

# publications

## peer-reviewed

Climate change may have limited effect on global risk of potato late blight

A H Sparks, G A Forbes, R J Hijmans, K A Garrett

Global Change Biology (2014). DOI: [10.1111/gcb.12587](#)

A review on crop losses, epidemiology and disease management of rice brown spot to identify research priorities and knowledge gaps

M K Barnwal, A Kotasthane, N Magculia, P K Mukherjee, S Savary, A K Sharma, H B Singh, U S Singh, A H Sparks, M Variar, N Zaidi

European Journal of Plant Pathology 136.3 (2013) pp. 443–457. DOI: [10.1007/s10658-013-0195-6](#)

Taking transgenic rice drought screening to the field.

A C M Gaudin, A Henry, A H Sparks, I H Slamet-Loedin

Journal of Experimental Botany 63.2 (2012) pp. 695–709. DOI: [10.1093/jxb/ers313](#)

An Economic Assessment of the Impact of Mango Pulp Weevil on the Agricultural Sector of Palawan, Philippines

J D Mckinley, A H Sparks, V O Pede, B Duff

The Philippine Agricultural Scientist 95.3 (2012) pp. 286–292

Complexity in climate-change impacts: an analytical framework for effects mediated by plant disease

K A Garrett, G A Forbes, S Savary, P Skelsey, A H Sparks, C Valdivia, A H C van Bruggen, L Willocquet, A Djurle, E Duveiller, H Eckersten, S Pande, C Vera Cruz, J Yuen

Plant Pathology 60.1 (2011) pp. 15–30. DOI: [10.1111/j.1365-3059.2010.02409.x](#)

International agricultural research tackling the effects of global and climate changes on plant diseases in the developing world

S Savary, A Nelson, A H Sparks, L Willocquet, E Duveiller, G Mahuku, G Forbes, K A Garrett, J Padgham, S Pande, M Sharma, J Yuen, A Djurle

Plant Disease 48 (2011) pp. 1–40

A metamodeling framework for extending the application domain of process-based ecological models

A H Sparks, G A Forbes, R J Hijmans, K A Garrett

Ecosphere 2.8 (2011) art90. DOI: [10.1890/ES11-00128.1](#)

Beyond yield: plant disease in the context of ecosystem services.

M R Cheatham, M N Rouse, P D Esker, S Ignacio, W Pradel, R Raymundo, A H Sparks, G A Forbes, T R Gordon, K A Garrett

Phytopathology 99.11 (2009) pp. 1228–36. DOI: [10.1094/PHYTO-99-11-1228](#)

Ecology and epidemiology in R: disease forecasting

P D Esker, A H Sparks, L Campbell, Z Guo, M Rouse, S D Silwal, S Tolos, B Van Allen, K A Garrett

The Plant Health Instructor (2008)

Ecology and epidemiology in R: modeling plant disease progress over time

A H Sparks, P D Esker, M Bates, W Dall'Acqua, Z Guo, V Segovia, S D Silwal, S Tolos, K A Garrett (2008)

Ecology and epidemiology in R: spatial analysis

A H Sparks, P D Esker, G Antony, L Campbell, E E Frank, L Huebel, M N Rouse, B Van Allen, K A Garrett

The Plant Health Instructor (2008)

Introduction to the R programming environment

K A Garrett, P D Esker, A H Sparks

The Plant Health Instructor (2007)

Ecology and epidemiology in R: modeling dispersal gradients

P D Esker, A H Sparks, G Antony, M Bates, W Dall'Acqua, E E Frank, L Huebel, V Segovia, K A Garrett  
The Plant Health Instructor (2007)

#### Writing teaching documents as a class project

K A Garrett, P D Esker, A H Sparks, L C Scharmann  
The Plant Health Instructor (2007)

## conferences/proceedings

#### Modeling the impact of disease resistance on rice yields in the Philippines and Indonesia

A H Sparks, J Anaurio, C Duku, M Noel, D Raitzer  
In Proceedings of the Australasian Plant Pathology Society 2013 Meeting (2013)

#### Preventing what ails rice with a strategic, statistical, prescriptive model system

A H Sparks, S Savary, A Nelson  
Phytopathology vol. 102:S4.113.7 (2012)

#### Predisposition factors affecting brown spot disease development in rice

N F Magculia, A H Sparks  
Phytopathology vol. 102:S4.74.7 (2012)

#### Putting information to use: Decisions at different scales

S Savary, A H Sparks, N Nelson, N McRoberts, P D Esker  
Phytopathology vol. 102:S4.162 (2012)

#### An economic assessment of the impact of mango pulp weevil on the agricultural sector of Palawan, Philippines

J McKinley, V O Pede, A H Sparks, B Duff  
The Conference Secretariat, 2011 PAEDA Biennial Convention (2011)

#### Income inequality and economic growth in the Philippines

G B Ballesefin, V O Pede, A H Sparks  
The Conference Secretariat, 2011 PAEDA Biennial Convention (2011)

#### Crop losses in highly populated areas: A global perspective

L Willocquet, A Nelson, A Sparks, A Laborte, S Savary  
Phytopathology vol. 101:S223 (2011)

#### Metamodels for scaling potato late blight risk analysis in climate change scenarios

A H Sparks, G Forbes, R Hijmans, K Garrett  
Phytopathology vol. 100:S121 (2010)

#### Anticipating and responding to biological complexity in the effects of climate change on agriculture

K Garrett, G Forbes, S Pande, S Savary, A Sparks, C Valdivia, C Vera Cruz, L Willocquet  
IOP Conference Series: Earth and Environmental Science vol. 6.37 (2009)

#### Adapting disease forecasting models to coarser scales: Global potato late blight prediction

A H Sparks, G Forbes, K A Garrett  
Phytopathology vol. 99:S122 (2009)

#### Adapting global disease forecasting models for readily available weather data sets in GIS

A H Sparks, K A Garrett, G A Forbes  
In Proceedings of the 10th International Epidemiology Workshop (2009). Geneva, NY, USA

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

A H Sparks, R Raymundo, R Simon, G Forbes, K A Garrett  
Phytopathology vol. 98:S149 (2008)

## book chapters

#### Chap. An introduction to key distributions and models for epidemiology using R

K A Garrett, P D Esker, A H Sparks

Stevenson, K and M Jeger, APS Press, Minneapolis, MN, "Exercises in Plant Disease Epidemiology", In Press

#### Chap. Cambio climático, enfermedades de las plantas e insectos plaga

K A Garrett, G A Forbes, L Gómez, M A Gonzáles, M Gray, P Skelsey, A H Sparks

Jiménez, E, "Cambio climático y adaptación en el Altiplano boliviano", 2013

#### Chap. Plant pathogens as indicators for climate change

K A Garrett, M Nita, E D De Wolf, L Gomez, A H Sparks

Letcher, T, Elsevier, "Climate Change Indicators", 2009

## reports

Evaluation of seed treatment for controlling seedling diseases and compatibility with Rhizobium inoculants, 2003.

L J Geisler, A H Sparks

*Fungicide and Nematicide Tests* 59:ST025

Evaluation of seed treatment fungicides for controlling soybean seedling diseases, 2003

L J Geisler, A H Sparks

*Fungicide and Nematicide Tests* 59:ST025

## invited talks

2013

#### **Biosecurity Risks in Southeast Asia Impacting on Human Food Supplies**

Forum: Pacific Environmental Safety Forum Australian Department of Defence and U. S. Pacific Command  
Sydney, New South Wales, Australia

2010

#### **Global potato late blight risk in response to climate change, possible futures for a historic disease**

Symposium: Emerging Infectious Diseases in Response to Climate Change.  
New York Academy of Sciences, New York, New York

## extramural support

2013-2017

**PRISM** Philippine Rice Information System  
Component B – Crop Health Monitoring, Co-PI: A Nelson

\$2,765,783

2013-2015

**Syngenta**  
Phase II, Project 2 – Crop Health Management

\$454,640

## professional certifications

PRINCE2 Foundation (2014) candidate number: P2R/009385 – HiLogic Pty Ltd.