

ASDS 2018 Program Schedule updated 01.09.18

Wednesday 5 September, 2018

08:00 **Registration**, National Wine Centre

09:00 **Welcome / Introduction**

09:15 **Plenary**

1.1 Managing soilborne diseases- Delivering on the promise of new technologies.
Kathy Ophel-Keller, SARDI, Australia

09:45 1.2 Diversity, genetics and ecology: *Verticillium dahliae* a case study.
Maria Jimenez-Gasco, Penn State University, USA

10:15 **Morning tea**

Session 2 - Pathogen Ecology

10:45 2.1 Genetic characterisation of black root rot pathogen of cotton in NSW Australia.
Duy Le, NSW Department of Primary Industry, Australia

11:00 2.2 Comparison of the growth patterns of two crown rot causing pathogens in wheat.
Joseph Barry, University of Southern Queensland, Australia

11:15 2.3 Can a change in nitrogen reduce plant parasitic nematodes (*Pratylenchus quasitereoides*) in Western Australian wheat crops?
Alice Butler, DPIRD, Australia

11:30 2.4 Southern Sting Nematode on Turf Grass in Western Australia.
Peter Ruscoe, Sports Turf Technology, Australia

11:45 2.5 Estimation of *Meloidogyne javanica* damage thresholds in sweet potato.
Paramullage Upamali Sandaruwan Peiris, Central Queensland University, Australia

12:00 2.6 A broad look at charcoal rot in the Northern Region broadacre crops through soil sampling and in-crop surveys.
Adam Sparks, University of Southern Queensland, Australia

12:15 **Lunch**

Session 3 - Disease Management - Resistance

- 13:00 3.1 Breeding for soil-borne disease.
Russell Eastwood, AGT, Australia
- 13:30 3.2 Pre-breeding solutions for resistance and tolerance to rhizoctonia root rot, takeall and common root rot diseases of wheat.
Stephen Neate, Centre For Crop Health, University of Southern Queensland, Australia
- 13:45 3.3 Winter cereal responses to root and crown rot pathogens in the Field.
Ahmed Saad, University of Southern Queensland, Australia
- 14:00 3.4 Using response curves to explore variation in the tolerance and resistance of wheat cultivars to crown rot across environments in the northern grains region of Australia.
Clayton Forknall, Queensland Department of Agriculture and Fisheries, Australia
- 14:15 3.5 Multi-environment analysis to explore the responsiveness of northern region wheat varieties to crown rot.
Steven Simpfendorfer, NSW Department of Primary Industries, Australia
- 14:30 **Afternoon Tea**

Session 3 - Disease Management – Resistance cont.

- 15:00 3.6 Screening sugarcane clones for resistance to *Pachymetra* root rot - challenges and outcomes.
Rob Magarey, Sugar Research Australia, Australia
- 15:15 3.7 Understanding the genetic control of pathogenicity and resistance to *Fusarium oxysporum* in onion.
Andrew Taylor, Warwick Crop Centre, University of Warwick, UK

Session 4 - Diagnostics

- 15:30 4.1 Techniques for quantitative and qualitative diagnostics of antimicrobial resistance in environmental and human matrices.
Robert Stedtfeld, SwiftBioSciences, USA
- 16:00 4.2 PreDicta®B update.
Alan McKay, SARDI, Australia

16:15-17:30 Posters - Authors to be present

Thursday 6 September, 2018

Session 5 - Disease Management

- 08:30 5.1 Development and application of biologically-based methods to control soil-borne diseases.
Mark Mazzola, USDA Agricultural Research Service, USA
- 09:00 5.2 *Pasteuria*, a potentially useful biocontrol agent of root-lesion nematodes.
Graham Stirling, Biological Crop Protection, Australia
- 09:15 5.3 Evaluation of barrier films for soil fumigation to control *Macrophomina phaseolina*.
Dylan McFarlane, Victorian Strawberry Industry Certification Authority, Australia
- 09:30 5.4 Volunteer and cover crops as a reservoir for building soilborne pathogen levels.
Robert Tegg, Tasmanian Institute of Agriculture, University of Tasmania, Australia
- 09:45 5.5 Infection by *Peronospora somniferi* and *Peronospora meconopsidis* from soil causing downy mildew of opium poppy.
Krithika Krishnamoorthy, University of Tasmania, Australia
- 10:00 5.6 Modelling effects of climate change on the over winter survival of *Phytophthora infestans* in potato tubers in Idaho.
Phillip Wharton, University of Idaho, USA

10:15 **Morning Tea**

Session 6 - Disease Management

- 10:45 6.1 Case studies of successful management of soilborne diseases by alternative methods.
Domenic Cavallaro, Stoller Australia, Australia
- 11:15 6.2 Biofumigation - Investing in our environment for the future.
John Duff, Department of Agriculture and Fisheries, Australia
- 11:30 6.3 Sensitivity of nematode community indices to soil management practices in perennial horticulture.
Anthony Pattison, Department of Agriculture and Fisheries, Australia
- 11:45 6.4 Identification and pathogenicity of soil-borne fungal and oomycete pathogens associated with poor growth of processing tomato plants.
Sophia Callaghan, University of Melbourne, Australia
- 12:00 6.5 Infection of grapevines by different propagules of the black foot pathogens, *Ilyonectria*/ spp., in soil.
Eirian Jones, Lincoln University, New Zealand
- 12:15 6.6 Effect of *Pythium ultimum* concentration in the soil, on tubers at harvest and pre-storage temperature on disease incidence and severity in storage.
Sandesh Dangi, University of Idaho, USA

12:30 **Lunch**
13:30 **Poster Session**

Session 7 - Disease Management

- 14:30 7.1 Biological control of Rhizoctonia root rot on wheat in the field.
Steve Barnett, SARDI, Australia
- 14:45 7.2 Preliminary investigations on host preferences of arbuscular mycorrhizal fungi colonizing grapevine rootstocks in New Zealand.
Romy Moukarzel, Lincoln University, New Zealand
- 15:00 7.3 RD&E prioritisation of soilborne diseases affecting Australian vegetable crops.
Doris Blaesing, RM Consulting Group Pty Ltd, Australia
- 15:15 7.4 Investigating reduced productivity in commercial onion crops from soil borne pathogens.
Mike Rettke, SARDI, Australia
- 15:30 7.5 Coffee parasitic nematodes in Australia and the potential of organic amendments in the management of *Pratylenchus coffeae*.
Khoa Le, The University of Sydney, Australia

15:45 **Afternoon Tea**

Session 8 - Biosecurity

- 16:00 8.1 On farm biosecurity.
Inca Pearce, Vine Health Australia, Australia
- 16:30 8.2 The plant biosecurity system in Australia - preparing for new pest incursions.
Sharyn Taylor, Plant Health Australia, Australia
- 16:45 8.3 The National Plant Biosecurity RD&E Strategy: Working together to make plant biosecurity RD&E efficient, coordinated and responsive.
Victoria Ludowici, Plant Health Australia, Australia

18:30 **Dinner 6.30pm - 11.00pm**
Ayres House, 288 North Terrace, Adelaide

Friday 7 September, 2018

Session 9 - Rhizosphere interactions

- 08:30 9.1 Rhizosphere interactions for disease suppression and biocontrol.
Rodrigo Mendes, Embrapa Environment, Brazil
- 09:00 9.2 How far is too far: Precision sowing drives Microbiology trade-offs with Soilborne diseases.
Gupta Vadakattu, CSIRO, Australia
- 09:15 9.3 The effect of inoculants on endophytic and rhizosphere populations in wheat.
Chris Franco, Flinders University, Australia

Session 10 - Crop Rotation

- 09:30 10.1 Evaluating soilborne pathogens in long-term field trials in the USA using PreDicta®B.
Richard Smiley, Oregon State University, USA
- 09:45 10.2 Are oats good break crops for crown rot?
Daniel Huberli, Department of Primary Industries and Regional Development, Australia
- 10:00 10.3 Two year crop rotation lowers incidence of Verticillium wilt in cotton.
Linda Scheikowski, DAF, Australia
- 10:15 10.4 The effect of cropping regime on field populations of reniform nematode (*Rotylenchulus reniformis*) in cotton soils in Theodore, Queensland.
Linda Smith, Department of Agriculture and Fisheries, Australia

10:30 **Morning tea**

Session 11 - Biocontrol

- 11:00 11.1 Rhizosphere bacteria as biocontrol agents of aphanomyces root rot in field pea grown in Saskatchewan, Canada.
Jim Germida, University of Saskatchewan, Canada
- 11:15 11.2 Biocontrol of Crown Rot (*Fusarium pseudograminearum*) in wheat by endophytic Actinobacteria.
Cathryn O'Sullivan, CSIRO Agriculture and Food, Australia
- 11:30 11.3 Suppression of wheat root and crown diseases by novel formulations of endophytic *Trichoderma gamsii*.
Belinda Stummer, CSIRO, Australia
- 11:45 11.4 Occurrence and Biocontrol of potato Verticillium wilt in China.
Dong Wang, Inner Mongolia Agricultural University, PR China
- 12:00 11.5 Biological control of crown gall disease using Agrobacterium K1026 in Shandong Province, PR China.
Maarten Ryder, The University of Adelaide, Australia

12:15 Lunch

Session 12 - Soil biology and plant health

13:15 12.1 Genome mining of Actinobacteria for genes encoding potential biofungicide compounds.
Louise Thatcher, CSIRO Agriculture and Food, Australia

13:30 12.2 Field assessment of consortium of bacterial inoculants on growth and yield of wheat.
Anil Sharma, GB Pant University of Agriculture & Technology, India

13:45 12.3 DNA tests for nematode community analysis to monitor and investigate management and environmental impacts on biological soil health.
Katherine Linsell, SARDI, Australia

14:00 12.4 The impact of Cre genes resistant to cereal cyst nematodes *Heterodera filipjevi* Isfahan pathotype.
Mehdi Esfahani, Isfahan Agriculture and Natural Resources Research and Education Center, Turkey

Closing

14:15 Future research directions.
Stephen Neate, University of Southern Queensland, Australia

14:30 Acknowledgement and conference closure.
Gupta Vadakattu, CSIRO, Australia

Posters

- P1 Differential chemotaxis responses of zoospores from *Spongospora subterranea* to individual components of potato root exudates.
Jonathan Amponsah, Tasmanian Institute of Agriculture, University of Tasmania, Australia
-
- P2 A case study of cross-industry collaboration leading to the capture of additional crown rot management insight.
Kylie Chambers, DPIRD, Australia
-
- P3 Survival of *Macrophomina phaseolina* in strawberry crop residue.
Apollo Gomez, Department of Agriculture and Fisheries, Australia
-
- P4 Major Fungal causal agent of Red beet (*Beta vulgaris* L.) seed industry in New Zealand.
Nitesh Chand, Lincoln University, New Zealand
-
- P5 Enhanced tolerance provided by positive interaction of (ACC) deaminase producing PGPR *Pseudomonas palleroniana* and *Arbuscular mycorrhizal* fungi on wheat under rain fed conditions.
S Sharma, GB Pant University of Agriculture & Technology, India
-
- P6 Addition of cereal stubble to PREDICTA® B soil tests improves prediction of crown rot risk.
Steven Simpfendorfer, NSW Department of Primary Industries, Australia
-
- P7 Influence of cultivar rotation on Pachymetra root rot of sugarcane.
Alison Jensen, Sugar Research Australia, Australia
-
- P8 Comparison of isolation methods and media for quantifying *Verticillium dahliae* populations in soil.
Shelby Young, Texas Tech University, USA
-
- P9 Antifungal activities of the volatile compounds produced by *Bacillus subtilis* BAB-1 against *Botrytis cinerea*.
Xiaoyun Zhang, Plant Protection Institute, Hebei Academy of Agricultural and Forestry Sciences, PR China
-
- P10 Isolation of antagonistic bacterium strains against pathogen causing black scurf of potato.
Peipei Wang, Hebei Academy of Agricultural and Forestry Sciences, PR China
-
- P11 Development of an internal sample process control (ISPC) for quantitative detection of *Ralstonia solanacearum* from soil samples by qPCR.
Liqun Zhang, China Agricultural University, PR China
-
- P12 Occurrence and development of wheat crown rot in Hebei province, China.
Lijing Ji, Plant Protection Institute, Hebei Academy of Agricultural and Forestry Sciences, PR China
-
- P13 A selection tool for nematode resistant rotation crops.
Katherine Thomson, Department of Agriculture and Fisheries, Australia
-
- P14 Plant-parasitic nematodes in banana production areas of Australia.
Jennifer Cobon, Department of Agriculture and Fisheries, Queensland, Australia
-
- P15 Development of wheat cultivars with combined resistance and tolerance to *Pratylenchus thornei* and resistance to *P. neglectus* for the

-
- Australian grains industry.
John Thompson, University of Southern Queensland, Australia
-
- P16 Identifying disease-suppressive crops for the management of Fusarium wilt in banana.
Noeleen Warman, Qld Department of Agriculture and Fisheries, Australia
-
- P17 Alternative hosts of Panama disease.
Wayne O'Neill, Department of Agriculture and Fisheries, Australia
-
- P18 Field screening of novel chemistries and biocontrol agents against seedling diseases of cotton, NSW Australia season 2017-2018.
Duy Le, NSW Department of Primary Industry, Australia
-
- P19 Soil-borne disease samples submitted to CropSafe between 2007 and 2017.
Luise Sigel, Agriculture Victoria, Australia
-
- P20 The search for soilborne diseases in Australian almond orchards.
Tonya Wiechel, Agriculture Victoria, Australia
-
- P21 Regional distribution of soilborne diseases in cereal crops in Australia.
Marcus Hicks, CSIRO, Australia
-
- P22 Effect of adding compost on microbial activity and composition to Australian cotton soil.
Stasia Kroker, CSIRO, Australia
-
- P23 Prevalence of soil-borne pathogens in Victorian cereal growing districts.
Joshua Fanning, Agriculture Victoria, Australia
-
- P24 Multi-environment analysis of post-harvest *Pratylenchus thornei* densities to investigate the resistance of northern region wheat varieties under field conditions.
Steven Simpfendorfer, NSW Department of Primary Industries, Australia
-
- P25 Population dynamics of the root lesion nematode *Pratylenchus thornei* on wheat in southern Australia.
Jonathan Baker, Agriculture Victoria, Australia
-
- P26 Induced resistance by the biocontrol agent against strawberry Fusarium wilt in Taiwan.
Tao-Ho Chang, Natioanl Chung Hsing University, Taiwan
-
- P27 Disease suppression: Soil fungal community diversity and interactions
Gupta Vadakattu, CSIRO, Australia
-
- P28 Endophytic actinobacteria as biocontrol agents and enhancers of N-fixation for lucerne (*Medicago sativa* L.).
Xuyen H. Le, Flinders University, Australia
-