

Science Exchange 2012			Page
8.00am - 8.45am	Registration desk open	Greg Vickers and Mandy Winter	
8.45am - 9.00am	Welcome	John Lovett and Simon McKirdy	1
<b>Session 1: Preparedness - Chair Kathy Ophel-Keller</b>			
9.00am - 9.15am	Analysing shipping networks as a pathway for invasive species	Dean Paini	7
9.15am - 9.30am	The potential implications of climate change for the wheat-aphid-YDV pathosystem in WA: a simulation modelling study	Hazel Parry	8
9.30am - 9.45am	Predicting the benefits of banana bunchy top virus eradication in Australia	David Cook	9
9.45am - 10.00am	Documenting and delivery an entire island's invertebrate fauna	Ken Walker	10
10.00am - 10.15am	Combining semi quantitative methods for prioritising plant parasitic nematode species for biosecurity risk assessment	Sunil Singh (PhD Student)	11
10.15am - 10.30am	<i>Phytophthora ramorum</i> : science into policy and management	Kylie Ireland (PhD Student)	12
10.30am - 11.00am Morning Tea			
<b>Session 2: Diagnostics - Chair Kim James</b>			
11.00am - 11.15am	Evaluation of novel platforms for their ability to identify new biomarkers for bacterial pathovars	Toni Chapman	14
11.15am - 11.30am	Development of single chain antibody fragments (scFvs) against banana streak <i>MY virus</i> towards a new detection method for banana viruses with recombinant antibodies	Jenny Vo (PhD Student)	15
11.30am - 11.45am	New technologies for plant biosecurity; bead arrays for multiplexed detection of plant viruses and their vectors	Sharon Van Brunshot (PhD Student)	16
11.45am - 12.00pm	Development of a diagnostic tool for the detection of <i>Erwinia amylovora</i> , the causal agent of fire blight	Rachel Powney (PhD Student)	17
12.00pm - 12.15pm	Nematode diagnostics using anti-primer technology	Matthew Tan (PhD Student)	18
12.15pm - 12.30pm	The resolution of species boundaries of four past members of the <i>Bactrocera dorsalis</i> complex ( <i>Diptera: Tephritidae</i> ): a multidisciplinary approach	Mark Schutze	19
12.30pm - 1.30pm Lunch			
<b>Session 3: Application of diagnostics - Chair Kim Plummer</b>			
1.30pm - 1.45pm	Development of a molecular based diagnostic capability for the detection of cereal viruses	Linda Zheng	21
1.45pm - 2.00pm	Effectors and species differentiation in <i>Venturia</i> sp.	Daniel Jones (PhD Student)	22
2.00pm - 2.15pm	Worldwide invasion genetics of Russian wheat aphid ( <i>Diuraphis noxia</i> )	Bo Zhang (PhD Student)	23
2.15pm - 2.30pm	Identifying the light-brown apple moth & other pests from the genus <i>Epiphyas</i>	Bobbie Hitchcock (PhD Student)	24
2.30pm - 2.45pm	Phosphine resistance molecular diagnostics	David Schlipalius	25
2.45pm - 3.00pm	Making sense of chemical communication in the red flour beetle: finding candidate pheromone receptors in <i>Tribolium castaneum</i>	Kelly Hill	26
3.00pm - 3.30pm Afternoon Tea			
<b>Session 4: Surveillance 1 - Chair Paul De Barro</b>			
3.30pm - 3.45pm	Studies on pospiviroid isolates from solanaceous and wild plant hosts in Australia	Alison Mackie (PhD Student)	28
3.45pm - 4.00pm	What do we learn from general surveillance? Bayesian methods for acknowledging the contributions by on-farm surveillance	Samantha Low-Choy	29
4.00pm - 4.15pm	Designing better surveillance programs with plant biosecurity practitioners	Mark Stanaway (PhD Student)	30
4.15pm - 4.30pm	Trapping to prove area freedom	Francis De Lima	31
4.30pm - 4.45pm	Testing the generality of the general model of biological invasion	Michael Renton	32
4.45pm - 5.00pm	Modelling the effects of release timing on the wind-assisted dispersal of passive propagules	David Savage (PhD Student)	33

Poster Session 6.00-7.00pm followed by Cocktail Party 7.00-10.00pm (Samuel Copley Room)			Page
Poster 1	Effects of climate variation on the <i>Rhopalosiphum padi</i> -Yellow Dwarf Virus-wheat plant pathosystem	Jo Luck	35
Poster 2	Robiga and Rudu in "Robiga investigates wheat stripe rust infecting wild barley grass in Australia"	Jordan Bailey (PhD Student)	36
Poster 3	Pheromone detection by <i>Tribolium castaneum</i> odorant receptors	Bradley Stevenson	37
Poster 4	Development of biosecure packaging for transport of emergency plant pest samples	Barbara Hall	38
Poster 5	Barrow Island surveillance design after year one	Peter Whittle	39
Poster 6	Fate of <sup>32</sup> P labeled phosphine in grain and grain fractions	YongLin Ren	40
Poster 7	Thermosiphon and ground level Aluminum phosphide application	Chris Newman	41
Poster 8	Measuring working airflow of aeration fans	Philip Burrill	42
Poster 9	Global eradication and response database	Lloyd Stringer	43
Poster 10	<i>Homalodisca vitripennis</i> (Hemiptera: Cicadellidae) and <i>Xylella fastidiosa</i> (Proteobacteria: Xanthomonadaceae): potential Australian invaders	Anna Rathe (PhD Student)	44
Poster 11	Climate change and pest risk analysis	Kyla Finlay	45
Poster 12	Farm grain supply contracts for biosecurity	Ben White	46
Poster 13	Biosecurity surveillance: should irrigation water be considered? The case study of the Ord River Irrigation Area	Rebecca Zappia (PhD Student)	47
Poster 14	Khapra beetle: detecting a wolf in sheep's clothing	Robert Cunningham	48
Poster 15	HS-SPME-GC/MS: A potential method to detect stored grain insect pests	Yonghao Niu (PhD Student)	49
Poster 16	Head Space-Solid phase micro-extraction Gas chromatography-mass spectrometry analyses of volatile organic compounds from <i>Phytophthora</i>	Rui Qiu (PhD Student)	50
7.00pm – 10.00pm	Cocktail Party: MC John Lovett (Samuel Copley Room)		

## Thursday 24 May 2012 (Barrett Lennard Room)

<b>Session 5: Surveillance 2 - Chair Jody Higgins</b>			Page
9.00am – 9.15am	Engineering for biosecurity, achievements and potential	Les Zeller	52
9.15am – 9.30am	A mixture of linear SVMs for multi-class classification of EPPs on hyperspectral image	Pattaraporn Khuwuthyakorn (PhD Student)	53
9.30am – 9.45am	Do locusts seek out greener pastures? A Bayesian hierarchical analysis of the 2010-2011 Victorian Australian plague locust invasion	John Weiss (PhD Student)	54
9.45am – 10.00am	Moving towards IPM with robust sampling strategies	Grant Hamilton	55
10.00am – 10.15am	Dispersal and resource use by the lesser grain borer ( <i>Rhyzopertha dominica</i> ) in southern New South Wales	Mark Stevens	56
10.15am – 10.30am	The economics of area wide management, the case of Qfly	Ben White	57
10.30am – 11.00am	Morning Tea		
<b>Session 6: Impact Management - Chair John Leslie</b>			
11.00am – 11.15am	Integrating technologies to achieve pest eradication in urban and peri-urban areas	Rajendra Soopaya	59
11.15am – 11.30am	Understanding myrtle rust epidemiology and host specificity to determine disease impact in Australia	Geoff Pegg	60
11.30am – 11.45am	Optimising eradications	Lloyd Stringer	61
11.45am – 12.00pm	Virulence evolution in the Russian wheat aphid and its impact on Australia's preparedness strategy	Owain Edwards	62
12.00pm – 12.15pm	Epidemiology and biology of Fusarium wilt tropical race 4	Rachel Meldrum (PhD Student)	63
12.15pm – 12.30pm	The South African Citrus Thrips ( <i>Scirtothrips aurantii</i> ) in Queensland is polyphagous, and does not show strong preferences for its only recorded host in the field	Brian Garms (PhD Student)	64
12.30pm – 12.45pm	Eradication of black rot ( <i>Guignardia bidwellii</i> ) from grapevines achieved by drastic pruning	Mark Sosnowski	65
12.45pm – 1.45pm	Lunch		
<b>Session 7: Post-harvest - Chair Ben White</b>			
1.45pm – 2.00pm	Patterns and trends in resistance of grain insect pests to phosphine: Mining the Australian Grain Insect Resistance Database (AGIRD)	Matt Falk	67
2.00pm – 2.15pm	Alternative to phosphine – nitrogen storage	YongLin Ren	68
2.15pm – 2.30pm	Successful management of strongly phosphine resistant stored grain pests by developing Sulfuryl fluoride as an alternative fumigant	Manoj Nayak	69
2.30pm – 2.45pm	Mortality estimation for individual-based simulations of phosphine resistance in lesser grain borer ( <i>Rhyzopertha dominica</i> )	Mingren Shi (PhD Student)	70
2.45pm – 3.00pm	Economic analysis of biosecurity risks within the WA grain supply network from farm to port	Hoda Abougamos (PhD Student)	71
3.00pm – 3.15pm	Ecology of stored grain beetles: How far have we come, what does it mean and what next?	Greg Darglish	72
3.15pm – 3.40pm	Afternoon Tea		
3.40pm – 5.00pm	Sporting activity (golf driving range, tennis, squash, gym, pool) or free time		
6.00pm	Buses depart for dinner		
6.15pm - 6.45pm	Pre-dinner drinks and canapés (Offsite)		
6.45pm - 10.30pm	Science Exchange Awards Dinner (Offsite)		

## Friday 25 May 2012 (Barrett Lennard Room)

<b>Session 8: Delivery - Chair David Teulon</b>			Page
9.00am – 9.15am	Developing a framework of Indigenous and non-Indigenous perspectives of biosecurity	Ruth Wallace/Kathy Guthadjaka	74
9.15am – 9.30am	Policy disjuncture in biosecurity management (case study of Eastern Indonesia provinces)	Theo Litaay (PhD Student)	75
9.30am – 9.45am	Revisiting disease triangle: the role of social environment in community biosecurity management	I Wayan Mudita (PhD Student)	76
9.45am – 10.00am	Achieving practice change to limit the development of phosphine resistance in insects of stored grain	Jo Slattery	77
10.00am – 10.15am	Digital diagnostics	Gary Kong	78
10.15am – 10.30am	Remote microscopy and the future of digital tools in plant biosecurity	Michael Thompson	79
10.30am – 11.00am	<b>Morning Tea</b>		
<b>Session 9: What's next - Chair Emma Colson</b>			
11.00am – 11.15am	Molecular diagnostic tools can meet the needs of biosecurity agencies	Brendan Rodoni	81
11.15am – 11.27am	The industry perspective - Grains Research and Development Corporation	Rohan Rainbow	
11.27am – 11.39am	The industry perspective - Horticulture Australia Limited	Kim James	
11.39am – 11.51am	The international perspective - Kansas State University, USA	John Leslie	
11.51am – 12.03pm	The international perspective - Plant and Food Research, NZ	David Teulon	
12.03pm – 12.20pm	The government perspective - Department of Agriculture, Fisheries and Forestry	Kim Ritman	
12.20pm – 12.30pm	Science Exchange Close	John Lovett and Simon McKirdy	
12.30pm – 1.30pm	<b>Lunch</b>		
1.45pm	First buses depart for Perth airport (delegates will be advised which flights need to take this bus)		
2.30pm	Final buses depart for Perth airport		