

# CTAHR Research News

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At any one time in CTAHR, over 600 faculty, clerical staff, APTs (Administrative/Professional/Technical), lecturers, RCUH (Research Corporation of the University of Hawaii) employees, graduate assistants, and administrative personnel are doing research or extension work, or providing in-class education, or managing our college. That is a lot of people dedicated to CTAHR's efforts in Hawaii, the Pacific/Asia region, and the world. To fuel such an effort there needs to be money and infrastructure. In this issue of CRN, we are going to focus on our research funding sources

– competitive and non-competitive. For many of you, it will be an eye-opening experience. I want to thank Doug Vincent for doing much of legwork to get the data together. I also want to share the outcomes of a recent meeting with the CTAHR research station directors. This long over-due meeting was an opportunity to raise some issues that needed attention. As I have said before, we need funding, infrastructure, and dedicated and well-trained employees, to run a quality research program. CTAHR's stations are an integral part of our research enterprise. As budget allows, we will be making appropriate upgrades to our stations. On October 28<sup>th</sup>, we also had a quick visit by three National Program

Leaders (NPLs) from USDA/CSREES. Louie Tupas, Deborah Sheely, and Siva Sureshwaran spoke to a packed Gilmore Hall conference room, offering deeper insight into some of their evolving funding programs.

We also wanted you to know that many



Manoa faculty and students, and Maui and Hawaii Island faculty (via video conference) listen to presentations by CSREES NPLs.

infrastructure improvement projects are happening at the moment. A quick visit to the white board in Thomas Lim's office (Gilmore 214B) showed us that there were lots of exciting things happening. Thomas shares an overview in this issue of CRN.

Finally, Doug has provided us with an up-date on our recovery from the Manoa flood that took place a year ago. Thank you to those who helped us recover so quickly!

As always, I urge you to be part of CRN by communicating your ideas and needs. My office door is always open. Please be in touch and thanks for reading.

*CY Hu*

# The Business of Research

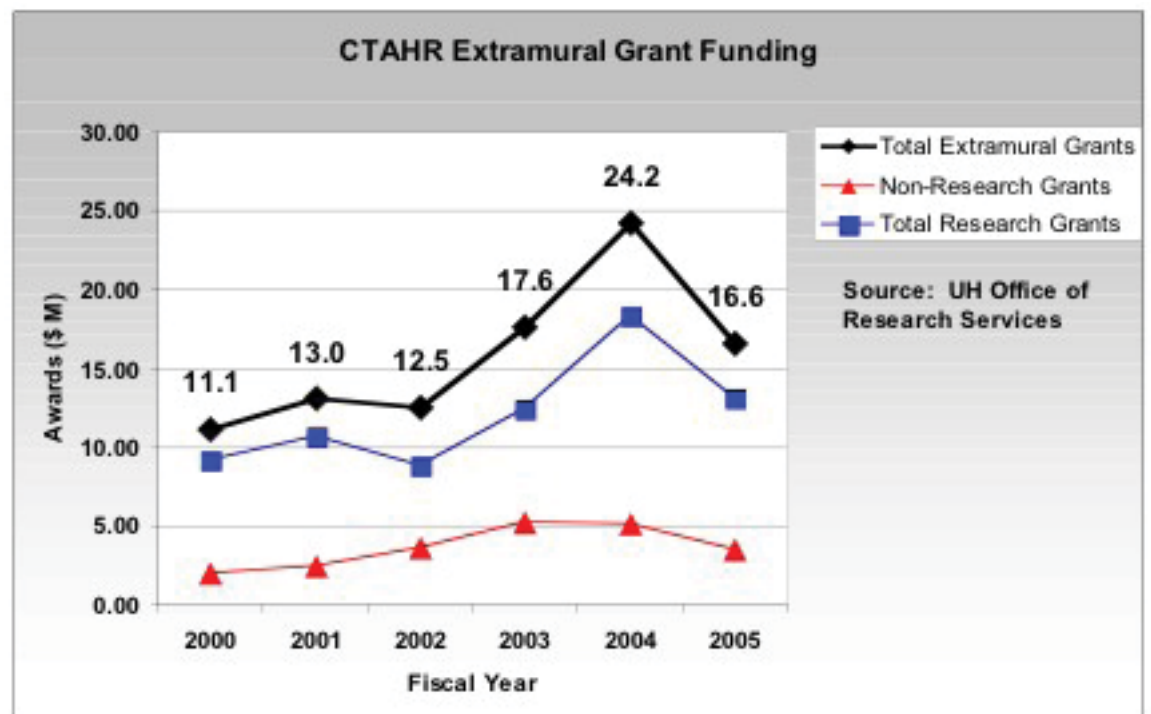
By Doug Vincent  
Special Program Director for Grants and Contracts

CTAHR's research budget for last year was more than \$28 million dollars, which includes both "hard" and "soft" dollars. Hard dollars are part of our base budget. Soft dollars vary from year to year and are dependent on our collective efforts to bring these funds into CTAHR. "Hard" dollars amount to \$11.8 million. \$8.8 million comes from state "G" or "General" funds. Through the efforts of Dean Hashimoto and with the support of our stakeholders, an additional \$500,000 was added to our base budget this past fiscal year to support nine faculty positions. The Dean is currently working to get an additional increase to our base budget of \$675,000 to support eight new positions in FCS, TPSS and NREM in the next budget. Unfortunately, CTAHR's potential for success in continually seeking additional funding from the legislature is limited. In addition to the G funds, another \$1.8 million comes from "S" or "Special" funds – these are mostly special tuition dollars. Finally, USDA contributes to our budget through formula funds – Hatch and McIntire-Stennis (forestry) for research. Of this \$11.8 million dollars, \$9.3 million (79%) is committed to salaries, including faculty, staff and civil service personnel. The balance,

\$2.5 million, goes for everything else – infrastructure and upkeep costs, utilities, water, repairs and maintenance of equipment and vehicles, graduate assistant salaries, and many other costs. A very small percentage (~10%) of these formula funds goes to fund new research projects through Hatch and McIntire-Stennis projects.

To thrive and prosper, CTAHR must rely upon extramural grants and contracts to cover the direct operating costs for our many projects. For FY 2005, CTAHR brought in 134 extramural grants and contracts resulting in \$16.6 million dollars. Of those dollars, most of them were for research projects (\$13.1 million) and the balance (\$3.5 million) was for non-research or training projects. While the \$16.6 million is impressive and ranks among highest amounts ever received by CTAHR, one must remember that a significant percentage of this amount (38%, \$6.3 million) comes to us through Congressional earmarks, the USDA Special Research Grants and USDA ARS Cooperative Agreements (more specifics about these programs in this newsletter). We must begin to wean ourselves off of these Congressional earmarks because when Senator Inouye leaves the Senate, we lose his membership on the

CTAHR Extramural Grants and Contracts, Total Research and Non-Research Grants FY 2000-2005. Funding levels for Total Extramural Grants for FY 2006 (beginning July 1, 2005), to date, are at \$14.3 M (not shown).

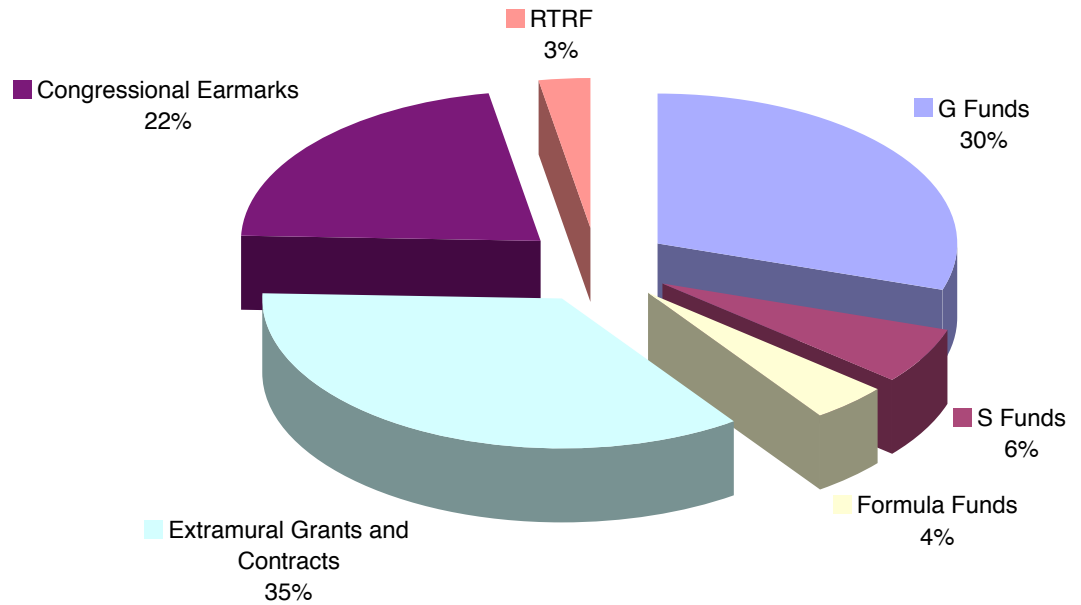


Appropriations Committee and the benefits that his seniority brings to the State of Hawaii. Senator Inouye ranks third in the U.S. Senate in seniority. Without his support, these programs will disappear or be cut significantly. If we remove these earmarks, that leaves \$10.3 million for 96 projects from other extramural sources, most of which are competitive programs. Included among these funding sources are federal, state and county agencies, private foundations and industry support. The one area for growth to increase

funding to CTAHR is through competitive grants and contracts. An additional benefit in receiving competitive grants and contracts comes to CTAHR via the Research and Training Revolving Fund or RTRF. RTRF is “overhead return” or our share of the negotiated indirect costs collected by the University when extramural grants and contracts are funded. Most competitive grants provide funding for indirect costs; comparatively, none of the USDA Special Grants or Cooperative Agreements do this. In the last fiscal year, CTAHR received \$847,229 in RTRF funding. The CTAHR administration keeps only 10% of this amount and the balance is returned to the units that generated the funding. With increased extramural grant support that allows for indirect costs, the amount of RTRF returned to CTAHR, and ultimately, to its units increases. RTRF funds can be used to support the activities of the units or the individual researchers that generated the funding, another incentive for seeking extramural funding.

Funding the research activities in CTAHR is complicated, with funds coming from many different sources. To maintain our excellence and expand our programs, our path to success must be forged by individual researchers or multi-disciplinary teams of researchers seeking extramural grants and contracts to support their work. As you can see from our list of extramural grants and contracts on the subsequent pages, CTAHR is blessed with many talented faculty members already heeding the call to seek funding to support our diverse activities. Each of us can help by submitting more proposals. Brian Turano is available to assist you in these activities.

## CTAHR Research Funding FY 2005



The mix of funding sources for research at CTAHR FY 2005.

*“To thrive and prosper, CTAHR must rely upon extramural grants and contracts to cover the direct operating costs for our many projects.”*

# Grant funds flow to faculty

I am thrilled to be able to share the following list of newly funded, or continually-funded, extramural grants and contracts. These are just the projects since July 1, 2005 and represent \$13,247,963 from competitive sources or Congressional ear-marks. We're doing very well this year. The amount of funding we've received thus far this fiscal year is already ahead of total amount of extramural funding for each FY from 1990 – 2002. Projects funded out of Hatch, Smith-Lever, McIntire-Stennis, and other similar funds are not included in this list. The source of this list is the UH Office of Research Services database. For more information, go to ORS's website <http://www.hawaii.edu/ors/reports.html>. Unfortunately, the following list has several shortcomings and I apologize for not being able to address them at this time:

- 1) Only PIs are listed. This means that Co-PIs and cooperators are not getting recognized.
- 2) On the umbrella projects, such as T-STAR, ADAP, or Federal Floriculture or the USDA ARS Cooperative Agreements, sub-projects may not listed.

Please understand that I appreciate everyone for working on these projects. And, if we have missed your project, funded since July 1, 2005, please let me know. Also, I encourage you to call your colleagues and congratulate them for their successes.

## **Rodrigo Almeida (PEPS)**

*Economic and Ecological Impacts and Management of Glassy-Winged Sharpshooter in Hawaii.* DA-Cooperative State Research Service. \$71,842.  
*Epidemiology of Banana Bunchy Top Disease in Hawaii.* DA-Cooperative State Research Service. \$68,090.

## **Anne Alvarez (PEPS)**

*Detection of Ralstonia Solanacearum and Development of Cultural Practices to Reduce Establishment of Bacterial Wilt Disease in Hawaii.* DA-Cooperative State Research Service. \$70,098.  
*Western Region Plant Diagnostics Network, Sentinel Laboratory at the University of Hawaii.* Univ of California-Davis. \$51,614.

## **Rogerene "Kali" Arce (TPSS)**

*Molokai Homesteader Small Tree Farms Training Program.* Hawaii-Dept of Land & Natural Resources. \$20,000.

## **Harry C. "Skip" Bittenbender (TPSS)**

*Improving the Quality of Kava Beverage.* DA-Dept of Agriculture. \$53,507.

## **Dulal Borthakur (MBBE)**

*Ecological Assessment and Economic Feasibility of a Practical Strategy for Regenerating Koa Forests in Hawaii.* DA-Cooperative State Research Service. \$88,234.  
*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. \$81,350

## **Richard Bowen (NREM)**

*SARE Professional Development Program for Hawaii.* Univ of Wyoming. \$16,000.

## **David Christopher (MBBE)**

*Characterization and Cloning of Pathogen-Inducible Genes and Promoters to Improve Resistance of Papaya to Fungal Disease.* DA-Cooperative State Research Service. \$93,712.  
*Defining the Blue Light Signaling Pathways Regulating Photosynthetic Gene Expression in Plant Chloroplasts.* DOE-Dept of Energy. \$109,431.  
*Genetic Transformation of Sugarcane Chloroplasts to Improve Expression and Containment of Genes Encoding Human Vaccines.* DA-Cooperative State Research Service. \$93,212.

## **Barbara DeBaryshe (COF)**

*Learning Connections: Meeting the Needs of Hawaii's Multicultural Low-Income Preschoolers-84.359B.* ED-Dept of Education. \$1,601,672.

## **Jonathan Deenik (TPSS)**

*Characterizing Nitrogen Mineralization and Plant N Supply from Animal Manures and Effluent in Hawaii's Soils.* DA-Dept of Agriculture. \$39,779.

## **Michael Dunn (HNFAS)**

*Establishing an Iron-Bioavailability Database.* Allen Foundation Inc. \$79,828.

## **Virginia Easton-Smith (TPSS)**

*Ecology and Management of Black Twig-Borer on Coffee in Hawaii.* DA-Cooperative State Research Service. \$32,230.

## **Carl Evensen (NREM)**

*Conservation System Guides for Pacific Basin Beginning and Limited Resource Farmers and Ranchers.* DA-Natural Resources Conservation Service (NRCS). \$56,507.

*Coordination of and Technical Support for Hawaii's Local Action Strategy to Address Land-based Pollution to Coral Reefs.* DA-Natural Resources Conservation Service (NRCS). \$45,000.  
*Implementation of Local Action Strategy to Address Land-Based Pollution Threats to Hawaii's Coral Reefs.* DLNR-Division of Aquatic Resources. \$84,000.

## **Declan Fallon (PEPS)**

*Rhizobitid Nematodes and Antagonists in Suppression of Plant-Parasitic Nematodes.* DA-Cooperative State Research Service. \$73,176.

## **Ali Fares (NREM)**

*Determining the Impacts of Water Pumping and Alien Species Invasion on Stream Flow for a Sustainable Water Resource Management in Makaha Valley, Hawaii.* DA-Cooperative State Research Service. \$40,405.  
*Developing and Improving Tension Based and Capacitance Based Soil Moisture Sensors as Water Management and Irrigation Scheduling Tools.* DA-Cooperative State Research Service. \$51,440.

*Field and Numerical Evaluation of Best Management Practices to Protect Water Resources in the Hanalei Watershed.* DA-Cooperative State Research Service. \$45,520.

*NSPECT: Evaluation of its Performance in Modeling the Effect of Land Based Management Practices on Coastal Areas.* DOC-National Oceanic & Atmospheric Administration. \$20,000

**Carol Ferguson (NREM)**

*Economics of Managing Invasive Species in Tropical and Sub-tropical Areas of the US - Hawaii.* DA-Cooperative State Research Service. \$49,837.

**Kenneth Grace (PEPS)**

*Evaluation of Subterranean Termite Behavior and Control.* Dow AgroSciences. \$15,000.

*Funding for Research of Mutual Interest.* DA-Dept of Agriculture. \$8,500.

*Risk Assessment and Integrated Termite Management Strategies for Hawaii and the Pacific Basin.* DA-Dept of Agriculture. \$116,238.

**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. \$36,008

**Miles Hakoda (OCS)**

*'Buy Fresh, Buy Local' Promotional Campaign.* Hawaii-Dept of Agriculture. \$24,500

**Randall Hamasaki (PEPS)**

*Intergenerational Succession in Kamuela Agriculture (Seed Grant).* County of Hawaii. \$5,000.

**Andrew Hashimoto (Admin)**

*Agricultural Development in the American Pacific (ADAP) Project, Year 18.* DA-Cooperative State Research Service. \$454,971.

*Agricultural Postharvest, Value-added Products and Processing Program.* DA-Dept of Agriculture. \$239,767.

**Cerruti Hooks (PEPS)**

*A Superhero Without a Cape: Using the Cover Crop Sunn Hemp to Feed the Soil, Suppress Nematodes, and Smother Weeds.* DA-Cooperative State Research Service. \$7,716.

**John Hu (PEPS)**

*Effects for Viral Suppressors of RNA Silencing in Sugarcane.* DA-Cooperative State Research Service. \$80,887.

*Field Evaluation of Genetically Engineered Banana Plants for Banana Bunchy Top Virus Resistance in Hawaii.* DA-Cooperative State Research Service. \$69,831.

**Alvin Huang (HNFAS)**

*An Integrated Approach for the Quality of Improvement of Guava Puree and Kava Beverage by a Non-Thermal Dense Phase Carbon Dioxide (DP-CO2) Pasteurize.* DA-Cooperative State Research Service. \$47,900

**Nguyen Hue (TPSS)**

*Toward Organic Farming: Using Animal and Green Manures, and Manure-based Composts to Improve Soil Quality and Crop Productivity.* DA-Cooperative State Research Service. \$55,794.

**Travis Idol (NREM)**

*Controlling Invasive Species Using Native Plant Agroforestry Systems.* DA-Cooperative State Research Service. \$33,606.

**Wayne Iwaoka (HNFAS)**

*Adding Value to Tropical and Sub-Tropical Botanicals: Identification and Evaluation of Bioactive Polyphenolics in Llex, Guava, Mamaki, and Noni Leaf.* DA-Cooperative State Research Service. \$35,955.

**Daniel Jenkins (MBBE)**

*Feasibility Analysis of Shrimp Waste Processing Alternatives.* Oceanic Institute-Ctr for Trop & Subtrop Aqua. \$34,850.

*Innovation of Detection Mechanisms for Dissolved Nitrogen and Bicarbonate in Agriculture and the Environment.* DA-Cooperative State Research Service. \$80,114.

**Michael Kawate (PEPS)**

*Western IPM Center Regional Comments Coordinator for the American-Affiliated Pacific Islands.* Univ of California-Davis. \$45,093.

**Davelyne Keala (FCS)**

*Intergenerational Programs.* Maui Association for Family and Community Ed. \$900.

**Harold Keyser (Maui County)**

*Hawaiian Home Lands Agricultural Education Program.* Hawaii-Dept of Hawaiian Home Lands. \$236,690.

*UH-CTAHR Extension and Research Projects in Maui County.* Maui-Off of Economic Development. \$100,000.

**Yong-Soo Kim (HNFAS)**

*Investigation of Molecular Mechanisms Regulating Skeletal Muscle Growth Using Microarray Analysis.* DA-Cooperative State Research Service. \$42,625.

**Charles Kinoshita (Admin)**

*MECO IRP-3: Banagrass Production and Cost Study.* Black and Veatch. \$10,000.

**Adelheid Kuehnle (TPSS)**

*Field Performance of Bioengineered Anthurium.* DA-Cooperative State Research Service. \$56,817.

**Monto Kumagai (MBBE)**

*Coffee Genomics: Isolation and Characterization of Genes Involved in Organ Size.* DA-Cooperative State Research Service. \$84,830.

**Qingxiao LI (MBBE)**

*Minor Use Pesticide Research-Western Regional IR-4 (Hawaii).* Univ of California-Davis. \$64,000

**Richard Manshardt (TPSS)**

*A Practical Phenotypic Marker for Early Determination of Sex in Papaya Seedlings.* DA-Cooperative State Research Service. \$31,110.

*Genetic Host-Matching in Biocontrol of Strawberry Guava.* DA-Dept of Agriculture. \$28,345.

**Ronald Mau (PEPS)**

*Area-Wide Pest Management Tephritid Flies that Infest Hawaii-Grown Fruits and Vegetables.* DA-Dept of Agriculture. \$606,991.

**Russell Messing (PEPS)**

*Natural Enemies of Invasive Tephritid Fruit Flies: Evaluation of New Candidate Species.* DA-Cooperative State Research Service. \$80,820.

**Tomoaki Miura (NREM)**

*Multi-sensor Translation of EOS Reflectance and Vegetation Index Products for Long Term Continuity with AVHRR: EOS Science Proposal.* Nat'l Aeronautics & Space Administration. \$105,218

**Susan Miyasaka (TPSS)**

*Increasing Sustainability of Tropical Pastures Through Selection of Legumes Tolerant to Drought and Aluminum.* DA-Cooperative State Research Service. \$62,932.

**Norman Nagata (TPSS)**

*Seed Germination Trials on Seashore Paspalum 'Sea Spray'.* Turf-Seed, Inc. \$2,000.

**Stuart Nakamoto (HNFAS)**

*Funding Support for Hawaii Tea Industry.* DA-Dept of Agriculture. \$99,878.  
*Institute of Tropical Food Research and Development.* DA-Dept of Agriculture. \$51,065.

**Pratibha Nerurkar (MBBE)**

*Morinda Citrifolia (noni): Potential Role of Nuclear Transcription in Factors in Ameriolating Hyperlipidemia.* DA-Cooperative State Research Service. \$62,167.  
*Obesity, Type 2 Diabetes and Alternative Medicine: Modulation of Nuclear Transcription Factors and Adipocytokine Signaling by Momordica Charantia.* HCF-Hawaii Community Foundation - General Fund. \$50,000.

**Wayne Nishijima (HNFAS)**

*Molecular Characterization of Disease Resistance Loci to Phytophthora in Carica Papaya.* DA-Cooperative State Research Service. \$89,187.  
*Resistance of Papaya Cultivars to Enterobacter Cloacae: Significance to Food Quality of Value-Added Products.* DA-Cooperative State Research Service. \$90,500.

**Melvin Nishina (TPSS)**

*Production of a Video "Grower Requirements to Certify Benches to Meet Quarantine Protocol."* County of Hawaii. \$5,000.

**Robert Paull (TPSS)**

*Development and Mapping of Microsatellite Markers for Papaya.* DA-Cooperative State Research Service. \$95,736.  
*Landscape Research.* Univ of Hawaii Foundation. \$2,000.  
*Postharvest Handling and Storage of Limu.* Oceanic Institute-Ctr for Trop & Subtrop Aqua. \$24,985.  
*Varietal Variation in Papaya Fruit Softening and its Inheritance.* DA-Cooperative State Research Service. \$85,714.

**Gernot Presting (MBBE)**

*Functional Genomics of Maize Centromeres.* Univ of Georgia. \$162,378  
*Genomic Barcoding of Phytopathogenic Bacteria Important to Hawaiian Agriculture.* DA-Dept of Agriculture. \$87,806  
*Papaya BAC End Sequencing.* DA-Cooperative State Research Service. \$78,802.

**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. \$77,786.  
*Genetic Identity, Range and Phylogeography of the Threatened Kern Primrose Sphinx Moth (Eurproserpinus euterpe).* DOI-Fish & Wildlife. \$4,600.  
*Study of Attraction of Non-Target Organisms to Fruit Fly Female Attractants and Male Lures in Hawaii.* DA-Dept of Agriculture. \$80,000.

**Dwight Sato (PEPS)**

*Developing Tea (Camellia sinensis) Processing Technology in Hawaii.* County of Hawaii. \$5,000.

**Wei-Wen Su (MBBE)**

*Economical and Eco-Friendly Molecular Farming Using a Novel Plant Culture System.* DA-Cooperative State Research Service. \$90,288.

**Sabina Swift (PEPS)**

*A Risk Management Training Program for Socially Disadvantaged Filipino and Other Southeast Asian Growers of Hawaii.* DA-Dept of Agriculture. \$131,321.

**Mark Thorne (HNFAS)**

*Best Management Practices for the Remediation of Former Sugarcane and Pineapple Lands for Sustainable Livestock Production in Hawaii.* DA-Dept of Agriculture. \$113,659.  
*Hawaii Animal Nutrition and Forage Production Profiling Project.* DA-Natural Resources Conservation Service (NRCS). \$17,110.  
*National Animal Premises Identification System Implementation Program.* Hawaii-Dept of Agriculture. \$81,200.

**Eduardo Trujillo (PEPS)**

*Evaluating Biological Control of Clidemiae Hirta with Colletotrichum f. sp. Clidemiae in State Forest Reserves on the Island of Hawaii.* Hawaii-Dept of Land & Natural Resources. \$44,708.

**Goro Uehara (TPSS)**

*Soil Management CRSP.* Agency for International Development. \$2,800,000.

**Hector Valenzuela (TPSS)**

*Growth of Tropical Crops in Response to Organic Amendments and Indigenous Arbuscular Mycorrhizae.* DA-Cooperative State Research Service. \$44,300.

**Douglas Vincent (Admin)**

*Detection, Control, and Mitigation of Banana Bunchy Top Virus (BBTV) and Citrus Tristeza (CTV) Virus in Hawaii.* DA-Dept of Agriculture. \$103,841.  
*Environmental Effects of Tephritid Fruit Fly Eradication and Control.* DA-Dept of Agriculture. \$215,105.  
*Hawaii Agricultural Diversification 2005 - New Crop/Product Development and Marketing.* DA-Cooperative State Research Service. \$104,637.  
*Hawaii Floriculture Research Grant - 2005.* DA-Cooperative State Research Service. \$328,726.  
*Hawaii Pineapple Improvement.* DA-Dept of Agriculture. \$255,853.  
*Minor Crop Pest and Disease Control.* DA-Dept of Agriculture. \$242,998.  
*Multi-Cropping Strategies for Aquaculture: A Collaborative Approach to Aquaculture Research and Extension - 2005.* DA-Dept of Agriculture. \$101,858.  
*Protecting Papaya from Pests and Diseases.* DA-Dept of Agriculture. \$255,853.  
*Tropical and Subtropical Agricultural Research (T-STAR) for Hawaii: Management 2005.* DA-Cooperative State Research Service. \$123,333.  
*Tropical and Subtropical Agricultural Research (TSTAR) Umbrella A - 2005.* DA-Cooperative State Research Service. \$808,513.

**Sylvia Yuen (COF)**

*Assessing the Needs of Homeless Families and Children in Hawaii.* Casey Foundation (Annie E Casey). \$40,000.  
*Services to Evaluate and Monitor Substance Abuse Service Outcomes and Process Evaluation Activities of the Alcohol and Drug Abuse Division Funded.* DOH-Alcohol & Drug Abuse Division. \$150,564.

**Julia Zee (HNFAS)**

*Diabetes Detection and Prevention Project.* DA-Dept of Agriculture. \$100,000.

# CTAHR Special Research Grants and ARS Cooperative Agreements

By Doug Vincent  
Special Program Director for Grants and Contracts

As most of you know, CTAHR has been blessed by strong support from our Congressional delegation. For a small state such as ours, the amount of federal funding supporting CTAHR is considerable. The greater portion of these funds are Congressional “earmarks,” meaning that through the efforts of our stakeholders to identify needs or issues to our Congressional delegations, these funds are allocated in the Agriculture Appropriations Bill. Before funds can be appropriated, they must be authorized. Appropriations are usually acquired through the efforts of individuals and stakeholder groups who make a compelling case to the Congressional delegation. Once the spending is authorized, it requires the approval of the Appropriations Committee. CTAHR has been fortunate to have Senator Daniel K. Inouye on the Senate Appropriations Committee. Through his efforts, and the efforts of the Hawaii delegation, the funding for these projects is appropriated under the Agriculture Appropriations Bill.

As CTAHR’s Special Director for Contracts and Grants, it is my responsibility to manage these funds. I am both a grant writer and a grant administrator. For many of the projects, I serve as the Project Director and I work closely with the Federal government to ensure that the funds are spent appropriately and that progress and impact reports are submitted. For other projects, I am a grant administrator. When funds become available, we conduct RFA’s and fund meritorious projects that fit the objectives of the grant or cooperative agreement.

We receive grants, cooperative agreements, and contracts and each is unique in scope of services and in our responsibilities to the funding agency. All federal monies are administered through the University of Hawaii, Office of Research Services. We receive grants from the USDA Cooperative State Research, Extension and Education Service (CSREES); we receive cooperative agreements with the USDA Agricultural

Research Service; and we receive contracts for research and other activities through various state agencies.

## Special Research Grants

In Table 1, we show the USDA CSREES Special Research Grants for FY 2005. FY 2005 funds have been committed to projects. The current (FY 2006) Agriculture Appropriations bill (HR2744) has been passed by both chambers of Congress and the differing language has been reconciled by a Senate-House conference committee. The conference committee report was just recently passed by both the Congress and Senate, and we await the President’s signature on the final budget bill. Here is a description of each Special Research Grant project:

Table 1. USDA CSREES Special Research Grants FY 2005

Grant Title	Funding
1. Tropical and Sub-Tropical Agricultural Research (T-STAR)	(Total) \$4,386,403 (Hawaii) \$3,675,383
2. Agricultural Development for the American Pacific (ADAP)	\$454,971
3. Federal Floriculture Research Grant	\$328,726
4. Hawaii Agricultural Diversification: New Crop/Product Development and Marketing	\$104,637
5. Multi-Cropping Strategies for Aquaculture: A Collaborative Approach to Aquaculture Research and Extension	\$101,858

- 1. Tropical and Sub-Tropical Agricultural Research (T-STAR).** (\$4,386,403 FY 2005). The T-STAR program has been a CSREES Special Research Grant since 1983. It is a joint program between the Universities of Florida, Puerto Rico, Virgin Islands, Guam and Hawaii and funds basic and applied research in tropical and subtropical agricultural research. For more information on T-STAR, go here: <http://www.ctahr.hawaii.edu/t-star/>. We seek new projects every year for these funds.
- 2. Agricultural Development in the American Pacific.** (\$454,971). Started in 1989, the ADAP program is a capacity building program to assist CTAHR and other Pacific Land-Grants. Its mission is “ADAP advances the viability and security of Pacific island agriculture and communities through collaborative programs that are culturally appropriate, socially acceptable, economically viable, and environmentally sustainable.” ADAP’s web site is: <http://www2.ctahr.hawaii.edu/adap2/index.htm>. Dean Andrew Hashimoto is Project PI. Jim Hollyer of PEPS manages this program. A board of directors, made up of the deans of the five Pacific land grants, set directives for investments.

3. **Federal Floriculture Research Grant.** (\$328,726). This grant grew out of a need for research and development to address the anthurium blight that devastated the anthurium industry in the late 1980's. Since then, it has funded the research priorities identified by a floriculture industry research committee made up of representatives of many of Hawaii's floriculture grower groups. We seek new projects each year for these funds, but the number of new projects depends upon the cost of existing projects and available funds. Current projects include research and development on anthurium, dendrobium and other orchids, protea, other ornamentals and nursery crops. Faculty in TPSS and PEPS receive funding from this project.
4. **Hawaii Agricultural Diversification: New Crop/Product Development and Marketing.** (\$104,637). In the past several years, Dean Hashimoto has designated where these funds are to be directed. Funds are currently supporting the CTAHR Beef Initiative, directed by HNFAS extension agent, Glen Fukumoto. Funding has been provided to conduct applied research in such diverse areas as economics and marketing of grass fed beef, pastoral systems, genetics and biotechnology and meat science. Read more about the CTAHR Beef Initiative at their web site: <http://www.ctahr.hawaii.edu/paniolo/index.asp>.
5. **Multi-Cropping Strategies for Aquaculture: A Collaborative Approach to Aquaculture Research and Extension.** (\$101,858). The CTAHR aquaculture project was originally conceived to assist in the restoration of Native Hawaiian fishpond aquaculture on Molokai. Using priorities set by a State-Wide Aquaculture Strategic Plan, I have worked closely with the Sea Grant Aquaculture Extension Specialist, Dr. Clyde Tamaru, to identify and fund aquaculture research projects by CTAHR faculty that fit into this strategic plan. We're currently funding risk management, decision support systems research for shrimp and finfish aquaculture (PingSun Leung) and genetic markers for ornamental fish (Dulal Borthakur).

*There will be no new funding, as it stands, for the Agricultural Diversification and Aquaculture projects in the FY 2006 budget. Pending approval of the FY 2006 USDA budget, the funding for these two projects will merge to form a "new" Agricultural Diversification project focused on funding research and development for Tropical Specialty Tree Fruits, such as lychee, longan, and others. We won't see the authorizing language until the budget comes forward but there will be a new research program, to be fashioned similarly to the Federal Floriculture Research Grant.*

### Special Cooperative Agreements

We also have several special cooperative agreements from the USDA Agricultural Research Service (ARS) (Table 2). Some are based upon Congressional earmarks; a few others are agreements made with the Pacific Basin Agricultural Research

Center in Hilo. As you will see, many differences in the management requirements exist in the cooperative agreements compared to the USDA CSREES Special Grants. First, since USDA CSREES are grants to UH, the post award handling of the funds is less complicated. With USDA ARS, these are cooperative agreements, which are treated by ORS as contracts and require additional scrutiny. Another difference is the award length: CSREES grants are awarded for three years without any no cost extensions. USDA ARS special cooperative agreements are for 5 years and sometimes, unexpended funds after 5 years can be "rolled over" into new agreements. Additionally, no cost sharing is required with CSREES funding, whereas with ARS funding, there is a requirement to cost share. Lately, for new agreements USDA ARS has been asking for a 20% cost share. Commonalities between these two sources of funding exist: no overhead or indirect costs are allowed. No stipends or tuition remission are permitted. Also, the standard prohibitions on the use of federal funding, as outlined in the Office of Management and Budget (OMB) Circular A-21, exist. Some of these prohibitions include no entertainment, no alcoholic beverages, no renovations or capital improvements, no general use equipment. You can find the OMB Circular A-21 at this web site: <http://www.whitehouse.gov/omb/circulars/a021/a021.html>. Here are projects under current agreements:

6. **Hawaii Pineapple Improvement.** (\$255,853). This project is a USDA ARS Special Cooperative Agreement and funds, obviously, pineapple research. The original cooperative agreement, under the direction of Dr. Ken Rohrbach and working closely with the Pineapple Growers Association of Hawaii (PGAH), funded research in CTAHR and at the Hawaii Agricultural Research Center (HARC) for using biotechnological techniques with the goal of developing improved pineapples with resistance

Table 2. USDA ARS Special Cooperative Agreements FY 2005

Agreement Title	Funding
6. Hawaii Pineapple Improvement	\$255,853
7. Protecting Papaya from Pests and Diseases	\$255,853
8. Minor Crop Pest and Disease Control	\$242,998
9. Agricultural Post harvest Value-added Products and Processing Program	\$239,767
10. Environmental Effects of Tephritid Fruit Fly Eradication and Control	\$215,105
11. Detection, Control and Mitigation of Banana Bunchy Top Virus (BBTV) and Citrus Tristeza (CTV) Virus in Hawaii.	\$103,841



to nematodes, mealybug wilt associated virus and to control early flowering in pineapple. The new agreement continues the molecular biology research on pineapple but also funds studies on insect and disease control on pineapple using more conventional methods, based upon input from the PGAH. This project funds researchers in PEPS and TPSS.

7. **Protecting Papaya from Pests and Disease.** (\$255,853). This project was originally derived to provide funding for the development of the transgenic ringspot virus resistant papaya. It continues to fund, in collaboration with USDA ARS PBARC, studies on further development of the ringspot virus resistance but has expanded to develop IPM programs to address other disease and insect problems constraining the advancement of papaya production in Hawaii. Funding includes projects from TPSS and PEPS, some in collaboration with USDA PBARC. As funding permits, we do seek new proposals in this area.
8. **Minor Crop Pest and Disease Control.** (\$242,998). The objective of this cooperative agreement is to develop economical and environmentally friendly pest and disease management strategies for Hawaii's economically important and potentially important crops, all classified as minor crops. Faculty in TPSS and PEPS are funded on this project, including work on the recent aster yellow disease discovered on watercress; developing detection methods for *Ralstonia solanacearum* on ginger and mitigating the effects of southern green stinkbug on macadamia nuts. All funds are currently committed to on-going projects but as projects end, we seek additional projects in this category.
9. **Agricultural Post harvest Value-added Products and Processing Program.** (\$239,767). This cooperative agreement funds joint research between USDA ARS PBARC, UH-Hilo and CTAHR. Currently, the project is funding CTAHR's tea project at the Mealani and Waiakea stations. The project leader, Dwight Sato of PEPS and Hawaii County, is working with Mealani's farm manager Milton Yamasaki, Francis Zee of USDA ARS PBARC, Randy Hamasaki of PEPS, and Stuart Nakamoto of HNFAS. The funding permitted the purchase for the equipment for CTAHR's Tea Processing Facility at the Mealani Experiment Station. Because federal funding cannot be used for renovation or capitol improvements, Dwight and his team was able to leverage the federal funds with support from the County of Hawaii and the State's Agribusiness Development Corporation to renovate the building to equip the processing equipment. Dean Andrew Hashimoto is the Project Director for this grant. Because funding authorization stipulates joint activities among CTAHR, UH-H CAFNRM, and USDA ARS PBARC, projects are identified by the leadership of these organizations.
10. **Environmental Effects of Tephritid Fruit Fly Eradication and Control.** (\$215,105). This project's goals are to develop and evaluate non-toxic, environmentally suitable, and publicly acceptable technologies and processes for fruit fly control. Currently, two CTAHR labs are being funded on this project. Dr. Russell Messing of PEPS has two projects and Dr. Qing Li of MBBE has a third project. These projects involve the evaluation of fruit fly parasitoids as a mechanism to reduce the impact of tephritid fruit flies, the impact of new insecticides on these IPM tools, and the identification and isolation of new chemical attractants of fruit flies into traps. This ARS cooperative agreement is a separate source of funding than the Hawaii Area Wide Fruit Fly Pest Management Program (funded through a USDA ARS cooperative agreement and

under the direction of Dr. Ron Mau of PEPS). All funds are currently committed to these projects but as funds become available, we accept proposals for projects in this area.

11. **Detection, Control and Mitigation of Banana Bunchy Top Virus (BBTV) and Citrus Tristeza (CTV) Virus in Hawaii.** (\$103,841). Only in its second year, the newest ARS cooperative agreement is a project addressing two viruses affecting banana and citrus. Drs. Scot Nelson, Steve Ferreira, Rodrigo Almeida, Mark Wright and John Hu, all of PEPS have been funded to conduct applied research and extension projects on BBTV mitigation and fundamental research on CTV. Funds are fully committed for this project and are directed and approved by the Director of USDA ARS PBARC.

There are other USDA grants and cooperative agreements in CTAHR that are not handled through my office. Most notably, the USDA CSREES Alaska Native Hawaiian Education grant that funds, in part, the UH-system Agribusiness Incubator Program and is coordinated through CTAHR's Dean's Office. Other ARS cooperative agreements in CTAHR include the aforementioned Hawaii Area-Wide Fruit Fly Pest Management Program, the Integrated Termite Management Strategies program that Dr. Ken Grace of PEPS manages, research on non-target impacts of fruit fly attraction by Dan Rubinoff of PEPS, and funds that support the Biotechnology Outreach and Education program of Dr. Ania Wieczorek of TPSS.



### **Doug Vincent**

**Hometown:** Aurora, IL

**Joined CTAHR:** 1985

**Educational history:** BA, Zoology, Southern Illinois University, Carbondale; MS, Physiology, Southern Illinois University, Carbondale; Ph.D. Animal Science, University of Illinois, Urbana-Champaign.

**Specialization:** Reproductive physiology of domestic animals, animal welfare, agricultural bioethics.

**Current work:** Special Program Director for Grants and Contracts/ Assistant Director for Research. I manage the portfolio of USDA CSREES/Special Research Grants and USDA ARS Special Cooperative Agreements. Other functions are to encourage and facilitate CTAHR faculty and staff to obtain extramural funding and to assist Dean Hashimoto and Associate Dean and Associate Director for Research Hu.

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# New Funding Opportunities

**D**eadlines, deadlines, deadlines! Yet preceding every deadline is the opportunity to compete for funds. Here is the latest batch of opportunities - best of luck and please call on our office for assistance.

U.S. Department of Agriculture  
Animal Reproduction, National Research Initiative (NRI)  
**Deadline: November 30, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1070>

U.S. Department of Agriculture  
Plant Genetic Mechanisms, NRI  
**Deadline: December 1, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1118>

U.S. Department of Agriculture  
Food Quality and Value, NRI  
**Deadline: December 1, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1084>

U.S. Department of Agriculture  
Children, Youth, and Families at Risk Sustainable  
Community Projects  
**Deadline: December 1, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1501>

U.S. Department of Agriculture  
Children, Youth, and Families at Risk Program: New  
Communities Projects  
**Deadline: December 1, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1077>

U.S. Department of Agriculture  
Outreach and Assistance for Socially Disadvantaged  
Farmers and Ranchers Competitive Grants Program  
**Deadline: December 2, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1113>

U.S. Department of Agriculture  
Epidemiological Approaches for Food Safety, NRI  
**Deadline: December 6, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1088>

U.S. Department of Agriculture  
Food Safety, NRI  
**Deadline: December 6, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1087>

U.S. Department of Agriculture  
Managed Ecosystems, NRI  
**Deadline: December 8, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1104>

U.S. Department of Agriculture  
Agricultural Prosperity for Small and Medium Sized  
Farms, NRI  
**Deadline: December 8, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1200>

U.S. Department of Agriculture  
Bioactive Food Components for Optimal Health, NRI  
**Deadline: December 13, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1096>

U.S. Department of Agriculture  
Western Integrated Pest Management (IPM)  
Competitive Grants  
**Deadline: December 15, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1101>

U.S. Department of Agriculture  
Animal Protection, NRI  
**Deadline: December 15, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1069>

U.S. Department of Agriculture  
Organismal and Population Biology of Arthropods and  
Nematodes, NRI  
**Deadline: December 15, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1103>

U.S. Department of Agriculture  
Biology of Plant-Microbe Associations  
**Deadline: December 16, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1500>

U.S. Department of Agriculture  
Assistive Technology Program for Farmers with Disabilities  
**Deadline: December 23, 2005**  
<http://www.csrees.usda.gov/fo/fundview.cfm?fonom=1061>

U.S. Corporation for National and Community Service  
2006 Learn and Serve America Higher Education  
Grant Program **Deadline: February 28, 2005**  
[http://www.learnandserve.gov/for\\_organizations/funding/nofa.asp](http://www.learnandserve.gov/for_organizations/funding/nofa.asp)

# The (not-so great) Manoa Flood of '04: One Year Later

By Doug Vincent  
Special Program Director for Grants and Contracts

Where were you, just over a year ago, on Saturday, October 30, 2004? After a day of continuous rain, a sudden downpour in the upper reaches of the Manoa Valley, some estimates were over 4 inches in a single hour, created a flash flood that roared through the UH-Manoa campus at approximately 8:00 pm. Seven out of the 8 CTAHR buildings were in the direct path of a wall of water that flooded basements, damaged laboratories and instrumentation, destroyed electrical and air conditioning infrastructure and wreaked havoc on our College. Damage to the power grid, caused outages to 35 buildings across campus. Although there was significant damage in the Manoa Valley, the flood managed to, thankfully, bypass CTAHR's Magoon Research Facilities. Four buildings on campus, including CTAHR's Agricultural Sciences III and Sherman Laboratory, sustained significant damage to their electrical and air conditioning infrastructure and had to be isolated from the electrical grid so that power could be restored to the rest of the campus.

After sustaining such a blow, CTAHR was down but far from out. CTAHR's existing emergency preparedness plan stated that the Associate Dean and Associate Director for Extension would take over the leadership in responding to the flood. Unfortunately, then Associate Director Barry Brennan's home was also flooded in the storm and he had to attend to his personal damages. Dean Andy Hashimoto was also traveling on the mainland when the flood occurred. A leadership vacuum could have easily occurred. Except CTAHR administrators, faculty, staff, and students immediately

swung into action to protect and preserve what we could. With chemical storage rooms in the basements of some buildings, the integrity of stored chemicals had to be ascertained. Without power, freezers containing sensitive and in some cases, irreplaceable samples were at risk. Even before the University as a whole would react, CTAHR APTs (such as MBBE's Karl Yanagihara and Sonia Campbell were buying dry ice with their P-cards to keep items frozen. Other CTAHR staff, such as Steve Spielman, Dan Paquin, Charlie Nelson, Joan Yanagihara were acting quickly and without being told, to help in the recovery. A few days after the initial shock, through the efforts of Walter Harada, two Horizon containers, one freezer and one refrigerated, found their way to the back of Ag Sciences to preserve samples and other items. Faculty and staff moved quickly to put items in these containers, some trudging up and down the steps of



Ag Sciences, in the dark, to place their items in the cold containers. Gilmore and Ag Engineering were back on power fairly soon after the flood. But the other buildings were desperate for electricity. Again, through Walter's efforts, portable generators were brought in, to provide limited power service to Sherman, Ag Sciences, Food Tech and St. John. Eventually, large generators were set up to restore most of the power to St. John, Sherman and Ag Sciences.

In late November, the Chancellor's office offered up to \$1 million dollars out of the Research and Training Revolving Fund (RTRF) for Short Term Assistance for Research and Training (START) grants. CTAHR was able to garner \$269,608 to assist faculty in rebuilding



The top photo shows damage to plants in Adelheid Kuehnle's tissue culture lab from high heat and low light. Bottom, employees clean up mud in Agriculture Sciences III.



The morning after the flood, wet boxes greeted CTAHR employees in Agriculture Sciences III.

their labs and restarting their research programs. A second allocation, START II, was offered in March, 2005 and again, CTAHR was able to obtain additional funding, \$210,694, to assist faculty in restoring their programs.

A few days after the flood, the University hired BMS-Cat, a Texas firm, which specializes in disaster restoration. Through their leadership, rooms were cleaned and dried out, debris cleaned up and restored as much as possible. The painstaking efforts of assessing and documenting the losses began shortly after the

flood with insurance claims due in December, 2004. Ruddy Wong and his staff coordinated working with the University, its insurance adjusters and FEMA in submitting and coordinating claims for losses. Although CTAHR responded very well, there were hard lessons learned. We have taken these lessons and improved our communication network. CTAHR has also revisited its disaster preparedness plan and a new plan is in its final stages of revision. Departments, units, and individual laboratories gained new perspectives on the importance of having plans to mitigate losses to data, samples, and other important records of our activities.

After one year, there are still outstanding issues awaiting resolution, but considering the widespread damage, and the considerable losses and injury to our spirit, the CTAHR *Ohana* can be very proud. We handled each loss with care and compassion. We were also fortunate that our losses were limited to property and to our spirits, not to life and limb. While we cannot turn back the clock and replace what can't be replaced, we can reflect upon how well the CTAHR *Ohana* responded. CTAHR may never again take a heavy Manoa rainstorm for granted but we can be assured that the CTAHR family will be responsive, resilient, compassionate and caring when faced with a challenge.

## Who is Thomas Lim?

Since coming to CTAHR just a few months ago Thomas Lim, CTAHR Director for Planning and Management, has jumped in with both feet. His office is responsible for the College's facilities, space, safety, computing, budgeting, and accountability. Thomas Lim is enthusiastic and energetic with a lot to offer our College. Here are just some of the many tasks on his 'to-do' list. As always, this type of work is done by individuals and teams in CTAHR and contractors. Everyone deserves our thanks!

### Molokai

CTAHR is looking for a new office building for the Cooperative Extension Program on Hawaiian Homeland Homestead's Hoolehua, Molokai. At the present moment we are working with the Department of Hawaiian Home Lands (DHHL) to obtain a lease for the land near the current site of a US Post Office and a Credit Union. We are in the process of reviewing the preliminary survey drawings for the new facility.



### Thomas Lim

**Hometown:** New York, New York

**Joined CTAHR:** May 2005

#### Educational history:

BA, Biology, New York University; MS, Architecture, University of Hawaii at Manoa.

**Specialization:** Planning and facilities

**Current work:** see list

## Station managers' summit

### **Hawaii Island – Komohana Cooperative Extension Office and Research Station**

Early design work is progressing for a new Wing D and for a partial renovation of Wing B of the highly-used Komohana Extension Office.

### **Hawaii Island – Kona Cooperative Extension Office and Research Station**

Preliminary planning is progressing on replacing a cesspool with a septic tank at the site. This will help with compliance issues we have been facing.

### **Oahu – Pearl City Urban Garden Center**

A berm (a large soil mound) needs to be removed before it causes a problem because it located in flood zone. Hazardous materials investigation will be conducted on the berm because its origin is not completely known. Also, the Air Force is working on a remedial investigation/feasibility study for environmental restoration that will clean up contaminates that have leaked from their fuel pipeline which runs across the CTAHR facility property.

### **Oahu – Manoa Campus – St John and Sherman Halls flood recovery**

Wall coverings, damaged during last year's flood, are finally being replaced in both buildings. St John is also going to get some repair work done on the air conditioning system.

### **Oahu – Manoa Campus – Health and Human Services Building**

This project, in the very early stages of planning, is looking at various sites for a new Health and Human Service Building. This project is a collaboration of the School of Social Work, Center on the Family, and the department of Family and Consumer Sciences.

### **Oahu – Waimanalo area**

CTAHR is in the early process of obtaining a large tract of land from the Department of Land and Natural Resources in the Waimanalo area.

We have eight station managers to take care of CTAHR's 14 branch research stations (and Magoon) on four islands. Station managers meet once a year to share experiences and ideas on how to do their work with decreasing resources and increasing workload. On October 18 and 19, station managers met for the first time in two years at the Kauai Agricultural Research Station. We were unable to meet last year because of the leadership transition. Station managers Dennis Ida, David Oka, John Gordines, Roger Corrales, and Craig Okazaki were there. Unfortunately, managers Milton Yamasaki, Susan Migita and Alan Umaki were unable to make it. Trent Hata, Angel Magno and Desmond Ogata were also present to help inform the discussions. Topics of critical interest to everyone included,

- The role extension staff at research stations
- Establishing priorities on research station issues
- CTAHR Germplasm Distribution Policy (now in final draft form on the CTAHR website)
- Future staffing at research stations
- Environmental, Health and Safety concerns at the research stations
- Sales of items from research stations (a committee, headed by Trent Hata, was formed to review and update policies for the station system)
- Publishing research station leaflets

As we talked about in the September Issue of CRN, we will keep you informed on the progress of these and other station happenings as they arise.



Station managers John Gordines, Roger Corrales, David Oka, Craig Okazaki, and Dennis Ida are all smiles during our recent station managers' meeting.

# Faculty Output

Publications (including books, book chapters), patents and other science-based output

We called and you answered—thank you! Here is the latest crop of faculty offerings. As always, if you have some new output that you would like shared with others, please let me know.

## Harry Ako (MBBE)

Ako, H., Shimizu, E., de Lemos, K., Asano, L., and Tamaru, C. 2005. Behavior limitations of high density fish growout. *World Aquaculture*, 36:25-29, 67.

## David Christopher (MBBE)

D.P. Lu and D.A. Christopher, Analysis of isoforms of protein disulfide isomerase in plants by immunomicroscopy. *Microscopy & Microanalysis*, 11(S2):1160-1161, (2005).

X.L. Li, T. Borsics, H.M. Harrington, D.A. Christopher, Arabidopsis AtCNGC10 rescues potassium channel mutants of *E. coli*, yeast and Arabidopsis and is regulated by calcium/calmodulin and cyclic GMP in *E. coli*. *Functional Plant Biology*, 32:643-653 (2005).

## Linda Cox (NREM)

*Proceedings: 2005 Mealani Forage Field Day, 2005*. eds. Mark S, Thorne and Linda J. Cox. College of Tropical Agriculture and Human Resources, 60pp.

Cox, Linda J. and Jody Smith. 2005. "Marketing Your Hawaii Ag Products: Buy Fresh\*Buy Local Campaign." *Rural Connections*, 11(2):4.

Linda J. Cox. 2005. "Cost of Production and Marketing Options." *Proceedings: 2005 Mealani Forage Field Day*. College of Tropical Agriculture and Human Resource, 1 pp.

Cox, Linda J. and Jody Smith. 2005. *Marketing Your Hawaii Ag Products: Farmer Tips for Exploiting the Buy Fresh\*Buy Local Campaign*. College of Tropical Agriculture and Human Resource, 2pp.

Cox, Linda J., Quincy A. Edwards, Mark Thorne and Glen Fukumoto. 2005. *Calculating the Cost of Production for a Cow-Calf Operation*. College of Tropical Agriculture and Human Resource, Livestock Management No. 11, Honolulu, Hawaii, 15 pp.

Fukumoto, Glen, Lincoln Ching, and Linda J. Cox. 2005. *New Zealand Study Tour Report*. College of Tropical Agriculture and Human Resource, 7pp.

## Richard A. Criley (TPSS)

Criley, R. A and J. Y. Uchia. 2005. That twisted Heliconia X rauliniana Bull. *Heliconia Soc. Intern.* 12(2):10-12.

Criley, R. A. 2005. Creating a potted, flowering Hedychium with growth retardants. *Acta Horticulturae*, 683:201-205.

Kuehny, J. S., R. A. Criley, and M. P. Paz. 2005. The joy of gingers. *Ornamental Outlook* 14(8):16-17.

Kuehny, J. S., R. A. Criley, and M. P. Paz. 2005. Jump-starting ginger. *Ornamental Outlook*, 14(7):18-19.

Criley, R. A. 2005. Program assessment – It's all the rage! *Acta Horticulturae*, 672:111-118.

Criley, R. A. 2005. Elementary plant propagation. Pp 1-12. In *A Tropical Garden Flora*. Staples, G. W. and D. R. Herbst (Eds). Bishop Museum Press. Honolulu, HI

Criley, R. A., J. Meyer, M. del Pilar Paz, J. S. Kuehny. 2005. Tropical gingers as new flowering potted plants. pp 28-32. *Proc. 2004 Hawaii Floriculture Conference*.

Leonhardt, K. W. and P. Nakao (Eds.), Coll. Trop. Agric. Human Resources, Univ. Hawaii. CTAHR Proc. P-04/05

Criley, R. A. 2005. Heliconia productivity study 1999-2001. pp 31-35. *Proc. 2004 Hawaii Floriculture Conference*.

Leonhardt, K. W. and P. Nakao (Eds.), Coll. Trop. Agric. Human Resources, Univ. Hawaii. CTAHR Proc. P-04/05

Criley, R. A. and N. Maciel. 2005. Seasonal production among some tropical cut flowers. pp 36-44. *Proc. 2004 Hawaii Floriculture Conference*. Leonhardt, K. W. and P. Nakao (Eds.), Coll. Trop. Agric. Human Resources, Univ. Hawaii. CTAHR Proc. P-04/05

Criley, R. A. 2005. Response of Dendrobium Jaquelyn Thomas 'Uniwai Pearl' (UH 306) to supplementary lighting. Pp 45-49. *Proc. 2004 Hawaii Floriculture Conference*. Leonhardt, K. W. and P. Nakao (Eds.), Coll. Trop. Agric. Human Resources, Univ. Hawaii. CTAHR Proc. P-04/05.

## Ken Grace (PEPS)

Husseneder, C., M. T. Messenger, N.-Y. Su, J. K. Grace, and E. L. Vargo. 2005. Colony social organization and population genetic structure of an introduced population of the Formosan subterranean termite from New Orleans, Louisiana. *Journal of Economic Entomology* 98: 1421-1434.

## Test your knowledge of CTAHR Experiment Station History

Q1. Jared G. Smith was the Special Agent in Charge of establishing the Hawaii Agricultural Experiment Station (HAES). What day and year did he arrive in Honolulu?

Q2. What topic was covered by the first Bulletin of the HAES?

Q3. In the 1902 Annual Report of the HAES a fruit was called an "alligator pear" - what is another name for this fruit?

Q4. On the night of January 25, 1902 what Hawaii organization was formed with Jared G. Smith as its president?

## Mitiku Habte (TPSS)

Habte, M. and D. Schmitt. 2005. Antagonistic interaction between plant parasitic nematodes and arbuscular mycorrhizal fungi, In: V. S. Merotra (ed). *Mycorrhiza*. Allied Publishers, New Delhi.

## C.Y. Hu (HNFAS)

T. D. Brandebourg and C.Y. Hu. 2005. Regulation of differentiating pig preadipocytes by retinoic acid. *J. Anim. Sci.* 83:98-107.

## Adelheid Kuehnle (TPSS)

Kuehnle, A.R. 2005. Orchids, Dendrobium. In: Flower Breeding & Genetics: Issues, challenges, and opportunities for the 21st century (N. Anderson, ed.) Springer Verlag, Heidelberg, pp. 533-554

Mudalige-Jayawickrama RG, M.M. Champagne, A. D. Hieber, A.R. Kuehnle. 2005. Cloning and characterization of two anthocyanin biosynthetic genes from *Dendrobium orchid*. *J. Amer. Soc. Hort. Sci.* 130:611-618

Hieber, A.D., R.G. Mudalige-Jayawickrama, A.R. Kuehnle. 2005. Color genes in the orchid *Oncidium Gower Ramsey*: identification, expression, and potential genetic instability in an interspecific cross. *Planta* 222 (currently an epub).

Kuehnle, A.R., T.D. Amore, H. Kamemoto, J.T. Kunisaki, J.S. Lichty, and J.Y. Uchida. 2005. 'Pumehana' and 'Andraecola-1' Anthuriums. Univ. of Hawaii CTAHR Coop. Ext. Ser. Series NPH-A-8

**Mark Thorne (HNFAS)**

Thorne, M.S., and L.J. Cox, 2005. *Proceedings: 2005 Mealani Forage Field Day: Improved Livestock and Forage Production Through Sustainable Management Practices*. College of Tropical Agriculture and Human Resources, P-09/05. 60 p.

Thorne, M.S., M.J. Trlica, W.C. Leininger, R.D. Child, and D.A. Klein. 2005. Soil CO2 efflux response to soil loss on 2 rangeland ecosystems. *Rangeland Ecology and Management* 58:27-34.

Thorne, M.S. 2005. Integrated management for control of fireweed: An adaptive management approach. pp. 23-30. In: Thorne, M.S., and L.J. Cox, Ed's, *Proceedings: 2005 Mealani Forage Field Day: Improved Livestock and Forage Production Through Sustainable Management Practices*. College of Tropical Agriculture and Human Resources, P-09/05.

Thorne, M.S., P.J. Meiman, Q.D. Skinner, M.A. Smith, and J.L. Dodd 2005. Clipping frequency affects canopy volume and biomass production in planeleaf willow (*Salix planifolia* var. *planifolia* Prush.). *Rangeland Ecology and Management*, 58:41-50.

Cibils, A.F., D.M. Swift, R.H. Hart, M.J. Trlica, and M.S. Thorne. 2005. Gender-specific responses to winter defoliation of greenhouse-grown *Atriplex canescens* clones under contrasting soil moisture regimes. *Journal of Arid Environments* 61:211-226.

Cox, L.J., Q.A. Edwards, M.S. Thorne, G. Fukumoto. 2005. Calculating the cost of production for a cow-calf operation. University of Hawaii at Manoa, College of Tropical Agriculture and Human Resources, LM-11.



On Friday, October 28th CTAHR faculty and students were treated to an impromptu session on USDA/CSREES grants. National Program Leaders (NPLs) Louie Tupas, Deborah Sheely, and Siva Sureshwaran talked about competitive grants, Small Business Innovation Research grants (SBIR), and grants in the area of global change. The NPLs pointed everyone to the newly-redesigned CSREES website: <http://www.csrees.usda.gov/fo/funding.cfm>

One of the most helpful pieces of advice they gave was to study the RFA carefully so that you have an idea that clearly resonates with reviewers. Secondly, they said, "call us." The best source of information on a program are the NPLs. Just call them, they are, "regular people," as one visiting NPL put it.

**Answers to our pop-quiz**

Q1. Jared G. Smith was the Special Agent in Charge of establishing the Hawaii Agricultural Experiment Station (HAES). What day and year did he arrive in Honolulu?

A1. Agent Smith left Washington, D.C. on March 21, 1901 and arrived in Honolulu on April 5th, 1901.

Q2. What topic was covered by the first Bulletin of the HAES?

A2. "Sore head." This disease of chickens was the topic of the first Station Bulletin by T. F. Sedgwick. The next bulletin was also by Sedgwick and it covered the "root rots" of taro.

Q3. In the 1902 Annual Report of the HAES a fruit was called an "alligator pear" - what is another name for this fruit?

A3. Avocado.

Q4. On the night of January 25, 1902 what Hawaii organization was formed with Jared G. Smith as its president?

A4. The Farmers' Institute of Hawaii.

**Coming up next in CRN!**

With the holidays just ahead of us we want to give you a glimpse of some of the work being done in CTAHR on beverage drinks. We'll also provide you with some thoughts about the USDA listening session on Hawaii Island. See you next month!

CY Hu,  
Associate Dean and  
Associate Director for Research