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# Adam Sparks

Ph.D. Candidate

Kansas State University

Department of Plant Pathology

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## Education

### **Kansas State University, Manhattan KS**

- Ph.D., Plant Pathology  
(Adviser K. Garrett)
- Graduate Certificate, Geographic Information Science

**2004-Present**  
Anticipated Nov. 2009

Awarded December 2007

### **University of Nebraska- Lincoln, Lincoln NE**

- Graduate Studies Plant Pathology  
(Adviser J. Stack)

**2000-2003**

### **Purdue University, West Lafayette, IN**

- Bachelor of Science, Agronomy, Soil and Crop Management  
(Advisers, G. Willoughby and J. Gravel)

**1993-2000**  
Awarded May 2000

## **Ph.D. Dissertation**

Adapting global disease forecasting models for readily-available weather datasets in a GIS

## Additional Training

Fusarium Laboratory Workshop, Kansas State University, Manhattan, KS

**2001**

## Professional Experiences

### **Kansas State University, Manhattan KS**

*Graduate Research Assistant*

**2004-Present**

- Develop new predictive models for evaluation of disease risk for large areas
- Help conduct impact analysis study using GIS for the International Potato Center, Lima, Peru
- Coordinate wheat fungicide seed treatment and foliar application trials
- Deliver extension talks for wheat growers and county extension personnel
- Plant Disease Ecology Lab group computer support and technology manager
- Instruct graduate and undergraduate courses in plant pathology
- Conduct research in disease control methods in Kansas wheat

### **University of Nebraska-Lincoln, Lincoln NE**

*Research Technologist, Soybean Pathology*

**2002-2004**

- Managed corn and soybean foliar fungicide trials and soybean seed treatment application trials

- Prepared results of fungicide trials for publication
- Oversaw the Nebraska state wide *Phytophthora sojae* survey
- Managed daily lab operations and undergraduate student workers

**University of Nebraska-Lincoln, Clay Center, NE****2000-2003***Research Technician, Corn and Sorghum Pathology*

- Conducted corn and sorghum disease research
- Coordinated with county extension educators in on-farm research
- Designed and conducted research examining soil microbial biodiversity in differing agricultural practices
- Presented talks on research at field days and other meetings
- Helped to design and then maintained the first iteration of Plant Disease Central, <http://pdc.unl.edu/>

**Purdue University, West Lafayette, IN****1999-2000***Assistant Director, Crop Diagnostic Training and Research Center (DTC)*

- Coordinated training events at sites away from the main Purdue campus at regional research farms.
- Platted and laid out new training facility at Purdue's South East Agriculture Center.
- Delivered soybean production talks to soybean growers and agriculture industry professionals.

**Purdue University, West Lafayette, IN****1997-1999***Research Technician, Soybean, Oilseed and Small Grains*

- Managed field plots for soybean and canola production research studies
- Conducted lab analysis for determination of total nitrogen content in canola seed
- Assisted other research groups on an as-needed basis with field research

## **Publications**

1. Cheatham, M. R., Rouse, M. N., Esker, P. D., Ignacio, S., Pradel, W., Raymundo, R., **Sparks, A. H.**, Forbes, G. A., Gordon, T. R., and Garrett, K. A. 2009. Beyond yield: Plant disease in the context of ecosystem services. *Phytopathology* 99:1228-1236. doi:10.1094/PHYTO-99-11-1228
2. Esker, P. D., **Sparks, A. H.**, Campbell, L., Guo, Z., Rouse, M., Silwal, S. D., Tolos, S., Van Allen, B. and Garrett, K. A. 2008. Ecology and Epidemiology in R: Disease Forecasting. *The Plant Health Instructor* doi:10.1094/PHI-A-2008-0129-01.
3. **Sparks, A. H.**, Esker, P. D., Bates, M., Dall'Acqua, W., Guo, Z., Segovia, V., Silwal, S. D., Tolos, S. and Garrett, K. A. 2008. Ecology and epidemiology in R: Modeling plant disease progress over time. *The Plant Health Instructor* doi:10.1094/PHI-A-2008-0129-02.
4. **Sparks, A. H.**, Esker, P. D., Antony, G., Campbell, L., Frank, E. E., Huebel, L., Rouse, M. N., Van Allen, B. and Garrett, K. A. 2008. Ecology and Epidemiology in R: Spatial Analysis. *The Plant Health Instructor* doi:10.1094/PHI-A-2008-0129-03.
5. Garrett, K.A., Esker, P. D. and **Sparks, A. H.**, 2007. Introduction to the R Programming Environment. *The Plant Health Instructor* doi:10.1094/PHI-A-2007-1226-02.
6. Esker, P. D., **Sparks, A. H.**, Antony, G., Bates, M., Dall'Acqua, W., Frank, E. E., Huebel, L., Segovia, V., and Garrett, K. A. 2007. Ecology and Epidemiology in R: Modeling dispersal gradients. *The Plant Health Instructor* doi:10.1094/PHI-A-2007-1226-03.
7. Garrett, K. A., Esker, P. D., **Sparks, A. H.**, Scharmann, L. C. 2007. Writing Teaching Documents as a Class Project. *The Plant Health Instructor* doi: 10.1094/PHI-T-2007-1226-01.

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## Book Chapters

1. Garrett, K. A., Nita, M., De Wolf, E. D., Gomez, L. **Sparks, A. H.** Plant pathogens as indicators for climate change. Chapter in *Climate Change Indicators*, edited by T. Letcher. Elsevier. 2009.

## Fungicide and Nematicide Tests

1. L. J. Geisler, and **A. H. Sparks**, 2004. Evaluation of seed treatment fungicides for controlling soybean seedling diseases, 2003. Fungicide and Nematicide Tests (online). Report No. 59:ST025. doi:10.1094/FN59 The American Phytopathological Society, St. Paul, MN.
2. L. J. Geisler, and **A. H. Sparks**, 2004. Evaluation of seed treatment for controlling seedling diseases and compatibility with Rhizobium inoculants, 2003. Fungicide and Nematicide Tests (online). Report No. 59:ST025. doi:10.1094/FN59 The American Phytopathological Society, St. Paul, MN.

## Extension Publications

1. **A. Sparks and M. Kennelly**, 2008, Bacterial Ring Rot of Potato. Kansas State Extension Publication No. EP-150, Online.
2. **A. Sparks and M. Kennelly**, 2008, Blackleg of Potato. Kansas State Extension Publication No. EP-149, Online.
3. **A. Sparks**, 2008, Common Scab of Potato. Kansas State Extension Publication No. EP-148, Online.
4. **A. Sparks**, 2002, Fusarium Stalk Rot of Corn. Plant Disease Central Online.
5. **A. Sparks**, 2002, Fusarium Root Rot of Corn. Plant Disease Central Online.

## Presentations

### Oral Presentations

Tenth International Epidemiology Workshop, Geneva NY June 8, 2009  
 “Adapting global disease forecasting models  
 for readily-available weather datasets in a GIS”

### Extension Talks

University of Nebraska South Central REC Field Day August 8, 2002  
 KSU Spring 2006 Ag Agent Update March 14, 15, 16, 2006  
 KSU Southeast Research Center Spring 2006 Field Day May 25, 2006  
 KSU Harvey County Experiment Field 2006 Wheat Tour May 25, 2006

### Class Lectures

“Global Climate Change and Plant Diseases” March 10, 2009  
 for AGRON 935, Climate Change and Agriculture

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## **Courses Taught at Kansas State University**

**Undergraduate**

Plant Pathology 500 “Principles of Plant Pathology”

Served as Lab Teaching Assistant

**Graduate**

Plant Pathology 920C “Ecology and Epidemiology of Plant Pathogens”

Served as Co-instructor

**Posters****APS Annual Meetings**“Adapting disease forecasting models to coarser scales:  
global potato late blight prediction”

August 3, 2009

“Regional predictions of potato late blight risk in a GIS incorporating  
disease resistance profiles, climate change, and risk neighborhoods”

July 30, 2008

“Web-based teaching modules for plant pathology applications  
in the R programming environment”

July 30, 2007

**K-State Research and Extension Annual Conference****Global Climate Change Session**“Regional predictions of potato late blight risk in a GIS incorporating disease  
resistance profiles, climate change, and risk neighborhoods”

October 21, 2008

**Service at KSU****Departmental Committee Service****KSU Plant Pathology Graduate Student Club Mentor Recognition Committee** - Member**KSU Plant Pathology Dept. CSREES Review Committee** - Graduate Student Representative**KSU Plant Pathology Dept. Technology Committee** - Graduate Student Representative**KSU Extension Horticulture and Turf Pathology Specialist Search Committee** - Graduate  
Student Representative**Club Activities**

KSU Plant Pathology Graduate Student Club Member

2004 - Present

KSU Agronomy Graduate Student Association Member

2004 - Present

KSU Agronomy Graduate Student Association Treasurer

2007

KSU Plant Pathology Graduate Club President

2006

KSU Agronomy Graduate Student Association Webmaster

2006

KSU Plant Pathology Graduate Club Treasurer

2005

**Service to Professional Organization****Committee Service**

APS Epidemiology Committee

08/02/2007 - 08/11/2010

### **Review Panels**

APS Student Travel Award Reviewer 2008

### **Professional Affiliations**

American Phytopathological Society (APS) Current

### **Grants and Awards**

North Central Division APS Student Travel Award 2008

North Central Division APS Third Place Student Poster 2008

APS Foundation Travel Award Donald E. Munnecke Award 2007

### **Certifications**

Certified Pesticide Applicator Category 1A, Agricultural Pests