

2022 ANNUAL
DIAGNOSTICS & SURVEILLANCE
WORKSHOP

30 AUGUST - 1 SEPTEMBER

Plant Surveillance
Network Australasia-Pacific

NATIONAL PLANT
BIOSECURITY
DIAGNOSTIC NETWORK

‘SURVEILLANCE AND DIAGNOSTICS – integrated to inspire and innovate’

AgriBio at La Trobe University, Melbourne

Monday 29 August

Time	Session/activity	Presenter	Presentation	Room	Duration
10:00 AM - 4:00 PM	Workshop 1. Introduction to molecular diagnostics	Pragya Kant, Dave Lovelock, Quang Dinh, Cliff Kinoti, Mark Blacket, Natasha Brohier, Isabel Valenzuela-Gonzalez - Ag Vic	Introduction to molecular diagnostics	Victoria A/B	All day
ADSW DAY 1: Tuesday 30 August					
8:30 AM - 12:00 Noon	Workshop 2. VirReport , a small RNA-seq pipeline for the diagnosis of viruses and viroids in plant commodities	Roberto Barrero, Ruvini Lelwala, Marie-Emilie Gauthier - QUT	VirReport, a small RNA-seq pipeline for the diagnosis of viruses and viroids in plant commodities	Victoria A	Half day

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8:30 AM - 12:00 Noon	Workshop 3. MYPESTGUIDE® in action - supporting diagnostics and surveillance practitioners	Nadine Guthrie - DPIRD	MYPESTGUIDE® in action - supporting diagnostics and surveillance practitioners	Victoria B	Half day
Lunch 12:00 Noon – 1:00 PM					
Session 1: Introduction and updates Chair Tegan Honing, Co-Chair Callum Fletcher					
1:00 PM	Start ADSW 2022 Welcome and introduction	Lucy Tran-Nguyen - PHA		Victoria A/B	15 mins
1:15 PM	PSNAP/NPBDN updates and PD programs	Maggie Mwathi - PHA			10 mins
1:25 PM	SNPHS update	Veronica Hayes /Louise Rossiter/Tim Hurst			15 mins
1:40 PM	SPHD update	Brendan Rodoni - Ag Vic			15 mins
1:55 PM	Speaker 1	Jonathan Terlich - PHA	National plant biosecurity strategies implementation update		10 mins
2:05 PM	Residential 1	Sharl Mintoff - NT - DITT (Virtual)	Banana Virus Immunological Assays training in Brisbane		3 mins

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Time	Session/activity	Presenter	Presentation	Room	Duration
2:08 PM	Residential 2	Brian Thistleton - NT - DITT	Development of National Diagnostic Protocols for exotic termites		10 mins
2:18 PM	Residential 3	Simon Ong – NT - DITT (Virtual)	Termites of the Indian Sandalwood industry of northern Australia		10 mins
Session 2. Theme 1. Integration and innovation: cases and opportunities for bringing elements of the biosecurity system together					
2:28 PM	Guest speaker 1	Jennifer Ticehurst - DAFF	Viewing general surveillance programs as systems to improve effectiveness	Victoria A/B	15 mins
2:43 PM	Speaker 2	Leigh Cuttall - DAFF	Northern biosecurity- an integrated approach		10 mins
2:53 PM	Speaker 3	David Cann – DAFF	The Indigenous Ranger Biosecurity Program: A case study in uniting northern biosecurity stakeholders		10 mins
3:03 PM	Speaker 4	Sophia Callaghan - DPI NSW	Many hands make early detections: discovery of a dangerous duo in NSW		10 mins
Afternoon tea (30 min)					
Session 3. Theme 1. Integration and innovation: cases and opportunities for bringing elements of the biosecurity system together Chair Andrew Manners, Co-Chair Toni Chapman					
3:43 PM	Guest speaker 2	Jessica Lye - Citrus Australia	The road behind, the road ahead - building biosecurity capability in the citrus industry	Victoria A/B	15 mins

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Time	Session/activity	Presenter	Presentation	Room	Duration
3:58 PM	Speaker 5	Louise Croeser - DPIRD	Polyphagous shot-hole borer in Western Australia – surveillance and diagnostics at the urban forest-residential interface		10 mins
4:08 PM	Speaker 6	Trevor Dunmall - PHA	Building stronger surveillance through collaboration and partnerships		10 mins
4:18 PM	Speed talk 2	Jane Ray – NT- DITT	Ralstonia species associated with bacterial wilt in Australia		3 mins
4:21 PM	Speed talk 3	Lilia Costa Carvalhais - QAAFI (Virtual)	Novel validated molecular assays for detection of Ralstonia solanacearum causing Moko disease in banana		3 mins
4:24 PM	Speaker 7	Isarena Schneider - DAFF Bala Asigua - NAQIA, PNG	Treaty Village Fruit Fly Trapping - PNG Fruit Fly Program		10 mins
4:34 PM	Panel Discussion 1 - Technology, policy, surveillance and diagnostics	Lead: Dave Hubbard, Panel members; Rosa Crnov, Andrew Tomkins, Karen Armstrong, Fiona Constable			30 mins
5:04 PM	PaDIL Launch	Matt Hill - PHA			10 min
5:14 PM	PolLEV	Maggie Mwathi - PHA	PolLEV.Com/phau		5 mins

Socialising Event 5:30 - 7:30 PM (Bread and Butta, AgriBio)

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ADSW DAY 2: Wednesday 31 August					
Session 4: Theme 2. Inspiration and discovery of the new.					
Chair Cathryn Todd, Co-Chair Gavin Hunter					
8:30 AM	Guest speaker 3	Jeremy Burdon – Scientist /Consultant	Bioplatforms Australia: the Plant Pathogen "Omics Initiative"	Victoria A/B	15 mins
8:45 AM	Speaker 8	Luciano Rigano - Primary Industries, NZ	High-throughput sequencing as a diagnostic tool for biosecurity		10 mins
8:55 AM	Speaker 9	Karen Armstrong - Lincoln University, NZ	Current research directions for Diagnostics in B3 (Better Border Biosecurity)		10 mins
9:05 AM	Speaker 10	Asad Prodhan - DPIRD (Virtual)	Improving MALDI-TOF bacterial species identification by nanopore whole genome sequencing		10 mins
9:15 AM	Speed talk 4	Mark Blacket - Ag Vic	Developing new molecular diagnostic tools for Australia's fruit flies		3 mins
9:18 AM	Speed talk 5	Dilani De Silva/Pooja Sharma - DAFF	Towards streamlining access to new citrus genetics for Australian horticulture using high throughput sequencing		3 mins
9:21 AM	Guest speaker 4	Julie Pattemore - DAFF	HTS - High-throughput sequencing		15 mins
9:36 AM	Speed talk 6	Andrew Manners - DAF QLD	A multiplex diagnostic PCR for the detection of the oomycete genera Phytophthora, Pythium and Phytopythium		3 mins

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Time	Session/activity	Presenter	Presentation	Room	Duration
9:39 AM	Speed talk 7	Cameron Brumley - DPIRD	Building Australian Aphid Diagnostics	Victoria A/B	3 mins
9:42 AM	Speed talk 8	Peter Scott - DPIRD	Multivariate Bayesian analysis to predict the invasion risk of <i>Phytophthora</i> pathogens, using incursions and diagnostics traits		3 mins
9:45 AM	Panel Discussion 2 - Transferring new technology to PB system	Lead: Benjamin Schwessinger, Panel members; Cathryn Todd, Julie Pattemore, Conrad Trollip, Luciano Rigano			30 mins
10:15 AM	Session wrap-up				5 mins
Morning tea (30 min)					
Session 5: Protocols and national capability survey Chair Jo Luck, Co-Chair Dave Hubbard					
10:50 AM	Protocols Update	National Diagnostics Protocols Officer and Rachel Taylor-Hukins (NDPs and NSPs)			20 mins
11:10 AM	Panel Discussion 3 - Surveillance and Diagnostics	Lead: Lucy Tran-Nguyen, Panel members; Yu Pei Tan, Brian Thistleton, John Roberts, Toni Chapman	Joint Surveillance and Diagnostics Panel (Surveillance and diagnostics, together at last', creating synergy in the full NSP and NDP pipeline)	Victoria A/B	50 mins
12:00 PM	Guest speaker 5	Benjamin Schwessinger - ANU	Nanopore sequencing to trace pathogens for public health and biosecurity		15 mins

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Time	Session/activity	Presenter	Presentation	Room	Duration
12:15 PM	Speaker 11	Tonny Kinene - DPIRD	Using Nanopore sequencing for improved diagnostic methods in plant pathology		10 mins
12:25 PM	Speaker 12	Duy Le – DPI, NSW	Black root rot of cotton: a diagnostic guide		10 mins
12:35 PM	Speaker 13	Alexander Piper - Ag Vic	DNA metabarcoding diagnostic assay and pilot surveillance programme for spotted wing drosophila (<i>Drosophila suzukii</i>)		10 mins
12:45 PM	Speaker 14	Pragya Kant - Ag Vic	Improved diagnostics for <i>Xylella fastidiosa</i> through high throughput sequencing		10 mins
12:55 PM	PolLEV	Maggie Mwathi - PHA	PolLEV.Com/phau		5 mins
Lunch 1:00 PM - 2:00 PM					
Session 6: Student session Chair Callum Fletcher, Co-Chair Liz McCrudden					
2:00 PM	Guest speaker 6	Carol Quashie-Williams - DAFF	STEM – What is STEM?	Victoria A/B	15 mins
2:15 PM	Residential 4	Conrad Trollip – Ag Vic	Surveillance residentials are an opportunity to connect		10 mins
2:25 PM	Student session	Joanne Mackie - DJPR	Targeted surveillance strategies to support area wide management of viruses in vegetable crops		3 mins
2:28 PM	Student session	Yuzhu Liu – University of Melbourne	<i>Pythium</i> spp., new pathogens of pyrethrum in Australia		3 mins
2:31 PM	Student session	Weixia Wang – University of Melbourne	Diagnose of <i>Colletotrichum</i> species causing pre- and post-harvest diseases of citrus in Australia		3 mins

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2:34 PM	Trade Show and Booth display		Bioplatforms, iMapPEST, Digital systems, Minlon, Ranger App		30 mins
Time	Session/activity	Presenter	Presentation	Room	Duration
Afternoon tea (30 min)					
Session 7: Theme 3. National Surveillance program updates Chair Sharyn Taylor, Co-Chair Leigh Cuttell					
3:35 PM	Guest speaker 7	Nigel Crump - AuSPICA	Diagnostic testing and surveillance that has worked (or not) for the Australian potato industry	Victoria A/B	15 mins
3:50 PM	Speaker 15	Rohan Burgess - PHA	National Forest Pest Surveillance Program		10 mins
4:00 PM	Speaker 16	Jenny Shanks - PHA	National Bee Pest Surveillance Program		10 mins
4:10 PM	Speaker 17	John Roberts - CSIRO	Advancing molecular detection for pest mites of honeybees in Australia		10 mins
4:20 PM	Panel Discussion 4 - Industry update, what is working, what can be improved?	Lead: Sharyn Taylor, Panel members; Shakira Johnson, Callum Fletcher, Nigel Crump, Jessica Lye			30 mins
4:50 PM	Guest speaker 8	Callum Fletcher - GRDC	Surveillance in Australia's North: A meaningful approach to improving industry and government collaboration in biosecurity		15 mins

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5:05 PM	Speaker 18	Ian Naumann - DAFF	Plant Pest Surveillance and Diagnostics in post-pandemic South-East Asia		10 mins
Time	Session/activity	Presenter	Presentation	Room	Duration
5:15 PM	Speaker 19	Rohan Kimber - SARDI	Sentinels without borders: how a global pandemic inspired the diversification of iMapPESTS's mobile surveillance suite	Victoria A/B	10 mins
5:25 PM	Speaker 20	Wellcome Ho - Ministries for Primary Industries - NZ (Virtual)	New Zealand high risk site surveillance programme in 2021-2022		10 mins
5:35 PM	Speaker 21	Asha Thomas - Ministries for Primary Industries - NZ	Managing diagnostic throughput for New Zealand's National Invasive Ant Surveillance Programme (NIAS)		10 mins
5:45 PM	Session wrap-up and close day 2				

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ADSW DAY 3: Thursday 1 September					
Session 8: Chair Lucy Tran-Nguyen, Co-Chair Maggie Mwathi					
8:35 AM	Guest speaker 9	Laura Murphy – DAFF (Virtual)	Updated assessment process for import proposals of plant-related viable pest organisms	Victoria A/B	15 mins
8:50 AM	Speaker 22	Uday Divi - DAFF	National competency, capability, and capacity for biosecurity molecular screening and surveillance using environmental DNA (eDNA) and eRNA technology		10 mins
9:00 AM	Speaker 23	Levente Kiss - University of Southern QLD	Connecting surveillance and diagnostics: Powdery Mildew Workshop in November 2022		10 mins
9:10 AM	Speaker 24	Abel Ximenes - Timor Leste Liz McCrudden - DAFF	Plant Health Surveillance Program, Timor-Leste's offshore partnership and remotely support surveys in 2021-22		10 mins
9:20 AM	Speaker 25	Ahmed Saad - University of Southern QLD	A qPCR-based assay to quantify the spread of <i>Curtobacterium flaccumfaciens</i> pv. <i>flaccumfaciens</i> in mungbean and potential for phenotyping for tan spot susceptibility		10 mins
9:30 AM	National capability plan	Lucy Tran-Nguyen - PHA Cheryl Grgurinovic - PHA	National capability plan update		10 mins
9:40 AM	ADSW survey	Maggie Mwathi - PHA	PolLEV.Com/phau		5 mins

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9:45 AM	Future workshops - PolLEV	Maggie Mwathi - PHA	PolLEV.Com/phau		15 mins
10:00 AM	Official Close ADSW 2022	Lucy Tran-Nguyen - PHA			
Morning tea (30 mins)					
Session 9: Workshops					
10:30 AM - 12:30 PM	Workshop 4 - The tale of AUSPestCheck® and the high-quality surveillance data lifecycle	Dave Gale - PHA	The tale of AUSPestCheck® and the high-quality surveillance data lifecycle	Victoria A	2 hrs
10:30 AM - 12:30 PM	Workshop 5 - Australia Plant Pest Database - APPD	Francesca Strutt - PHA	Australia Plant Pest Database - APPD	Victoria B	2 hrs
Lunch 12:30 PM - 1:30 PM					

Friday 2 September

Time	Session/activity	Presenter	Presentation	Room	Duration
8:30 AM – 12:30 PM	Workshop 6. Nationally coordinated HTS database - stakeholder workshop	Lucy Tran-Nguyen – PHA Cheryl Grgurinovic – PHA	Nationally coordinated HTS database - Stakeholder workshop	Victoria A	Half day
9:30 AM – 1:00 PM	Workshop 7. Metabarcoding	Alex Piper, Reannon Smith, Conrad Trollip, Tongda Li– Ag Vic	Metabarcoding	Victoria B	Half day