

American Phytopathological Society
Potomac Division, Annual Meeting
Program

The Inn at Virginia Tech, 901 Prices Fork Road, Blacksburg, VA 24061
March 21-23, 2007

Meeting Notes:

1. Speaker's or Presenter's name is in **Bold**
2. Posters are available for viewing throughout the meeting, and can be set up at your earliest convenience. Presenters, please stand by posters during the Poster session/social prior to the Banquet on Thursday.
3. **Thank you for TURNING OFF your cell phone during the meeting.**
4. Registration fee includes: Thursday lunch and dinner (banquet) and continuous break in Latham Foyer. Please help yourself!

Wednesday, March 21, 2007

- 12:00 PM -- 5:30 PM **Registration** (Latham Foyer)
- 1:30 PM -- 3:30 PM **Tour 1** – *Tree Walk of VPI campus* - **R. Jay Stipes**, Professor Emeritus of Plant Pathology, Virginia Tech, Blacksburg, VA (meet at registration table)
- Tour 2** – *Latham Hall and Plant Disease Clinic* - **David G. Schmale III** and **Elizabeth Bush**, Virginia Tech, Blacksburg, VA (meet at registration table)
- 4:00 PM -- 4:05 PM *Welcome* (Latham Ballroom B) - **Kate Everts**, APS Potomac Division President
- 4:00 PM -- 5:30 PM *Industry 'Extension' and Emerging Diseases Update (informal presentations, open forum and discussion)* (Latham Ballroom B) - Co-Chairs, **Steve Rideout**, Eastern Shore AREC, Virginia Tech, Painter, VA and **Arvydas Grybauskas**, University of Maryland, College Park, MD
- 5:30 PM -- 7:30 PM **Dinner** on your own in Blacksburg
- 7:30 PM -- 9:00 PM **Symposium I** (Ballroom B) – *Outstanding Collaborations between Basic and Applied Plant Pathology Programs.* - Chair, **Kate Everts**, University of Maryland and University of Delaware, Salisbury, MD
- 7:30 PM Development and Field Evaluation of Genetically Modified Peanuts with High Levels of Resistance to Sclerotinia Blight. **Darcy Partridge**, P. M. Phipps, E. A. Grabau, and S. M. Chriscoe, Tidewater AREC, VPI & SU, Suffolk, VA.
- 8:00 PM Managing Invasive Fungal Diseases of Cacao – Example of Multidisciplinary Effort. **Prakash Hebbar**, Masterfoods USA/USDA-ARS, Beltsville, MD.
- 8:30 PM *Ophiostphaerella agrostis*: From Classification to Control. **John E. Kaminski**, University of Connecticut, Storrs, CT.

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Thursday morning, March 22, 2007

7:00 AM -- 8:30 AM **Registration** (Latham Foyer)

8:30 AM -- 8:40 AM *Welcome* (Latham Ballroom B) - **Craig Nessler**, Associate Dean for Research, College of Agriculture & Life Sciences and Director of the Virginia Agricultural Experiment Station, Blacksburg, VA.

8:40 AM -- 9:00 AM *What's Happening at APS* - **Jan Leach**, APS President, Colorado State University, Fort Collins, CO

9:00 AM -- 9:45 AM **Session I, Contributed Papers, Oral.** - Chair, **Anne DeMarsay**, University of Maryland

9:00 AM Asian soybean rust epidemic of 2006 confirmed in 18 counties of Eastern Virginia. **P. M. Phipps**, D. L. Holshouser, S. L. Rideout, E. L. Stromberg, and M. E. Palm-Hernandez. Virginia Tech, Tidewater AREC, Suffolk, VA, Virginia Tech, Eastern Shore AREC, Painter, VA, Dept. Plant Pathol., Physiol. & Weed Sci., Blacksburg, VA, and USDA/ARS, Systematic Botany and Mycology Laboratory, Beltsville, MD.

9:15 AM Monitoring the development of downy mildew (*Phytophthora phaseoli*) of lima bean (*Phaseolus lunatus*) under field and controlled conditions. **L. Santamaria**, T.A. Evans, K. L. Everts, A. P. Grybauskas, and R.P. Mulrooney. Department of Plant and Soil Sciences, University of Delaware, Newark, DE, and Plant Science and Landscape Architecture, University of Maryland, College Park, MD and Salisbury, MD.

9:30 AM Regional and national activities in development of the Legume PIPE. **S. A. Tolin**. Virginia Tech, Plant Pathology, Physiology and Weed Science.

9:45 AM -- 10:00 AM **Break**

10:00 AM -- 12:00 PM **Symposium II** (Latham Ballroom B) -- *Diagnostics and Detection: New Directions.* - Chair, **Nancy Gregory**, University of Delaware, Newark, DE.

10:00 AM The NPDN Database: A National Program to Track Plant Diagnostics. **Eileen Luke**, CERIS, Purdue University, West Lafayette, IN

10:30 AM Plant Pathogen Diagnostics in APHIS/PPQ. **Mary E. Palm**, USDA-APHIS, National Identification Service, Beltsville, MD

11:00 AM Federal Regulatory Plant Pathogen Diagnostics Preparedness and Response. **Vessela Mavrodieva** and Laurene Levy, National Plant Germ Plasm and Biotechnology Laboratory, APHIS PPQ CPH ST, Beltsville, MD.

11:30 AM Research and Extension: Today's results drive tomorrow's opportunities. **Marty A. Draper**, USDA-CSREES, Washington, DC

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Thursday afternoon, March 22, 2007

- 12:00 PM -- 2:00 PM **Lunch** (Included with Registration), **Business Meeting** (Latham Ballroom A)
- 2:00 PM -- 3:00 PM *Graduate Student Paper Contest*. (Latham Ballroom B) - Chair, **Daniel Roberts**, USDA, ARS, Beltsville, MD
- 2:00 PM Characterizing isolates of cucumber mosaic virus from heirloom species at a Virginia historic site. **P. G. Chang**, R. Loveday, and S. A. Tolin. Department of Plant Pathology, Physiology and Weed Science, Virginia Tech, Blacksburg, VA.
- 2:15 PM Apple scab sensitivity to myclobutanil in Virginia. **S. C. Marine**, D. G. Schmale III, and K. S. Yoder. Department of Plant Pathology, Physiology and Weed Science, Virginia Tech, Blacksburg, VA and Virginia Tech AREC, Winchester, VA.
- 2:30 PM Induced resistance to *Globodera tabacum solanacearum* in tobacco. **V. Parkunan**, C. S. Johnson and J. D. Eisenback. Virginia Tech Southern Piedmont AREC, Blackstone, VA, and Department of Plant Pathology, Physiology and Weed Science, Virginia Tech, Blacksburg, VA.
- 2:45 PM Pathogenicity Evolution by Recombination in *Pseudomonas syringae*. **S. Yan**, R. Chiodini, J. Jenrette T. Mohr, and B. A. Vinatzer. Department of Plant Pathology, Physiology and Weed Science, Virginia Tech, Blacksburg, VA.
- 3:00 PM Etiology of verticillium wilt of *Ailanthus altissima*. **M. J. Schall** and D. D. Davis. Department of Plant Pathology, Pennsylvania State University, University Park, PA.
- 3:15 PM -- 3:45 PM **Break**
- 3:45 PM -- 4:30 PM **Session II, Contributed Papers, Oral** - Chair, **Keith S. Yoder**, Virginia Tech, AREC, Winchester, VA.
- 3:45 PM Effect of Verticillium Wilt of Ailanthus on Forest Composition. **M. J. Schall** and D. D. Davis. Department of Plant Pathology, Pennsylvania State University, University Park, PA.
- 4:00 PM Differentiation of live and dead cell of *Acidovorax avenae* subsp. *citrulli* in polymerase chain reaction assays using a DNA binding dye. **J. Feng**, J. Kim, J. Li, and N. W. Schaad. Department of Plant Pathology, China Agricultural University, Beijing, China and USDA-ARS FDWSRU, Ft. Detrick, MD.
- 4:15 PM Molecular characterization of *Pseudomonas syringae* 508, a naturally occurring *P. syringae* strain without type 3 secretion system and without effector genes. T. J. Mohr, J. Jenrette, and **B. A. Vinatzer**. Department of Plant Pathology, Physiology and Weed Science, Virginia Tech, Blacksburg, VA.
- 5:30 PM -- 7:00 PM **Poster Session/Social** (Latham Ballroom C) Poster titles listed at the end of the program
- 7:00 PM -- 9:00 PM **Banquet** (Included in Registration), **with awards and guest speaker, Lieutenant Colonel Stringer**.

Friday morning, March 23, 2007

8:00 AM -- 9:30 AM **Symposium III** – (Latham Ballroom B) *Bridging Engineering and Agriculture*.
Chair, David G. Schmale III, Virginia Tech, Blacksburg, VA

8:00 AM Unmanned Aircraft and Airborne Plant Pathogens: Bridging Agriculture and Engineering for Scientific Discovery and Outreach. **David G. Schmale III**, Virginia Tech, Blacksburg, VA.

8:30 AM Perception for Autonomous Tractor Operations. **Carl Wellington**, Carnegie Mellon University, Pittsburg, PA.

9:00 AM On-site Detection of Plant Pathogenic Bacteria with Real-Time PCR: Taking Cutting-Edge Technologies into the Field. **Norm Schaad** and **Aaron Sechler**, USDA-ARS, Fort Detrick, MD.

9:30 AM -- 10:30 AM **Travel to Kentland Farm for Field Demonstrations.**

10:30 AM -- 12:00 PM **Demonstrations at Virginia Tech's Kentland Farm.** (Maps provided at registration desk in Latham Foyer. 15-minute drive from the Inn)

Field Detection of *Xylella* or *Acidovorax citrulli* using Real-Time PCR. **Norm Schaad** and **Aaron Sechler**, USDA-ARS, Fort Detrick, MD.

Demonstration of an Autonomous Unmanned Aerial Vehicle Collecting Plant Pathogens. **Benjamin R. Dingus** and **David G. Schmale III**, Department of Plant Pathology, Physiology and Weed Science, Virginia Tech, Blacksburg, VA.

Visual Cueing from an Autonomous Unmanned Aerial Vehicle. **Craig A. Woolsey**, Department of Aerospace and Ocean Engineering, Virginia Tech, Blacksburg, VA.

Demonstration of Autonomous Lawn Mowers. **Brandon Horvath**, **David McCall**, **Shawn Askew** and **David G. Schmale III**. Virginia Tech, Blacksburg, VA.

Autonomous Ground Vehicles with Applications to Agriculture. **Charles Reinholtz** and **Alfred Wicks**, Department of Mechanical Engineering, Virginia Tech, Blacksburg, VA.

12:00 PM -- 1:00 PM **Boxed lunch at Virginia Tech's Kentland Farm. You must sign up in advance for a lunch!**

POSTERS: Set up Wednesday evening or Thursday morning, take down Friday morning (Latham Ballroom C).

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*We thank BASF Ag Products, Bayer CropScience, AgraQuest, Inc., Syngenta Crop Protection, Inc. for their sponsorship of the Thursday evening social and Friday box lunches.*

## Posters

Characterizing conserved effector proteins from *Hyaloperonospora parasitica*. **R. Anderson**, R. Jiang, D. Dou, X. Wang, B. Tyler and J. McDowell. Department of Plant Pathology, Physiology and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, VA, Laboratory of Phytopathology, Wageningen University, Wageningen, The Netherlands, and Broad Institute, Cambridge, MA.

Development of an autonomous unmanned aerial vehicle for aerobiological sampling. **B. R. Dingus**, D. G. Schmale III, and C. Reinholtz. Department of Plant Pathology, Physiology, and Weed Science and Department of Mechanical Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA.

Crosses between pycnia of *Puccinia arcoptili* from the United States, Russia, and Turkey. F. Eskandari and W. Bruckart. USDA-ARS, Foreign Disease-Weed Science Research Unit, Ft. Detrick, MD.

A biologically-based approach for white rust management on spinach. **K. L. Everts**, X. G Zhou and M. Newell. University of Maryland Lower Eastern Shore Research and Education Center, Salisbury, MD, Wye Research and Education Center, Queenstown, MD and University of Delaware, Georgetown, DE.

The RPP7 gene activates race-specific resistance to the downy mildew pathogen *Hyaloperonospora parasitica*. **T. Hoff** and J. McDowell. Department of Plant Pathology, Physiology and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, VA.

Single gene resistance and the increased frequency of severe epidemics of tobacco black shank in Virginia. **C. S. Johnson**. Virginia Polytechnic Institute and State University Southern Piedmont Agricultural Research and Extension Center, Blackstone, VA, and Department of Plant Pathology, Physiology, and Weed Science, Blacksburg, VA.

*Rhizoctonia zeae* and tall fescue. **D. S. McCall**. Department of Plant Pathology, Physiology and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, VA.

Nonpathogenic strains of the bacterial plant pathogen *Pseudomonas syringae*: potential tools to study host range and pathogenicity. **T. Mohr**, R. Anderson, P. Bowerman, J. Jenrette, J. Jelenska, J. Castillo, J. Greenberg, and B. Vinatzer. Department of Plant Pathology, Physiology, and Weed Science, Virginia Polytechnic Institute and State University, Fralin Biotechnology Center, Blacksburg, VA, and Department of Molecular Genetics and Cell Biology, The University of Chicago, Chicago, IL.

Functional genomic analysis of apple (*Malus*) ESTs associated with fire blight (*Erwinia amylovora*). **J. L. Norelli**, E. Borejsza-Wysocka, A. M. Baldo, H. S. Aldwinckle, C. L. Bassett, R. E. Farrel Jr., M. Malnoy, D. A. Lalli, S. S. Korban, K. Gasic, and M. E. Wisniewski. USDA-ARS, Appalachian Fruit Research Station, Kearneysville, WV, Department of Plant Pathology, Cornell University, Geneva, NY, USDA-ARS Plant Genetic Resources Unit, Geneva, NY, Pennsylvania State University, York, PA, and University of Illinois, Urbana, IL.

Trichothecene mycotoxin genotypes of *Gibberella zeae* in Virginia, New York, and North Carolina wheat fields. **D. G. Schmale III**, A. K. Wood-Jones, G. C. Bergstrom, and C. Cowger. Department of Plant Pathology, Physiology, and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, VA, Department of Plant Pathology, Cornell University, Ithaca, New York, NY, and USDA-ARS, Department of Plant Pathology, North Carolina State University, Raleigh, North Carolina, NC.

Diversity of the fungal genus *Fusarium* one hundred meters above the surface of the earth. **D. G. Schmale III**, B. R. Dingus, A. K. Wood-Jones, P. A. Khatibi, and C. Reinholtz. Department of Plant Pathology, Physiology, and Weed Science and Department of Mechanical Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA.

Using synthetic RPP8 gene clusters to model R gene evolution by meiotic unequal crossing-over. **S. Simon**, B. Woffenden, C. Gilbert, J. Jelesko, and J. McDowell. Department of Plant Pathology, Physiology, and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, VA.

Assessment of brown patch severity on tall fescue using digital image analysis. **V. Sykes**, B. Horvath, and D. McCall. Department of Plant Pathology, Physiology and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, VA.

Tissue blot immunoassay for high through-put detection of viruses for the Legume PIPE. **S.A. Tolin**, and M. Baldwin. Department of Plant Pathology, Physiology and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, VA.

Rapid detection of trichothecene mycotoxin genotypes of *Gibberella zeae* using real-time PCR. **A. K. Wood-Jones**, D. G. Schmale III, and J. F. Leslie. Department of Plant Pathology, Physiology, and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, VA, and Department of Plant Pathology, Kansas State University, Manhattan, KS.

Potential to use nematode community analysis to qualify how agricultural practice influence soil health. **I. A. Zasada** and H. Ferris. USDA-ARS Nematology Laboratory, Beltsville, MD and University of California, Davis, CA.

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Program Committee

Jay Norelli
David Schmale III
Dan Roberts
Inga Zasada
Tom Evans
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Elizabeth Bush
Steve Rideout
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