



Multi-Scale Influence of Weather on Pathogens and Disease Development

Synopsis

Plant disease progress is determined by a set of dynamic interactions between hosts, pathogens and biophysical environments. These interactions occur at multiple spatial and temporal scales, resulting in complex systems. In this session we will focus on the influence and importance of weather conditions (at multiple scales) on disease development, forecasting, and management. Talks will cover interactions at the intra-field/canopy scale, through to landscape connectivity and influence of continental/global weather conditions on disease development. The concepts, approaches, and data required to study the influence of weather at multiple scales on disease development will be presented.

Tuesday, July 31, 2018

08:30 - 10:30

📍 Hynes Convention Center - Room 312

Organizers

Odile Carisse

Agric & Agri-Food Canada

Ian M. Small

University of Florida

Subject Matter Committee Chairperson

Daniel J. Anco

Clemson University

Papers

The value of information across scales for weather-based management decisions

Karen A. Garrett, *Plant Pathology Department, University of Florida, Gainesville, FL; Emerging Pathogens Institute, Gainesville, FL; Institute for Sustainable Food Systems, Gainesville, FL*

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Can rainfall be a useful predictor of epidemic risk across temporal and spatial scales?

Emerson M. Del Ponte, *Universidade Federal de Vicosa, Vicosa, BRAZIL, Adam H. Sparks, University of Southern Queensland, Toowoomba, AUSTRALIA, Nik J. Cunniffe, University of Cambridge, Cambridge, UNITED KINGDOM*

and Laurence V. Madden, The Ohio State University, Wooster, OH

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Upscaling models, downscaling data or the right model for the right scale of application?

Adam H. Sparks¹, Karen A. Garrett², Christopher A. Gilligan³, Andrew Nelson⁴ and Keith Pembleton¹, (1)University of Southern Queensland, Toowoomba, AUSTRALIA, (2)Plant Pathology Department, University of Florida, Gainesville, FL, (3)University of Cambridge, Cambridge, UNITED KINGDOM, (4)University of Twente, Enschede, NETHERLANDS

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Stability of the Spread Parameter of the Power Law Model for Dispersal Gradients of Disease Epidemics

Peter Sande Ojiambo¹, Gent David², Lucky Mehra³, David Christie¹ and Roger D. Magarey¹, (1)North Carolina State University, Raleigh, NC, (2)USDA ARS, Corvallis, OR, (3)US Horticultural Research Lab, Fort Pierce, FL

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Using Predictions from a Fusarium Head Blight Risk Assessment Tool as Predictors of the risk of Deoxynivalenol Contamination of Wheat Grain

Wanderson Bucker Moraes¹, Erick D. De Wolf², Denis A. Shah², Jorge David Salgado¹, Laurence V. Madden¹ and Pierce A. Paul¹, (1)The Ohio State University, Wooster, OH, (2)Kansas State University, Manhattan, KS

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Evaluation of weather-based foliar fungicide applications for soybean in the mid-Atlantic U.S

Tian Zhou¹, David L. Holshouser¹ and Hillary L. Mehl², (1)Virginia Tech, Suffolk, VA, (2)Virginia Tech Tidewater AREC, Suffolk, VA

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