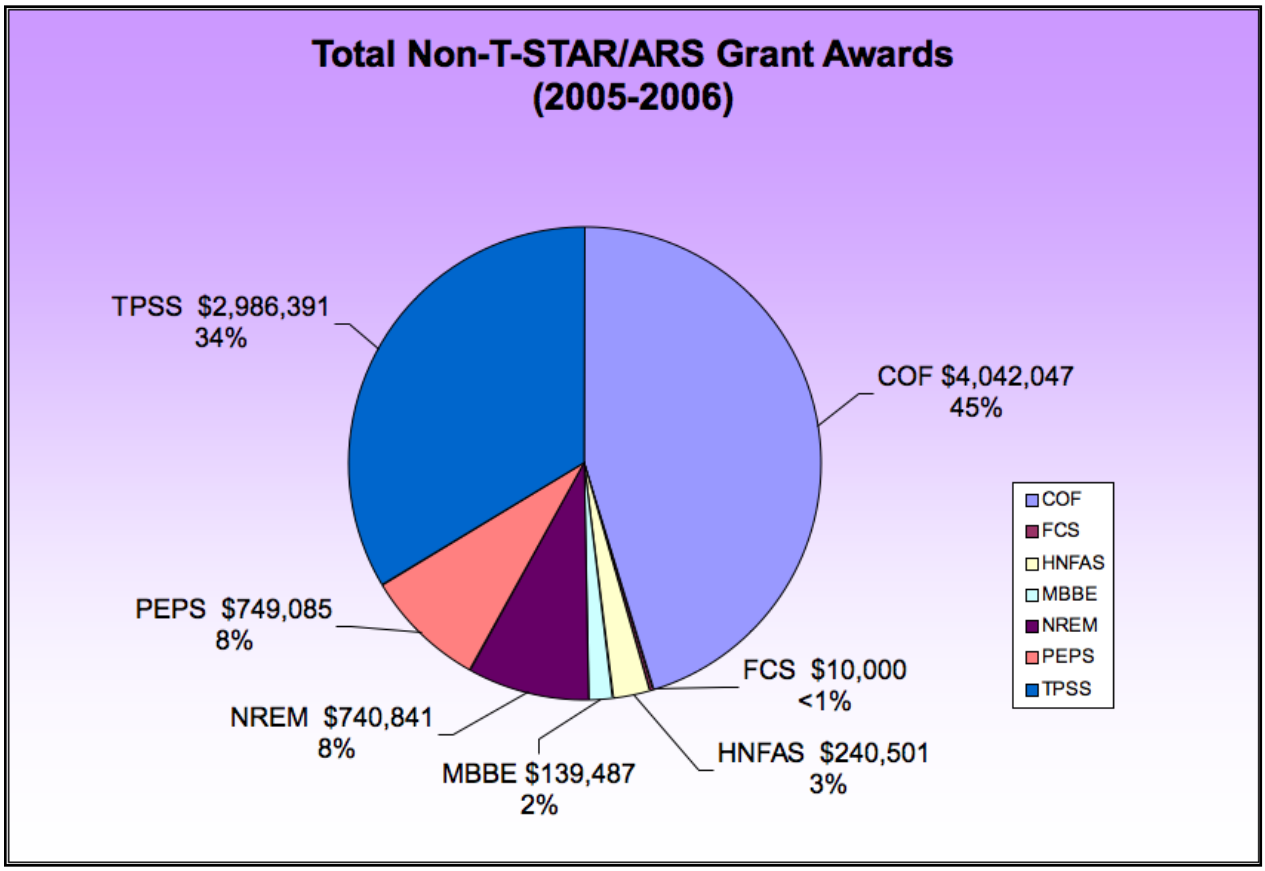
Total 2005-2006 number of grants by unit.

The chart below shows the average size of awards for each unit. The range was from over $360,000 for COF to $10,000 for FCS.



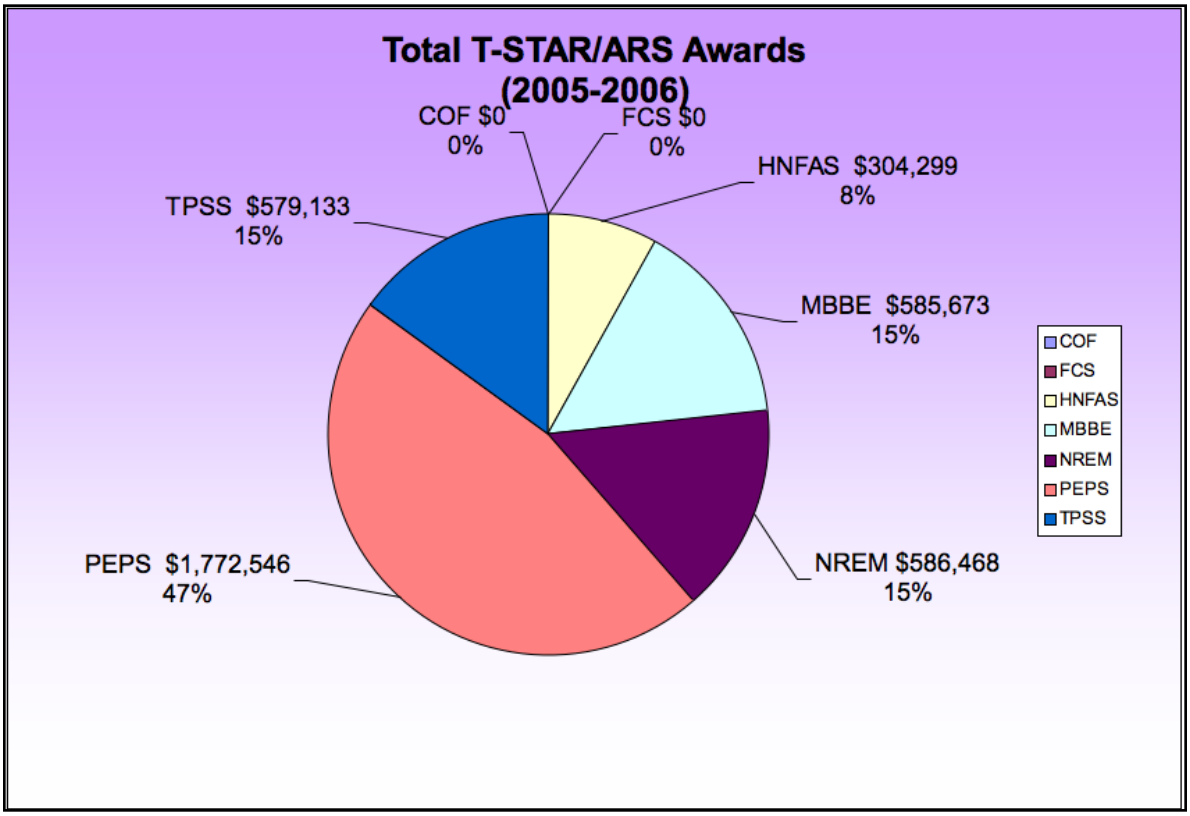
Average grant amount by unit, 2005-2006.

You have heard that we won't have the federal pork dollars forever. To determine the amount of non-congressional earmark dollars each unit received, all Tropical and Subtropical Agriculture Research (T-STAR) and USDA Agriculture Research Service (ARS) awared dollars were subtracted, and the chart below reflects this adjustment. Once again, the COF should be lauded for bringing in 45 percent of all non-congressional earmark dollars.



Total 2005-2006 amount of grants by unit excluding T-STAR and ARS pass-through monies.

Lastly, the corollary to the chart above is the amount of T-STAR/ARS funding that each unit received in 2005. This analysis is useful to show how the different units might be affected by the loss of congressional earmarks. As illustrated below, PEPS received 47 percent of these funds (~$1.8 million), while COF and FCS did not receive any.



Total 2005-2006 T-STAR and ARS grants by unit.

The above results were an eye-opener for the author. I hope this will motivate you to go after more grants, collaborate with colleagues, and obtain funding for the important work you do everyday. Remember, the Research Office stands-at-the-ready to help in developing and expanding your research programs.

and, your success keeps coming!!!

Anne M Alvarez (PEPS)
Western Regional Center in National Network.
Univ of California-Davis. $5,683.

H.C. "Skip" Bittenbender (TPSS)
Improving the Quality of Kava Beverage.
DA-Cooperative State Research Service. $49,894.

Dulal Borthakur (MBBE)
The Invasiveness of the Noxious Weed Gorse (*Ulex europaeus* L) Influenced by Symbiosis in Agricultural and Natural Habitats of Hawaii.
DA-Cooperative State Research Service. $72,597.

Ecological Assessment and Economic Feasibility of a Practical Strategy for Regenerating Koa Forests in Hawaii.
DA-Dept of Agriculture. $69,156.

Ali Fares (NREM)
Developing and Improving Tension Based and Capacitance Based Soil Moisture Sensors as Water Management and Irrigation Scheduling Tools.
DA-Cooperative State Research Service. $41,536.

Field and Numerical Evaluation of Best Management Practices to Protect Water Resources in the Hanalei Watershed.
DA-Cooperative State Research Service. $43,005.

Determining the Impacts of Water Pumping and Alien Species Invasion on Stream Flow for Sustainable Water Resource Management in Makaha Valley, Hawaii.
DA-Cooperative State Research Service. $38,373.

J Kenneth Grace (PEPS)
Management of Formosan Subterranean Termites in Hawaii Through School Campus Based Research and Suppression.
DA-Dept of Agriculture. $150,000.

2007 -- Funding for Research of Mutual Interest.
DA-Dept of Agriculture. $12,000.

Mitiku Habte (TPSS)
Understanding the Impacts of Soil Acidity and Associated Toxicities of Aluminum and Manganese on Acacia Koa Root Symbioses and Tree Growth.
DA-Cooperative State Research Service. $37,912.

Andrew Hashimoto (Admin)
Pacific Regional Aquaculture Information Service for Education (PRAISE) and Publications -- Publications Component.
Oceanic Institute-Ctr for Trop & Subtrop Aqua. $52,510.

Agricultural Postharvest, Value-added Products and Processing Program.
DA-Dept of Agriculture. $237,518.

Agricultural Development in the American Pacific (ADAP) Project, Year 19. *DA-Cooperative State Research Service.* $450,347.

Cerruti R R Hooks (PEPS)
Using Cover Crops to Build an Ecologically Based Pest Management Program for Vegetable Production.
DA-Cooperative State Research Service. $434,120.

John Hu (PEPS)
Field Evaluation of Genetically Engineered Banana Plants for BBTV Resistance in HI.
DA-Cooperative State Research Service. $65,772.

Detection, Distribution, and Etiological Roles of Invasive Badnaviruses in Pineapple.
DA-Cooperative State Research Service. $69,522.

Alvin S Huang (HNFAS)
An Integrated Approach for the Quality Improvement of Guava Puree and Kava Beverages by a Non-Thermal Dense Phase Carbon Dioxide Pasteurization.
DA-Cooperative State Research Service. $45,074.

Nguyen V Hue (TPSS)
Toward Organic Farming: Using Animal & Green Manures.
DA-Cooperative State Research Service. $51,584.

Naomi A Kanehiro (HNFAS)
Food Stamp Nutrition Education - UH/CES. *Hawaii-Dept of Human Services.* $120,000.

Michael K Kawate (PEPS)
Minor Use Pesticide Research - Western Region IR-4.
DA-Dept of Agriculture. $36,000.

Western IPM Center Regional Comments Coordinator for the American-Affiliated Pacific Islands.
Univ of California- Davis. $53,670.

Harold Keyser (Admin – Maui County)
UH-CTAHR Extension and Research Projects in Maui County FY2007.
Maui Economic Development Board. $98,500.

Yong-Soo Kim (HNFAS)
Investigation of Molecular Mechanisms Regulating Skeletal Muscle Growth Using Microarray Analysis.
DA-Cooperative State Research Service. $40,682.

PingSun Leung (MBBE)
Economic Analytical Support for Fishery Management Actions.
DOC-National Oceanic & Atmospheric Administration. $22,000.

Richard M Manshardt (TPSS)
A Practical Phenotypic Marker for Early Determination of Sex in Papaya Seedlings.
DA-Cooperative State Research Service. $26,949.

Ronald Mau (PEPS)
Area-wide Pest Management of Tephritid Flies that Infest Hawaii-Grown Fruits & Vegetables.
DA-Dept of Agriculture $394,461

Russell H Messing (PEPS)
Natural Enemies of Invasive Tephritid Fruit Flies: Evaluation of New Candidate Species
DA-Cooperative State Research Service. $64,979.

Susan C Miyasaka (TPSS)
Increasing Sustainability of Tropical Pastures Through Selection of Legumes Tolerant to Drought and Aluminum.
DA-Cooperative State Research Service. $59,832.

Pratibha V Nerurkar (MBBE)
Morinda Citrifolia (Noni): Potential Role of Nuclear Transcription Factors in Ameliorating Hyperlipidemia.
DA-Cooperative State Research Service. $54,007.

Robert E Paull (TPSS)
TPSS Critical Research Needs: Sustainable Farming Systems in Hawaii.
DA-Cooperative State Research Service. $120,000.

Varietal Variation in Papaya Fruit Softening and its Inheritance.
DA-Cooperative State Research Service. $76,285.

Gernot Presting (MBBE)
A DNA Barcode Database for Invasive and Native Plant Species Identification in Hawaii.
DA-Cooperative State Research Service. $70,728.

Daniel Rubinoff (PEPS)
Empirical Evaluation of the Target and Non-Target Impacts of Biological Control Introductions on Native Moths and their Threatened Sister Taxa.
DA-Cooperative State Research Service. $68,845.

Study of Attraction of Non-Target Organisms to Fruit Fly Female Attractants and Male Lures in Hawaii.
DA-Dept of Agriculture. $25,000.

Wei-Wen W. Su (MBBE)
An Integrated Approach for Efficient Production of Plant-Derived Antibodies.
DA-Cooperative State Research Service. $87,819.

Economical and Eco-Friendly Molecular Farming Using a Novel Paint Culture System.
DA-Cooperative State Research Service. $81,589.

Mark Thorne (HNFAS)
2006-Mealani Forage Field Day Educational Program.
DA-Natural Resources Conservation Service (NRCS). $13,122.

Sheep Producers Sustainable Grazing Management Workshop.
DA-Dept of Agriculture. $12,242.

Best Management Practices for the Remediation of Former Sugarcane and Pineapple Lands for Sustainable Livestock Production in Hawaii.
DA-Cooperative State Research Service. $62,565.

Janice Y Uchida (PEPS)
Efficacy of Liquid Compost Factor (LCF) to Enhance Growth of Tropical Crops, Ornamentals and Bedding Plants.
ABR, LLC. $20,000.

Douglas L Vincent (Admin)
Hawaii Floriculture Research Grant – 2006.
DA-Cooperative State Research Service. $325,325.

Environmental Effects of Tephritid Fruit Fly Eradication and Control.
DA-Dept of Agriculture. $212,954.

Detection, Control, and Mitigation of Banana Bunchy Top Virus (BBTV) and Citrus Tristeza (CTV) Virus in Hawaii.
DA-Dept of Agriculture. $102,867.

Minor Crops Pest and Disease Control.
DA-Dept of Agriculture. $240,568.

Protecting Papaya from Pests and Diseases.
DA-Dept of Agriculture. $253,293.

Hawaii Pineapple Improvement.
DA-Dept of Agriculture. $253,293.

Jinzeng Yang (HNFAS)
Growth Hormone Receptor DNA Polymorphisms and their Associations with Growth Traits in Grass-Fed Cattle Populations.
DA-Cooperative State Research Service. $59,016.

Ping-Yi Yang (MBBE)
Bioprocessing Pacific Island By-products for Production of Value Added Feed Ingredients.
Center for Tropical and Subtropical Aquaculture (CTSA). $150,000.

Julia M Zee (HNFAS)
Diabetes Detection and Prevention Project.
DA-Cooperative State Research Service. $100,000.

In summary . . . August 17– September 19, 2006: - 49 projects - $5,233,194

congratulations and thanks!

In the research calabash

T-STAR grants due October 2, 2006

T-STAR grants are due Monday, October 2, 2006. Information can be found on how to complete your grant proposal using the SF 424 R&R forms. If you have questions, please contact Doug Vincent at 956-8157 or send an e-mail to vincent@hawaii.edu .

University Research Council travel awards

The University of Hawaii Vice Chancellor for Research and Graduate Education sponsors travel awards for faculty throughout the year. The University Research Council (URC) manages these awards. Priority is given to new tenure-track faculty. Only one travel application will be accepted per faculty member per fiscal year (July 1-June 30). Up to $2,000 in travel reimbursement is available. Applications should be submitted no later than 4 weeks prior to domestic travel; earlier for foreign travel. Download information. Download application.

University Research Council Research Relations Grants

The University Research Council is also seeking applications for funding through its Research Relations Fund. The University of Hawaii Research Relations Fund supports selected scholarly and creative activities of full-time faculty and staff whose disciplines do not traditionally receive significant extramural funding. Such support is limited to small, self-contained projects. Applicants are strongly encouraged to seek supplemental funding from other sources. Priority will be given to proposals that are designed to lead to extramural funding in the future. Program Guidelines and Fillable Application are available. The deadline for this academic year is **October 31, 2006.** Forms can also be obtained from Spalding Hall 357. Contact **Dr. Hal McArthur** at 956-8128 or by e-mail hmcarthu@hawaii.edu if you have any questions about URC-managed programs.

UH INBRE travel funding opportunities

The Hawaii Infrastructure Development Award Network for Biomedical Research Excellence (INBRE) invites eligible faculty, postdoctoral researchers and students active in relevant disciplines to apply for travel funds to attend conferences and professional meetings. Applications are being accepted for travel to be completed by March 31, 2007. Applications are due **October 2, 2006** and **January 8, 2007**. A cover letter inviting applications and more information about the program are found at these links. More information and the application form can be found at these links. The application form is here. See the INBRE Web Site for more information. Dr. Heinz Gert de Couet is the Outreach Coordinator for the INBRE program which manages the travel grant program. Contact Dr. de Couet at 956-9367 or by e-mail couet@hawaii.edu if you have questions about this program.

Graduate Student Organization offers grants for student travel, research

The University of Hawaii Graduate Student Organization (GSO) offers small grants for reimbursement of travel or research costs. Classified and unclassified graduate students that pay GSO fees are eligible for these grants. GSO accepts applications for reimbursement on a continuous, rolling basis and reviews applications monthly. You can apply from one semester before you start your proposed project or up to one semester after you complete the proposed project. For more information see the GSO website.

Committee on Human Subjects training sessions

The University of Hawaii Committee on Human Studies is presenting Fall 2006 Semester investigator workshops on human subjects research for researchers, staff, faculty and students:

- **Wednesday, September 27, 2006 8:30am-12:30pm,** Law School Classroom #1
- **Tuesday, October 3rd 12:45pm-4:45pm** Law School Classroom #3
- **Thursday, October12th, 12:45pm-4:45pm** Law School Classroom #3
- **Wednesday, October 18th 8:30am-12:30pm** Law School Classroom #1

These are the same workshops; not a series. One does not need to sign up ahead of time; there is no cost. The workshop will provide a basic understanding of the ethics and principles of human subjects research and what is required of investigators at UH. This workshop will also meet the UH and NIH requirement for human subjects research training. For further information, call Bill Dendle 539-3945.

ORS Grants and Contracts Certification Program starts September 29, 2006

The Office of Research Services is launching a new Grant and Contract Certification Program. The program is designed for support staff who manage grant and contract accounts to better understand the proposal and contract preparation, research compliance issues, budgeting, cost share, indirect cost returns, program income, electronic tools and post award management and reporting. The program consists of six modules beginning Friday, September 29, 2006 from 8 am – 12 noon. Go to the ORS website for more information. Or contact ORS at training@ors.hawaii.edu if you have questions.

New University of Hawaii fringe benefit rates in effect

A reminder that for FY 2007, new fringe benefit rates are in effect. The new rates can be found here.

New UH research publication launched

The first edition of the new University of Hawaii research publication was published on-line this past summer. *Kaunana*, a Hawaiian word for "to discover" was chosen as a title to convey both the connection to the islands and to UH's commitment to the quest for scientific knowledge and discovery. Read *Kaunana* here.

Dr. Peter Brayton, USDA CSREES at CTAHR

Dr. Peter Brayton, National Program Leader, National Research Initiative (NRI) Competitive Grants Program, USDA CSREES gave a seminar in CTAHR on Friday, August 25, 2006. Dr. Brayton's seminar provided useful information about the NRI program and other programs funded by USDA CSREES.

USDA CSREES releases NRI request for applications

The National Research Initiative Competitive Grants Program has been released from USDA CSREES. Go here for a list of programs (with links to individual programs and all deadlines here. All NRI programs require on-line submission. You need to download and install the PureEdge Viewer to access the SF 424 R&R forms from the Grants.gov website. Follow this link for resources for applying electronically to USDA CSREES grant opportunities. The FY 2007 Request for Applications is this link.

Future dates/events

Hawaii Agriculture Conference, Ag 2006, "Maximizing Your Bottom Line." October 26, 2006, Hilton Hawaiian Village. Online registration is available at this link.

Update on the International Treaty of Genetic Resources in Food and Agriculture

Special to CRN

By Luigi Guarino
Plant Genetic Resources Adviser,
Land Resources Division,
Secretariat of the Pacific Community (Fiji)

A new international treaty is focusing attention on the importance of the use of biodiversity in general and genetic resources in particular in agricultural research and development. The Convention on Biological Diversity (CBD) provides a framework for the conservation and sustainable utilization of genetic resources, but the CBD does not address the particular problems associated with plant genetic resources for food and agriculture (PGRFA). In particular, the way in which the Convention has been implemented through primarily bilateral negotiations for access to genetic resources has significantly slowed the exchange and use of PGRFA, with important consequences for plant breeding programmes. The continued exchange of PGRFA is vital to agriculture in Pacific Island countries and around the world. Continued access to PGRFA from other countries and regions is essential to ensure that crops can continue to be researched and improved to achieve food security and so that resistance can be found to new diseases, such as the recent Taro Leaf Blight, and other challenges such as drought.

The International Treaty on Plant Genetic Resources for Food and Agriculture addresses the special problems associated with PGRFA in harmony with the CBD. It was negotiated within the framework of FAO, was adopted by the FAO Conference in November 2001, and came into force on 29 June 2004. The Treaty provides, in particular, for the establishment of a Multilateral System of access and benefit-sharing for plant genetic resources of the major crops of most importance for food security and on which countries are most interdependent. For PGRFA of these crops, access and benefit-sharing is on the basis of standard multilaterally agreed terms and conditions, which thereby facilitates the continued exchange of PGRFA, and reduces individual transaction costs. Three Pacific countries – the Cook Islands, Kiribati and Samoa – have ratified the Treaty. The US has signed the Treaty, signifying its intent to ratify it. With over 100 countries ratifying the Treaty, it is expected to govern access to PGRFA for the foreseeable future. Agricultural researchers and plant breeders, both in countries that are parties to the Treaty and those that are not, need to be aware of its provisions and what it means to them.

(clockwise) Bananas, breadfruit, and taro are crucial crops for the Pacific islands.

Read Mr. Guarino's full paper on this subject by clicking on this link. His email is: <LuigiG@spc.int>- Ed.

New grant dollars up for grabs!

By Doug Vincent
Special Program Director for Grants and Contracts

Tides Foundation
Moloka'i Environmental Protection Fund
Deadline: Open
http://www.tidesfoundation.org/grants-impact/the-molokai-environmental-protection-fund/index.html

U.S. Environmental Protection Agency
Market Mechanisms and Incentives: Case Studies and Experimental Testbeds for New Environmental Trading Programs:
Deadline: September 27, 2006
http://es.epa.gov/ncer/rfa/2006/2006_star_mmi.html

Hawaii Community Foundation
2006 Tobacco Trust Fund
Preventing Tobacco Initiation Among Youth and Young Adults
Deadline: September 27, 2006
http://www.hawaiicommunityfoundation.org/doc_bin/grant_rfps/RFP-2006YouthPrevention-FINAL.doc

Hawaii Community Foundation
2006 Tobacco Trust Fund
Tobacco Cessation Programs and Services
Deadline: September 27, 2006
http://www.hawaiicommunityfoundation.org/doc_bin/grant_rfps/RFP-2006CESSATIONRFP-FINAL.doc

Hawaii Community Foundation
ChevronTexaco Hawaii Education Fund – Science Education
Deadline: September 29, 2006
http://www.hawaiicommunityfoundation.org/doc_bin/grant_rfps/RFP-Chevronapplication2006-07.doc

U.S. Fish and Wildlife Service
Partners for Fish and Wildlife Program
Deadline: September 30, 2006
http://www.fws.gov/partners/pdfs/grantsgov06partners.pdf

National Oceanic and Atmospheric Administration
Monitoring and Event Response for Harmful Algal Blooms (MERHAB)
Deadline: October 2, 2006
http://www.grants.gov/search/search.do?oppId=9904&mode=VIEW

Hawaii Community Foundation
Leahi Fund – Research
Deadline: October 2, 2006
http://www.hawaiicommunityfoundation.org/doc_bin/grant_rfps/RFP-LeahiResEdRFP_2006revisedJune.pdf

National Science Foundation
International Research Fellowship Program (IRSP)
Deadline: October 3, 2006
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf06582

National Science Foundation
Plant Genome Research Program (PGRP)
Deadline: October 6, 2006
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf06581

National Science Foundation
U.S. Department of Agriculture, USDA CSREES NRI
Interagency Microbial Observatories Program
Deadline: October 9, 2006
http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1460

Laura Jane Musser Fund
Intercultural Harmony
Deadline: October 10, 2006
http://www.musserfund.org/intercultural_harmony.htm

Department of Health and Human Services
National Institute of Occupational Safety and Health
NIOSH Exploratory and/or Developmental Grant Program (R21)
Deadline: October 10, 2006
http://grants1.nih.gov/grants/guide/pa-files/PAR-06-408.html

U.S. Department of Agriculture
Rural Housing Service
Rural Community Development Initiative (RCDI)
Deadline: October 10, 2006
http://www.rurdev.usda.gov/rd/nofas/2006/071206rcdi.pdf

Robert Wood Johnson Foundation
Health & Society Scholars Program
Deadline: October 13, 2006
http://www.rwjf.org/applications/solicited/cfp.jsp?ID=19588

U.S. Environmental Protection Agency
Environmental Justice Small Grants Program
Deadline: October 23, 2006
http://www.epa.gov/compliance/resources/publications/ej/grants/rfa-sg-grant-6-13-06.pdf

Robert Wood Johnson Foundation
Scholars in Helath Policy Research Program
Deadline: October 25, 2006
http://www.rwjf.org/applications/solicited/cfp.jsp?ID=19666

National Science Foundation
Partnerships for International Research and Education
Pre-proposals due: October 30, 2006
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf06589

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
FY 2007 Community-based Marine Debris Prevention and Removal Project Grants
Deadline: October 30, 2006
http://www.grants.gov/search/search.do?oppId=9890&mode=VIEW

U.S. Department of Agriculture
CSREES
Animal Biosecurity Coordinated Agricultural Projects (CAP)
Deadline: October 31, 2006
http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1522

The National Academies
2006 Research Associateship Programs (multiple programs available)
Postdoctoral and Senior Awards
Deadline: November 1, 2006
http://www7.nationalacademies.org/rap/

U.S. Department of Agriculture
Western Regional Sustainable Agricultural Research and Education (SARE)
Professional Development Program
Deadline: November 1, 2006
http://wsare.usu.edu/grants/docs/req_pd_07.pdf

National Gardening Association
Home Depot
Youth Garden Grant Program
Deadline: November 1, 2006
http://www.kidsgardening.com/grants.asp

National Oceanic and Atmospheric Administration
National Estuarine Research Research Graduate Research Fellowship Program FY07
Deadline: November 1, 2006
http://apply.grants.gov/opportunities/instructions/oppNOS-OCRM-2007-2000788-cfda11.420-cid2050001-instructions.pdf

Foundation for Child Development
Young Scholars Program for Research on Immigrant Children
Deadline: November 1, 2006
http://www.fcd-us.org/ourwork/y-how.html

National Science Foundation
Biomaterials
Deadline: November 3, 2006
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13699

Fund for Wild Nature
Proposals accepted to save and restore native species and wild ecosystems.
Deadline: November 3, 2006
http://www.fundwildnature.org/proposal.html

National Science Foundation
Minority Postdoctoral Research Fellowship and Supporting Activities
Deadline: November 6, 2006
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf06586

Camille and Henry Dreyfus Foundation
Camille Dreyfus Teacher-Scholar Award for Chemical Sciences
Deadline: November 9, 2006
http://www.dreyfus.org/tc.shtml#introduction

National Oceanic and Atmospheric Administration
General Coral Reef Conservation
Deadline: November 10, 2006
http://apply.grants.gov/opportunities/instructions/oppNMFS-HCPO-2007-2000782-cfda11.463-cid2049898-instructions.pdf

National Oceanic and Atmospheric Administration
Coral Reef Ecosystems Studies (CRES)
Deadline: November 13, 2006
http://apply.grants.gov/opportunities/instructions/oppNOS-NCCOS-2007-2000701-cfda11.478-cid2041972-instructions.pdf

National Oceanic and Atmospheric Administration
NOAA Coral Reef Conservation Grant Program – International Grant
Pre-application Deadline: November 13, 2006
http://ipo.nos.noaa.gov/coralgrantsdocs/IPO_07_Coral_FFO.pdf

Robert Wood Johnson Foundation
Substance Abuse Policy Research Program – Round XI
Deadline: November 14, 2006
http://www.rwjf.org/applications/solicited/cfp.jsp?ID=19686

Ford Foundation
Predoctoral Fellowships for Achieving Excellence in College and University Teaching
Deadline: November 16, 2006
http://www7.nationalacademies.org/fordfellowships/fordpredoc.html

U.S. Environmental Protection Agency
Fall 2007 EPA Science to Achieve Results (STAR) Fellowships for Graduate Environmental Study.
Pre-application Deadline: November 28, 2006
http://es.epa.gov/ncer/rfa/2007/2007_star_fellow.html

U.S. Enviromental Protection Agency
Fall 2007 Greater Research Opportunities (GRO) Fellowships for Graduate Environmental Study
Pre-Application Deadline: November 28, 2006
http://es.epa.gov/ncer/rfa/2007/2007_star_gro_grad.html

U.S. Environmental Protection Agency
Fall 2007 EPA Greater Research Opportunity (GRO) Fellowships for Undergraduate Environmental Study
Pre-Application Deadline: November 29, 2006
http://es.epa.gov/ncer/rfa/2007/2007_star_gro_undergrad.html

U.S. Environmental Protection Agency
Sources, Composition and Health Effects of Course Particulate Matter
Deadline: November 30, 2006
http://es.epa.gov/ncer/rfa/2006/2006_star_coarse_pm.html

Ford Foundation
Postdoctoral Fellowships for Achieving Excellence in College and University Teaching
Deadline: November 30, 2006
http://www7.nationalacademies.org/fordfellowships/fordpost.html

Ford Foundation
Dissertation Fellowships for Achieving Excellence in College and University Teaching
Deadline: November 30, 2006
http://www7.nationalacademies.org/fordfellowships/forddiss.html

U.S. Department of Agriculture
Western Regional Sustainable Agricultural Research and Education (SARE)
Farmer Rancher Grants
Deadline: December 6, 2006
http://wsare.usu.edu/grants/docs/req_fr_07.pdf

U.S. Department of Agriculture
Western Regional Sustainable Agricultural Research and Education (SARE)
Professional + Producer Grants
Deadline: December 6, 2006
http://wsare.usu.edu/grants/docs/req_pp_07.pdf

National Science Foundation
East Asia and Pacific Summer Institutes for U.S. Graduate Students
Deadline: December 12, 2006
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf06602

U.S. Enviornmental Protection Agency
Development of Environmental Health Outcome Indicators
Deadline: December 14, 2006
http://es.epa.gov/ncer/rfa/2006/2006_star_ephi.html

U.S. Environmental Protection Agency
4th Annual P3 Awards: A National Student Design Competition for Sustainabilty Focusing on People, Prosperity and Planet.
Deadline: December 21, 2006
http://es.epa.gov/ncer/rfa/2007/2007_p3_4thannual.html

U.S. Department of Defense
United States Army Medical Research & Materiel Command
Broad Agency Announcement
Deadline: September 30, 2007
http://www.usamraa.army.mil/pages/index.cfm

U.S. Department of Defense
National Biodefense Analysis and Countermeasures Center
Broad Agency Announcement
Deadline: September 30, 2007
http://www.usamraa.army.mil/pages/index.cfm

Binational Agricultural Research and Development (BARD) Fund
Vaadia-BARD Postdoctoral Fellowships
Deadline: January 15, 2007
http://www.bard-isus.com/postguide_07.pdf

Binational Agricultural Research and Development (BARD) Fund
Senior Research Fellowship
Deadline: January 15, 2007
http://www.bard-isus.com/ResFellguide_07.pdf

CTAHR faculty publications on the leading edge of science . . .

Greg Bruland (NREM)
Bruland, G.L., S. Grunwald, T.Z. Osborne, S. Newman, and K.R. Reddy. 2006. Spatial distribution of soil properties in Water Conservation Area 3, South Florida. *Soil Science Society of America Journal* 70:1662-1676.

Bruland, G.L., and C.J. Richardson. 2006. Comparison of soil organic matter in created, restored, and paired natural wetlands in North Carolina. *Wetlands Ecology and Management* 14:245-251.

Ken Grace (PEPS)
E. L. Vargo, C. Husseneder, D. Woodson, M. G. Waldvogel and J. K. Grace. 2006. Genetic analysis of colony and population structure of three introduced populations of the Formosan subterranean termite (Isoptera: Rhinotermitidae) in the continental United States. *Environmental Entomology* 35: 151-166.

Grace, J.K., A. Byrne, P.I. Morris, and K.Tsunoda. 2006. Performance of borate-treated lumber after 8 years in an above-ground termite field test in Hawaii. *International Research Group on Wood Preservation.* Stockholm, Sweden. IRG Document No. IRG/WP 06-30390. 8 pp.

Tsunoda, K., A. Byrne, P.I. Morris, and J.K. Grace. 2006. Performance of borate-treated lumber after 10 years in a protected, above-ground field test in Japan (final report). *International Research Group on Wood Preservation.* Stockholm, Sweden. IRG Document No. IRG/WP 06-30395. 8 pp.

Woodrow, R.J., J.K. Grace, and R.J. Oshiro. 2006. Comparison of localized injections of spinosad and selected insecticides for the control of *Cryptotermes brevis* (Isoptera: Kalotermitidae) in naturally infested structural mesocosms. *J. Economic Entomology* 99: 1354-1362.

John Griffis (TPSS)
Griffis, J., and R. Brizmohun. 2006. Postharvest Handling, Packaging, and Marketing of Hydroponically-Grown Greenhouse Tomatoes in Mauritius. Proc. IS on Greenhouses, Environmental Controls & In-house Mechanization for Crop Production in the Tropics and Sub-tropics Eds. Rezuwan Kamaruddin, Ibni Hajar Rukunuddin & Nor Raizan Abdul Hamid. *Acta Hort*. 710, ISHS 2006, p507-510.

Arnold Hara (PEPS)
Lawrence L. Woolbright, Arnold H. Hara, Christopher M. Jacobsen, William J. Mautz, and Francis L. Benevides Jr. 2006. Population Densities of the Coqui, *Eleutherodactylus coqui* (Anura: Leptodactylidae) in Newly Invaded Hawaii and in Native Puerto Rico. *Journal of Herpetology*, Vol. 40, No. 1, pp. 122–126, 2006

Dan Paquin (MBBE)
Paquin, D., and T. Liang. 2006. Estimating the Spatial Variation of Anaerobic Digester Heating Potential, *Biosystems Engineering* (2006) 95 (2), 227-233, doi:10.1016/j.biosystemseng.2006.06.009.

Qing Xiao Li (MBBE)
Harada, R.M.; Campbell, S.; Li, Q.X. 2006. *Pseudoxanthomonas kalamensis* sp. nov., a novel gammaproteobacterium isolated from Johnston Atoll, North Pacific Ocean. *Int J Syst Evol Microbiol*. 56:1103-1107.

Denery, R.J.; Cooney, J.M.; Li, Q.X. 2006. Metabolic profiling to reflect gene expression in *Streptomyces tenjimariensis*. *Industrial Biotechnology*. 2(1):51-54.

Kim, H.-J.; Shelver, W.L.; Hwang, E.-C.; Xu, T.; Li, Q.X. 2006. Automated flow fluorescent immunoassay for part per trillion detection of the neonicotinoid insecticide thiamethoxam. *Analytica Chimica Acta* 571(1):66-73.

Zhao, J.; Li, G.; Yi, G.-X.; Wang, B.-M.; Deng, A.-X.; Nan, T.-G.; Li, Z.H.; Li, Q.X. 2006. Comparison between conventional indirect competitive enzyme-linked immunosorbent assay (icELISA) and simplifiedic ELISA for small molecules. *Analytica Chimica Acta* 571(1), 79-85.

Lee, S.-E.; Li, Q.X.; Yu, J. 2006. Proteomic responses to formic acid on *Ralstonia eutropha. Proteomics* 6:4259-4268.

Seo, J.S., Keum, Y.S., Cho, I.K., Li, Q.X. 2006. Degradation of dibenzothiophene and carbazole by Arthrobacter sp. P1-1. *Int. Biodeterioration & Biodeg.* 58:36-43.

Zhao, J.; Yi, G.-X.; Wang, B.-M.; Li, G.; Li, Z.-H.; Li, Q.X. 2006. Development of a monoclonal antibody-based enzyme-linked immunosobent assay for the herbicide chlorimuron-ethyl. *J. Agric. Food Chem.* 54(14):4948-4953.

Gao, Hongbin; Ling, Yun; Xu, Ting; Zhu, Weiwen; Jing, Hongyu; Sheng, Wei; Li, Qing X.; Li, Ji. 2006. Development of an Enzyme-Linked Immunosorbent Assay for the Pyrethroid Insecticide Cyhalothrin. *J. Agric. Food Chem.* 54(15):5284 -5291.

Janice Uchida (PEPS)
Uchida, J., Zhong, S., and E. Killgore. 2006. First report of a rust disease on Ohia caused by *Puccinia psidii* in *Hawaii. Plant Dis*. 90:524.

Shaobin Zhong (PEPS)
Uchida, J., Zhong, S., and E. Killgore. 2006. First report of a rust disease on Ohia caused by *Puccinia psidii* in *Hawaii. Plant Dis*. 90:524.

Zhong, S., Toubia-Rahme, H., Steffenson, B. J., and Smith, K. P. 2006. Molecular Mapping and Marker Assisted Selection of Genes for Septoria Speckled Leaf Blotch Resistance in Barley. *Phytopathology* 96:993-999.

And finally from the coconut wireless . . .

This year the American Phytopathological Society held a joint meeting with the Canadian Phytopathological Society and the Mycological Society of America in Quebec City Canada. **Dr. Koon-Hui Wang**, who obtained her doctorate with **Dr. Brent Sipes** won the William Boright and Maybelle Ellen Ball Hewitt Award, for the outstanding, innovative contributions in the control of Plant Disease. **Cassandra Swett**, graduate student with **Dr. Janice Uchida**, won the National APS John K and Hall awards for Student Travel and presented her work on Orchid disease and new *Fusarium* morphological and molecular classifications. Cassandra also won the CTAHR 2005 award for best presentation, used her travel award to attend the 8th International Mycological Congress in Australia, where she won Best Poster presentation for the characterization of two new *Fusarium* species found in Hawaii.

MBBE MS student **Steve Lim** has been awarded the "Excellence in Research" award by the UHM Office of the Vice President for Research. This is the first time a MBBE student has received this prestigious award. Congratulations Steve! **Dr. Pratibha Nerurkar** is Steve's supervisor. She also deserves our congratulations !

Thanks everyone for helping us communicate with you and our clients. Please keep in touch - CY.