



PLANT PATHOLOGY PENN STATE UNIVERSITY

2004 ANNUAL NEWSLETTER

From the Department Head (Dr. Leonard Franci)

Greetings from Happy Valley! Once again, we would like to bring you up to date on the activities of the Plant Pathology Department at Penn State. We hope you find these news bits an informative way to stay in touch. Please take a moment to drop a line that we can share with others in our next annual newsletter. Also, please visit the department's web site at www.ppath.cas.psu.edu to see what we're up to as 2005 unfolds.

The department had a very good year in 2004 with two new faculty hires, many large grant awards, and a record 13 advanced degrees conferred. Plant Pathology at Penn State is alive and well, ready to face the future as a leader in the discipline. Clearly, the department's ability to exploit opportunities, turn out top-notch graduates, seek out and lead new academic initiatives, and serve its constituencies will determine our collective fate in the years ahead.

The reality of public land grant universities across the country, including Penn State

University, continues to change from the 20th century model. No longer can we expect strong support from the federal government. No longer will the state automatically increase their allocation to keep pace with inflation and meet pressing needs. In fact, faculty members have to be very creative in putting together a research program that supports students, skilled staff, and operations.

One way that friends of the department can help us cope with the new reality is through tax-deductible donations. We have a number of designated funds in the department that target student education, reward teaching excellence, and endow research programs. Details on these funds are presented later in this newsletter. I encourage you to make a donation to the department or inquire further about how to start a new endowment. Please support our efforts to fulfill the land grant mission with your generosity.

On a personal note, I had a fulfilling year leading a great group of people. I found a little extra time to write some grant proposals on disease forecasting and hope to have the benefits of mushroom compost to vegetable productivity on display at the 2005 Ag Progress Days. Although I'm trying to keep up a modest research program, my biggest joy comes when a professor lands a big grant, a graduate student passes their final exam, or a staff member provides extraordinary service. You'll read many success stories of faculty, graduate students, and support staff told herein. A great many of the people in the department distinguish themselves by their achievements.

JOHN AYERS directs the Penn State Pesticide Education Program, which helps ensure proper use of pesticides on the farm and in urban settings. **Janis Marshall, Sharon Gripp, Kerry Richards, Julie Watson, Rick Johnson, Eric Lorenz,** and **Jimi Gingerich** assist John in this effort. John also serves as co-director of the Northeastern Pest Management Center, a joint effort of Penn State and Cornell Universities.

PAUL BACKMAN has active programs in biological control and biosecurity, which are

supported by **Kim Paley** as the technical assistant. The USDA at Fort Detrick has funded a project on biological control of Canada Thistle, that supports the MS program of **Anissa Demers**. A second MS student, **Rachel Melnick**, researches cocoa endophytes and disease control that are supported by USDA's international programs group.

DAVE BEYER has extension responsibilities for mushroom grower production problems. **Vija Wilkinson** assists Dave in the lab and **Jeremy Uncles** is working on his MS. **Jacki Kremser** left the group due to personal reasons.

BARBARA J. CHRIST organized the first International Powdery Scab Workshop and it was held in conjunction with the Annual Potato Association of America meetings in Scottsbluff, NE. Barb was the PI of a grant from USDA-ARS that helped sponsor the workshop. Barb coordinated the activities of this workshop and was the moderator of the symposium "*Spongospora subterranea*, causal agent of powdery scab and vector of the mop-top virus". The speakers for the symposium were experts from the UK, New Zealand, Switzerland, and Denmark. For several of the international guests, Barb was able to arrange a flight to a corporate farm in the San Luis Valley of CO, with all expenses paid by the grower.

Barb was elected as Junior Councilor-at-large for the APS society and will sit on council for the next 3 years as she moves from junior to senior councilor-at-large.

Ruofang Zhang graduated in the summer semester with her PhD. She has returned to China and holds a faculty position at the College of Life Sciences, Inner Mongolia University located at Huhhot, Inner Mongolia. This university is located in her home province. She plans to continue her research interests in breeding potatoes for disease resistance. She and her husband, Min, experienced reverse culture shock after spending many years away from home.

Damitha Wickramasinghe and **Chris Burkhart** have joined the potato program as graduate students. **Xinshun Qu** continued his

postdoc while **Sara May** split her time with the Diagnostic Clinic. **Mike Peck** provided field research support with help from **Chad Moore**.

HERB COLE is an assistant to Daney Jackson, the Associate Vice President for Outreach and Cooperative Extension. Herb also serves as the Professional Development Regional Coordinator for the Northeast Sustainable Agriculture Research and Education Program (SARE). **Shirley Gryczuk** is a project associate working with Herb in the Northeast SARE program. Dr. Cole has announced his intent to retire from the faculty in 2005.

DON DAVIS contributes his expertise in forest and shade tree pathology and teaches a popular undergraduate (Tree Diseases) and a graduate course (Plant Disease Diagnosis with **John Peplinski**). He currently mentors **Mark Schall** and **Lee Kline**, MS candidates, and co-advises **Teo Orendovici**, a PhD candidate in Ecology.

ERICK DE WOLF is now in his fourth year on the faculty and has been working to develop extension and research programs for field crops. His research on Fusarium head blight of wheat has led to the development of a disease forecasting system that was delivered in 23 states this past year. Interested parties can see the models at www.wheatcab.psu.edu. **Nick Dufault** defended his MS thesis research on the ecology of the fungus causing Fusarium head blight in wheat. Nick has begun a PhD program in the Department working with Dr. De Wolf and **Dr. Isard** on soybean rust epidemiology. **Julio Molineros** is now in his second year as Ph.D. and has made great progress in developing the disease prediction models for Fusarium head blight. **Norm Conrad** splits his time between PhD studies and extension responsibilities.

DAVE GEISER, who was promoted to Associate Professor, continues to lead the Fusarium Research Center with the able assistance of **Jean Juba**. **Ameena Nalim**, **Jozsef Geml** and **Carla Garzon** all finished their PhDs in the past year. Dave participated in the Fusarium Laboratory Workshop in Pretoria, South Africa and gave a symposium talk in Japan at the International Congress of Culture Collections.

Dr. Rafael Jimenez-Diaz, who is a world leader in the integrative management of Fusarium wilt of chickpea, spent a sabbatical in Geiser's lab.

FRED GILDOW studies the mechanisms of specificity between viruses and their insect vectors. **Bill Sackett** provides able technical assistance while **Chris Wallis** finished his MS degree and went to Ohio State for a PhD. **Xiaolong Yang** joined the lab to work on transmission of barley yellow dwarf virus.

JOHN HALBRENDT continues to work closely with the Plum Pox Virus (PPV) eradication program in cooperation with the Pennsylvania Department of Agriculture and USDA/APHIS. One project is designed to detect wild reservoirs of the virus and another is designed to monitor virus movement as an early detection system. The eradication program appears to be working, in that only four PPV positive plants were found in 2004 and the PPV quarantine zone was reduced this year because closely monitored areas have been virus free for the past three years. Other projects focus on the management of plant-parasitic nematodes and nematode transmitted virus in orchards and vineyards. The use of rotation crops and green manures to prepare replant sites is an environmentally sound approach and offers an option for organic growers. Nematology at Biglerville suffered a blow on October 1 when **Rod Shaffer** (worm wrangler extraordinaire) retired after 38 years of service to Penn State. However, **Phyllis Price** stepped up to do the work of two until a new worm picker can be trained. **Noemi Halbrendt** enjoys working upstairs with **Dr. Travis** and that makes it convenient for both of us. We're putting our combined expertise to the test by establishing a small vineyard at home. Our children, JD (4) and Nikki (7) are growing like weeds and both enjoy school very much.

SEOGCHAN KANG has contributed greatly to departmental expertise in molecular genetics since coming to Penn State. **Dr. Ekaterina (Katya) Nikolaeva** joined his lab July as a postdoc. She is a Senior Researcher and Vice Chief of the Bacterial Plant Disease Lab at the Russian Research Institute of Phytopathology. She current works at the PA Department of

Agriculture (PDA) to carry out a joint research project with **Dr. Seong-Hwan Kim**. **Sook-Young Park** is also a postdoc in the lab working on molecular genetics.

Yang Han, a student in the intercollege program in Genetics, joined Kang's lab to pursue a Ph.D. She has a BS degree from the Department of Biological Science and Biotechnology at Tsinghua University in Beijing, China. Continuing their graduate programs in 2004 were **Chang Hyun Khang**, **Lori Kroiss**, **Jean-Phillippe Marelli**, and **Hye-Seon Kim**.

GRETCHEN KULDAU began the year by attending the Gordon Conference on Biological and Chemical Terrorism Defense in California. She also attended three workshops on rating biological threats, such as plant pathogens and toxins, sponsored by the Department of Homeland Security. In keeping with the Homeland Security theme Dr. Kuldau taught a graduate course on Agricultural Biosecurity in spring semester. This course has now been proposed as an online World Campus course as part of the curriculum in the Masters program in Homeland Security.

Michele Mansfield, PhD candidate with Dr. Kuldau, is in the final year of her program. She won a first place award in the Environmental and Natural Resource Sciences at the College of Agricultural Sciences/Gamma Sigma Delta Research Exhibition for her poster presentation on mycotoxigenic fungi in corn silage and a third place award in the Health and Life Sciences section at the University's Graduate Exhibition. **Nik Zitomer** passed his candidacy exam in the spring and is now in the second year of his PhD program. **Brian Dombroski** has supported the work of everyone in the lab throughout the year. During the summer, Brian managed and executed our field studies at Rock Springs farm. He also performed many toxin analyses for our collaborative studies with **Erick De Wolf**.

Gretchen Kuldau, Michele Mansfield and Nik Zitomer attended the Mycological Society of America's annual meeting held in Asheville, NC. Nik gave a talk on his fumonisin research, Michele presented a poster and Gretchen spoke about *Penicillium* fungi in silages.

Later in the summer, Nik and Gretchen attended the APS Meeting. Gretchen served as Chair of the Mycotoxicology Committee and presented Michele's work on fumonisins in silage while Nik presented a poster on trichothecene production in *Fusarium*.



Gretchen Kuldau, Nik Zitomer, and Michele Mansfield enjoy a moment together

FELIX LUKEZIC is an emeritus professor who is still an engaged educator. He received an honorary appointment by the University Provost as a Emeritus Faculty Teaching Scholar. Not only does he teach a freshman seminar and a popular general education course, but he also conveys his love of plants to grade school students in a remarkable classroom session.

ALAN MACNAB continues his vegetable disease extension and research program for Pennsylvania growers. Tomato/potato late blight, cucurbit downy mildew, and vegetable Phytophthora blights were especially important during the past "very wet" growing season. Thanks to good work by many Penn Staters, both the late blight BLITECAST forecaster (Russ Hire, Bill Mills, Ray Krause, Lowry Massey, John Peplinski, Dave Mackenzie) and the early blight FAST-based forecaster (Stan Pennypacker, Larry Madden) helped us facilitate good control of these important diseases. With excellent cooperation from the PA Department of Agriculture and the PA Vegetable Growers Association, and excellent technical assistance (**Ellen Hay**), we are learning how to use NWS-based weather data to economically drive these early blight and late blight forecasters.

TIM McNELLIS researches plant defense mechanisms to bacteria and teaches "Phytobacteriology" and a popular general education course titled "Plant Stress: It's Not Easy Being Green." **Judy Sinn** is a Senior Research Assistant in the lab, and **Phil Jensen** is a postdoctoral researcher with the program. The graduate students (all PhD candidates) in the lab are **Justin Dillon**, **Tzoo-fen Lee**, and **Jianxin Liu**. Dr. McNellis was awarded a major NSF grant in 2004 to work on resistance factor(s) transmissible across a graft union.

GARY MOORMAN completed a 6-month sabbatical leave at VPI's Hampton Roads Agricultural Research and Extension Center in Virginia Beach, VA. He was hosted by Chuanxue Hong from May through October. He determined that a root rot causing major crop losses in hollies is being caused by *Phytophthora cinnamomi* in large nurseries in eastern Virginia and on the Delmarva Peninsula. The source of the infection was sought in a Maryland nursery that supplied the initial plant material as well as in the plant material, irrigation water, potting mix, and soil in and around the nurseries affected. Gary is continuing to examine all the isolates collected and hopes that DNA fingerprinting will match the holly pathogen to one or more of the isolates from other sources.

Carla Garzón (Ecuador) completed her PhD studies late in '03 on *Pythium* under the co-advising of **David Geiser** and Gary Moorman. In '04, she continued to work on *Pythium* as Gary's postdoc and completed experiments demonstrating that very low concentrations of propamocarb fungicide enhances disease development by *Pythium* on geraniums. This 'hormesis' or beneficial effect of a low concentration of a toxic material (in this case, beneficial to *Pythium*) is well recognized in medical circles but has not been examined in plant pathology. Carla also continues to work on the DNA fingerprinting of *Pythium* isolates from commercial greenhouses in an effort to trace specific root isolates to their points of origin in the production facilities and to identify fingerprints that are characteristic of fungicide-resistant isolates.

Jeniffer Yanez (Ecuador) is a Master of Agriculture student with Gary Moorman. She is taking extensive measurements of *Pythium irregulare* structures to determine whether what is currently called *P. irregulare* is actually two or more species. DNA analyses by Carla Garzón, Gary, and other researchers indicate that there are two species, possibly four, now lumped under that species name.

EVA J. PELL serves the university as Vice President for Research and Dean of the Graduate School. Dr. Pell advises **Hernan Romero**, who is in the intercollege Plant Physiology PhD program.

PETE ROMAINE is involved in the transgenic manipulation of the button mushroom for crop improvement. He is assisted in the lab by a postdoctoral researcher, **Carl Schlaghauer**.

DAN ROYSE conducts research on edible mushrooms. Dan is advising two graduate students, **Alma Rodriguez-Estrada**, an MS candidate working on bacterial blotch disease of oyster mushrooms and **Delphina Mamiro**, a PhD candidate working on production of the button mushroom on non-composted substrate. Dan currently serves as president of the World Society for Mushroom Biology and Mushroom Products based in Shanghai.

JOHN SKELLY carried a full schedule of research and teaching until his retirement at mid-year. His lab crew of **Dick Stevenson**, **Jon Ferdinand**, and **Jim Savage** then shifted gears to support the efforts of **Dennis Decoteau** and **Don Davis**.

ELWIN STEWART focuses his research and extension program in systematic mycology and grapevine decline with an emphasis on Petri Disease and Esca. He is ably assisted in the lab by **Nancy Wenner** and guided **Barrie Overton** to his doctorate and **Leslie Long** to an M.Agr. degree.

JIM TRAVIS is located at the Fruit Research and Extension Center in Biglerville. His responsibilities include tree fruit and grape extension and research. Over the last year, he

has coordinated an initiative involving tree fruit industry leaders, processors, and University personnel to begin the transition of processing apple orchards to organic production to support the marketing of organic processed apple products. Jim is assisted at University Park by **Jo Rytter**, in Erie by **Bryan Hed**, and in Biglerville by **Noemi Halbrendt**. Jim is currently on an ESCOP/ACOP national leadership development fellowship. He received the American Phytopathological Society award for 'Excellence in Extension' at the 2004 annual meeting in California.

WAKAR UDDIN leads the turfgrass pathology program. Wakar's research focuses on epidemiology and management of gray leaf spot (blast) and anthracnose basal rot diseases, and population biology of *Magnaporthe grisea* and *Colletotrichum graminicola*. He teaches two resident courses and one of the few Internet plant pathology courses. Wakar also operates a turfgrass disease clinic. **Mike Soika** assisted Wakar with field plots, while **Dr. Gnana Viji** worked as project associate in the lab (and became a mom!). **Bangya Ma** and **Upeksha Nanayakkara** are Ph.D. students in his laboratory.

Dennis Decoteau Receives a Courtesy Faculty Appointment

Dr. Dennis Decoteau stepped down as the Head of the Department of Horticulture last year and was appointed Professor of Ecosystem Health and Courtesy Professor in the Department of Plant Pathology. As part of his new duties, Dr. Decoteau assumes leadership of the air pollution research program formerly headed by **Dr. John Skelly**, who retired in 2004. Dr. Decoteau has formed a close collaboration with **Dr. Don Davis** to encompass research on air pollution effects on horticultural and forest plants. He also will manage the Air Quality Learning and Demonstration Center and teach Dr. Skelly's course "Air Pollution Impacts to Terrestrial Ecosystems." Dr. Decoteau assuredly will continue these activities in fine fashion and will become part of an important departmental legacy in air pollution research and education.

Scott Isard Appointed Professor of Aerobiology

Dr. Scott Isard, Professor at the University of Illinois joined the department in August 2004. Dr. Isard is an international leader in aerobiology and brings to the department expertise on the movement of biota in the atmosphere. Dr. Isard was partly motivated by the world-class meteorology program at Penn State and has a joint appointment (30%) in that department. Future advancements in botanical epidemiology as well as the maintenance of the security of agricultural crops are highly dependent on research and modeling in aerobiology. With pressing needs such as the soybean rust invasion, the department is extremely fortunate to have attracted Dr. Isard.

Maria del Mar Jimenez Gasco Appointed Assistant Professor of Plant Pathology

Dr. Maria del Mar Jimenez Gasco received an appointment as assistant professor effective 1 January 2005; she will research pathogen population genetic diversity as an approach to disease management. Dr. Jimenez Gasco was awarded a PhD from the University of Cordoba in 2001 and most recently was a postdoctoral research associate in **Dr. David Geiser's** lab working on *Fusarium* systematics. Dr. Jimenez Gasco will contribute to advanced strategies for managing pathogen virulence and plant resistance genes. Her interest in soil-borne diseases adds to the department's expertise in that area.

Endowment Funds Library Remodeling and Subscription to Electronic Journals

The Albert C. Hildebrandt Endowment funded a major remodeling of the departmental library in 2004. Besides the beautiful wood shelves and cabinetry, new capabilities include computer workstations and a copier/laser printer. The department also subscribed to electronic (on-line) versions of the three American Phytopathological Society journals, the Plant Health Management Network and the Canadian Journal of Plant Pathology. All members of the Penn State University community can access these literature sources. Plans call for greater

support of the department's need for information access and management.

Open House and Picnic Held

Members of the department were introduced to the recently constructed Air Quality Learning and Demonstration Center in May when **Dr. John Skelly** hosted an open house. Employees, friends, and families enjoyed a catered picnic, games, music, and lively conversation.



Paul Backman, Scott Isard, and Dennis Decoteau enjoy the picnic atmosphere.

John Skelly Retires

Dr. John Skelly retired from his position as professor on June 30th. John's service and association with Penn State began with his undergraduate studies in forestry in 1958, continued through two graduate degrees in plant pathology from 1962-1968, and resumed after an interlude at Virginia Tech when he returned to the department as its head in 1982. John and Linda now reside in rural Virginia near family.

David Geiser and Wakar Uddin Receive Tenure and Are Promoted to Associate Professor

Drs. David Geiser and **Wakar Uddin** were granted tenure at Penn State University and were promoted to Associate Professor in 2004. Dr. Geiser is an internationally recognized mycologist specializing in molecular systematics and is director of the *Fusarium* Research Center. Dr. Uddin leads the turfgrass pathology program in the department and contributes to the world-class turf management program in the college.

APS Excellence in Extension Award

Dr. Jim Travis received the 2004 Excellence in Extension Award during the national APS meeting in Anaheim. Dr. Travis was recognized for his leadership in promoting innovative and mission-critical extension programming to fruit growers. Specific examples of his work include early adoption of computerized expert systems, coping with the plum pox virus outbreak, and leading a transition to sustainable fruit production systems.

NE-APS Annual Meeting at Penn State

In October of 2004, the Department hosted the Northeastern Division-APS meeting. **Timothy McNellis** headed the local arrangements committee of **Barb Christ**, **Fred Gildow**, and **Elwin Stewart**. Their hard work help make the meeting very successful and made **Gary Moorman's** job as the Division President a simple one. Elwin did double duty by also arranging for Angus Dawe (New Mexico State) to deliver the Molecular Biology presentation. The State College weather cooperated and provided an enjoyable day for the tour of the Penn State elms (Jeff Dice, PSU Grounds Manager), the Valentine Turf Research Center (**Wakar Uddin** and **Mike Soika**), and the MTFD (**Dave Beyer**, **Tom Rhodes**, and crew cooked mushrooms). Several people were a great help behind the scenes and at the registration table including **Rita Smith**, **Jodi Shaw**, and **Roxanne Lease**.



APS President Jim MacDonald and NE APS President Gary Moorman.

NE-APS Division Award of Merit Goes to Skelly

Dr. John Skelly, Professor Emeritus of Plant Pathology received the 2004 NE-APS Award of Merit in recognition of his many contributions to plant pathology. Highlights of Dr. Skelly's career include international leadership in the effects of air pollution on plants, leadership of the department (1982-1985), and initiation of the Air Quality Learning and Demonstration Center.



John Skelly accepts the Award of Merit

Outstanding College of Agricultural Sciences Alumnus Award to Dr. Wuest

Dr. Paul J. Wuest, Professor Emeritus of Plant Pathology, was selected by the College of Agricultural Sciences as one of their Outstanding Alumni. Dr. Wuest, who received his BS in Horticulture and PhD in Plant Pathology, spent his entire academic career in the department (1964-1999). He is widely known for his expertise in mushroom production and trouble shooting. The Outstanding Alumnus Award recognizes his life-long service to the mushroom industry and his integral contributions to the academic reputation of the Plant Pathology Department.

Tim McNellis Receives First Excellence in Teaching Award

Dr. Timothy McNellis was selected as the recipient of the first annual Excellence in Teaching Award. Dr. McNellis teaches a general education course called “Plant Stress: It’s Not Easy Being Green” and a graduate course in “Phylobacteriology.” The award recognizes the extraordinary efforts of Dr. McNellis to improve his teaching effectiveness and create a superior learning environment. Once a new endowment named after **Dr. William Merrill Jr.** reaches its funding goal, the department will be able to recognize both a professor and a teaching assistant. Dr. Merrill himself was recognized by Penn State with a prestigious teaching award.

Cooperative Extension Spirit Award: Outstanding Research Partner

Dr. Barb Christ received recognition as an outstanding research partner due to her record of relaying new and useful information to Pennsylvania potato growers. Dr. Christ has established an outstanding outreach program to satisfy the needs of the PA potato industry.

College of Agricultural Sciences Employee Leadership Award

Becky Peplinski, administrative assistant, was recognized by the college for her superior leadership qualities. Becky always strives for excellence, which makes everyone around her look good. Without question, Becky makes the administration of the department a simple duty; moreover, five former heads wrote letters of support attesting to that fact.

Service Awards

35-Year Award: John E. Ayers

20-Year Award: Barbara J. Christ

15-Year Award: William M. Sackett, Judith P. Sinn, and Rita M. Smith

10-Year Award: Timothy L. Grove, Shirley M. Gryczuk, and Douglas A. Keith

5-Year Award: Timothy W. McNellis

Student Awards

Henry W. Popp Award

Anissa Demers

Michele Mansfield

Upeksha Nannayakkara

Harold J. Miller Memorial Award

Mary Beth Wiseman

Ben Cordivano

L. F. Lambert Spawn Company Award in Memory of James R. Roberts

Delphina Mamiro

Lester P. Nichols Memorial Award

Rachel Melnick

Arthur Gaspari Memorial Scholarship

Alma Rodriquez

Graduate Student Travel Award (Professional Development)

Lee Kline – Clemson University

College Travel Award

(Professional Meetings)

Chang Hyun Khang - APS

Michele Mansfield - MSA

Upeksha Nanayakkara - APS

Chris Wallis – APS Potomac

Core Staff News

Becky Peplinski, leads the office staff and serves admirably as the administrative assistant to the department head. Currently, **Rita Smith** is the receptionist, **Jodi Shaw** handles the bookkeeping chores, and **Susanne Hart** is in charge of graduate student programming. **Teresa Shirk** serves as the Buckhout Lab facilities, safety, and services coordinator. **John Peplinski** manages the Plant Disease Diagnostic Clinic, which processes in excess of 2,000 samples per year for Pennsylvanians. He is also the departmental liaison to the National Pest Diagnosis Network that was formed to coordinate communication among state and federal agencies. **Tom Rhodes** manages the Mushroom Research Center and Mushroom Test-Demonstration Facility, which supports research on mushrooms across departmental lines. Tom is assisted by **Doug Keith**, **Joseph Martain**, and **Henry Shawley**. **Randy Dreibelbis** received a promotion last year and is now the farm manager at Rock Springs. **Roxanne Lease** split her time between

managing the greenhouse on campus and providing support for the farm to fill some of the void brought on by budgetary constraints.

Wet Summer Completes Disease Triangle

A wetter than normal summer in Pennsylvania created ideal conditions for many diseases. From apple growers with scab epidemics to wheat farmers with Fusarium head blight, agriculturalists had a strong demand for management advice from plant pathologists. *Phytophthora infestans* was more active in tomato and potato fields last year than in the recent past and some growers who did not treat their crops in a timely manner lost everything. Next season, Pennsylvanians can look forward to the arrival of soybean rust!

Dr. William Merrill Memorial Tree

A memorial tree was planted and a commemorative plaque placed at the Spring Creek Park in honor of the late Dr. William Merrill, Jr. To mark the occasion, several of "Wild Bill's" colleagues and friends met at the park with Mrs. Mary Merrill on May 13, 2004, to share stories and to celebrate Bill's many contributions to Plant Pathology, to Penn State, and to the forest industry.

Department Endowments

Mushroom Industry Endowment	Supports research in mushroom science
A. C. Hildebrandt	Provide department library services
James O. Watts	Supports potato pathology research
Henry W. Popp	Graduate education
Arthur Gaspari	Graduate excellence in mushroom science
L. F. Lambert / J. R. Roberts	Graduate study in mushroom science
Lester P. Nichols	Graduate studies
Harold J. Miller	Undergraduate scholarship
Richard R. Nelson	Memorial lecture
Graduate Student Endowment	Supplemental equipment and operations
J. B. Swayne	Mushroom chair (pending)
William Merrill Jr.	Teaching excellence award (pending)

Department Display at Ag Progress Days a Big Hit with Kids

The Plant Pathology Department produced an educational display on spore movement for the August Ag Progress Days. A tent was dedicated to "super-sized" exhibits of splash, swimming, insect, and wind dispersal. The project was planned and executed by the department's outreach committee, led by **Dr. Erick De Wolf**.



Sara May (center) helps demonstrate how impact scatters spores

Department of Plant Pathology Profile

Number of Tenure-track Faculty	23
Courtesy Faculty Appointment	1
Number of Nontenure-track Faculty	4
Adjunct Faculty	9
Number of Postdocs	10
Number of Office and Facilities Staff	12
Number of Research Staff (hard \$)	9
Number of Research Staff (soft \$)	5
Number of PhD Candidates	14
Number of MS Candidates	10
Number of Interdisciplinary Students (all are PhDs)	4
Number of International Students	15
Assistantships from General Funds	8
Assistantships from Federal Grants and Contracts	11
Assistantships from Other Funding Sources	9
Graduating class of AY2003-2004	13

Open Faculty Searches

Plant genomics, biotic and/or abiotic interactions (open rank, choice of four plant science departments depending on incumbent's interest).

Research associate in Fruit Pathology, Fixed-term (3 yr), Ph.D. scientist/extension educator to be located at Biglerville.

Please contact the department for more information.

Correspondence

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Pycniosetosa polychroma, a splash-dispersed pathogen first observed at Ag Progress Days, 2004.

This publication is available in alternative media on request.

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