

26th Annual Tomato Disease Workshop

October 11-13, 2011

PROCEEDINGS



Cornell University

Department of Plant Pathology and

Plant-Microbe Biology

Ithaca, NY



26th Annual Tomato Disease Workshop

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Holiday Inn, Ithaca, NY 14850

Convener: Tom Zitter

Tuesday, October 11, 2011

8:00 – Noon Concludes	Tomato Breeder's Roundtable and Workshop (under separate registration) – Holiday Inn
12:00 – 12:45 pm	Travel to SolCAP -Pick up Registration Packet and name tags in the Holiday Inn lobby and load up for trip to Cornell (vans provided or your own transportation with parking permits provided as arranged)
1:00 – 5:00 pm	SolCAP Workshop - Mann Library Computer Lab, Cornell University Transportation needed to and from Holiday Inn; Break provided on Campus, and return to Holiday Inn
5:00- 7:30 pm	Registration in lobby of Holiday Inn (Pickup registration information)
6:30 – 9:30 pm	Welcome Reception at Finger Lakes Wine Center (Hors d'oeuvres and cash bar)

Wednesday, October 12, 2011

7:00 – 8:15 am	Continental Breakfast – Holiday Inn Ballroom
7:30 - 8:30 am	Registration - Holiday Inn lobby
8:30 am	Introductions Moderator – Tom Zitter, Department of Plant Pathology and Plant-Microbe Biology, Cornell University, Ithaca, NY. Welcome from CALS and CCE – Chris Watkins, Assoc. Director, CALS & Cooperative Extension Administration, Cornell University, Ithaca, NY.
8:40	The tomato genome sequence: an enabling platform for tomato biology - <u>James Giovannoni</u> , USDA-ARS Robert W. Holley Center and Boyce Thompson Institute for Plant Research, Cornell University, Ithaca, NY. 1 (Abstract) (PowerPoint)
9:05	Of tomatoes, genomes and databases (http://solgenomics.net/) - <u>Lukas Muller</u> , Boyce Thompson Institute for Plant Research, Cornell University, Ithaca, NY. 2 (Abstract) (PowerPoint)
9:30	Molecular basis of resistance to bacterial speck disease in tomato - <u>Greg Martin</u> , Boyce Thompson Institute for Plant Research & Department of Plant Pathology and Plant-Microbe Biology, Cornell University, Ithaca, NY. 3 (Abstract) (PowerPoint)

- 9:55 Multilayered strategies for attack, defense and counter-defense in the plant cell wall - Jocelyn Rose, Department of Plant Biology, Cornell University, Ithaca, NY. **4 (Abstract) (PowerPoint)**
- 10:15 – 10:25 **Discussion of previous talks**
- 10:25 **Break - Sponsored by Boyce Thompson Institute for Plant Research**
- 10:45 Integrated food safety and plant health approach to controlling microbial hazards in greenhouse tomatoes - Sanja Ilic¹, Sally Miller², Melany Ivey², Xuilan Xu², Fulya Baysal-Gurel², and Jeff Lejeune¹, ¹ Food Animal Health Research Program, ²Department of Plant Pathology, The Ohio State University, Wooster, OH. **5 (Abstract) (PowerPoint)**
- 11:05 Development of non-invasive inoculation methods of tomato fruit with *Geotrichum candidum* for the purpose of improving post-harvest disease management strategies - Kathryn Fiedler and Steve Rideout, Virginia Tech - Eastern Shore AREC, Painter, VA. **6 (Abstract) (PowerPoint)**
- 11:25 Challenges of providing tomatoes that are locally grown for large end retailers and CSAs - Amy Hepworth, Hepworth Farms, Hudson Valley, Milton, NY. **7 (Abstract) (PowerPoint)**
- 11:45 Launch of “Focus on Tomato” to a national audience - Phillip Bogdan, Communications Manager, Plant Management Network International, St. Paul, MN. **8 (Abstract) (PowerPoint)**
- 12:00 pm **Lunch – Sponsored by BASF**
- 1:00 pm **Session resumes**
Moderator – Teresa Rusinek, CCE, Sr. Extension Educator, Kingston, NY (Ulster Co.)
- 1:00 Using small RNA technology to efficiently identify tomato viruses and viroids in mixed-infected field samples - Kai-Shu Ling¹, Rugang Li¹, Patrick Wechter¹, Alvaro Hernandez² and Zhangjun Fei³.¹ USDA-ARS, U.S. Vegetable Laboratory, Charleston, SC, ² W.M. Keck Center for Comparative and Functional Genomics, University of Illinois at Urbana-Champaign, Urbana, IL, ³ Boyce Thompson Institute, USDA-ARS, Robert W. Holley Center for Agriculture and Health, Cornell University, Ithaca, NY. **9 (Abstract) (PowerPoint)**
- 1:20 Recessive begomovirus resistance from the *Solanum Lycopersicum* cv. ‘Tyking’ is conferred by the *Ty-5* locus - Samuel F. Hutton¹, John W. Scott, and David J. Schuster. IFAS, University of Florida, Gulf Coast Research & Education Center, Wimauma, FL. **10 (Abstract) (PowerPoint)**
- 1:40 Spotty results in our *Sw-7* tomato spotted wilt virus research - J. W. Scott¹, S. F. Hutton¹, S. M. Olson², and M.R. Stevens³. ¹University of Florida, Gulf Coast Research &

Education Center, Wimauma, FL; ²North Florida Research & Education Center, Quincy, FL; ³Brigham Young University, Dept. of Plant and Animal Sciences, Provo, UT. **11 (Abstract) (PowerPoint)**

- 2:00** Combining insect resistance with virus resistance to construct a dual system of virus control - Martha A. Mutschler¹, Darlene DeJong¹, Jessica Houle², and George Kennedy². ¹Department of Plant Breeding and Genetics, Cornell University, Ithaca, NY; ²Department of Entomology, North Carolina State University. Raleigh, NC. **12 (Abstract) (PowerPoint)**
- 2:20** Determining the impacts of acylsugar characteristics on whitefly response - Brian Leckie, Darlene DeJong, and Martha Mutschler, Dept. of Plant Breeding and Genetics, Cornell University, Ithaca, NY. **13 (Abstract) (PowerPoint)**
- 2:40** Screening of *Solanum pimpinellifolium* accessions for resistance to *Xanthomonas gardneri* - Debora Liabeuf¹, Sung-Chur Sim², David Francis². ¹Agrocampus Ouest, Centre d'Angers, Institut National d'Horticulture et de Paysage ²The Ohio State University, Ohio Agricultural Research and Development Center, Dept. of Horticulture and Crop Sciences, The Ohio State University, Wooster, OH. **14 (Abstract) (PowerPoint)**
- 3:00** **Break – Sponsored by DuPont**
- 3:20** Identification of useful sources of bacterial wilt resistance in tomato - Dilip R. Panthee, Department of Horticultural Science, Mountain Horticultural Crops Research and Extension Center, North Carolina State University. Mills River, NC. **15 (Abstract) (PowerPoint)**
- 3:40** Performance of hybrids combining genetic control to early blight and late blight with and without resistance to Septoria leaf spot - Martha A. Mutschler¹, Stella Zitter¹, Darlene DeJong¹, Tom Zitter², and Kelly Ivors³, ¹Department of Plant Breeding and Genetics, Cornell University; ²Department of Plant Pathology and Plant-Microbe Biology Cornell University, Ithaca, NY; ³ Department of Plant Pathology, Mountain Horticultural Crops Research and Extension Center, North Carolina State University. Mills River, NC. **16 (Abstract) (PowerPoint)**
- 4:00** Comparing the performance of early blight and Septoria leaf spot resistant materials in the presence and absence of fungicides - Tom Zitter¹, Stella Zitter², and Martha Mutschler². ¹Department of Plant Pathology and Plant-Microbe Biology and ²Department of Plant Breeding and Genetics, Cornell University, Ithaca, NY. **17 (Abstract) (PowerPoint)**

- 4:20** Initial characterization of *Corynespora cassiicola* affecting Florida tomatoes - Gary E. Vallad, Department of Plant Pathology, Gulf Coast Research and Education Center, University of Florida. Wimuama, FL. **18 (Abstract) (PowerPoint)**
- 4:40** Effectiveness of Vapam (metam sodium) at reducing root rot symptoms and improving yield in Ontario processing tomatoes - Cheryl Trueman¹ and K. Conn², ¹University of Guelph, Ridgetown Campus, Ridgetown, ON N0P 2C0, and ²Southern Crop Protection and Food Research Centre, Agriculture and Agri-Food Canada, London, ON. **19 (Abstract) (PowerPoint)**
- 5:00** *Phytophthora infestans* transmitted to seedlings growing from tomato fruit rotted by late blight - Margaret T. McGrath, Department of Plant Pathology and Plant-Microbe Biology, Cornell University, Long Island Horticultural Research and Extension Center, Riverhead, New York 11901. **(Abstract) (PowerPoint)**
- 5:30** **Adjourn – Stroll on the Ithaca Commons and refresh in the Fall air!**
- 6:30 – 8:30 pm** **Dinner at Holiday Inn (sit down dinner with cash bar)** – Guest speaker Dr. Jay Scott, University of Florida, “Philosophical Approach to Tomato Breeding – Is There Flavor Out There?” **(PowerPoint)**

Thursday, October 13, 2011

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- 7:00 – 8:15 am** **Breakfast – Holiday Inn - Ballroom**
- 7:30 - 8:15 am** **Registration – Holiday Inn Lobby**
- 8:30 am** **Morning session**
Moderator – Judson Reid, Cornell Veg. Program, Extension Specialist, Penn Yan, NY (Yates Co.)
- 8:30** Late blight on tomatoes and potatoes in eastern USA in 2011 - Kevin Myers, Giovanna Danies, Ian Small, William Fry, Department of Plant Pathology and Plant-Microbe Biology, Cornell University, Ithaca, NY. **20 (Abstract) (PowerPoint)**
- 8:55** A decision support system for late blight of tomato - Ian Small, L. Joseph, S. McKay, and W. Fry, Department of Plant Pathology and Plant-Microbe Biology, Cornell University, Ithaca, NY. **21 (Abstract) (PowerPoint)**
- 9:20** Differences in virulence of *Phytophthora capsici* isolates from a worldwide collection on tomato fruits - Leah L. Granke, L. M. Quesada-Ocampo, and Mary K. Hausbeck, Department of Plant Pathology, Center for Integrated Plant Systems, Michigan State University, E. Lansing, MI. **22 (Abstract) (PowerPoint)**
- 9:40** Evaluation of products for the management of Botrytis gray mold and bacterial canker in greenhouse tomato – David M. Ingram, Central Mississippi Research & Extension Center, Raymond, MS. **23 (Abstract) (PowerPoint)**

- 10:00** **Break – Sponsored by EnviroLogix**
Group Photo in Holiday Inn lobby and stairway - Kent Loeffler, photographer
- 10:30** Critical components of bacterial canker surveillance and management in field and greenhouse tomatoes - Sally A. Miller¹, Melanie L. Lewis Ivey¹, Fulya Baysal-Gurel¹, Xiulan Xu¹, Warren Arinaitwe² and Michael E. Bledsoe³. ¹The Ohio State University, Ohio Agricultural Research and Development Center, Wooster, OH, ²Makerere University, Kampala, Uganda and ³Village Farms International, Inc., Heathrow, FL. **24 (Abstract) (PowerPoint)**
- 10:50** Managing bacterial speck and bacterial speck-like diseases on fresh market tomatoes in New York - Christine D. Smart, Maryann A.B. Herman, Lisa A. Jones and Holly W. Lange. Department of Plant Pathology and Plant-Microbe Biology, Cornell University, Geneva, NY. **25 (Abstract) (PowerPoint)**
- 11:10** Greenhouse industry update and challenges - Michael E. Bledsoe¹, Erika Verrier²; Christy Goodman³; Dana Sfetcu⁴. ¹Village Farms International, Heathrow, FL, ²Backyard Farms, Madison, ME, ³EuroFresh, Snowflake, CA, ⁴Houweling Nurseries, Carmarillo, CA. **26 (Abstract) (PowerPoint)**
- 11:30** DNABLE™ field test kit for detection of *Clavibacter michiganensis* subsp. *michiganensis* in tomato tissue - Tania Spenlinhauer, Manager of Molecular Diagnostics Applications Development, EnviroLogix Inc. Portland, ME. **27 (Abstract) (PowerPoint)**
- 11:50** **Concluding Remarks and Selection of Next Year's Host**
- 12:00 – 1:00 pm** **Adjourn and Lunch – Sponsored by Agdia**
- 1:30 – 5:30 pm** **SCRI Greenhouse Tomato Disease Management Project – Holiday Inn**
- 1:30 – 5:00 pm** **Tour of Cornell Campus or Arboretum, visit to Plant Pathology Dept or Boyce Thompson Institute for Plant Research on Cornell Campus**

Special thanks for their help in organizing this workshop are extended to Tracey Sherwood, Tracy Holdridge, Dawn Dailey O'Brian, Carol Fisher, Andrea Gilbert, Mary Kreitinger, and Kent Loeffler. Thanks are also extended to Brian Leckie and David Kalb for their help in driving the vans for the SolCAP participants.

Thomas A. Zitter
 October 20, 2011