



APPS Newsletter Vol 29, No. 1

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APPS NEWS is the official newsletter of the Australasian Plant Pathology Society, published electronically 3 times per year. Items for inclusion should be sent to:

Sara Blake, Plant Health & Biosecurity, South Australian Research and Development Institute, GPO Box 397, Adelaide, SA, 5001.  
Phone: 08 8303 9383 Email: sara.blake@sa.gov.au

**Next deadline: July 31 2015**

Web Site: <http://www.australasianplantpathologysociety.org.au/>

## President's Message

I am pleased to report that the society is in great shape with healthy membership numbers and as a consequence is doing well financially. That said I still would like to encourage any newcomers (new students or researchers) into APPS.

I hope you all enjoyed the Freemantle meeting; it was great meeting both old and new colleagues. The organisation for the next APPS conference, to be held in Brisbane in 2017, is in full swing and it is shaping up to be a terrific meeting.

I also want to highlight that the society has supported—and is keen to continue supporting—various APPS-related activities happening in the Regional Branches. This is enabled by the APPS policy of returning a proportion of your annual membership fee to your Regional Branch. How those funds are spent is up to the Regional Branch membership, as long as plant pathology is promoted. For this to happen, the Regional Councillors need to send a short annual report outlining Branch activities for the previous year. So, please assist your Regional Councillors by sending them a few lines to report on any plant pathology-related activities that bring APPS members together. These activities do not have to be attended exclusively by APPS members, but obviously the more members we attract to interact at events, the healthier the society and plant pathology in general.

Speaking of finances, Alex Idnurm is our current Treasurer (thanks Alex) and he is recruiting new Finance Subcommittee members (see the Finance Subcommittee section below). I encourage you to put yourself up for this task. This is a vital job for the society, as this committee has oversight of the funds and proposes projects for using some of the APPS funding.

The Exec has also been discussing some important issues related to the APPS journals. We are keen to improve the impact factor of the Australasian Plant Pathology journal. To this end, I encourage all members to consider providing review articles to APP. This is a great way to increase your research profile and will boost your citations. All higher degree research students should consider APP as a great place to publish their Chapter 1 literature review. This will be a fantastic way to kick off your publications from your degree and will provide progress toward completing your thesis.

The APPS journals have also recently reinforced government requirements for new disease reports. We have now prominently highlighted the researcher's responsibility to notify State/Federal Government authorities prior to any publication of such reports. The appropriate links for reporting to Australian and NZ authorities appear prominently on the APPS and the journal websites. Any other members who have similar links in their regions please forward these to myself for inclusion on the APPS website.

I am happy to announce (on behalf of the Executive for the Advancing Plant Pathology Fund Australia) that Noeleen Warman is the recipient of the Advancing Plant Pathology Fund Australia scholarship to undertake her honours degree research into the Epidemiology of Fusarium wilt in Bananas (Panama Disease) at the University of Queensland in 2016.

Kim Plummer

K.Plummer@latrobe.edu.au; president@appsnet.org.au

## Finance Subcommittee

Expressions of interest from anyone wishing to revitalise the Finance subcommittee are welcome. The membership of this subcommittee is open to all society members. Its role is to: provide advice to the Treasurer on financial matters affecting the Society; review the overall financial situation once during the 2 year term and provide advice to the Management Committee on that matter; investigate new revenue streams, oversee their development into profit-making enterprises and manage income and expenditure during the development phase. Please contact the Treasurer, Alex Idnurm ([alexander.idnurm@unimelb.edu.au](mailto:alexander.idnurm@unimelb.edu.au)), if you would like to participate.

## New Members

On behalf of the Society, the Management Committee would like to welcome the following new members:

- Dr Adrian Dinsdale Victoria
- Miss Abigail Durrant New Zealand
- Miss Jenna Gilkes New Zealand
- Mr Shane Hossel Tasmania
- Miss Emily Lancaster Queensland
- Mr Thanh Le New Zealand
- Mrs Fareeha Naz Western Australia
- Dr Darren Phillips Tasmania
- Mr Muhammad Shah Jahan Pakistan
- Mr Muhammad Ibrahim Tahir Pakistan



## Dates for your Diary

- **9<sup>th</sup> Australasian Soilborne Diseases Symposium**,  
Heritage Hanmer Springs, Canterbury, New Zealand.  
14-18 November 2016



Registration is now open for the 9<sup>th</sup> ASDS, that will be held in the spa resort township of Hanmer Springs, North Canterbury, in the spring of 2016. The Symposium, organised under the auspices of the Australasian Plant Pathology Society (APPS), will continue the tradition of highly successful Symposia that began on the Queensland Gold Coast in 1999 and has continued through to 2014 in Hobart, Tasmania. The 9<sup>th</sup> ASDS will include inputs from plant pathologists and other relevant researchers who study soilborne plant pathogens, the diseases they cause, soil health, microbiology and related ecology in forestry, pasture, arable, fruit and vegetable crops. The 9<sup>th</sup> ASDS is being organised by plant pathologists and APPS members at Lincoln.

<https://conferences.lincoln.ac.nz/9th-australasian-soilborne-diseases-symposium/#1>



### Victorian branch field day reveals critical role of plant pathology in the strawberry industry

Members of the Victorian branch of the APPS began 2016 with a field tour of the Victorian Strawberry Industry Certification Authority (VSICA) at the Toolangi Research Centre and the Toolangi Certified Strawberry Runner Growers' Co-operative on 16<sup>th</sup> February. VSICA manages the Victorian Strawberry Runner Certification Scheme, which involves four generations of multiplication of pathogen-tested Nucleus stock (Figure 1) to produce healthy runners for the strawberry fruit industry in Australia.

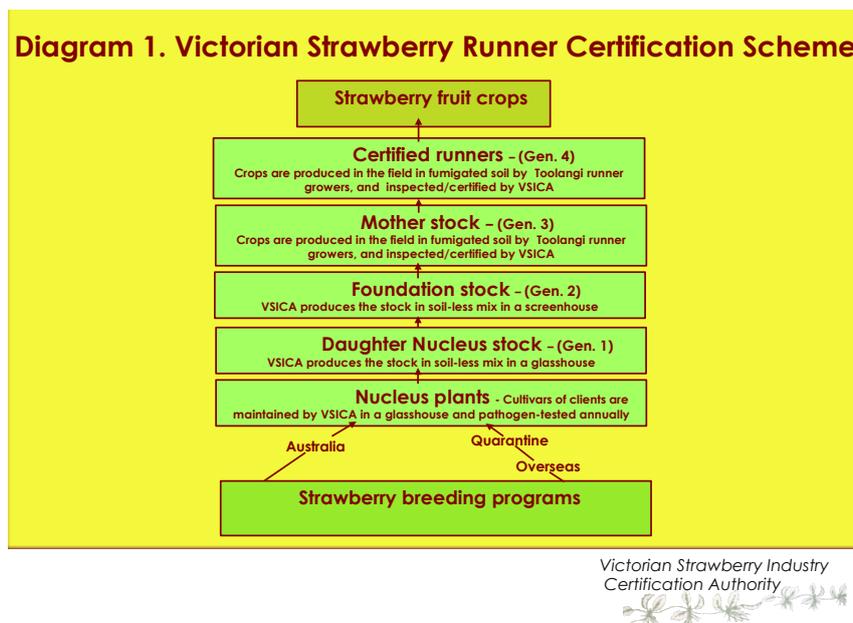


Figure 1. Victorian Strawberry Industry Certification Authority

The Scheme commenced in 1960 and is a real success story for plant pathology in the country as yields of fruit crops have increased more than 4-fold since the introduction of the Scheme, largely due to healthy planting material being provided to fruit growers together with improved cultivars and cultural practices.

The event was well attended. Most of the 33 attendees met at the AgriBio building at LaTrobe to wait in the drizzle for a bus to take us to Toolangi, but others came under their own steam from as far away as Horsham and Canberra. The bus trip was a great time to have informal catch ups with our colleagues before the busy day ahead of us.

Once arrived at VSICA, we were greeted with a sumptuous morning tea followed by an introduction and welcome from Frank Greenhalgh, the Chair of VSICA who gave a fascinating summary of the origins of the Scheme and its operations. Following this, Nigel Crump gave us a quick introduction to the Victorian Certified Seed Potato Authority (VICSPA), also located at the Toolangi Research Centre. He showed us how regulation, education and research led to support for the potato industry in Australia. Fiona Constable then spoke about her research on improved methods for detection of viruses of strawberry plants.

George Weda explained the role of the Toolangi Certified Strawberry Runner Growers' Co-operative, and Mirko Milinkovic gave us a tour of the strawberry facilities at the Toolangi Research Centre. We saw the glasshouse where the Nucleus and Daughter Nucleus stock (generation 1) are grown (Figure 2) and the screen house where the Foundation stock (generation 2) are grown (Figure 3). Some R&D is also being undertaken in the screen house, including that on the production of strawberry stolon tips and plug plants.



Figure 2. Glasshouse production of Nucleus and Daughter Nucleus stock



Figure 3. Screen house production of Foundation stock



Figure 4. Peter showing us some of the machinery used to harvest runners



Figure 5 Field trials for alternatives to methyl bromide use for soil disinfestation.

After a filling lunch at the Toolangi tavern, Peter Van de Ven explained the process of harvesting and treating certified strawberry runners for sale to fruit growers around Australia via the Co-operative (Figure 4).

The day ended with a visit to one of the trial sites of VSICA where Scott Mattner is evaluating alternative treatments to methyl bromide fumigation for control of weeds and soil-borne pathogens (Figure 5).

All in all, it was an enjoyable and informative day and we thank VSICA and the Co-operative for taking the time to show us and discuss aspects of the Scheme and underpinning R&D. In addition everyone received a complimentary Strawberry Co-op cap! We look forward to the next meeting to be held in the next few months.

*Linda Zheng*

## Regional news from SA



APPS members have been busy over the year organising and running a large number of workshops for landowners and agronomists and attending and presenting at various conferences and symposia around the country. Several SA members attended the APPS in Fremantle in September 2015: Suzanne McKay presented her work 'Resistance of *Erysiphe necator* to Qols and DMIs'; Eileen Scott presented 'Quantitative PCR (qPCR) and mid-infrared spectroscopic (MIR) analyses of powdery mildew on grape bunches' and gave her President's address which was well received; Katherine Linsell presented 'Assessing resistance and tolerance of cereal varieties to root lesion nematodes in multi-environment fields'; and Amanda Able presented 'Learning and teaching academic standards statement for agriculture-how does plant pathology fit?'.

Ismail Ismail attended the Barley Technical Symposium in Sydney giving 2 presentations:

- Genetic Basis of Sensitivity of Barley to the Secretome of *Pyrenophora teres f. teres*, The 17th Australian Barley Technical Symposium 2015 Manly.
- Proteomics of the filtrates from barley and barley grass isolates of *Pyrenophora teres f. teres*, Stromlo 2015 Canberra (Molecular Plant Pathology Meeting).

Marg Evens in the Cereal Pathology group contributed to Pathogen Of The Month, writing an article on White Grain disorder, which can be caused by single fungi and fungi in multiple combinations.

In November last year SA suffered another devastating bush/crop fire, The Pinery Fire, which destroyed homes, livestock and farm equipment along with large areas of wheat ready for harvest. Unfortunately, this included the loss of trial plots for SARDI's Soil and Plant Biology group.

On the 22<sup>nd</sup> January this year we had a social get-together in the Plant Research Centre auditorium, with 12 members attending. The door prize voucher of \$50 for an online purchase through Fishpond was won by Pauline Glocke.

Unfortunately, we had to cancel our Abstract Writing Course twice, first due to everyone's busy schedule and secondly, lack of interest. The funds allocated (\$400) have been carried over and a discussion was held to change the nature of the course from abstract writing to power point presentation in May this year.

*Pauline Glocke*

## Regional news from Tas



### Regional committee activity

The Tasmanian committee for 2016 consists of Drs Karen Barry (Councillor), Robert Tegg and Alison Dann. The committee has organised a symposium to be held on Friday 29<sup>th</sup> April at the Somercotes Orchard meeting rooms in Ross. Dr Neena Mitter (UQ and QAAFI) has been invited as the key speaker to share research on RNA interference technologies for crop protection. The day will also involve presentations from postgraduate students, researchers, industry and government. We are thankful to the APPS management committee and the Tasmanian Institute of Agriculture for funding to make this event possible.

### New R, D & E activity

APPS member Dr Doris Blaesing (RM Consulting Group) and Applied Horticultural Research (AHR) have commenced a 3 year Hort Innovation funded RD&E project on managing soilborne diseases in vegetables. It has a strong extension focus and the first webinar on *Pythium* management was held on 31<sup>st</sup> March 2016.

Dr Kathy Evans, Tasmanian Institute of Agriculture, is hosting PhD student Megan Hall from Cornell University from January – May 2016. Supervised by Prof. Wayne Wilcox, Megan is studying the aetiology and management of sour rot in wine grapes. This disease was present in a number of Tasmanian vineyards during the 2016 vintage, in some cases appearing to cause about 20% crop loss. Symptoms are associated with vinegar flies and the smell of acetic acid. These attributes help distinguish this rot from the early symptoms of botrytis bunch rot (*B. cinerea*, grey mould) which is also common in Tasmanian vineyards.

Recent research on the effect of strigolactones on soilborne disease led by APPS member Dr Eloise Foo has been published. Sara Blake is an ex-Tas member (now SA – we miss you Sara!).

- Blake, SN, Barry, KM, Gill, WM, Reid, JB and Foo, E. 2015. The role of strigolactones and ethylene in disease caused by *Pythium irregulare*. Molecular Plant Pathology. [doi:10.1111/mpp.12320](https://doi.org/10.1111/mpp.12320)
- Foo, E, Blake, SN, Fisher, BJ, Smith, JA and Reid, JB, 2015. The role of strigolactones during plant interactions with the pathogenic fungus *Fusarium oxysporum*, *Planta* pp. 1-10. [doi:10.1007/s00425-015-2449-3](https://doi.org/10.1007/s00425-015-2449-3)

### Biosecurity Tasmania activity

Several Biosecurity Tasmania staff are members of APPS. As part of the National Plant Health Survey Program (NPHSP) staff are conducting surveys this year for *Xylella fastidiosa* in grapevines. This is a volunteer program so we sent out sample packs for interested growers to return samples to us to test according to national diagnostic protocols. *Xylella fastidiosa* is a bacterium that can infect a very wide

range of hosts and is at the top of the list of high priority exotic pests. So far no positives have been found.

Dr Alison Dann will be attending a PBCRC workshop on “Next generation sequencing (NGS) technologies for the surveillance and diagnosis of viral pathogens” at AgrBio, Bundoora on the 19<sup>th</sup> April. The workshop will cover everything from sample management to data analysis.

Biosecurity Tasmania has also secured state government funding for a Laboratory Futures Project to update infrastructure and equipment in both Animal and Plant Health Laboratories to meet the requirements of the National and State Biosecurity Strategies and NATA accreditation.

*Robert Tegg*

## Regional news from NT



### TR4 collaboration

In March 2016, Plant Pathology staff member, Dr Vu Tuan Nguyen, attended the EcoScience Precinct in Brisbane to undertake training in Vegetative Compatibility Group (VCG) testing using NT *Fusarium oxysporum* f. sp. *ubense* isolates. Tuan spent 7 days in the QC3 laboratory learning the technique with Dr Wayne O'Neill from Biosecurity Queensland, Department of Agriculture and Fisheries. This was part of collaboration between the NT and Qld governments' Panama Tropical Race 4 (TR4) research program. During his visit, Tuan also undertook training with Wayne O'Neill and Ms. Jenny Cobon on the extraction and identification of nematodes.

### Melons conference

Dr Lucy Tran-Nguyen and Dr David Lovelock attended the 2016 Australian Melon Association Industry conference in Mildura from the 16<sup>th</sup> – 18<sup>th</sup> March. Lucy is the project leader on a three year project on the identification and management of *Fusarium* wilt in watermelons. The project is funded by Horticulture Innovation Australia Limited (HIA) with co-investment from NT DPIF, Monsanto Australia and Rijk Zwaan and funds from the Australian Government. Lucy presented project results at the conference on several key research areas for the management of *Fusarium oxysporum* f. sp. *niveum* (*Fon*) of watermelons; including *Fon* race differentials, molecular characterisation and resistant rootstocks. Lucy also presented preliminary results from *Cucumber green mottle mosaic virus* (CGMMV) bee and soil NTG funded research, and described key activities of a newly funded HIA national project on the improved management options of CGMMV.



Variety field trial at melon conference.

Cassie McMaster