

# Resistance 2007

at Rothamsted Research, Harpenden, Hertfordshire, AL5 2JQ, UK

Monday 16<sup>th</sup> – Wednesday 18<sup>th</sup> April, 2007

## Current Programme

### Monday 16<sup>th</sup> April 2007

- 8.30** Registration and coffee
- 9.45** Welcome Ian Crute (Rothamsted Research, UK)
- 10.00** Opening address – Changing paradigms in agriculture: new inputs, outputs and implications for resistance David Evans (UK)
- 10.40** Target-site-based resistance to pesticides in weeds and fungi: similar ways to a same end Christophe Delye (INRA, Dijon, France)
- 11.10** Coffee
- 11.30** Genetic and genomic approaches to understanding mechanisms of resistance to *Bacillus thuringiensis* toxins David Heckel (Max Planck Institute, Germany)
- 12.00** A nicotinic acetylcholine receptor point mutation (Y151S) conferring insecticide resistance causes reduced agonist potency to a range of neonicotinoids Neil Millar (UCL, UK)
- 12.20** Exploring molecular mechanisms of reduced translocation-based glyphosate and paraquat resistance in *Lolium rigidum* Qin Yu (University of Western Australia)
- 12.40** Characterising the impact of mechanisms correlated with azole resistance in *Mycosphaerella graminicola* Hans Cools (Rothamsted Research, UK)
- 13.00** Lunch and poster session
- 14.15** Cytochrome b gene structure and implications for QoI resistance in plant pathogens Ulrich Gisi (Syngenta, Switzerland)
- 14.45** Resistance to ALS-inhibiting herbicides: why is the theory different to the practice? Stephen Moss & Ron Marshall (Rothamsted Research, UK)
- 15.05** DDT, pyrethrins, pyrethroids and paratype sodium channels Emyr Davies (Rothamsted Research, UK)
- 15.25** Independent somatic mutations in invasive plant Hydrilla lead to resistance to phytoene desaturase-inhibiting herbicides Franck Dayan (USDA, USA)
- 15.45** Tea
- 16.05** What have microarrays taught us about insecticide resistance in mosquitoes? Hilary Ranson (Imperial College, UK)
- 16.35** The biochemical basis of multiple herbicide resistance Robert Edwards & Ian Cummins (Durham University, UK)
- 16.55** Mechanism of resistance to ACCase and ALS inhibitors in *Lolium* species Deepak Kaundun (Syngenta, UK)
- 17.15** Could esterases jeopardise the future of Bt crops? Robin Gunning (Tamworth Agricultural Institute, Australia) & Graham Moores (Rothamsted Research)
- 17.40** Poster session and wine reception
- 19.00** Reception and buffet sponsored by Syngenta
- 21.00** Coaches to hotels

**Tuesday 17<sup>th</sup> April 2007**

- 9.00** Coffee and poster session
- 9.30** Evolution of fungicide resistance in UK populations of *Mycosphaerella graminicola* Bart Fraaije (Rothamsted Research, UK)
- 10.00** Complete maternal inheritance of bifenazate resistance in *Tetranychus urticae* (Acari: Tetranychidae) reveals a mitochondrial target-site Thomas Van Leeuwen (Ghent University, Belgium)
- 10.20** The development and nature of pyrethroid resistance in the Pollen Beetle (*Meligethes aeneus*) in Europe Russell Slater (Syngenta, Switzerland) and Ralf Nauen Bayer Crop Science, Germany)
- 10.40** Widespread herbicide resistance in Australian *Lolium rigidum* populations and an overview of commercial herbicide resistance testing Peter Boutsalis (University of Adelaide, Australia)
- 11.00** Coffee
- 11.20** Molecular and physiological bases of glyphosate weed resistance: current status and future perspectives Giovanni Dinelli (University, of Bolgna, Italy)
- 11.50** Distribution, biology, and multiple resistance of glyphosate- resistant horseweed (*Conyza Canadensis*) in eastern corn-belt soybean productions systems in the USA William Johnson (Purdue University, USA)
- 12.10** Inheritance of resistance to spinosad in *Frankliniella occidentalis* Pablo Bielza (University of Cartagena, Spain)
- 12.30** Resistance to neonicotinoids and other insecticides in *Myzus persicae* in the UK: good news, bad news and challenges ahead Steve Foster (Rothamsted Research, UK)
- 12.50** Lunch at Rothamsted Manor and an opportunity to visit the Classical Experiments
- 14.50** Incidence and causes of neonicotinoid resistance in insect pests Ralf Nauen (Bayer Crop Science, Germany)
- 15.20** Is disease control in wheat crops failing due to fungicide insensitivity? Steven Parker (CSL, UK)
- 15.40** Effective resistance management for stacked transgenic crop varieties expressing the novel insecticidal protein, Vip3A Alan McCaffery (Syngenta, UK)
- 16.00** Tea
- 16.20** Unique herbicide resistance mechanisms and challenges: examples in *Amaranthus* species Patrick Tranel (University of Illinois, USA)
- 16.50** IPM and resistance management: the impact of pathogens and conventional plant defenses on the evolution of resistance Ben Raymond (University of Oxford, UK)
- 17.10** Herbicide resistance and herbicide use rates: can reduced herbicide use rates accelerate evolution of resistance in *Lolium rigidum*? Paul Neve (HRI Warwick, UK)
- 17.30** Buses to hotels
- 19.00** Buses from hotels to Hatfield House for conference dinner (timing approximate)
- 22.30** Buses from Hatfield House to hotels (timing approximate)

**Wednesday 18<sup>th</sup> April 2007**

- 9.00** Coffee and poster session
- 9.20** Pathogen population genetics and fungicide risk assessment  
Bruce McDonald (Zurich, Switzerland)
- 9.50** Glyphosate-resistant populations of *Amaranthus palmeri* found in the United States  
Robert Nichols (Cotton Incorporated), Stanley Culpepper (University of Georgia), Larry Steckel (University of Tennessee), Alan York (North Carolina State University, USA)
- 10.10** Pesticide regulation and resistance management; process and practice  
David Richardson (PSD, UK)
- 10.30** Defeating the super pests with temporal synergism  
Georgina Bingham (Rothamsted Research, UK)
- 10.50** Coffee
- 11.10** A decade of successful management of *Bemisia* resistance to insecticides in Arizona  
Timothy Dennehy (University of Arizona, USA)
- 11.40** Resistance management for Bt crops: past, present and future  
Graham Head (Monsanto, USA)
- 12.10** Modelling the impacts of farm management on the development and spread of herbicide resistance  
Fiona Evans (Department of Agriculture and Food, Western Australia)
- 12.30** Fungicide resistance management of *Cercospora beticola* of sugarbeets in the Northcentral USA: A case study of success  
Gary Secor, Viviana Rivera & Mohamed Khan (North Dakota State University, USA)
- 12.50** Insecticide resistance management strategies for the American bollworm, *Helicoverpa Armigera* on cotton  
Prasada Rao Golla (RARS, India)
- 13.10** Concluding remarks
- 13.15** Lunch and depart