

ASSOCIATION OF APPLIED BIOLOGISTS

President: Professor Peter Shewry BA, BSc, PhD, DSc



***Crop Production in Southern
Britain 2014: Precision Decisions
for Profitable Cropping***

**A two day conference
at the Peterborough Arena
on 25-26 November 2014**



PROGRAMME & BOOKING FORM



Crop Production in Southern Britain 2014: Precision Decisions for Profitable Cropping with support from BCPC

on 25-26 November 2014

at the Peterborough Arena, Peterborough

The conference, which is the fifth in this series, will provide a major platform for the dissemination of recent developments in crop protection and production research and practice with a focus on dissemination to advisers and practitioners. The conference theme is: Precision Decisions for Profitable Cropping.

PROVISIONAL PROGRAMME

(12 BASIS have been awarded as follows: 6 CP, 2 E, 2 AP, 1 PN and 1 HS)

Tuesday 25 November

09:00 **REGISTRATION and COFFEE**

09:50 **Introduction**

JIM ORSON (NIAB TAG, Cambridge, UK)

10:00 ***Session 1 : Insects & Nematodes***

10:00 **Exploiting tolerant sugar beet varieties for beet cyst nematode management**

MARK STEVENS, STUART HARDER, GEORGE MILFORD & COLIN WALTERS (BBRO, Norwich Research Park, Norwich, Norfolk, UK)

10:15 **Exploiting genomics to improve the biological control potential of *Pasteuria* spp., an organism with potential to control plant-parasitic nematodes**

A SRIVASTAVA, A M HALL, K GRAEME-COOK & K G DAVIES (School of Life Sciences, University of Hertfordshire, Hatfield, UK)

10:30 **Oilseed rape: restriction of neonicotinoids, restriction on crop protection**

CAROLINE J NICHOLLS & HARLEY STODDART (HGCA, Agriculture & Horticulture Development Board, Kenilworth, Warwicks, UK)

10:45 **Controlling aphids and turnip yellows virus in oilseed rape in a post-neonicotinoid world**

A M DEWAR (Dewar Crop Protection Ltd, Bury St Edmunds, Suffolk, UK) & J EVANS (Syngenta UK Ltd, Cambridge, UK)

11:00 **Improving risk assessment and control of saddle gall midge (*Haplodiplosis marginata*)**

S ELLIS, N J ASHLEE (ADAS, High Mowthorpe, Malton, N Yorks, UK) & K A MAULDEN (ADAS Boxworth, Cambridge, UK)

- 11:15 **Isoclast™ Active (sulfoxaflor): A new insecticide for the control of aphids in cereal and oilseed rape crops**
D HARRIS (Dow Agrosciences Ltd, Hitchin, Herts, UK) & I MEZEI (Dow AgroSciences Hungary Kft, Budapest, Hungary)
- 11:30 **COFFEE**
- 12:00 **Session 2 : Herbicides**
- 12:00 **Changes in the incidence of herbicide-resistant *Alopecurus myosuroides* (black-grass) in England, based on sampling the same random fields on two occasions**
S R MOSS, R I HULL, R MARSHALL & S A M PERRYMAN (Rothamsted Research, Harpenden, Herts, UK)
- 12:15 **The efficacy of flufenacet based herbicides on *Alopecurus myosuroides* (black-grass): analysis of data from 375 field trials**
R HULL, S CLARK (Rothamsted Research, Harpenden, Herts, UK), L WESTRUP (University of Lincoln, Lincoln, UK) & S R MOSS (Rothamsted Research, Harpenden, Herts, UK)
- 12:30 ***Alopecurus myosuroides* (black-grass) control in sugar beet**
P A CHAMBERS (United Phosphorus Ltd, Warrington, UK)
- 12:45 **Preventing a wide-scale increase in ALS resistant broad-leaved weeds through effective management in a cereal/oilseed rape cropping rotation in the UK**
L V TATNELL, J H CLARKE (ADAS Boxworth, Boxworth, Cambs, UK) & S R MOSS (Rothamsted Research, Harpenden, Herts, UK)
- 13:00 **DISCUSSION**
- 13:15 **LUNCH (can also be taken during the next session)**
- 13:45 **Session 3 : Fungicides**
- 13:45 **Evaluating cultivar-based integrated control with reduced fungicide inputs for the control of potato late blight, caused by *Phytophthora infestans*, in the UK**
F RITCHIE (ADAS Boxworth, Boxworth, Cambs, UK), R A BAIN (Crop & Soil Systems, SRUC, Auchincruive, Ayr, UK), A K LEES (The James Hutton Institute, Invergowrie, Dundee, UK) & C DYER (ADAS Boxworth, Boxworth, Cambs, UK)
- 14:00 **Triazole SDHI based fungicides: the incidence of Septoria leaf blotch (*Mycosphaerella graminicola*) in winter wheat varieties and its impact on grain yield**
S SHAH (Agrii Technology Centre, Swindon, Wilts, UK), S LEE (Royal Agricultural University, Cirencester, UK), S WILKINSON, C FLINT & J M FLETCHER (Agrii Technology Centre, Dunmow, Essex, UK)
- 14:15 **A new active ingredient, sedaxane, for protecting root health and controlling soil-borne *Rhizoctonia* sp. and seed-borne diseases in winter cereals**
F RITCHIE (ADAS Boxworth, Boxworth, Cambs, UK) & M F TAIT (Syngenta UK Ltd, Fulbourne, Cambridge, UK)
- 14.30 **Verticillium wilt in winter oilseed rape – diagnosis and cultivar susceptibility**
J E THOMAS & T A WOOD (NIAB, Cambridge, UK)

14:45 **COFFEE**

15:15 **Sclerotinia disease control in oilseed rape: disease forecasting, key risk factors and fungicide timing**

C S YOUNG (ADAS Drayton, Stratford-upon-Avon, Warwicks, UK), D GINSBURG (ADAS Boxworth, Boxworth, Cambs, UK), K NORMAN (Velcourt, Oakham, Rutland, UK) & S WATERHOUSE (BASF plc, Cheadle Hulme, Cheshire, UK)

15:30 **A detached leaf assay to determine fungicide persistence against *Sclerotinia sclerotiorum* in winter oilseed rape**

JULIE SMITH (ADAS Rosemaund, Preston Wynne, Hereford, UK), PETER GLADDERS (ADAS Boxworth, Boxworth, Cambs, UK) & STEVE WATERHOUSE (BASF plc, Cheadle Hulme, Cheshire, UK)

15:45 **Importance of *Leptosphaeria biglobosa* as a cause of phoma stem canker on winter oilseed rape in the UK**

Y-J HUANG, C S KARANDENI-DEWAGE & B D L FITT (School of Life & Medical Sciences, University of Hertfordshire, Hatfield, Herts, UK)

Session 4 : Cultural Control of Black-grass

16:00 **Emergence patterns of black-grass (*Alopecurus myosuroides*)**

S COOK (ADAS Boxworth, Cambridge, UK) & S HURRY (Dow AgroSciences Ltd, Hitchin, Herts, UK)

16:15 **Optimising the cultural control of black-grass (*Alopecurus myosuroides*)**

DICK NEALE (H L Hutchinson, Wisbech, Cambs, UK)

16:30 **Identifying the traits in cereals that confer greater competitive ability against *Alopecurus myosuroides***

IZZADORA ANDREW, JONATHAN STORKEY (Rothamsted Research, Harpenden, Herts, UK) & DEBBIE SPARKES (University of Nottingham, Sutton Bonington Campus, Loughborough, Leics, UK)

16:45 **Potential for controlling *Alopecurus myosuroides* (black-grass) using tractor mounted burners on cereal stubble**

S R MOSS (Rothamsted Research, Harpenden, Herts, UK), C R RICHES (Ag Herba Consultants, Shipham, Somerset, UK) & R PEARSON (Thermoweed, Malton, N Yorks, UK)

17:00 **POSTERS (these will also be available to view and discuss during refreshments breaks and lunch during the day)**

Posters

Factors contributing to the holistic control of strawberry powdery mildew

XIAOLEI JIN, AVICE M HALL, BRUCE D L FITT & YONGJU HUANG (School of Life Sciences, University of Hertfordshire, Hatfield, UK)

Factors contributing to sustainable strawberry production

B LIU, A M HALL & K DAVIES (School of Life Sciences, University of Hertfordshire, Hatfield, UK)

Frequencies of Avr alleles in field populations of *Leptosphaeria maculans* in the UK

GEORGIA K MITROUSIA, YONG-JU HUANG & BRUCE D L FITT (School of Life Sciences, University of Hertfordshire, Hatfield, UK)

ISOCLAST™ Active (Sulfoxaflor): A new insecticide for the control of aphids in brassica vegetable crops

J FRASER, D HARRIS (Dow AgroSciences Ltd, Hitchin, Herts, UK) & I MEZEI (Dow Agrosciences Hungary Kft, Budapest, Hungary)

Exploring agronomic options for the control of saddle gall midge using Dursban WG (chlorpyrifos)

D A ROBERTS & D HARRIS (Dow AgroSciences Ltd, Hitchin, Herts, UK)

Weed Control in game cover crops and wild bird seed mixes with clopyralid (Dow Shield 400™)

A LEADER, A NICHOLS, M FAIRFAX, J FRASER & S JACKSON (Dow AgroSciences Ltd, Hitchin, Herts, UK)

EcoSyn: The potential for overcoming insecticide-resistance in arable crop pests using synergists

ALAN M DEWAR (Dewar Crop Protection, Bury St. Edmunds, Suffolk, UK), GRAHAM MOORES (ApresLabs Ltd, Research and Innovation Campus, Rothamsted Research, Harpenden, Herts, UK), MARK JOHNSTON (AgChemAccess Ltd, Norwich, Norfolk, UK), VALERIO BORZATTA (Endura SPA, Bologna, Italy), CHRIS BASS (Rothamsted Research, Harpenden, Herts, UK), EMANUELE MAZZONI (Universita Cattolica del Sacro Cuore, Piacenza, Italy), OKTAY GURKAN (Ankara Ileri Teknoloji Yatirimlari Anomin Sirketi, Ankara Universitesi Teknoloji Gelistirme Bolgesi B Blok Kat 1 No 4, Ankara 06830, Turkey), DALIBOR TITERA (Vyzkumny Ustav Vcelarsky SRO, Libcice Nad Vltavo, Czech Republic) & JANOS SZOLAGYI (Bablona Kornyezeti biologiai Kozpont KFT, Budapest, Hungary)

19:30 **CONFERENCE DINNER AT EAST OF ENGLAND SHOWGROUND**

Wednesday 26 November

08.30 **REGISTRATION & COFFEE**

Session 5 : Precision Decisions

09:00 **“Intelligent Farming” for site-specific management**

S A M SHAMAL (Agriculture & Horticulture Development Board, HGCA, Stoneleigh Park, Coventry, UK)

09:15 **eyeWeed: automating mapping of black-grass (*Alopecurus myosuroides*) for more precise applications of pre- and post-emergence herbicides and detecting potential herbicide resistance**

ALISTAIR MURDOCH (University of Reading, Berks, UK), CARL FLINT (Agrii, UK), ROBERT PILGRIM (Concurrent Solutions llc, USA), PAUL DE LA WARR (University of Reading, Berks, UK & Agrii, UK), JAMIE CAMP (University of Reading, Berks, UK), BRIAN KNIGHT (Knight Farm Machinery, UK), PETER LUTMAN (Rothamsted Research, Harpenden, Herts, UK), BEN MAGRI (Syngenta Crop Protection, Cambridge, UK), PAUL MILLER (NIAB/TAG, Silsoe Spray Application Unit, Silsoe, Beds, UK), T ROBINSON (Syngenta Crop Protection, Cambridge, UK), SHANE SANFORD & NICK WALTERS (Precision Farming Robotics, UK)

09:30 **Towards more precise sugar beet management based on geostatistical analysis of spatial variability within fields**

S A MAHMOOD & A MURDOCH (University of Reading, Berkshire, UK)

09:45 Understanding the scale-dependence of the relations between soil conditions and weed density and the implications for precision management of weeds

HELEN METCALFE, ALICE MILNE (Rothamsted Research, Harpenden, Herts, UK), ALISTAIR MURDOCH (University of Reading, Berks, UK), RICHARD WEBSTER (Rothamsted Research, Harpenden, Herts, UK), R MURRAY LARK (British Geological Survey, Nottingham, UK) & JONATHAN STORKEY (Rothamsted Research, Harpenden, Herts, UK)

10:00 Using Precision Farming technologies to improve nitrogen management and empower on-farm learning

D R KINDRED & R SYLVESTER-BRADLEY (ADAS Boxworth, Cambridge, UK)

10:15 Critical soil phosphate for combinable crops in southern Britain

NATHAN MORRIS, STUART KNIGHT (NIAB, Cambridge, UK), PAUL POULTON, JOHNNY JOHNSTON & KEITH GOULDING (Rothamsted Research, Harpenden, Herts, UK)

10:30 COFFEE & POSTERS

Session 6 : Strategy

11:00 Key factors influencing future UK cropping systems

SIMON WARD (Increment, Cambridge, UK)

11:20 A review of constraints to arable crop production. Crop and soil interactions

T C K DAWKINS (Procam UK Ltd, Royston, Herts, UK)

11:40 Crop yields and gross margins from Essex & Hertfordshire: Optimising arable rotations and farm financial output (A survey from 2008–2012)

J MACKAY & M PATERSON (Association of Independent Crop Consultants, Samco & Shrim Farmers Ltd, Bishop's Stortford, Herts, UK)

11:55 Managing spring crops on heavy land: Breaking the black-grass cycle

ANDREW M COTTON (Cotton Farm Consultancy, Bicester, Oxon, UK)

12:10 The impact of cover crops on yield and soils in the New Farming Systems programme

R M STOBART & N L MORRIS (NIAB TAG, Morley Office, Wymondham, Norfolk, UK)

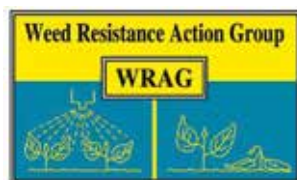
12:30 Platforms to test and demonstrate sustainable soil management: integration of major UK field experiments

RON STOBART (NIAB TAG, Morley Office, Wymondham, Norfolk, UK), PAUL D HALLET (Institute of Biological & Environmental Sciences, University of Aberdeen, Aberdeen, UK), TIMOTHY S GEORGE (The James Hutton Institute, Invergowrie, Dundee, UK), NATHAN MORRIS (NIAB TAG, Morley Office, Wymondham, Norfolk, UK), ADRIAN C NEWTON, TRACY A VALENTINE & BLAIR M MCKENZIE (The James Hutton Institute, Invergowrie, Dundee, UK)

12:50 Quantifying how autumn weed control is constrained by opportunities to apply herbicides ('spray days')

J CUSSANS (NIAB, Cambridge, UK) & STEPHEN DORLING (University of East Anglia, Norwich, UK)

13:05 LUNCH & POSTERS



Celebrating 25 years of WRAG

14:00 PRESENTATION OF BCPC AWARDS

Session 7 : Current & Future Issues of Crop Protection

14:10 Risks and hazards to arable farming of the EU pesticide regulations

M SMITH (Syngenta, Jealott's Hill, Bracknell, UK)

14:30 Pesticide resistance; a regulators view

P ASHBY, I DEN HOED & S MATTOCK (Environment Branch, Chemicals Regulation Directorate, Health and Safety Executive, York, UK)

14:50 Current status of herbicide-resistant weeds in the UK

R HULL (Rothamsted Research, Harpenden, Herts, UK), L V TATNELL, S K COOK (ADAS Boxworth, Cambridge, UK) & S R MOSS (Rothamsted Research, Harpenden, Herts, UK)

15:10 Weed Resistance Action Group (WRAG) - the next 25 years

J H CLARKE (ADAS Boxworth, Cambridge, UK) & S R MOSS (Rothamsted Research, Harpenden, UK)

15:30 Future challenges for crop protection in fruit crops in the UK

J D BLACKMAN (H L Hutchinson Ltd, Wisbech, Peterborough, UK)

15:50 The resistance trap: growing aphid threats

R HARRINGTON, D COX, S P FOSTER, M S TAYLOR & M S WILLIAMSON (Rothamsted Research, Harpenden, UK)

16:10 DISCUSSION

16:30 END OF CONFERENCE

AAB CONFERENCE CALENDAR

2014

- 19-20 November **Advances in IPM 2014**
Olde Barn Hotel, Marston, Lincs (Biocontrol & IPM Group)
- 25-26 November **Crop Production in Southern Britain - Precision Decisions for Profitable Cropping**
Peterborough Arena, Peterborough (CATE Group/AICC, AIC, BCPC, AHDB)
- 9-10 December **Challenges for Crop Production & Quality**
Annals of Applied Biology Centenary Conference
Rothamsted Research, Harpenden, Herts, UK (Multidisciplinary, *Annals* Board of Editors)
- 16 December **Advances in Nematology**
Linnean Society of London, Piccadilly, London (Nematology Group)

2015

- 31 March-2 April **Advances in Virology**
ICC, Birmingham (Virology Group)
- 31 March-1 April **Improving Soil Health – Developing tools for land managers**
Olde Barn Hotel, Marston, Lincs (CATE Group)
- 28-29 May **Valuing long-term sites and experiments for agriculture and ecology**
Cockle Park farm, Newcastle University, Morpeth, Northumberland (CATE Group)
- 24-25 June **Getting the Most Out of Cover Crops**
Olde Barn Hotel, Marston, Lincs (CATE Group)
- 7-8 September **5th Symposium on Potato Cyst Nematodes**
Harper Adams University, Newport, Shropshire, UK (HAU/Nematology Group)
- 15 December **Advances in Nematology**
Linnean Society of London, Piccadilly, London (Nematology Group)

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