The word "change" has been bantered about over the last several months as we prepare for the upcoming Presidential elections. What is interesting about the word "change" is that without a modifier or the word being provided in some context it is generally unclear what the writer or speaker intends. Perhaps that is why it is a word so useful to the politician. We change our roster of graduate students each year by sending some off with what we hope is some acquired amount of knowledge and wisdom to be successful in the career they are about to undertake. New graduate students take their place and begin the rigors of pursuing an advanced degree. This change is generally accomplished without too much fanfare. However, change in faculty ranks is a bit more sobering as it usually marks the passing of a significant block of time and the end of the daily contributions of a valued colleague to the scientific enterprise of research, instruction and/or extension. Such is the case this spring with the retirements of Dr. Alex Cinos at the Tifton campus and Dr. Charles Mims at the Athens campus. These two senior leaders of the department leave a legacy of achievements, accomplishments, and contributions that span both time and what we do as a department in the development of new scientists, contributions to the body of scientific inquiry, and exposing young minds to aspects of the field of plant pathology. Hopefully in filling these areas of endeavor, young professionals equally as capable and collegial will be obtained to leave a valued legacy in the future.

Transformational change can certainly be applied to what is happening to commodity prices, policy and acreage of crops. Georgia remains one of the more agriculturally diverse states in the nation, with each plant production system having its own set of problems and needs. While the disease triangle remains the same, new approaches to mitigate disease development continue to emerge through cooperative programs in research and extension in the department, between departments, and between universities. Much like the development of plant diseases, combating them has become a regional effort. Inside I hope you take the time to read about some “Innovations and Transformations” fostered by work in the department that are addressing in novel ways the ever changing needs of some of the industries we serve in Georgia and elsewhere.

As this newsletter is distributed, I will be completing a three year half-time appointment at USDA-CSREES in the Competitive Programs Unit in Washington, D.C. This has been an interesting opportunity to see change and attempts at change at the Federal level. The funding of science in support of the agricultural production systems that provide food, fiber, feed and now fuel is challenged. There are many perspectives on both the amount of funding necessary to support research, extension and instruction, and the best way to allocate and manage those resources. I urge you when you have the opportunity to discuss funding at the Federal, state or local level that you remind policy makers the importance of agricultural research. Regardless of how that discussion evolves, we all know that if plants are grown there will be plant diseases. And while the phone call on a new threat may come at 6 a.m. instead of 3 a.m., I hope you find in these pages the evidence that the faculty, staff and students in the department are poised to address the needs of Georgia and others in plant health. While other things may change, what has not is my hope that this newsletter finds you and your plants in good health.

John L. Sherwood, Professor & Department Head

The University of Georgia • College of Agricultural & Environmental Sciences
Amy Maguire Glidewell joined the department in October 2007 as a Research Professional in Dr. Shavannor Smith's laboratory. She received her Bachelor's degree in Environmental Studies and Psychology at Emory University in 2001 and recently began pursuing her Master's degree in Environmental Science at the University of Florida in the Soil and Water Science Distance Education Program. Amy previously worked as a research technician at Yerkes National Primate Research Center in Atlanta and the Aquatic Biotechnology and Environmental Laboratory at UGA.

Linda Genzlinger joined the department in May 2007 as a Research Professional in Dr. Ron Walcott's laboratory. She received a Bachelor's degree in Microbiology from the University of Wisconsin, Oshkosh in 1995 and has been working at UGA for the last six years. Linda previously worked in the UGA Department of Food Science and Technology, and she also spent 2 years at the UGA Experiment Station in Griffin doing research at the Center for Food Safety. Linda now performs research related to pathogen detection and mechanisms of infection and disease transmission of seed borne pathogens.

Ganpati Jagdale joined our staff as an Extension Nematology Lab Manager on September 1, 2007. Ganpati received B.Sc. (Agric) in 1977 and M. Sc. (Agric) in 1979 from Mahatma Phule Agriculture University (MPAU), Rahuri, Maharashtra, India. Before moving to Canada, he worked as a faculty member in the Department of Entomology, at MPAU for nine years. Ganpati has completed his Ph.D. in Biology (Nematology) at the University of Newfoundland, St. Johns, NF, Canada in 1997. After receiving his Ph.D., he worked as a postdoctoral fellow in Nematology at the Agriculture and Agri-Food Canada, Delhi, ON, Canada. Before joining Plant Pathology, UGA, he worked as a research associate in Entomology/Nematology at the Ohio Agricultural Research and Development Center (OARDC), The Ohio State University, Wooster, OH. At UGA, one of his primary responsibilities is to provide accurate diagnosis of plant-parasitic nematodes in support of nematology research and extension programs in the College of Agricultural and Environmental Sciences. Also, relay nematode assay results to crop specialists, researchers, county extension agents and other clients through appropriate means (internet, e-mails etc.).

IN MEMORIAM

L. David Dwinell passed away May 2, 2007. Dave was an Adjunct Professor with our department and worked as a Research Plant Pathologist with the USDA Forest Service for 40 years. He received a B.S. in Horticulture from Colorado State University, a M.S. in Plant Ecology from the University of Denver and his Ph.D. in Plant Pathology from Cornell University. Early in his career he worked on diseases that affect pine production in the southeastern United States. His research expanded to include disease problems that affect seed and seedlings in nurseries. Later in his career he focused on international movement of wood and regulatory aspects of wood movement.
What's New With You?  We would like to hear from our alumni. Please supply us with any updated information, comments, and news (career activities, honors and/or achievements, etc.) you care to share by sending an e-mail to pathath@uga.edu. Also if you see an error in our information, please let us know so we can correct our records. Thanks!

Jianchi Chen (M.S. 1988) is a Research Plant Pathologist with the USDA ARS Crop Diseases, Pests and Genetics in Parlier, CA. His projects include epidemiology and management of Xylella fastidiosa and other exotic and invasive diseases and insect pests.; citrus stubborn disease in California; and genetic diversity and fingerprinting of Candidatus liberibacter Asiaticus strains.

Alan Walters (MPPPM 1988) is an Associate Professor of Vegetable Science in the Department of Plant, Soil, and Agricultural Systems at Southern Illinois University. Courses he teaches include home gardening, vegetable production and plant physiology. Alan’s research focuses on applied vegetable production including reduced tillage practices for vegetable production, polination ecology of cucurbit crops, vegetable disease management, and alternative crops.

ALUMNI WHO GRADUATED IN:

1938  C. C. Murray  M.S.  J. H. Miller
1948  Julian P. Craigmiles  M.S.  G. E. Thompson
1958  Samuel J. Rowan  M.S.  J. H. Miller
1958  Julian Crews  M.S.  A. A. Fleming
1966  Jimmy K. Golden  M.S.  W. M. Powell
1968  H. Harris West  Ph.D.  R. T. Hanlin
1968  Richard C. Churchill, Jr.  M.S.  W. M. Powell
1978  Walter H. Mitchell, Jr.  MPMPM  W. M. Powell
1978  John D. Lane  MPMPM  R. W. Roncadori
1978  Edward J. Mullaney  Ph.D.  K. E. Papa
1978  Bob Pohlad  Ph.D.  E. S. Luttrell
1978  Fred M. Shokes  Ph.D.  S. M. McCarter
1978  Marvin P. Stewart  MPMPM  M. S. Fuller
1978  Mitchell A. Yakrus  M.S.  N. W. Schaad
1978  Patsy A. Carathers  M.S.  W. M. Powell
1978  Johnny M. Enfinger  M.S.  S. M. McCarter
1978  Rolf R. Johansen  MPMPM  F. F. Hendrix
1978  Andrew M. Seckinger  MPMPM  J. T. Walker
1978  James E. Greer  M.S.  D.K. Bell & H.D. Wells
1988  Mark S. Hopkins  M.S.  S. M. McCarter
1988  John T. Labrincos  M.S.  F. W. Nutter, Jr.
1988  Arne J. Skarshaug  Ph.D.  R. T. Hanlin
1988  Jianchi Chen  M.S.  C. J. Cheng
1988  Edward W. Dixon  M.S.  R. W. Roncadori
1988  S. Alan Walters  MPMPM  W. K. Wynn
1998  Diane Bannwart  M.S.  R.W. Roncadori
1998  Charity Robertson  M.S.  Katherine Stevenson

Upon receiving his Ph.D. at UGA in 1978 under States McCarter’s tutelage, Fred Shokes went through the ranks from assistant to full professor at the University of Florida’s, North Florida Research and Education Center (NFREC) in Quincy, Florida. During his 20-year tenure at the NFREC he worked closely with the peanut breeding program and became the co-developer of three multiple-disease-resistant peanut varieties. Fred is currently the Director of Virginia Tech’s Tidewater Agricultural Research and Extension Center in Suffolk, Virginia. He also serves as the coordinator of the Peanut Variety Quality Evaluation Program, a multi-state varietal development and quality assessment program. He plans to retire in late 2008.

Edward J. Mullaney (Ph. D. 1978) is a Research Geneticist at the Southern Regional Research Center, ARS, USDA in New Orleans, LA. His research focuses on molecular modifications of fungal phytase to better adapt it for utilization as an animal feed additive.

Bob Pohlad ((Ph.D. 1978) has served as Professor of Biology and Horticulture and Program Coordinator for Horticulture at Ferrum College since 1978. His teaching areas include plant diseases, greenhouse management, field botany, and fungi. His research interests include the study of the morphology, taxonomy, and ecology of fungi on plants and in soil and plant litter. Dr. Pohlad has been an advocate for the use of computer technology in teaching and has received a number of teaching awards including the United Methodist Church outstanding teaching award and the Pew Appalachian Award for Outstanding Teaching in the Sciences.
The 19th Annual E. S. Luttrell Lecture was held April 9, 2008 on the Athens campus. Our invited speaker was Dr. Linda Kohn from the Department of Botany, University of Toronto. The title of Dr. Kohn's seminar was "Mechanisms of Fungal Speciation". Her research focuses on taxonomy and evolutionary systematics, population processes of fungi associated with agricultural (crops and weeds) or wild plants, and experimental evolution of speciation. After the seminar, a reception and dinner was held at Trumps.

From 1966 to 1970 Dr. E. S. Luttrell penned a bulletin in the department. Often included in these bulletins were commentaries by Dr. Luttrell or other members of the faculty. Many of these are as insightful today as they were thirty-some years ago.

A highlight of many careers is the invited review article where your insight is sought on how the scientific literature should be organized. Today the volume of scientific literature grows at a logarithmic pace, and from time to time the literature must be reviewed to glean the highlights of previous work. While the volume of literature may have been less 40 years ago, on 17 January 1967, Dr. Curtis R. Jackson addressed the Georgia Association of Plant Pathologists as outgoing President with his thoughts on the value of organizing scientific literature. At the time, Dr. Jackson was in the department working on diseases of peanut at the Tifton location. Perhaps insightful words to consider the next time you are asked for a review and perspective on things past.

The President of this Association usually functions as the instigator of the program and officiates at the meeting. Other than this his utility is rather low. I suggest that the President of this group should be expected to address the group each year on some subject of interest to him -- whether involving his scientific work or general facts and opinions.

I would like to speak briefly about the value to science and agriculture of the scholarly organization of scientific knowledge. Science as it now exists is a body of information organized mostly at simple levels. Each scientific report is organized to some extent, through the vital part - the interpretation or conclusions is often omitted. I am speaking now of a more general type of information organization such as exemplified by Neergaard's Danish Species of Alternaria and Stemphylium, Zaumeyer's Monograph of Bean Diseases, Chupp's Monograph of Cercospora or Gilman's Manual of Soil Fungi, or even some less ambitious but useful compilation. Should you think the libraries are geared with such compilations of information try to find a single source of rather detailed and accurate information on cotton diseases, pecan diseases, on species of Phomopsis, Phoma, Phyllosticta or Pythium, for example.

In emphasizing the word scholarly I intend to convey an idea of a writing beyond mere listing of names or briefly describing attributes of various categories of information. Everyone may not have scholarly inclinations but every professional person should have, at least, high standards of craftsmanship. Assemblages, i.e. technically collated information, of quality will necessarily have to be written by persons familiar with their subject. I submit, however, that a lifetime of experience is unnecessary and in fact restricts the influence of a person and his profession. Many of you in the audience have or will soon have the experience required for the task.

Such assemblages should encompass a world view of the subject. To do this eliminates a provincial aspect of the science and the scientist. Some subjects obviously are too broad to cover well in a lifetime, and geographic or other restrictions are reasonable solutions. The detail with which the literature on the subject is researched and used will determine the value of the finished work. However, the inclusion of exhaustive literature citations partly for the sake of staggering the reader or convincing him that you know everything about the subject is a waste of everyone's time. Of the reports written on a particular subject, for each illuminating article there are 2 to 30 variations on the same theme that may add essentially nothing to a larger view of the subject.

The value to the scientist, in addition to improving his ability at academic exercises, is mostly the intangible values of expanding his awareness. A certain volume of "spin-off" information - deficiencies, inconsistencies, errors to be corrected - will possibly lead him to profitable research areas. The value to Science lies in increased organization of diverse knowledge into an accessible, intelligible form. Plant pathological information that is now known is relatively disorganized and becoming more so each day. We are adding greatly to our specific knowledge without any great attempt to collate the knowledge.

The value of information retrieval systems is undoubtedly tremendous to scientists with access to fine libraries who are looking for references to work on a particular subject, but a handful of IBM cards or 5 yards of printout have very limited value to a plant pathologist in Tanzania, or even Tifton. Aside from the value of assembled information to agriculture in remote areas of the world all research workers benefit from a point of departure and some consolidation of facts.

All such assembled information is out of date by the time it is printed but this fact need not deter you from writing. It would be unusual for any person to have a final word on any subject. Ordinarily collections are never in bad repute if they are accurate. However, writers of such materials may be suspected at times of choosing a low order of scientific endeavor. Any scientist should, at least once, allay these suspicions by assembling a large body of disorganized facts.
Plant Disease Clinic Update

Those individuals engrossed in the plant industry hope Mother Nature will be more compassionate in 2008 than in 2007. Many retail plant nurseries, greenhouses, and farms were permanently closed, declared bankruptcy, or simply put, 'went under' due to the lack of available water to keep their inventory alive.

How does the drought affect plant pathologists and/or plant disease development? From a clinical perspective, plant disease pressure was low. Although the number of plant samples submitted to the clinic did not significantly decrease, many of the diagnoses given were ‘no disease – likely environmental and/or cultural problems’. This is not to say we did not see any plant disease problems. As most of you know, there are several stress related plant diseases.

HOMEOWNER SAMPLES:
On warm season homeowner turfgrasses (such as St. Augustine and Centipede), over half of the disease problems were attributed to the fungal pathogen, Gaumannomyces graminis var. graminis, also known as Take-all patch or root rct. To read more about this pathogen, please see the October 2006 Homeowner Report available on our Clinic Homepage. Nearly every homeowner tomato sample submitted to the diagnostic clinic in Athens was infected with TSWV (Tomato spotted wilt virus). Thrips, the vector of this virus disease, can be very abundant under dry conditions.

Other common homeowner plant disease problems encountered in the clinic included: large patch (Rhizoctonia solani) on Zoysia and Bermuda grasses, Volutella blight (Volutella buxi) on boxwoods, and Bot canker (Botryosphaeria obtusa) on apple.

COMMERCIAL SAMPLES:
The clinic in Athens also receives commercial plant samples from the ornamental, forestry, turf, and fruit industries. After turf, the most frequent commercial samples received are ornamentals and fruits. Because of the experience of persons in the commercial sector, samples submitted generally tend to be in better condition than the homeowner samples submitted. Additionally, more variability in the plant diseases isolated from commercial samples is encountered.

If you are interested in what plants and diseases are processed by the diagnostic clinics, this information can be found in the Annual Clinic Summary that is located on the clinic homepage (http://plantpath.caes.uga.edu/extension/clinic.html).

PROCESSED SAMPLES:
The graph below shows the number of plant samples processed in the Plant Pathology diagnostic clinics over the last three years. The numbers below were generated from the DDDI system summaries. Due to lapses of personnel in the clinics in 2006 and changes in the sample processing procedure, the number of samples submitted to the clinic by were down. Now that the clinic is in full operation, it is anticipated that the numbers will bounce back to what they once were before the homeowner clinic was closed (see 2005 numbers).

CLINIC STAFF:
The clinic in Athens is currently staffed by myself full-time and Jan Fowler in a part-time appointment. As part of my Homeowner IPM program responsibilities, I spend quite a bit of time traveling across the state giving talks and conducting trainings for agents, landscapers, and Master Gardeners. Hence, we try to communicate through county agents to clientele and as much as possible through electronic means. In Tifton, the diagnostic clinic is run by Jason Brock. Jason is also the Pecan Specialist for our department. If you have comments or questions about the lab in Athens, you can contact me at hthornto@uga.edu.

Holly Thornton, Homeowner IPM Specialist and Diagnostician
Outreach

"I scream, you scream, we all scream for...OUTREACH! Outreach for the past year has been busy and extremely rewarding for our department. We visited with old friends and made some new friends this past year, all whom were excited to learn about the science of Plant Pathology. Our outreach program opened up some new opportunities to visit with elementary, middle and high school students all throughout Georgia.

Each year we find ourselves happily participating at the Cleveland Road Elementary School Career Science Day. This year we added “smelly” and “oozing” to our collection of diseases specimens as we introduced the students to soft rot of potato. The magic word, a most difficult scientific term we use to describe a sign of some bacterial diseases, was ooze. Between the discussion about corn smut, oozing potatoes, and of course the peach mummies (or as the kindergarten class calls them “the monsters of plant pathology”), fun and learning was had by all. Once again, the chatter in the hallways was that the “sick plant lady” was back and this time she brought something gross.

Our participation in the 2008 Georgia Science Teachers’ Association annual meeting held in Athens, GA, gave us the chance to share Plant Pathology with 20 Georgia middle and high school teachers. This year, graduate student, Erika Scocco, assisted with the workshop as well as led the session on DNA extraction. This workshop gave us the opportunity to then visit Schley County High School and Whitfield Academy, and more schools will be visited in May 2008. At Schley County High School, we spent the day with the tenth grade science classes and learned that these students find it amazing that people can actually have the “back-nine” as their office, or that they could be the one to figure out ways to save the chocolate in the world. At Whitfield Academy, we were asked to participate in a Science Day with the elementary school.

Students from Pre-K to fifth grade were introduced to the world of plant diseases via a slide show and story time. I recommend that everyone spend some time with these younger students because it definitely renews your passion for Plant Pathology as they ask the most unusual question (and a lot of questions).

Our outreach efforts also included participation in some local events. We provided tours to students, teachers, and parents of the Georgia Science and Engineering Fair held at the beginning of April. Holly Thornton, our very own Homeowner IPM Specialist, provided students the opportunity to see some smut diseases of wheat and rust diseases under the microscope as she taught them how to prepare slides. After that students explored soft rot of potato and extracted DNA from bananas. Fall of the year found the department participating in the annual South Campus Tailgate event. This event gives us a great opportunity to see old faces as alumni come into town and to reach out to the younger generation of future UGA students.

Other outreach efforts had the Department of Plant Pathology participating at the Georgia FFA Career and Trade Show and the Gwinnett Alliance for Gifted Education Summer Fair. We also worked closely with the Georgia Center for Continuing Education Summer Academy at UGA providing instruction for their Sci-Dawg and DAWGwarts camps. Students spent the week exploring soft rot of potato, extracting DNA, learning about signs and symptoms, and even extracting nematodes. The latter of those camps had a Harry Potter theme with Kisha participating with the middle school students on their last day of camp by acting as the score keeper during their Quidditch match.

This year we were invited by Sigma Alpha, a professional agricultural sorority for women, to participate in an Ag Awareness Day held at the Tate Center. Graduate student Brijesh Karakkat assisted with the booth as we reached out to our fellow students, staff, and faculty outside the College of Agricultural and Environmental Sciences in an effort to show them what we are about. We were also
asked to participate in the first Madison County Ag Celebration Day. Graduate student Lorna Nissen assisted with the booth as we visited with the more than 200 visitors at the event.

Twenty-four Georgia high school students participated in the Georgia Plant Science Scholars summer residential program. This year three teachers, Melissa Hubbard, Vicki Duncan, and Reva Utz, from Gordon Central High School in Georgia acted as chaperones at the event. Students participated in tours, hands-on activities with Plant Pathology, Horticulture, Crop and Soil Science, and Entomology. Students were also treated this year when the visit to Sanford Stadium included a trip into the UGA Football team private locker room. This year added yet another treat as we charted a bus to visit the APHIS facility in Atlanta. Part of that trip included meeting the Beagle Brigade. GAPSS was sponsored this year by the College of Agricultural and Environmental Sciences, Plant Pathology, Horticulture, Crop and Soil Sciences, Entomology, Agricultural Commodity Commission for Cotton, Bob Kemerait (Associate Professor), Bob Parker and Golden Peanut LLC.

Outreach was fun and educational, as well it should be. Most importantly we opened the eyes to many who now see the world in a whole new way. If you are interested in participating in an outreach project or would like help creating one for your area please contact Kisha Shelton (kshelton@uga.edu).

Kisha Shelton, Program Coordinator III

Mr. Unessee Hargett's community program on the Black Shank farm at Tifton made the news this year. Here is the story published in the Tifton Gazette http://www.tiftongazette.com/homepage/local_story_359210049.html).

Tifton — An article in the Valdosta Daily Times, “Food Bank asks folks to plant a row,” caught the interest of Unessee Hargett, agricultural research coordinator with the University of Georgia, Tifton Campus. Hargett took this idea of growing food for the needy by planting an extra row in a garden for the hungry and turned it into an educational project for students in Valdosta and Tifton. Hargett's goal is to educate and teach students about agriculture, but he doesn't stop there. He not only brings a spark of interest to students in learning about agriculture by providing them the opportunity to experience hands-on learning, but he also teaches them about giving to their community by supporting the local food bank and other charitable organizations and to take some of the crops they grow home, giving their families the benefit of enjoying the crops they grow and sharing their knowledge with their families. "We are on our way to doing some good things... It's a good incentive and initiative for kids to learn by planting crops and supporting their communities and, at the same time, giving them pride in their accomplishments," Hargett said. This is Hargett's second year working with teachers and students from Annie Belle Clark Primary School and his first year working with students from J.L. Lomax Elementary in Valdosta with the Plant A Row Program. "I took the lead, but everybody in Plant Pathology helps out. It's a joint effort," Hargett said. Hargett bragged on the support he receives from local businesses. "The tractor was donated by Mr. Jack Perrin from Perrin Farm Equipment; the commercial grade seeds were donated by Mr. Van Lindsey from Seminis Seed Company; and a $500 donation was received from Mr. Brad Hartley, Credit Bureau Associates, Valdosta, to purchase T-shirts for the students participating in Plant A Row."

Hargett is thrilled that the Plant A Row program in Tifton and Valdosta has taken off to a great start. He has seen first-hand what the students get out of the program and encourages everyone to do a part. "Have a garden and take some of what you grow to the food bank," Hargett said. Hargett's plan for Plant a Row is to donate food monthly or weekly on a year-round basis. He will continue the program through the summer with students in the summer school programs. Anyone interested in helping with the program is encouraged to contact Hargett at 229-392-3732.
The Department of Plant Pathology is pleased to announce a new multidisciplinary undergraduate certificate in Integrated Pest Management. Because insects, weeds, and plant diseases are a constant threat to the production of row crops, fruits, nuts, turf and ornamentals, Georgia’s plant production industries depend on integrated pest management to remain profitable. Keeping up with advanced techniques and methods is a difficult task for business managers, and most rely on outside expertise to stay current and profitable. Skilled entry-level personnel in integrated pest management will serve as valuable resources in Cooperative Extension, consulting, and commercial plant production industries. Graduates who have earned the integrated pest management certificate will be able to positively impact all areas of production, including the emerging area of organic farming. Improved pest management, resulting from better information flow and documented knowledge levels in newly-hired professionals, will help to stabilize production levels, and enhance profits. This certificate will recognize and document students who graduate with competency in integrated pest management, across the disciplines of Entomology, Plant Pathology, and Weed Science.

### Athens Courses Offered in 2007

**PATH/ANTH 2010**
- Plants, Pathogens & People (Walcott)

**PATH/FDST 2030**
- Marvelous & Malevolent Microbes (Denny)

**PATH/ANTH/PBIO 3010**
- Fungi: Friends & Foes (Mims/Gold)
- Intro Plant Pathology (Scherm/White)

**PATH/PBIO 4200/6200(L)**
- Introductory Mycology (Mims)

**PATH 4300/6300**
- Clinical Plant Pathology (Woodward)

**PATH 4400/6400**
- Plant Pathology for Teachers (Little)
- Nematology (Noe)

**PATH 6350**
- Plant Virology (Deom)

**PATH 8000**
- Field Plant Pathology (Brennen)

**PATH 8310**
- Epidemiology (Stevenson)

**PATH 8410**
- Advanced Plant Disease Management (Scherm)

**BTEC 4000L**
- Methods in Biotechnology (Deom/Gold)

**CRSS/ENTO/PATH 3500**
- Turfgrass Pest Management (...Burpee)

**CRSS/ENTO 4250(L)**
- Pesticide Management & Utilization (...Brannen)

**ENTO/CRSS/PATH 4740/6740(L)**
- Integrated Pest Management (...Buck)

**PBIO/PATH 8960**
- Genetics of Fungi (Momaney, Gold)

### Students Who Graduated in 2007

- Carolina Zuleta, M.S., Tim Denny
- Emily House, M.S., Jean Williams-Woodward
- Weibo Dong, Ph.D., Tim Brennenman
- Sara Sremillion, Ph.D., Albert Culbreath

### Current Graduate Students

*name, degree, major professor*

- Joao Augusto, Ph.D., Tim Brennenman
- Ada Bacetti, Ph.D., Charles Bacon
- Nadia Chacko, Ph.D., Scott Gold
- Bhabesh Dutta, M.S., Ron Walcott
- Sydney Everhart, Ph.D., Herald Scherm
- Jeff Garton, M.S., David Langston
- Jeremy Haralson, M.S., Brennen/Scherm
- Kimberly Jackson, M.S., Pingsheng Ji & Alex Csinos
- Kameka Johnson, Ph.D., Ron Walcott
- Brijesh Karakkat, Ph.D., Sarah Covert
- Kamalpreet Kaur, Ph.D., James Buck
- Yan Li, M.S., Culbreath/Guo
- Ping (Pamela) Lu, M.S., Kemerialt & Scherm
- Chris Martin, MPPPM, Jim Noe
- Katherine Mills, Ph.D., Mike Deom
- Marina Nadal, Ph.D., Scott Gold
- Lorna Nissen, M.S., C. J. Chang
- Edwin Palencia, Ph.D., Charles Bacon
- Jia Qiu, M.S., Culbreath/Stevenson
- Erika Scocco, Ph.D., Buck/Walcott
- Murat Seyran, M.S., Katy Stevenson
- Johanna Takach, Ph.D., Scott Gold
- Sara Thomas, M.S., Harold Scherm
- Hsien-Tzer Tseng, M.S., Tim Denny
Innovations and Transformations. Plant pathologists at UGA have always been responsive to the needs of clients and forged new areas of investigation to understand the nature of plant diseases. So it is not so much of answering the question “What have you done for me today?” in addressing issues in plant pathology, but “What will you be doing tomorrow?” Below are issues and approaches highlighting some innovative activities in the department that may likely transform disease management in the future.

Drs. Brannen and Chang have identified a new disease in the Georgia blueberry production region. This disease has been named bacterial leaf scorch, and it is caused by the bacterium Xylella fastidiosa. This disease has the potential to become a major detriment to blueberry production in Georgia and elsewhere, especially in the southern highbush blueberry varieties. Fortunately there is some varietal resistance, but at this early stage little is known about the epidemiology. However, Georgia, Florida, and other southern states provide ideal environments for both the bacterium and the suspected vectors to survive. Recommendations for disease management have been developed (http://plantpath.caes.uga.edu/extension/documents/BlueberryXylella.pdf).

Peanut stem rot caused large losses to growers in Georgia in 2007, in part because of the very favorable weather and in part because of the difficulty of penetrating thick peanut foliage with fungicide sprays. In Dr. Brenneman’s program trials were set up in replicated small plots to evaluate fungicide sprays applied either at night when the leaves were folded or during the day. His hypothesis was that night sprays would penetrate the foliage much more efficiently and protect the lower stems, crown, and even pods of the plant from infection. In these trials the same rate of fungicide was applied on the same day, the only difference being the time of application. There was a large and significant improvement in control of stem rot with the night versus the day sprays with two different fungicides in two trials. Foliar diseases were controlled equally well with either application timing. With many growers each year are using sprayers equipped with GPS systems it will be feasible to easily and accurately make this application for the benefit to Georgia farmers.

Dr. Culbreath, in cooperation with Drs. Corley Hobbrook and Patty Timper, USDA, Tifton, and Craig Kvien, UGA-NESPAL has released a peanut cultivar “Tifguard.” Tifguard is the first runner-type peanut cultivar with resistance to the peanut root-knot nematode and field resistance to tomato spotted wilt virus. In addition to resistance to TSWV, they found that this line also has resistance to Cercosporidium personatum, the pathogen that causes late leaf spot of peanut. This new medium maturity cultivar has the potential to greatly improve management of root-knot nematode and TSWV in peanut compared to the standard cultivar Georgia Green, as well as possibly reduce the fungicide inputs required for production.

Drs. Kemerait and Brenneman, in conjunction with scientist at Auburn and University of Florida have developed a prescription program for more efficient use of fungicides to manage diseases in peanut. This program facilitates quick development of a customized field based program to more save the grower money and use fungicides as effectively as possible. Syngenta Crop PrpsectOptmizes the benefits of this innovative approach to peanut disease management and has become the first crop protection company to embrace the prescribing approach. This is highlighted in the March 2008 issue of The Peanut Grower.

In Georgia, there are approximately 500,000 Hispanics, and the Green Industry and agribusinesses employ Hispanics as the backbone of their workforce. As there is a widely recognized need to develop bilingual information (English/Spanish) on disease etiology, epidemiology and effective disease management strategies on turfgrass and ornamentals, Dr. Martinez has developed a series of electronic bilingual (English/Spanish) publications and materials on turfgrass and ornamental disease identification and management. Publications were viewed and/or downloaded 39,418 times in 2006 and their popularity continues today. Sixty two percent of the visitors accessing these publications were located in the US, but visitors were also located outside US borders. These publications help to accurately and rapidly identify diseases, to implement disease control measures and reduce the cost of chemical treatments. Additional information can be found at: http://www.caes.uga.edu/publications/subject_list.html#PlantPath

Seeds for Georgia’s vegetable production are produced outside the state, thus there is great potential for nonindigenous plant pathogens to be introduced in seed. To exclude such organisms, work in the lab of Dr. Walcott has resulted in an approach to simultaneously detect multiple pathogens in seed samples. In particular, two of the most significant disease threats to cucurbits production that are seedborne are gummy stem blight and bacterial fruit blotch caused by the fungus Didymella bryoniae and the bacterium Acidovorax avenae subsp. citrulli, respectively. The standard seed assays for these pathogens require 14-18 days for completion and require familiarity with disease symptoms and pathogen morphology. A specific multiplex real time PCR assay was developed for the simultaneous detection of the causal agents of gummy stem blight and bacterial fruit blotch of cucurbits that can detect 2 of 5,000 infested with each pathogen. This assay is completed within 8 h, and will significantly increase the capacity of state and federal agencies to test seeds and planting materials that are imported for crop production.
Presentations

Phil Brannen attended and/or presented at the Southern Professional Fruit Workers Conference in Byron, GA; Sunny Ridge Grower Conference in Orlando, FL; Regional Small Fruit Guide Meeting in Fletcher, NC (organizer and meeting chair); American Phytopathological Society Meetings in San Diego, CA; Georgia Association of Plant Pathologists Meeting in Fort Gaines, GA; Southern Region of the American Society for Horticultural Sciences Annual Meeting in Mobile, AL; Southeastern Apple Growers Meeting in Asheville, NC; Southeastern Strawberry, Blueberry, Peach and Bramble Conferences in Savannah, GA. He also taught at the Blueberry IPM Training in Alma, GA; Peach Disease Clinic; DDD Microscopy Training and the Homeowner Fruit Session. Phil also gave presentations at the North Georgia Wine Grape Fall Meeting in Blairsville, GA; Alapaha Research Station Twilight Blueberry Tour in Alapaha, GA; North Georgia Wine Grape Meeting in Blairsville, GA; as well as at the Middle Georgia Peach Meeting; North Georgia Apple Meeting; and the Bacon County Blueberry Meeting.

Tim Brenneman gave an invited presentation on management of peanut diseases at a meeting in Chinandega, Nicaragua sponsored by the Peanut Growers Association of Nicaragua and participated in a Peanut CRSP exploratory trip to Haiti. He also attended and/or gave presentations at the Georgia Association of Plant Pathologists Meeting at Bagby State Park (he chaired a session on pecan diseases); American Peanut Research and Education Society Meeting in Birmingham, AL; Southern Division American Phytopathological Society Annual Meeting in Mobile, AL; Bayer Peanut Pathology Forum in Atlanta, GA; Valient Corporation Nationwide Staff Training meeting at Lake Blackshear, GA; and at the Georgia Pecan Growers meeting in Albany, GA. He also gave presentations at the Crisp/Doory/Wilcox peanut production meeting and the Sumter county peanut production meeting.

Jason Brock attended the Southeastern Pecan Growers Association annual meeting in Panama City Beach, FL; Georgia Fruit & Vegetable Growers Association Annual Meeting in Savannah, GA; and the Advanced Real-Time PCR Workshop, Theory and Laboratory, Cepheid in Sunnyvale, CA. He was also a speaker at the Annual Meeting of Georgia Association of Plant Pathologists in Fort Gaines, GA. Jason also presented lectures at the Extension Service County Faculty Training, Winter School and the Pecan Scout School as well as 12 county pecan production meetings throughout the state.

James Buck coauthored papers and/or attended the Georgia Association of Plant Pathologists Annual Meeting; North American Cereal Rust Workshop in St. Paul, MN; Eastern Wheat Workers & Southern Small Grain Workers Joint Conference in Tallahassee, FL; American Phytopathological Society Southern Division Meeting; and the American Phytopathological Society Annual Meeting in San Diego, CA. He also was a presenter at the Small grains/Canola Field Day in Tifton GA and was an invited speaker in the Plant Pathology Department at the University of Wisconsin-Madison.

Lee Burpee attended the Southern Division APS meeting in Mobile, AL and the GA Association of Plant Pathologists meeting in Fort Gaines, GA.

C. J. Chang presented papers at the American Phytopathological Society Annual Meeting in San Diego, CA.

Alex Csinos attended and/or presented papers at the SE Regional Fruit & Vegetable Conference in Savannah, GA; National Onion Labs Meeting; Southern Division American Phytopathological Society in Mobile, AL; Georgia Association of Plant Pathologists Meeting at Bagby State Park (served as Vice Chairman); Tobacco Cultivar Evaluation Meeting in Raleigh, NC; and the 1st International Phytophthora capsici Conference in Islamorada Keys, FL (served as organizer). Alex also organized and/or attended the Plant Pathology Department Picnic; Quincy Vegetable Tour; Georgia Tobacco Tour; Georgia Vegetable Tour; Kentucky Tobacco Tour and the Georgia Peanut Tour.

Albert Culbreath attended and/or presented papers at the Georgia Organics Annual Conference in Douglas, GA; Georgia Association of Plant Pathology Meetings in Ft. Gaines, GA; American Peanut and Research Society annual meeting (President) in Hoover, AL; American Phytopathological Society annual meeting; Alabama/Georgia/Florida TSWV Peanut Research Results and Planning Retreat in Ft. Gaines, GA; Mississippi Peanut Growers Association Meeting and Peanut Shortcourse in Hattiesburg, MS; and at the University of Florida, Marianne Agricultural Research Center Field Day. Albert also gave presentations at the Bayer Sponsored Meeting on Peanut Diseases in Braselton, GA; Georgia Peanut Commission update in Tifton; and the Tri-State Disease Tour in Tifton, GA. He also attended and served on the organizing committee for the Georgia Peanut Tour and gave field presentations to peanut growers and extension specialists from Mississippi at the UGA-CPES Rigdon Farm as well as to peanut growers, industry representatives and Kelley Manufacturing Company representatives from Brazil at the UGA-CPES Lang Farm.
Tim Denny attended and/or presented at the Georgia Association of Plant Pathologists annual meeting in Ft. Gaines, GA and the APS annual meeting in San Diego, CA.

Ron Gitaitis presented Biology and Management of Iris yellow spot virus (IYSV) and Thrips in Onions in Denver, CO and attended the Annual Georgia Association of Plant Pathologists Meeting at George Bagby State Park, GA.

Scott Gold attended and/or presented at the 24th Fungal Genetics Conference, Asilomar Conference Center in Pacific Grove, CA; USDA NRI Awardee Meeting in Washington DC; Annual Meeting of the American Phytopathological Society in San Diego, CA; National Workshop to Facilitate the Establishment of a National Culture Collection System (NCCS) in Beltsville, MD; and the University of Minnesota in St. Paul.

Richard Hussey attended and/or presented at the 4th World Cotton Research Conference in Lubbock, TX; Brigham Young University in Provo, UT; Monsanto Company in St. Louis, MO; APS/SON Annual meeting in San Diego, CA; and at the UGA Poultry Science Department and the UGA Plant Center Retreat. He also attended meetings with the research collaborators on nematode parasitism genes in Columbia, MO and at the USB funded Soybean Tissue Culture and Genetic Engineering Center in Kentucky.

Pingsheng Ji attended and/or presented at the Georgia Association of Plant Pathologists Annual Meeting in Ft. Gaines, GA; Annual Georgia Extension-Research Update meeting in Tifton, GA; American Phytopathological Society Annual meeting in San Diego, CA; First International Phytophthora capsici Conference in Islamorada, FL; and at the Valent Technical Launch meeting in Islamorada, FL.

Bob Kemerait conducted peanut production meetings in Guyana during May and Guyana and Haiti in September. He also attended and/or presented at the Annual meeting of the Philippine Phytopathological Society in Tagbilaran, Bohol, Philippines; Mississippi Peanut Growers' Association Meeting and Peanut Short Course in Hattiesburg, MS; Beltwide Conference of the National Cotton Council in New Orleans, LA; Georgia Peanut Commission's Farm Show in Albany, GA; Annual meeting of the Southern Division, APS in Little Rock, AR; Bayer CropScience Southeastern Consultant Conference in Greene County, GA; Annual meeting of Georgia Association of Plant Pathologists and the TSWV Peanut Rx Retreat at George T. Bagby State Park, Ft. Gaines, GA; Annual Meeting of the American Peanut Research and Education Society in Birmingham, AL; Annual meeting of the Southeastern Peanut Growers' Federation in Panama City Beach, FL; American Phytopathological Society in San Diego, CA; National Cotton Council Seedling Disease and Nematology Working Group Conference in Memphis, TN; National Soybean Rust Symposium, American Phytopathological Society in Louisville, KY; Soybean Expo in Statesboro, GA; Cotton Agent Training in Statesboro and Tifton, GA; Cotton Production Workshop in Tifton; Annual Florida Panhandle Peanut Short Course in Marianna, FL and was also an invited speaker for Iowa Researchers, Extension agents, and soybean growers at the North Florida Research and Education Center in Quincy, FL. He also attended and/or presented at the Bayer CropScience annual meeting of peanut pathologists in Braden, GA; Georgia Peanut Tour; Peanut Tri-state disease tour; Southern States Dealer Training, Peanut and Soybean Disease Management in Perry, GA; and at the Valent Technical Support Training, Cotton, Corn, and Soybean Disease and Nematode Management in Cordele, GA;

David Langston attended and/or presented at the Southeast Regional Fruit and Vegetable Growers Conference in Savannah, GA; Georgia Watermelon Growers Association meeting in Blackshear, GA; Georgia Association of Plant Pathologists meeting at Brumby State Park, GA; National Association of County Ag. Agents meeting in Grand Rapids, MI; Southeast Vegetable Workers Conference in Fletcher, NC; IR-4 Food Use Workshop in Tampa, FL; Annual Tomato Disease Workshop in Williamsburg, VA; Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions in San Diego, CA; and moderated a session at the 1st International Phytophthora capsici Meeting in Islamorada, FL. David also attended and/or presented at four Plant Disease Clinics and 15 county production meetings throughout the state; Commercial Vegetable Production meeting, Winter School; Commercial Vegetable Production Extension/Research Tour; Syngenta Crop Protection Disease Tour; Vegetable Production and Management meeting; Georgia Vegetable Extension-Research Update; and the Vidalia Onion Field Day.

Elizabeth Little attended the Georgia Water Resource Conference in Athens, GA.
Alfredo Martínez attended and/or presented at the CURLA University in La Ceiba, Honduras; El Zamarano University in Honduras; Spanish National Association of Greenkeepers Annual Meeting in Bilbao Spain; Turfgrass Institute and Trade Show in Duluth, GA; East Texas Turfgrass and Ornamental Growers, Texas A&M in Tyler TX; Georgia-Florida Green Industry Updates in Quincy, FL; Virginia Tech Sloan Foundation in Blacksburg VA and Princeton, WV; Southern Nursery Association Educational Series in Atlanta, GA; Georgia Association of Plant Pathologists in Fort Gaines, GA; GGIA Regional Seminars in Rome, GA; Georgia National Fairgrounds and Agricenter in Perry, GA; GGIA WinterGreen Conference in Athens, GA; and the Paspalum Disease Tour in Fort Lauderdale, FL. He also presented at four County Agent Training sessions; Lowndes County Landscape Update in Valdosta, GA; Northeast District Update in Griffin, GA; ARC Growers Meeting in Augusta, GA; North GA Turf Field Day in Gainesville, GA; Lowndes Co. Metro Master Gardener Association in Valdosta, GA; West Georgia Landscape Association in Douglasville, GA; South Metro Master Gardener Association in Griffin, GA; Multicounty Turfgrass Production and Maintenance Workshop in Toccoa, GA; Metro-Atlanta Master Gardener Association in Atlanta, GA; and the Columbia and Richmond Landscape Association in Martinez, GA.

Hunt Sanders attended the Southeast Regional Fruit and Vegetable Conference in Savannah, GA; Beltwide Cotton Conference in New Orleans, LA and the Georgia Association of Plant Pathologists meeting in Fort Gaines, GA.

Harald Scherm attended and/or presented at the NC Blueberry Council Open House in Clinton, NC; National Soybean Rust Symposium in Louisville, KY; LEAD21 leadership development in Kansas City, MO and Indianapolis, IN; CSRESS Soybean Rust Focus Group in Nashville, TN; Southern Professional Fruit Workers Conference in Byron, GA; National Plant Disease Recovery Syst. Workshop in St. Louis, MO; and the Fruit & Vegetable Conference in Savannah, GA. He was also an invited speaker at Iowa State University in Ames, IA and participated in the Comprehensive Phytopathogen Genome Workshop held in conjunction with the APS Annual Meeting in San Diego, CA (July 2007).

Shavannor Smith attended and/or presented at the UGA Annual Plant Center Retreat at Lake Lanier Islands, GA; UGA Maize Group Meeting; Department of Energy, BioEnergy Science Center task meeting and organizational group meeting; UGA Big Bioenergy Group meeting; and was a panel participant at the Athens Career Fair Day.

Katherine Stevenson attended and/or presented at the Bayer CropScience Peanut Cooperator Meeting in Braselton, GA; Annual meeting of the Southeastern Pecan Growers Association in Panama City Beach, FL; Georgia Association of Plant Pathologists in Fort Gaines, GA; Joint meeting of the Pecan Producers of Louisiana, Arkansas and Mississippi in Shreveport, LA; Annual meeting of the American Phytopathological Society in San Diego, CA; Georgia Pecan Growers Association Fall Field Day at Shiloh Farms in Hahira GA; and the Arizona Pecan Growers Meeting in Tucson, AZ.

Holly Thornton attended and participated in the National Plant Diagnostic Meeting in Orlando, FL; GGIA Wintergreen Winter School in Athens, GA; Georgia Organics Conference in Douglas, GA; GA Association of Plant Pathologists Meeting in Ft. Gaines, GA; National Association of County Agricultural Agents Annual Meeting and Professional Improvement Conference in Grand Rapids, MI; Georgia Association of County Agricultural Agents Annual Meeting; Georgia Arborist meeting in Dekalb County; Sunbelt Ag Expo in McUnitie, GA; Professional Improvement Conference in Waco, GA; 4th Annual Ag Week Kick Off PR with Governor; and the ACCG Farmhouse in Savannah, GA. Holly also conducted SE, SW, and NE Plant Disease Clinic Training; Agent Training in Griffin, GA. Holly also conducted training sessions at the Extension Winter School Training and/or Master Gardener Training sessions in Carroll, Clarke, Coweta, Cherokee, and Dougherty County as well as Rock Eagle and Griffin, GA. She also conducted a Pesticide Re-certification session in Clarke and Oconee County; Green Industry Updates in Cobb and Paulding County; GGIA Update in Cobb County; and SW and NE District ANR Updates.

Ron Walcott made presentations at the Department of Plant Protection, Shisheji University in Shisheji, China and at the Annual Meeting of the American Phytopathological Society in San Diego, CA.

Jean Williams-Woodward attended and/or presented at the Sudden Oak Death Science Symposium in Santa Rosa, CA; Southern Nursery Association in Atlanta, GA; Ohio State University Nursery Short Course / CENTs in Columbus, OH; University of Florida/FAS Pest Management Updates in Homestead, Balm, West Palm Beach, and Apopka, FL; Southeast Greenhouse Conference and Trade Show in Greenville, SC; CANR Open House in Deering, GA; GTA Turfgrass Institute and Trade Show in Duluth, GA; Augusta-Richmond County Grower's Breakfast meeting in Augusta, GA; and the GGIA WinterGREEN Conference and Trade Show in Athens, GA. Jean also conducted three Extension Winter Conference and Agent Training sessions at Rock Eagle, GA and Master Gardener programs in Athens, Columbia/Richmond, and Cherokee/Pickens/Gilmer County; County Agent Training sessions at Statesboro, Tifton, Griffin and Athens; NE District ANR Ag training in Oglethorpe County; ANR New Agent Foundations Training in Athens, GA; Winter School on the Road in Perry and Rome, GA and the GGIA School on the Road in Savannah, GA.


FOUNDATION
As a recipient of our newsletter you are aware of the vigorous programs in teaching, research and extension in the Department of Plant Pathology at The University of Georgia. Although we receive support from the public and private sectors for our mission and client directed programs, we rely on gifts to our Foundation accounts to facilitate our activities in recruiting the best and brightest students, to have outstanding scientists visit our institution and share their work with our students, staff and faculty, and to enhance the interaction of our faculty, staff and students to improve productivity. I hope you will give some consideration to helping us in our efforts to attract quality graduate students, to continue to have world class scientists visit the University of Georgia to interact with the faculty, staff and students, and to continue to improve the cohesiveness of our plant pathology programs. Please consider assisting us in these endeavors and do not hesitate to contact me if you would like additional information. Our current portfolio of giving opportunities include:

**Gwendolyn Burton Caldwell Plant Pathology Graduate Scholarship**
The newest of our endeavors, this fund was established with a bequest from the estate of the late Ms. Gwendolyn Burton Caldwell in 2005. Ms. Caldwell was a member of the faculty in the early 1940s, a colleague and co-author with Dr. Julian Miller on several seminal papers that provided a new basis for the classification of the Ascomycetes. Interest from this fund will provide the department the flexibility to assist excelling students to become better prepared to be competitive for employment in today’s highly competitive work environment.

**Plant Pathology Scholarship & Award**
This fund is used to recruit graduate students and provide an annual scholarship to graduate students who will be joining or are enrolled in our programs. Growth in this endowment will allow us to enhance our recruiting activities and provide a larger scholarship.

**E. S. Luttrell Lectureship**
The Luttrell Lectureship was established to honor E. S. Luttrell, a leader in the study of plant pathogenic fungi. While our current resources permit annual support of a lecture from an exceptional scientist based in North America, we hope the endowment will grow to insure our ability to bring world renown scientists to campus, regardless of their country location.

**Plant Pathology Development Fund**
These resources are used to enhance the development of the programs in plant pathology. Outreach programs are an important activity supported through this fund. We must find ways to inform the public about the opportunities and value of plant pathology. If you are uncertain which activity of the department you wish to support, I hope you will consider a contribution to this fund.

Additional information on giving to the Department can be found at http://www.uga.edu/externalaffairs/development.html or contact John Sherwood (sherwood@uga.edu, 706.542.1246).

---

The University of Georgia
College of Agricultural & Environmental Sciences
Department of Plant Pathology

Julian H. Miller Plant Sciences Building
Athens, GA 30602-7274

To: