

ANNUAL **DIAGNOSTICS** & **SURVEILLANCE**

WORKSHOP

9-11 MAY 2023 | CANBERRA

*Implementation
through
connections*

Welcome to the 2023 Annual Surveillance and Diagnostics Workshop (ADSW).

ADSW is an annual networking event which allows diagnosticians and surveillance practitioners to come together and share knowledge and learnings.

The theme of this year's workshop is "Implementation through connections".

Session 1: Implementation and sharing new technologies

Session 2: Capacity building to connect surveillance and diagnostic practitioners

Session 3: Outreach and engagement to implement and connect our work

Session 4: The wider industry connection - R&D implementation and the pathways to connect

Session 5: Reconnecting with the building blocks of the plant biosecurity system

Session 6: Connections across our National Surveillance Protocols and National Diagnostic protocols

The workshop is facilitated by Plant Health Australia (PHA) and funded by the Department of Agriculture, Fisheries and Forestry (DAFF) as a part of the 'National Plant Biosecurity Diagnostics and Surveillance Professional Development and Protocols' projects.

WORKSHOPS

DAY ONE Tuesday 9 May QT Hotel, 1 London Circuit ACT				
TIME	ROOM	SESSION	PRESENTER	TOPIC
8.30 – 10.30am	Studio 2	Workshop 1	Pragya Kant Agriculture Victoria	Multi-locus target sequencing (MLTS) workshop
8.30 – 10.30am	Studio 3	Workshop 2	Amanda Yong Plant Health Australia	The science of communication workshop

DAY THREE Thursday 11 May QT Hotel, 1 London Circuit ACT				
TIME	ROOM	SESSION	PRESENTER	TOPIC
1.30 – 4.30pm	Studio 2 & 3	Workshop 3	Sharyn Taylor Plant Health Australia	Towards a nationally integrated surveillance system for plant pests

PROGRAM

DAY ONE Tuesday 9 May QT Hotel, 1 London Circuit ACT				
Morning tea 10.00am - 10.30am				
Session: Implementation and sharing new technologies			Chair/s: Troy Bowman and Toni Chapman	
TIME	ROOM	PRESENTER	ORGANISATION	TOPIC
11.00am	Ballroom 3	Lucy Tran-Nguyen	Plant Health Australia	Official open and welcome
11.15am	Ballroom 3	Juliane Henderson	QLD Department of Agriculture and Fisheries	Subcommittee on Plant Health Diagnostics (SPHD) updates
11.30am	Ballroom 3	Tim Hurst (Virtual)	Agriculture Victoria	Subcommittee on National Plant Health Surveillance (SNPHS) updates
11.45am	Ballroom 3	Maggie Mwathi-Nyarko	Plant Health Australia	Networks updates
12.00 noon	Ballroom 3	Gabrielle Vivian-Smith	Department of Agriculture, Fisheries and Forestry	The importance of diagnostics and surveillance in Australia's national plant biosecurity system
12.15pm	Ballroom 3	Carolyn Blomley	Plant Health Australia	Protocols updates
12.30pm	Ballroom 3	Alexander N. Schmidt-Lebuhn	CSIRO	Mobile identification and collection of observation records using computer vision in biosecurity and weed management
12.45pm	Ballroom 3	Antonette Walford	Agriculture Victoria	Environmental DNA-based detection complements biosecurity monitoring and surveillance to enhance early detection
12.57pm	Ballroom 3	Rohan Kimber	SARDI	Automated air sampling for remote surveillance and high throughput processing of environmental samples for eDNA analyses
Lunch 1.10pm - 2.00pm				

DAY ONE Tuesday 9 May QT Hotel, 1 London Circuit ACT				
TIME	ROOM	PRESENTER	ORGANISATION	TOPIC
2.00pm	Ballroom 3	Geoff Grossel	Department of Agriculture, Fisheries and Forestry	National eDNA testing program
2.15pm	Ballroom 3	Frank Bedon (Virtual)	Department of Agriculture, Fisheries and Forestry	Towards field deploying future CRISPR/Cas based diagnostic assays for simultaneous detection of multiple plant pathogens: citrus as a case study
2.27pm	Ballroom 3	Cheryl Grgurinovic	Plant Health Australia	Proposed nationally coordinated high-throughput sequencing database for plant pests
2.31pm	Ballroom 3	Lilia Carvalhais	QLD Alliance for Agriculture and Food Innovation	Molecular diagnostics: more than just laboratory work
2.35pm	Ballroom 3	David Nehl (Virtual)	Department of Agriculture, Fisheries and Forestry	MALDI-ToF mass spectrometry: an additional molecular tool for biosecurity diagnostics
2.39pm	Ballroom 3	Mee -Yung Shin	Agriculture Victoria	Using near-infrared spectroscopy and machine learning modelling for the rapid detection of Verticillium wilt of potatoes
2.43pm	Ballroom 3	Regina Billones-Baajens	Charles Sturt University	Establishment and implementation of real-time LAMP protocols for diagnosis of Eutypa and Botryosphaeria dieback pathogens of grapevines, through collaboration with commercial diagnostic laboratories
2.47pm	Ballroom 3	Sharareh Heydari (Virtual)	Department of Agriculture, Fisheries and Forestry	Development of a diagnostic assay for detection of <i>Colletotrichum higginsianum</i> in vegetable seeds
2.51pm	Ballroom 3	David Gopurenko	NSW Department of Primary Industries	LAMP diagnostics for rapid identification of the serpentine leafminer, <i>Liriomyza huidobrensis</i> (Blanchard 1926) (Diptera: Agromyzidae) in Australia
2.55pm	Ballroom 3	PollEv		
Afternoon tea 3.00pm - 3.30pm				

DAY ONE | Tuesday 9 May | QT Hotel, 1 London Circuit ACT

Session: Capacity building to connect surveillance and diagnostic practitioners

Chair/s: Cathryn Todd and Andrew Manners

TIME	ROOM	PRESENTER	ORGANISATION	TOPIC
3.30pm	Ballroom 3	Irene Kernot	Australian Centre for International Agricultural Research (ACIAR)	Biosecurity outreach and engagement activities at ACIAR
3.45pm	Ballroom 3	Darren Peck (Virtual)	Department of Agriculture, Fisheries and Forestry	Northern Australia Plant Capability and Response Network (NAPCaRN)
3.57pm	Ballroom 3	Dominie Wright	WA Department of Primary Industries and Regional Development	Capacity building to connect diagnostic and surveillance practitioners (in emergency management)
4.09pm	Ballroom 3	Leigh Cutell (Virtual)	Department of Agriculture, Fisheries and Forestry	Northern Australia Quarantine Strategy (NAQS) surveillance model: connecting surveillance and diagnostic practitioners
4.21pm	Ballroom 3	Darryl Herron (Residential)	SCION	Diagnosing <i>Fusarium circinatum</i> and <i>Ceratocystis eucalypticola</i> in South Africa to improve Australasian diagnostics
4.33pm	Ballroom 3	Duy Le (Residential)	NSW Department of Primary Industries	Making nematological upskilling possible
4.45pm	Ballroom 3	Cathryn Todd (Residential)	SARDI	Residential to expand diagnostic and surveillance capacity to include bacterial LAMP assays
4.57pm	Ballroom 3	James Bickerstaff	CSIRO	Australian bark beetle (<i>Curculionidae: Scolytinae</i>) diagnostics: connecting biosecurity, taxonomy and molecular identification
5.01pm	Ballroom 3	Saidi Achari	Agriculture Victoria	Diagnosis of <i>Fusarium oxysporum</i> f. sp. ciceris causing Fusarium wilt of chickpea using Loop-Mediated Isothermal Amplification (LAMP) and conventional end-point PCR
5.05pm	Ballroom 3	PollEv (day ends 5.10pm)		

Event dinner | Cahoots Lounge, QT Hotel, 1 London Circuit ACT | 6.00 - 9.00pm

DAY TWO | Wednesday 10 May | QT Hotel, 1 London Circuit ACT

Session: Outreach and engagement to implement and connect our work

Chair/s: Laura Fagan and Troy Bowman

TIME	ROOM	PRESENTER	ORGANISATION	TOPIC
8.30am	Ballroom 3	Kevin Thiele	Department of Climate Change, Energy, the Environment and Water	The Biodiversity Data Repository: a key national data asset for Australia
8.45am	Ballroom 3	Nicholas Ward (Virtual)	Plant Health Surveillance, Biosecurity NZ	Biosecurity New Zealand's use of digital imagery in plant health surveillance programmes
8.57am	Ballroom 3	Dave Cousins	WA Department of Primary Industries and Regional Development	Polyphagous shot-hole borer in Western Australia – stakeholder engagement and response at the urban forest-residential interface
9.09am	Ballroom 3	Levente Kiss	University of Southern QLD	Capacity building at the Powdery Mildew Workshop in 2022
9.13am	Ballroom 3	JOINT PANEL DISCUSSION Chair/s: Laura Fagan and Callum Fletcher		Mind mapping
9.58am	Ballroom 3	Baldissera Giovani	Euphresco	EU diagnostics projects
10.08am	Ballroom 3	Salome Wilson	Australian National University	Advancing diagnostic resolution by rapid validation of fungal avirulence genes detected by the wheat immune system
10.11am	Ballroom 3	Fable Eenjes	Australian National University	A novel machine learning approach for fungal species detection
10.14am	Ballroom 3	Jo Luck	Plant Biosecurity Research Initiative	Plant Health Student Network

Morning tea | 10.30am - 11.00am

DAY TWO Wednesday 10 May QT Hotel, 1 London Circuit ACT				
Session: The wider industry connection – R&D implementation & pathways to connect			Chair/s: Callum Fletcher & Andrew Manners	
TIME	ROOM	PRESENTER	ORGANISATION	TOPIC
11.00am	Ballroom 3	John McDonald (Virtual)	Greenlife Australia	Biosecure HACCP
11.15am	Ballroom 3	Trevor Dunmall	Plant Health Australia	The potential impact of molecular diagnostics on biosecurity planning
11.27am	Ballroom 3	Francesco Martoni (Residential)	Agriculture Victoria	Early detection of Varroa mites by eDNA surveillance
11.39am	Ballroom 3	Andie Wong	Citrus Australia	CitrusWatch and urban biosecurity - expanding surveillance and engagement across major capital cities in southern Australia
11.51am	Ballroom 3	Zorica Duric	Department of Regional NSW	Not one problem, but two? How rigorous taxonomy and population genetics has revealed possible double trouble in the field with 'Rutherglen bug'
11.55am	Ballroom 3	Kathryn Pagler	Plant Health Australia	Let your hive thrive, it's time for a honey bee check up!
12.00 noon	Ballroom 3	Nancy Schellhorn	RapidAIM	RapidAIM on pest precision, management, rapid detection of fruit flies
12.15pm	Ballroom 3	Carlos Barbativo-Rodriguez	WA Department of Primary Industries and Regional Development	Implementation and sharing new technologies regarding the utilisation of geospatial software, and its integration across different ag vendors
12.27pm	Ballroom 3	Chuong Ngo	Sugar Research Australia	Management of Ratoon stunting disease of sugarcane
12.39pm	Ballroom 3	Rohan Burgess	Plant Health Australia	Forest biosecurity and surveillance
Lunch 12.55pm - 1.40pm				

DAY TWO | Wednesday 10 May | QT Hotel, 1 London Circuit ACT

Diagnostics afternoon breakout

Session: Reconnecting with the building blocks of the plant biosecurity system

Chair/s: Carol Quashie-Williams and Toni Chapman

TIME	ROOM	PRESENTER	ORGANISATION	TOPIC
1.40pm	Ballroom 3	Lucy Tran-Nguyen and Pragya Kant	Plant Health Australia and Agriculture Victoria	Field activity preparation: LAMP and Agdia assays
2.30pm	Ballroom 3	Kath De Boer	Department of Agriculture, Fisheries and Forestry	An ontology and vocabulary for biosecurity diagnostics, created and maintained online by a community of practice
2.42pm	Ballroom 3	Reannon Smith	Department of Energy, Environment and Climate Action	Ancient powdery mildew DNA from reference collections: the effect of a century on powdery mildew DNA preservation
2.54pm	Ballroom 3	Pragya Kant	Agriculture Victoria	Targeted sequencing approaches for Xylella identification and surveillance
3.06pm	Ballroom 3	Kathy Crew	Queensland Alliance for Agriculture and Food Innovation	Reducing the threat of banana bunchy top disease through development of a lateral flow assay
3.18pm	Ballroom 3	Johanna Wong-Bajracharya	NSW Department of Primary Industries	How to be generic specific? A nanopore sequencing -compatible PCR/qPCR assay for detection and differentiation of <i>Xylella fastidiosa</i> and <i>Xylella taiwanensis</i>

Afternoon tea | 3.30pm - 4.00pm

Surveillance afternoon breakout

Session: Reconnecting with the building blocks of the plant biosecurity system

Chair/s: Liz McCrudden and Callum Fletcher

1.40pm	Studio 2 & 3	Sharyn Taylor and Troy Bowman	Plant Health Australia and PIRSA	Field activity prep (Xylella NDP Section 9 work construction)
2.30pm	Studio 2 & 3	Conrad Trollip	NSW Department of Primary Industries	High throughput screening of fungal phytopathogens caught in Australian forestry insect surveillance traps
2.42pm	Studio 2 & 3	Murray Sharman (Virtual)	QLD Department of Agriculture and Fisheries	Development of rapid tests for a range of important diseases to support surveillance, research and save time in lab
2.54pm	Studio 2 & 3	Luise Fanning	Agriculture Victoria	CropSafe community surveillance supports detection of <i>Fusarium gamsii</i> on wheat

DAY TWO Wednesday 10 May QT Hotel, 1 London Circuit ACT				
TIME	ROOM	PRESENTER	ORGANISATION	TOPIC
3.06pm	Studio 2 & 3	John Moore (Virtual)	WA Department of Primary Industries and Regional Development	Success of the Three-horned bedstraw (<i>Galium tricornutum</i>) eradication program in Western Australia
3.18pm	Studio 2 & 3	Lara Pretorius	Queensland Alliance for Agriculture and Food Innovation	Avocado sunblotch viroid surveillance - a pathway to declaring pest freedom
Afternoon tea 3.30pm - 4.00pm. Following afternoon tea, reconvene in Ballroom 3				
4.00pm	Ballroom 3	Cathryn Todd and Troy Bowman	SARDI and PIRSA	Surveillance and diagnostics breakout session de-brief
4.15pm	Ballroom 3	Susanna Driessen	Plant Health Australia	Emergency Plant Pest Response Deed (EPPRD)
4.25pm	Ballroom 3	Shannon Mulholland	NSW Department of Primary Industries	Incidence response management
4.35pm	Ballroom 3	Alejandro Trujillo-Gonzalez	University of Canberra	Insect diversity in shipping containers determined by environmental DNA
4.39pm	Ballroom 3	Pooja Sharma (Virtual)	Department of Agriculture, Fisheries and Forestry	Implementation of a suite of diagnostic methods for Rubus yellow net virus to support regulatory decision making at post-entry quarantine
4.43pm	Ballroom 3	Wes Webster (Virtual)	Department of Agriculture, Fisheries and Forestry	Implementing policy into practice: diagnostic development and validation of a novel <i>Diaporthe angelicae</i> molecular assay
4.47pm	Ballroom 3	Rob Clemens	Griffith University	Introducing Biosecurity Commons - the decision support platform set to transform biosecurity modeling capability
4.59pm	Ballroom 3	Jim Eldridge	Department of Agriculture, Fisheries and Forestry	Introducing the Department of Agriculture, Fisheries and Forestry new technical response team.
5.11pm	Ballroom 3	Matt Hill	Plant Health Australia	Integrated digital biosecurity systems
5.23pm	Ballroom 3	PollEv and closing remarks (day ends 5.28pm)		

ADSW 2023

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FIELD ACTIVITY

Field activity participants to meet and depart from QT Hotel, 1 London Circuit, ACT at 8:40am. Transport will be arranged to the Australian National Botanical Gardens (ANGB), returning to the QT Hotel at 12.30pm.

Thursday 11 May Australian National Botanical Gardens (ANGB)	
Session: Connections across our National Surveillance Protocols and National Diagnostic Protocols	
TIME	TOPIC
9.00 - 9.30am	Presentation from ANGB
9.30 - 10.45am	Field activity: part 1 (surveillance with Xylella NDP Section 9)
Morning tea Pollen Cafe 10.45am - 11.15am	
11.15 - 12.30pm	Field activity: part 2 (diagnostics LAMP assay + Agdia kit for Xylella)
12.30 - 12.45pm	Depart for lunch at QT Hotel, Canberra

Implementation through connections



About the Plant Surveillance Network Australasia-Pacific

The Plant Surveillance Network Australasia-Pacific (PSNAP) enables members to communicate about plant pest surveillance and acts as a coordination point for surveillance professionals and practitioners to strengthen surveillance capacity and capability across Australia, New Zealand and the nearby region.

The network was formed in 2017 as an initiative of the Subcommittee for National Plant Health Surveillance (SNPHS).

The concept of the Plant Surveillance Network follows the success of the National Plant Biosecurity Diagnostic Network (under the Subcommittee on Plant Health Diagnostics).

Visit www.plantsurveillancenetwork.net.au






About the National Plant Biosecurity Diagnostic Network

The National Plant Biosecurity Diagnostic Network (NPBDN) is the nationally integrated network for plant diagnosticians in Australia. Members of the network support their profession by helping to contribute to a sustainable plant diagnostic system. Their activities enable the efficient and effective diagnosis of plant pests by Australian plant diagnosticians.

The network was founded in 2011. The network was formally established by a wide range of stakeholders involved in managing Australia's plant biosecurity system. Plant diagnosticians involved with this network are located in every state and territory. Diagnostic services are provided from cities and regional centres in most of Australia's major agricultural production areas.

Visit www.plantbiosecuritydiagnostics.net.au



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