

USDA \* APHIS \* PPQ

# CPHST NEWS



## New Process for *Ad Hoc* Projects in Place July 2004



People



Places



Programs



Publications

Policy &  
Plans

Presentations



Philosophy

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CPHST serves the science and technology needs of PPQ. CPHST assigns work in categories that are identified by project technology, duration and urgency. Our dedication to transparency and commitment to improving performance, coupled with the increasing volume and complexity of tasks, has necessitated that CPHST develop another category of projects to better serve the Agency and our customers. For this reason, *Ad hoc* projects have been developed.

**What is an *Ad hoc* Project?** An *Ad hoc* Project requires less than three FTE months to complete, has immediate benefit and entails frequent dialogue between client (requester) and CPHST scientists. *Ad hoc* Projects address issues where the science is mature and technology can be transferred to operations/ programs with little modification. *Ad hoc* Projects involve in-house work only and are not intended to support projects beyond the expertise of CPHST scientists or scope-of-work undertaken within CPHST.

**Who requests an *Ad Hoc* Project and what is involved?** State Plant Health Directors, State Plant Regulatory Officers, Regional and Riverdale Program Managers and PPQ Executive Team Members can request *Ad hoc* projects. Work requests can now be made via a web-based electronic application available on CPHST's webpage. The application is simply a brief summary that explains the project, defines its requirements and lists its deliverables. Requests by SPHDs and regional Program Managers are automatically routed through the Assistant Regional Directors for comment and oversight. Work requests submitted by SPROs are automatically routed through the SPHDs. Work requests by Riverdale PHP managers are routed through the Associate Director of Plant Health Programs. Decisions on applications are made in consultation between management of CPHST and the requesting organization. Critical points in shaping the decision include project relevance to the agency's mission, feasibility, utility and cost.



Categorization of CPHST research projects as a percentage of lead scientists' time.

*Ad hoc* work requests can be made at any time; requests are not subject to a formal, competitive process or deadline, nor do they require an extensive workplan. However, they do require a clear,

concise explanation of project concept and expected outcome. The applicant should think carefully about the request and ensure that all questions are answered completely. Each successful application becomes a project that is given a **Job Ticket**. The Job Ticket is used administratively for work management and financial accountability. By accessing CPHST's website, applicants can monitor the status of their requests and managers can monitor the progress of projects.

### How does CPHST administer *Ad Hoc* Projects?

*Ad hoc* work requests are electronically transmitted to the Associate Director of CPHST who logs the request into a CPHST password-protected project database. The AD assigns the project to an NSPL who reviews the request for completeness, confirms estimates of project duration and decides the appropriate CPHST scientist for the project. The NSPL contacts the supervisory Lab Director, scientist and client who, as a group, review the project description, create a timeframe for completion and establish timeliness for project deliverables. Open communication concerning *Ad hoc* work and progress is encouraged. The NSPL is responsible for certifying project completion, summarizing results to the CPHST AD for record keeping, and providing the ARD/ ADPHP/ PNPB and client(s) information for implementation. We acknowledge the inevitability of "slippage" and understand that some projects designed for three months may occasionally require more time.

**What should CPHST scientists know about *Ad hoc* Projects?** These projects serve as an important component of work, and may entail up to 25% of annualized work. Much of the work captured in the concept of *Ad hoc* projects has been fulfilled informally until now and without credit given to the scientist for work done. Under the *Ad hoc* process, CPHST scientists are automatically given credit for time worked on assigned *Ad hoc* projects when their time contributions are tabulated each year. Work on *Ad hoc* projects is reported in the Peer Review Case submitted by CPHST scientists in their three-year review cycle.

We hope this new procedure will engage more work resulting in quicker delivery and increased customer satisfaction.



Submitted by Gordon Gordh





## CPHST Launches New Staff Evaluation Initiative

May 2004

The staff of CPHST has begun to work its way towards a merit-based, accountability-driven, performance and promotion evaluation process. Better known as "peer review" due to its similarity to systems currently in place at USDA-ARS and APHIS-WS, this evaluation system will provide CPHST scientists with a transparent, predictable and objective process for evaluation of their contributions to the mission of PPQ. Important elements in the process involve the development of guidelines and review criteria.

For the first phase of development of the peer review process, a group of randomly selected scientists prepared detailed "case write-ups" (resumé-style listings of contributions towards USDA's mission). The cases underwent comprehensive review by peers and stakeholders during a long three days at the end of April.

A key to the successful completion of the first phase were the contributions of CPHST stakeholders and counterparts in the Eastern and Western Regions as well as key Managers in the Plant Health Programs and PDMP groups in Riverdale. These groups joined as multi-disciplinary panel members to review the cases submitted by the scientists. In addition to recommendations to the CPHST Director, the panels provided individualized suggestions to the incumbents that clearly identified how to strengthen their cases.

This newest plan for accountability and objective performance evaluation is one of the most exciting long-term efforts at CPHST and is expected to have consequences throughout APHIS.



Submitted by Ron Sequeira

*This newest plan for accountability and objective performance evaluation is one of the most exciting long-term efforts at CPHST.*



## Inside the Pest Detection Diagnostics Laboratory, Edinburg, TX

June 2004

The USDA has maintained facilities at Moore Air Base since 1962 when the Screwworm Eradication program was located there. The present lab that now houses the Pest Detection Diagnostics and Management Laboratory (PDDL) was established in 1980 by PPQ Deputy Administrator **Harvey Ford**. Shortly after that time actual construction began and the structure was completed over the course of several years. The "state of the art" facility includes over 10,000 sq. ft. of labs and computer controlled environmental growth chambers. Support labs and administrative areas surround the central core of environmental chambers. The facility is backed up by a multitude of control systems including complete electrical backup capabilities.



Pest Detection Diagnostic and Management Laboratory, Edinburg, TX

The earliest programs at PDDL included the biological control of the citrus whitefly and a pilot project testing the feasibility of using an endemic plant parasitic nematode as a biological control organism against an endemic weed, silverleaf nightshade. **Dr. Gary Cunningham** was the first laboratory director and **Drs. Lloyd Wendel** and **Paul Parker** were the first scientists at the facility. From that time, new programs and staff were added with an emphasis on biological control of insect pests and invasive exotic weeds. The list of new biological control initiatives against insect pests included programs to control Colorado potato beetle, Russian wheat aphid, boll weevil, and brown citrus aphid. Many of these programs were focused on the mass rearing of natural

enemies and the staff continued to grow in support of host plant production and insect rearing objectives. During this period of time several rangeland weed programs were also initiated including diffuse & spotted knapweed and leafy spurge. For the weed programs the lab functioned as the primary quarantine introduction point for new natural enemies and was an essential part in the establishment of these control agents.

In 1993 the new arthropod quarantine building was dedicated. This new facility added the needed quarantine space including greenhouse quarantine space to handle expanding needs in processing and handle parasitoids of silverleaf whitefly; it also provided needed space for expanding weed bio-control programs. The new quarantine facility added approximately 6,000 sq. ft. of space.

Beginning in the mid 1990's new directions began to develop in the arena of molecular diagnostics under the direction of geneticist **Dr. Don Vacek**. Both arthropods and plants have been subjects for these new molecular studies.

This new venture has recently been expanded with the addition of a new genetics lab within the main facility. This has expanded the capabilities of the group with a central focus on fruit fly molecular diagnostics. Support of fruit fly

programs has not been limited to the diagnostic developments of the genetics group. A strong fruit fly support component encompassing diet development, new strain development, genetic markers, development of fruit fly lures and support of conventional control measures has further strengthened the fruit fly support function.

Other new directions led by lab scientists include the establishment of a GIS remote sensing laboratory utilizing the latest computer equipment and hyperspectral technology to detect and survey for plant pests including insects, plant diseases and weeds. Also plant disease epidemiology studies and the development and construction of a mobile containment green-



Roxanne Garza, genetics technician.

house laboratory have been initiated to enhance the citrus canker emergency program support. Over the past 24 years the facility has gone through many name changes, but the mission of protecting American agriculture has remained steadfast.



Submitted by Paul Parker



## APHIS Forges Cooperative Agreement with Clark Labs for Cutting-Edge Technology in Pest Survey for EAB

May 2004

An important aspect of CPHST's work involves bringing technology into PPQ and modifying it for specific applications. In this regard, APHIS and Clark Labs (Worcester, MA) announced a Cooperative Agreement to develop hyperspectral imaging technology in support of the PPQ survey program for Emerald Ash Borer (EAB).

Several years ago, EAB invaded Michigan from East Asia and has killed over 6 million trees around Detroit. EAB is spreading rapidly into neighboring Ohio, Indiana, and Canada, requiring a massive survey effort by the PPQ ER and states. The problem is disastrous because EAB threatens to eliminate ash trees from the American landscape, much as chestnut blight and Dutch elm disease destroyed other icons of American forestry. How can CPHST help PPQ successfully accomplish its mission of eradicating this invasive species?

Accurate and rapid survey of EAB is critical. The beetle is microscopic and spends most of its life cycle inside a tree. EAB symptoms are difficult to detect until a tree is nearly dead. Thus, the traditional "visual survey" from the ground is very difficult, time consuming and inefficient.



David Bartels tackles the task of ground truthing, a process used for validating hyperspectral data.

Hyperspectral imaging (a recent development in remote sensing) holds great promise to help EAB survey by rapidly mapping distributions of ash trees over wide areas. The images of trees are collected from an airplane survey of large areas. They cover a wide spectrum of visible and infrared radiation. Images of selected wavelengths may be combined to identify a "spectral signature" that is unique to ash trees and, more specifically, to trees declining from beetle attack. As an internationally

recognized center for the development of geographical technologies, Clark Labs brings to the project powerful expertise on the analysis of hyperspectral imagery.

The CPHST team involved in this project include **David Williams**, **David Bartels** (see photo), **Alan Sawyer** and **Vic Mastro** of the Otis, MA and Mission, TX labs. Their counterparts at Clark Labs include **Ronald Eastman**, **Ciro Marciano**, **James Tole-dano** and **Honglei Zhu**. PPQ ER Program Manager **Phil Bell** coordinates the EAB program. PPQ ER personnel in Michigan (**David McKay** and **Craig Kellogg**) and their staffs will use the technology. The project has strong support from the Michigan

Department of Agriculture through its Director of Pesticide and Plant Pest Management, **Kenneth Rauscher**.

This project is one of several involving spatial technology whose development and impact will be reported in the Newsletter. For more information contact **Dan Fieselmann**, NSPL for Survey, Detection and Identification.



Submitted by David Williams



## New Mobile Containment Greenhouse Lab

June 2004

Functional field lab and greenhouse space is often at a premium in emergency programs. To help provide mobile field facilities for the Citrus Canker program, a collaborative project between USDA-ARS and USDA-PPQ was initiated. The concept of a mobile containment greenhouse/lab was originally developed by two ARS scientists nine years ago. A prototype unit was built and has functioned as a containment greenhouse/lab for citrus canker studies in the Miami area for several years. The usefulness of this concept became apparent and improvements to the original prototype design were proposed for a second generation prototype. The new design includes a number of improvements with the addition of a generator that allows the unit to be fully powered at remote sites where electrical power may not be available and also provides automatic emergency power back up if outside power is lost. The air-conditioned greenhouse area is constructed of double paned Lexan panels and provides 160 sq. ft. of useable space. The lab portion is outfitted with ample cabinets for storage and contains a biosafety cabinet, incubators, refrigerator/freezer and autoclave. The expansive lab countertop provides needed space for other specialized lab equipment.

The bid for construction of this unit was awarded in September of 2003 and actual construction of the greenhouse lab

commenced later that year. The unit, completed as to contract specifications, was delivered to Edinburg, TX on April 30, 2004. It is currently being housed in the AEO aircraft hanger, Edinburg, TX. Several smaller items need to be added to the unit to make it more functional including greenhouse grow lights, plastic benching and specialized lab equipment. AEO will provide the skills and labor to accomplish the final outfitting of the greenhouse/lab. This second generation prototype Mobile Containment Greenhouse/Lab will immediately be used for citrus canker work, but more importantly, can be replicated and rapidly deployed as needed by APHIS as outbreaks of new high consequence quarantine pests occur in the U.S.



Top: Mobile containment greenhouse laboratory

Bottom Left: Laboratory

Bottom Right: Greenhouse



Submitted by Paul Parker



## New On-line Tool for Cold Treatment Data Collection

June 2004

The CPHST Treatment Quality Assurance Unit (TQAU) is developing new tools for the management of data on in-transit cold treatments in order to better guarantee that vessels and containers are certified by USDA for cold treatment of imported fruit before leaving foreign ports. TQAU has developed a web-based world wide search engine (<http://www.cphst.org/treatment/>) that provides foreign cooperators, PPQ and International Service personnel the technical information necessary for performing certifications and inspections of in-transit cold treatments.

The number of in-transit cold treatments has grown beyond expectations since the USDA began accepting them. In 1956, eight vessels (8) carried 300,000 cases of fruit. In 1980, 216 vessels carried 7,780,000 cases of fruit. By 1997, the number had almost doubled to just over 14,000,000 cases of fruit. From 1997 to 2003, there was almost a 280% increase in amount of cold treated fruit being imported into the United States with 98 vessels and 1,344 containers carrying over 53 million cases of fruit to the United States. The main reason for this dramatic increase was the



**Larry Zettler** verifying that the foreign cooperator is installing the fruit probe correctly before the vessel leaves for the United States in order to conduct an in-transit cold treatment export program in South Africa .

switch to using containers for shipping cold treated fruit. In-transit cold treatment containers were not used before 1986, but since that time, container usage has increased steadily.

This voluminous increase necessitated the development of a web-based processes with built-in safeguards to improve quality and information exchange between foreign cooperators, industry

and USDA. The real-time search engine associated with this technology effectively provides data and information to foreign cooperators (at country of origin) and PPQ personnel (at ports of arrival). This web-based process provides a new electronic tool to guide foreign port and industry personnel to select USDA approved vessels and containers to be loaded with fruit destined for the United States. This fruit will be cold treated in-transit by utilizing quarantine approved treatments to guarantee control of Mediterranean and certain other tropical fruit flies.

The web-based database is searchable and provides information on vessels to determine date of certification, hull numbers, ex-names, sister ships and compartment specifications. Included with the ship information are downloadable .pdf files of the sensor arrangement for inspection and/or certification purposes. Soon to be added will be examples of instrument printouts for each ship, also in .pdf format.

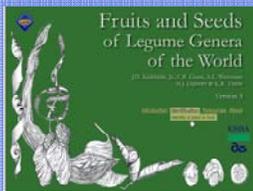
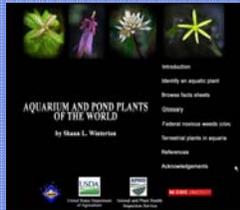
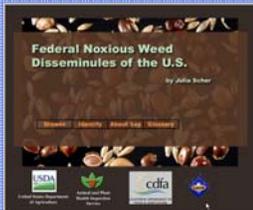


Submitted by Scott Wood



## New LucID Plant Keys Demonstrated

June 2004



Three of the new LucID keys. CPHST scientists and cooperators are working to develop these keys to facilitate speedy and accurate identification of pests.

Three Lucid keys concerning plants are among those being developed by CPHST in its effort to promote the use of advanced technological tools for pest identification. This past April, during a two-day visit, **Julia Scher** of CPHST (based in Sacramento at the California Department of Food and Agriculture's Plant Pest Diagnostics Center) showed features of her Lucid key, "Federal noxious weed disseminules of the U.S." to CPHST staff in Raleigh. The following day Julia conducted a hands-on Lucid computer demonstration at the National Identifiers meeting in Riverdale. Botanist identifiers had the opportunity to try out the federal noxious weed (FNW) key and two other keys: "Fruits and seeds of legume genera of the world" and "Aquarium and pond plants of the world". By using the powerful features within Lucid and

viewing the many high-quality images of taxa in the keys, the botanists were able to quickly identify seed and aquatic plant specimens, including two urgent interceptions.

More recently Julia presented her FNW key at the annual California Seed Association conference, emphasizing the multiple ways to view images and obtain information, and how to use the interactive key. Seed professionals in attendance from industry, state government and academia expressed enthusiasm for this Lucid system as an important tool in their work and were eager to acquire copies. Private and state seed labs nationwide in particular may become major users.



Submitted by Julia Scher



## Western Plant Board Meeting May 2004

The 85th meeting of the WPB was held 11-13 May in Anchorage, AK. Western Region President **Mike Cooper** presided and **Bill Dickerson** (NPB President) was in attendance. Alaska arrangements were made by **Doug Warner** (AK Div Agric.) and his staff. CPHST staff in the west should be aware that **Sherry Sanderson** (WR Past President) has recently left her job as SPRO for New Mexico to become a PPQ employee as WR Manager of Emergency Programs. (Welcome aboard, Sherry!)

About 50 representatives attended the meeting. CPHST's participation in these regional Plant Board meetings is through the invitation of the NPB; the meetings focus on regional issues as seen by the State Plant Regulatory Officials (SPROs). The PPQ Western Region was represented by **Jim Reynolds** (WR Director) and his staff of Program Managers. Staff from Riverdale attending the meeting included **Mike Firko** (PHP), **Charles Brown** (PHP), **Shirley Wager-Page** (PIM), **Mike Ward** (PIM), **Bob Spaide** (PDMP), and **Bill Aley** (SITC). CPHST representatives at the meeting included **Alan Dowdy**, **Dan Fieselmann** and **Gordon Gordh**.

**Jim Reynolds** gave an overview of Sudden Oak Death in CA, destruction of 540,000 bu. of GMO soybeans in SD, grasshopper control in FY03, growing trade and phytosanitary issues, eradication of *Ralstonia* infested geraniums imported from Guatemala, SITC, DHS transition, and new PPQ infrastructure.

**Craig Regelbrugge** (American Association of Nurserymen) gave an overview of the nursery business during the past year and the current round of challenges including *Phytophthora ramorum*, *Ralstonia* and Clean Stock Certification Program and overhaul of "Q-37". **Shirley Wager-Page** spoke of commodity treatments and import permits. **Mike Ward** spoke of PPQs accreditation program to perform phytosanitary seed certification. This was followed by an update of Electronic Phytosanitary Certificates by **Casey Estep** (CDFA).

**Mike Firko** discussed Domestic Security issues – Plant Pest Permits and the Agriculture Bioterrorism Protection Act of 2002. (Information developed by CPHST through pathway analysis and risk assessment is very important in shaping strategy for safeguarding.) **Nat Aycox** (DFO, CBP, SFO) reviewed the role of Customs and Border Protection as related to agriculture. He was a welcome addition to the meeting and he spoke with authority for Homeland Security, assuring everyone that DHS took agricultural inspection work very seriously.

**Roeland Elliston** and **Bill Kaufman** gave a detailed overview of WR Pest Detection activities including CAPS. They emphasized the critical nature of cooperation and coordination of activities between state and federal officers in each state to ensure early detection and rapid response to invasive pests. **Dan Fieselmann** is an important partner with the regions in shaping the national



Participants of the Western Plant Board Meeting, Anchorage, AK.

CAPS list of priority organisms.

**Mitch Yergert** (SPRO CO) gave an overview of Japanese Beetle Eradication Program in Colorado. JB was first reported in Colorado during 1995; more recent and important has been the detection of an established population of JB during 2002 at Palisade. Since 2002, CDA has conducted eradication efforts with strong local public support. Following Mitch's presentation, **Roland Elliston** provided a federal perspective to trapping, monitoring and treatment for JB in the western states.

**Charlie Brown** reviewed the Fire Ant, Rangeland Grasshopper and Mormon Cricket programs for FY04, to include survey, training and workshops. **Dan Hilburn** (SPRO OR) discussed the SOD in Oregon and moderated comments from other affected states.

The meeting provided CPHST with an opportunity to speak with SPROs and SPHDs from the Western Region and gain a better impression of what is needed to support operational programs.



Submitted by Gordon Gordh



## New Database for CPHST Publications Available July 2004

A beneficial result of the development of the CPHST Skills Inventory (SKI) (see first Newsletter), is the ability offer our PPQ stakeholders a comprehensive list of publications available directly from CPHST scientists. This database responds to direct requests from our stakeholders (sorry it took so long!) and is expected to become a dynamic tool produced by the report-writing feature of the SKI sys-

tem. In the interim, sample hard copies plus the complete publications database have been mailed to the Eastern/Western regions and to Plant Health Programs/PDMP. For additional copies of the database, please contact Ron Sequeira or go directly to the featured link at <http://www.cphst.org/links.cfm>. Enjoy!



Submitted by Ron Sequeira



NC State cooperator **Heike Meissner** and PERAL analyst **Shawn Robertson** utilizing the new publications database.



## UPDATE: Working Group on Fruit Flies of Western Hemisphere May 2004

The 5th Meeting of the Working Group on Fruit Flies of the Western Hemisphere (<http://www.conference.ifas.ufl.edu/Flies>) was held in Fort Lauderdale, FL, May 16-21, 2004. The Organizing Committee was led by **Bob Heath** (ARS Miami) and **Sue McCombs** (CPHST) with assistance from **Nancy Epsky** (ARS Miami), **Pedro Rendón** (CPHST), **Aldo Malavasi** (Universidade de São Paulo), **Walther Enkerlin** (IAEA), and **Norm Leppla** (Univ of Florida). The 206 attendees, representing government, academia and industry from 33 countries, participated in developing a prioritized list of research needs for fruit fly suppression programs throughout the Western Hemisphere. Invited speakers addressed components of the systems approach for movement of regulated commodities from areas with populations of pest fruit flies. Poster presentations covered state-of-the-art technologies in topical areas that included basic and applied biology; detection methods; control and eradication methods; biological control; sterile insect technique; regulatory procedures; and program management.

The Plenary Address, 'Future Perspectives of Sterile Insect Technique (SIT)', was delivered by **Don Linquist**, the recipient of the 2004 WGFFWH Lifetime Achievement Award. The award was presented to Dr. Linquist by **Pedro Rendón**, Chair of the Working Group, in recognition of his contributions to fruit fly sterile insect programs. During his career, Linquist has demonstrated strong leadership in the initiation and management of SIT programs globally.

Other presenters included :

- **Carol Lauzon** (California State University-Hayward) gave a talk entitled "The Role of Microbial Endosymbionts in the Life History of Fruit Flies."
- **Pedro A. Rendón** (APHIS PPQ CPHST) gave a talk entitled "Efficacy of the Sterile Insect Technique (SIT) combined with releases of braconid parasitoids."
- **Paul Gadh** (APHIS PPQ), gave a talk entitled "APHIS Irradiation Rule and its Application for Movement of Fruits and Vegetables."
- **José Luis Zavala** (SAGARPA-DGSV, Mexico), gave a talk entitled "Systems Approach Guidelines for Fruit Flies of Economic Importance."
- **Ron Mau**, (Univ of Hawaii at Manoa), gave a talk entitled "Outcomes-based Implementation of the HAW-FLYPM Area-Wide Fruit Fly Suppression Program."
- **Jesús Reyes** (International Atomic Energy Agency, Guatemala City, Guatemala), who discussed, "A Multi-institutional Approach to Implement Fruit Fly Low Prevalence and Free Areas in Central America: Outcomes and Constraints."

"Trapping Guidelines for Area-Wide Fruit Fly Programs" were recommended by participants of the 3rd WGFFWH to address a lack of uniformity in the application of trapping methodologies. **Walther Enkerlin** (IAEA, Vienna) coordinated the development and publication of the guidelines to support fruit fly surveillance activities of National Plant Protection Organizations and industries in FAO/IAEA Member States. The trapping guidelines, available at <http://www.iaea.org/programmes/nafa/d4/index.html>, are a working document that requires periodic review and revision to reflect new technology.



CPHST provided several poster presentations. For more information about the conference, contact Dr. Sue McCombs.

The 6th Meeting of the Working Group on Fruit Flies of the Western Hemisphere will be held from September 10-15, 2006 in Salvador, Bahia, Brazil in conjunction with the 7th International Symposium on Fruit Flies of Economic Importance. Information is available at <http://www.fruitfly.com.br>.



Submitted by Sue McCombs



## CPHST Scientists Receive Honor Award from Secretary Veneman June 2004

CPHST scientists and staff were part of a group honored by Secretary Ann Veneman in June for their work on APHIS' *Ralstonia* Incident Response Team. Led by **Matt Royer** (PPQ-PDMP), the team was convened in the Spring of 2003 in response to the accidental introduction of *Ralstonia solanacearum* race 3 biovar 2 into the United States on geraniums imported from production facilities in Kenya and Guatemala. This bacterial pathogen is listed as a regulated plant pathogen because of its potential impact on the potato, tomato, pepper and floriculture industries.

Upon learning that *Ralstonia solanacearum* race 3 biovar 2 had been detected in off-shore geranium cutting production facilities, APHIS' *Ralstonia* Incident Response Team was convened to develop and deploy a science-based emergency response program. The goals of the program were to rapidly detect, identify, and eradicate this bacterial pathogen and to prevent its further entry into the US. Because of their leadership, planning and actions, in cooperation with state officials and industry representatives, establishment of a pathogen that would have had a catastrophic impact on US agriculture and trade was averted.

CPHST team members included: **David Kaplan**, **Laurene Levy**, **Renee Devries-Patterson**, **Wayne Claus**, **Vessela Mavrodieve**, **Raul Ruiz**, **Heather McCue** and **Roxanne Garza**.



Geraniums infected with *Ralstonia solanacearum* race 3 biovar 2.



Submitted by David Kaplan



## CPHST Spotlight: Kayimbi Tubajika

June 2004

Dr. Kayimbi M. Tubajika ("Tuba") joined CPHST as a Plant Pathologist (Commodity Treatment Specialist) with the Otis Pest Survey, Detection and Exclusion Lab, in Cape Cod, MA during January 2004.

Tuba was born and raised in the Diamond region of the Democratic Republic of Congo (DRC) (formerly Zaire). He received his BS in Agricultural engineering with a concentration in Agronomy from University of Zaire (Campus of Kisangani). After graduation, Tuba worked as researcher/extension special-

ist at DRC Department of Agriculture for several years before coming to the United States for his graduate studies at Iowa State University. Tuba received his MS and PhD degrees in Plant Pathology at ISU with concentration in plant breeding and epidemiology. Tuba obtained Post Doctorate experience working in several crops and plant diseases at ISU and Louisiana State University. During the last three years, he worked as Research Plant Pathologist with USDA ARS Crop Pathology and Genetic Research Unit, Davis, California studying the epidemiology and control of Pierce's

disease caused by *Xylella fastidiosa* in grape.

Tuba is married to Mathilde Tubajika and has three children, Thierry (23), Claude (20), and Carina (17). When not at work, Tuba enjoys traveling with his family.

Welcome Tuba!



## CPHST Spotlight: Pat Shiel

June 2004

Dr. Patrick Shiel joined CPHST as a National Program Staff Scientist in the Director's Office in Raleigh, NC during January 2004. The National Program Staff are newly created positions designed to facilitate the five National Programs. Pat's works with Phil Berger, the National Science Program Leader in Molecular Diagnostics and Biotechnology.

Pat was born in New York City, but has lived in upstate New York, Massachusetts, and the Pacific Northwest. He received his BS and MS in Forest Biology at the State University of New York College of Environmental Science and Forestry located at Syracuse University,

where he worked on virus diseases of forest trees. He received his Ph.D. in Plant Biology at the University of Idaho, where he worked on the molecular characteristics of fruit tree viruses. Pat has more than 20 years of experience at working in and supervising a molecular biology lab as a Research Associate, Lab Manager and Acting Assistant Professor in Idaho. He has worked on the molecular characterization of many of the plant viruses and other pathogens that affect agriculture in the Pacific Northwest. His work on the molecular characterization of tuber necrosis strains of *Potato virus Y* that have been recently found in the U.S. was good preparation for his position as a Staff Scientist

with CPHST.

Pat is married to Mary O'Loughlin Shiel and has two children, Ryan (11) and Maggie (9). Pat is passionate about realizing the potential of molecular biology applications to the diagnosis of plant pests. He also likes to work on restoring his 1964 Austin-Healey and visiting historical and beautiful places with his family.



## CPHST Spotlight: Russ Bulluck

June 2004

Dr. Russ Bulluck was born and raised in Rocky Mount, North Carolina. He received a BS in Marine Biology from the University of North Carolina at Wilmington. Upon graduation, he worked as a marine biologist for five years at the Skidaway Institute of Oceanography (Georgia) before beginning a Masters program at California University of Pennsylvania in California, PA. In December 1999, he received a Ph.D. in Plant Pathology from North Carolina State University, where he worked with Professor Jean Ristaino studying

the dynamics of soil food-webs as affected by organic amendments in a Southeast vegetable production system. He then completed a post-doc at the University of California, Davis looking at replant disorder of grapes and peaches.

Russ joined the Center for Integrated Pest Management at North Carolina State University during December of 2002, working as a cooperater with CPHST-PERAL.

In March 2004, Russ joined the CPHST Director's Office as the National Program Staff Sci-

entist for IPME, working under the direction of David Kaplan.

When not at work, Russ enjoys spending time with his wife Laura and their two boys, Russie (8) and James (4).



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## CPHST Philosophy: An Open Forum

*"CPHST Philosophy: An Open Forum" is the section of the Newsletter dedicated to sharing employees thoughts, questions, concerns, and ideas about CPHST's mission, structure, methods, role, and management. Employees are invited to send comments to Gordon Gordh:*

[gordon.gordh@aphis.usda.gov](mailto:gordon.gordh@aphis.usda.gov).

*This month, Dr. Robert Staten, Director of the Decision Support and Pest Management Systems Lab in Phoenix, AZ shares his thoughts about CPHST and our role in protecting American agriculture.*

### **CPHST Philosophy from Where I Sit**

When I joined APHIS more than 30 years ago, the Agency was called PPD and under ARS. For most of my career I have worked under "Methods Development." Now, as part of CPHST, the focus of our group has shifted from traditional methods development to a wider range of scientific activities that support regulatory decision making and operational needs.

Early in my career, I was fortunate to have worked in a "simple" organization with a very short chain-of-command. I was extremely fortunate to attend meetings with (and work for) the true masters of "Plant Protection" of their time - J. R. Brazzel and E. F. Knipling (the Elder). For many years, I was among the youngest staff in the room. Then, all of the sudden it seemed, I was among the oldest practitioner of plant protection and working in CPHST. Where has the time gone? Although I do not consider myself and elder spokesman of plant protection compared with the elder Knipling, I do think we need some elderly statesmanship and so I will do my best to fill this role.

During the past 34 years, I have spent con-

siderable time, much effort and a lot of money "obsessed" with the eradication of Pink Bollworm. This cotton pest first appeared in Texas during the First World War and California during the mid 1960s. Many people within PPQ have contributed to the success we have enjoyed in managing PBW. After 30 years of sustained work and effort by PPQ, eradication is almost within our reach: it can be a reality or a dream lost. Unidirectional goals are a bit dangerous in agriculture, and after more than 45 years on the job (I started in a lab at age 15) it is difficult to identify enduring contributions. Eradication of PBW would fit in that category. This gets me thinking about accomplishment versus work.

What is an accomplishment in CPHST and to whom should it be directed?

As USDA employees we are first responsible for supporting agriculture, then we serve USDA, APHIS, PPQ, CPHST, the labs (in my case) and finally ourselves. Chuck Schwalbe observed that PPQ staff really can only count on a few real accomplishments:

1. We do our best to stop invasive pests from entering the United States;
2. Find it if it gets in;
3. Kill it when it gets here (eradication).

To that list I would add:

4. Manage it if all else fails (biocontrol, for example).

As CPHST employees then, our true accomplishments can only occur when we find, develop and transfer existing or new technology to enable the Agency to do the above four things. In my

view, the accomplishments arena is what we and PPQ are all about. It's the only place where we are unique. For example, if we give money to a state solely to do a job (eradicate a pest) and they do it, then the state realizes the accomplishment, not PPQ or CPHST.

Where does "work" fit in? Obviously all accomplishments require work. However, not all work leads to accomplishment. Work is administrative tasks (service), work is movement of information (service), work is storage and retrieval (service), work is planning and documentation and work is the gathering of data. The list goes on and on. Much of it is service to those who are in a position to directly kill it, stop it or find it (the bugs, that is!) Leadership is work (a hell of a lot of work), but much of work is process and when process overtakes accomplishment, we as a group (CPHST and PPQ) as a whole have no further reason to exist.

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**Left: Bob Staten** examining a cotton plant for signs of PBW oviposition.  
**Right: Bob Staten and Larry Antilla**, Director of the Arizona Cotton Research and Protection Council, evaluating pheromone trap counts in early stage cotton for PBW.