



Dispersal Notes



April 2016 News Flyer

Department of Plant Pathology and Microbiology
Iowa State University

Calendar

Note: 2016 PLPM seminar is located in 107 Kildee Hall on Tuesdays from 3:10 to 4 pm and Brown Bag series is located in 255 Bessey on Thursdays from 12:30-1:30 pm.

April 5th – PLPM Seminar: Xavier Phillips. Title: “Green stem disorder of soybean and the effect of fungicide application, sink removal, and cultivar”.

April 7th – Brown Bag: Chelsea Harbach. Title: “Cover crops and SCN: What’s the connection?”.

April 12th – PLPM Seminar: Dr. Xun Li. Title: “Epidemics of downy mildew on spine grape in Hunan, southern China”.

April 14th – Brown Bag: Elizabeth Lerch. Title: “Soybean-Pythium pathosystem: The search for resistance”.

April 15th – Deadline for [abstract submission](#) for Society of Nematologists annual meeting in Montreal from July 17th-21st.

April 19th – PLPM Seminar: Dr. Manjula Elmore. Title: “Host-induced gene silencing in the obligately biotrophic downy mildew pathogen *Bremia lactucae*”.

April 21st – Brown Bag: Jiani Chen. Title: “How to create and publish an online teaching case study in plant pathology”.

April 26nd – PLPM Seminar: Dr. Damon Smith, University of Wisconsin. Title: “Using new research results to improve the integrated management of Sclerotinia rot of soybean”.

April 28th – Brown Bag: Lauren Washington. Title: “The war against waste: nanoparticle treatments and agriculture”.

Recent Publications

Eggenberger, S., Diaz-Arias, M.M., Gougherty, A.V., Nutter, F.W., Sernett, J., and Robertson, A.E. 2016. Dissemination of Goss’s wilt of corn and epiphytic *Clavibacter michiganensis* subsp. *nebraskensis* from inoculum point sources. *Plant Disease* 100(4): 686-695.

McRoberts, N., Thomas, C.S., Brown, J.K., **Nutter, F.W.**, Stack, J.P., Martyn, R.D. 2016. The evolution of a process for selecting and prioritizing plant diseases for recovery plants. *Plant Disease* 100(4): 665-671.

Snapshot



Dr. Ravi Ramachandran, Head of the Seedcare Institute for North American at Syngenta, giving a lecture at the ISU Seed Science Center on March 24th, 2016.

Stories

Greg Tylka awarded NSF grant as co-PI to develop instruments to extract and quantify plant-parasitic nematodes

Dr. Greg Tylka, professor in the PLPM department, and Dr. Santosh Pandey, associate professor in the Electrical and Computer Engineering department, were recently awarded a 3-year, \$587,248 National Science Foundation grant to develop automated instruments that can extract and quantify nematodes and nematode eggs from soil samples. Currently, nematode extraction from soil is a time- and labor-intensive process. In addition to nematodes, the instruments developed in this project may also be able to quantify large fungal spores, like those from mycorrhizal fungi, and weed seeds in the future. The project also aims to develop smartphone-based software that could be used to count different life stages of nematodes.



Dr. Gregory Tylka



Dr. Santosh Pandey

Cassie Wattenburger receives highly competitive 2016 NSF Graduate Research Fellowship

Cassie Wattenburger, a PhD student working with Dr. Larry Halverson, was recently awarded the highly competitive 2016 National Science Foundation (NSF) Graduate Research Fellowship Program Fellowship. Wattenburger is originally from Washington state and grew up in the Palouse region. She received a B.S. in cellular and molecular biology with a minor in chemistry at Western Washington University. She worked as a research associate with Dr. Kirsten Hofmockel for a few months before starting graduate school in the fall of 2015. She is currently advised by Drs. Halverson and Hofmockel and her project is investigating the role of soil microbes, particularly those involved with nitrogen cycling, in sustainable agriculture. For her NSF application, she proposed to investigate the interaction between arbuscular mycorrhizal fungi and nitrifying bacteria and how they relate to nitrogen leaching from the soil. The fellowship funds three years of stipend and tuition. Wattenburger hopes to someday become a PI in a Department of Energy or USDA research laboratory and continue to work on agriculture and sustainability.



Cassie Wattenburger

International Student Highlights: Mohsin Raza

Muhammad (Mohsin) Raza is a first year PhD student and Fulbright Scholar in the PLPM department. He is advised by Dr. Forrest Nutter. Raza is from Pakistan and developed an early interest in plant disease epidemiology during his undergraduate studies. He has found U.S. agriculture to be quite different compared to Pakistan in several ways. Raza sees U.S. agricultural production benefitting from good marketing and infrastructure systems for the sale and transportation of crops, as well as profiting from production techniques based on research. Raza hopes to develop his skills in GIS, remote sensing and geo-statistics so that he may aid Pakistani agriculture after graduate school. Raza’s research focuses on developing a better disease severity assessment scale for soybean sudden death syndrome (SDS). In addition, Raza will also assess soybean yield loss due to SDS at different spatial scales, and determine the spatiotemporal distribution of SDS in the field.



Mohsin Raza