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Comments from the APPS President

Since the last *APPS News*, a number of issues of interest to APPS members have been progressing.

These include APPS issues approved or noted at the APPS AGM held in late March:

- revisions to the APPS Constitution,
- a Work Plan for APPS for 2007-2009,
- agreement on a framework for developing a 10 year plan for APPS,
- progress in establishing an APPS fund
- on-going remodeling of the APPS webpage and
- progress in planning for
 - the 2009 40th Anniversary Biennial APP Conference in Newcastle in September 2009
 - the 4th Asian Conference of Plant Pathology and APCC2011 in Darwin in April 2011

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- the Australasian Plant Virology Workshop in November 2008 in New Zealand and
 - the Soil-borne diseases Workshop in the Blue Mountains early in 2008

Other issues of importance are

- Australia's National Plant Health Strategy (NPHS) being developed during 2008, under the auspices of Plant Health Australia. See the summary of progress below.
- the independent review of Australia's quarantine and biosecurity arrangements (www.quarantinebiosecurityreview.gov.au), announced in February 2008 by the Australian Government Minister for Agriculture, Fisheries and Forestry, Tony Burke. APPS is in the process of preparing a submission.

Cheers

Greg Johnson

Australia's National Plant Health Strategy Planning and progress

APPS was formally represented by Greg Johnson and Bill Roberts at a 2 day planning workshop organised by PHA on 27-28 February, 2008. More than 80 delegates represented a cross-section of PHA members and associate members (APPS is an associate member), including state and federal agencies and rural industries and the CRC for Plant Biosecurity. I noticed that about a dozen APPS members or former members were amongst the delegates. New Zealand was also represented.

Discussion papers circulated prior to the workshop were made available to APPS members for comment. PHA discussion paper proposed that "the strategy will recognise and acknowledge existing components of the plant health system and identify new or existing areas requiring further development or enhancement. The NPHS will sit under the overarching framework of the *Australian Biosecurity System for Primary Production and the Environment* (AusBIOSEC) (<http://www.environment.gov.au/biodiversity/invasive/ausbiosec.html>), and span the biosecurity continuum from pre-border to the farm and community level (post-border)." The strategy will cover a 10-year period and "involve all stakeholders that have a shared responsibility and common or shared need to maintaining and improving the plant health status of Australia (sic)." Progress in the development of the strategy and further opportunities for inputs by APPS members will be circulated as PHA provides information and updates.

At the workshop, it was obvious that there were a wide range of views about what came under a national plant health strategy (from narrow = biosecurity, to broad = weeds, pests and pathogens of cropping and the environment). By the end of the workshop however, there was general consensus on the scope, framework, drivers, and proposed outcomes for the NPHS.



Scope: Primary Production and public amenity covering:

- ◆ exotic and endemic pests
- ◆ pest management
- ◆ residues
- ◆ chemical availability
- ◆ contaminants and
- ◆ vectors

across the biosecurity continuum: Pre-border <> Border <> Post-Border
(farms, industry, urban, peri-urban, environment)

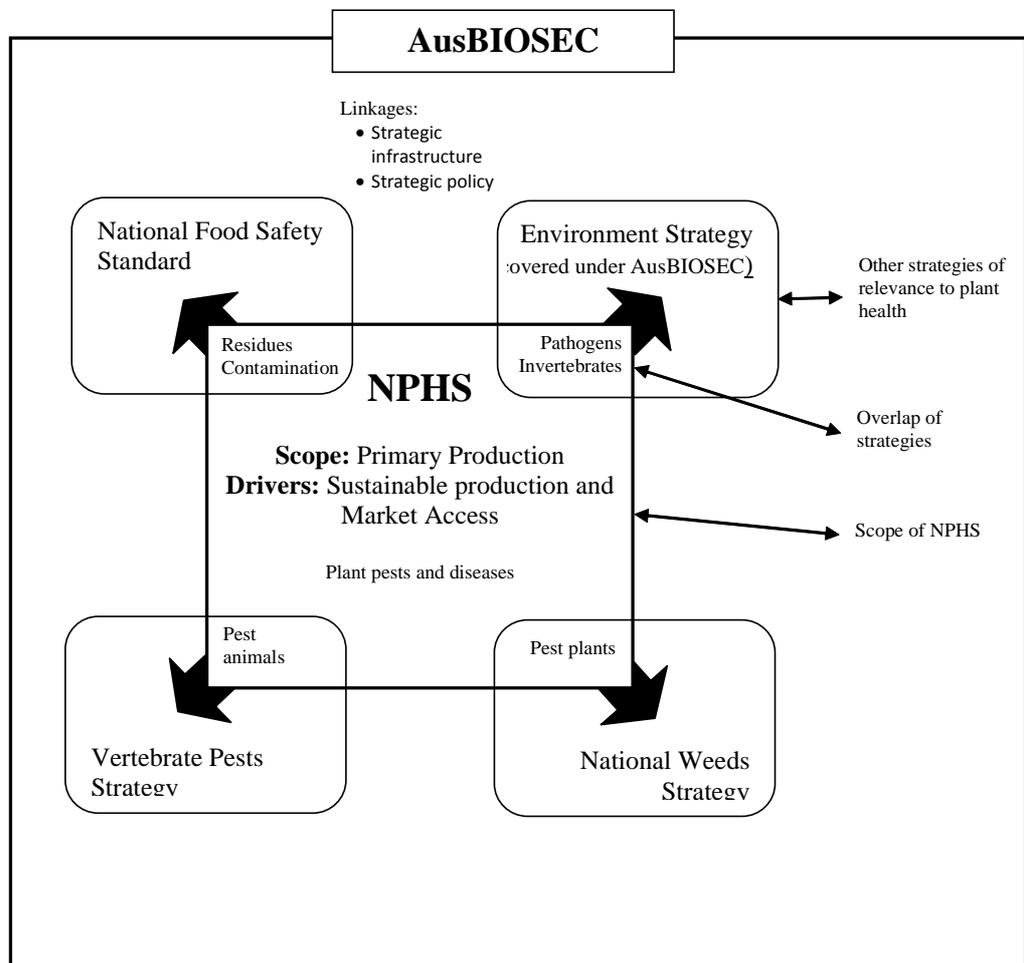
Framework: International Plant Protection Convention (IPPC) as it applies to plant protection.

Drivers: Production sustainability and market access (GJ adds: presumably also amenity conservation and community expectations but these were not specified).

Outcomes: Positive, proactive, definable and measurable outcomes will be devised from workshop inputs and future consultation.

Out of Scope: Food Safety, Plant nutrition and Environmental pests.

A framework for the NPHS was proposed:





REGIONAL NEWS FROM QUEENSLAND

The first DPI&F/APPS seminar was held on the 1st of April (no joke) at the Hermitage Research Station (Warwick). Please see flyer on APPS website for more details.

APPS would also like to welcome two new councillors for South East Queensland – Alistair McTaggart and Jennifer Cobon. Alistair and Jenny will be taking on the majority of APPS councillor stuff. Their first job was to help write this article! Please see below for Al and Jen's contributions.

Alistair: Hi there, at the moment I'm doing a PhD at QUT funded by the Co-operative Research Centre for National Plant Biosecurity working on classification of, and diagnostics for smut fungi. I also work at Herbarium BRIP, DPI&F Indooroopilly, on other kinds of fungi such as rusts and some anamorphic Ascomycetes. I look forward to meeting everyone and learning about what they are doing in Plant Pathology.

Jennifer: Hi, I have worked at the Indooroopilly Sciences Centre for the Department of Primary Industries & Fisheries for 17 years – 15 of those researching plant parasitic nematodes and soil health. I have undertaken projects researching the control of *Meloidogyne* spp. (root-knot nematodes) in many horticultural crops and *Radopholus similis* in bananas using crop resistance, crop rotation and organic amendments. I have broadened my knowledge to include the identification of free living nematodes. This has become a valuable tool in a vegetable soil health project designed to develop useful soil health indicators that can identify changes in soil due to management practices.

I manage a diagnostic service provided by DPI&F and use molecular techniques to distinguish species of *Meloidogyne* and am currently supervising an Honours student looking at the phylogenetic relationships of *Radopholus similis* in Australia.

I am a member of the Australasian Nematology Association and have previously been a editor of their newsletter for many years. I am presently the secretary of the organising committee for the 5th International Nematology Congress to be held in Brisbane 13th-18th July 2008. I am looking forward to this meeting and the chance to finally meet the authors of the papers I have been reading for years.

Bookmark the APPSweb site:

www.australasianplantpathologysociety.org.au/



REGIONAL NEWS FROM NORTHERN TERRITORY

Things have been a bit hectic for the NT APPS members with people going away for field surveys or stuck in the labs. All equate to coming together for a seminar day a bit adventurous. But a 'catch up' day is scheduled for the end of April. The day will allow current members to chat and welcome our newest member, Ms. Rachel Meldrum. Rachel recently started her PhD in early February at NT DPIFM. Supported by the CRC for National Plant Protection and enrolled at University of Queensland, Rachel's project is entitled 'Epidemiological and biological studies of the Fusarium wilt of Banana caused by *Fusarium oxysporum* f. sp. *cubense* tropical race 4'.

Katherine based Plant Pathologist; Dr. Shahid Khan recently participated in the 'Scientists in Schools' program designed to create a long term partnership between scientists and students. Dr. Khan hopes to 'develop a sense of achievement and inspire students to consider science as a career option and improve their knowledge of how science relates to their everyday lives'. The national program is funded by the Dept. of Education, Employment and Workplace Relations and managed by CSIRO Education.

Lucy Tran-Nguyen

REGIONAL NEWS FROM WESTERN AUSTRALIA

WA's 'BIG' plans for 2008



Well 2008 is already running away from us and the WA APPS committee has been hard at work behind the scenes planning events for our members for the 2008 calendar year so get your pencils out and write these tentative dates in your diary:

April 29th – Research Seminars and Sundowner.



Hans Lambers (UWA) and Treena Burgess (Murdoch Uni) will team up to excite us with their research in plant physiology and forest pathology in two 30 minute presentations. Following this we will have a sundowner to relax and network with fellow researchers and alike.

Late July – *Phytophthora* Identification Workshop



A number of *Phytophthora* experts from WA will co-ordinate a 2 day workshop exploring *Phytophthora* identification and nomenclature. Emphasis will be put on the identification of a range of new *Phytophthora* species that will include traditional and molecular identification techniques. Further details including the dates of the workshop will be advertised shortly.



September – International Speaker: Kelly Turkington

Dr Turkington a plant pathologist from Department of Agricultural, Food, and Nutritional Science, University of Alberta, Canada will present a seminar from one of his many areas of expertise in agricultural plant pathology. We will finish off the agenda with a sundowner to network and celebrate our interests in plant diseases.

October – Plant Health Research Symposium 2008

Half day symposium for early career researchers to present seminars in their field of expertise and compete for prizes including Best presentation, Scientific Endeavour and Peer Review. This symposium allows early career researchers the opportunity to gain exposure for their work in the wider plant pathology and plant health arena. It also gives experienced researchers a look at new ideas and up and coming researchers in the field.

December – Christmas Cheers

We cant finish off the year without celebrating how wonderful we are, how much we've achieved for the year and look ahead to 2009...

Regards

The WA APPS committee

(Sarah Collins, Daniel Hüberli, Aaron Maxwell and Chris Dunne)

REGIONAL NEWS FROM SOUTH AUSTRALIA

The Councillor position in SA is now run by committee. We owe a big thank you to Amanda Able for managing the councillor position here so 'ably' for so long. (Sorry – couldn't help myself!). But we are not saying goodbye to Amanda – she remains as one of the councillor group, along with Suzanne McKay and Eileen Scott from Uni Adelaide and the SARDI contingent of Jenny Davidson, Barbara Hall and Peter Magarey. Over the next couple of newsletters we will profile the councillors. First up are Suzanne McKay and Amanda Able. The majority of the SA members are on the Waite Campus and as there are a plethora of seminars held here, our first challenge as a group is to provide benefit to the members here without overloading the campus with more seminars. If anyone has any ideas, please contact one of us.

The Christmas wind up (or wind down?) was held at Urrbrae House, the original residence of Peter Waite who bequeathed the property to the University. Members enjoyed a stylish cocktail party, with the chance of wandering around the beautifully renovated house. Congratulations to Rohan Kimber, who won the raffle for a free student membership. The SA Branch is also offering travel grants for students to attend the ICPP in Italy.

Barbara Hall



PROFILES - SA councillor team:

Suzanne McKay

Currently, I am a post-doc at the University of Adelaide (Waite campus) investigating the impact of *Phytophthora* dieback on native plants in South Australia, with a particular focus on threatened plant species. I commenced this project 6 months ago, after spending two happy years at the South Australian Research and Development Institute trying to unravel the mysteries of soil-borne pathogens of dryland-grown lucerne. In the preceding nine years, I studied at the University of Adelaide, doing an Agricultural Science degree followed by a PhD. In my life before science, I had a 12 year career as a Physiotherapist; from sick people to sick plants, at least plants don't talk back!



Favorite disease:

Learning to 'love' *Phytophthora* dieback!

What do you love about Plant Pathology?

You get to go to interesting places and environments and connect with the natural world. What better field site than a conservation park?!

Pet hates in Plant Pathology:

Not really with particular reference to plant pathology but science research in general; poor job security, having to jump from grant to grant and move jobs because you have to not because you want to and overall lack of career structure. They wonder why people aren't attracted to science!

Amanda Able

Senior Lecturer in Plant Science, School of Agriculture, Food and Wine, The University of Adelaide.

Favorite disease: At the moment? Net blotch disease of barley. But my favorite pathogen would have to be *Phytophthora* - I spent hours watching zoospores under the microscope during my PhD. Lots of fun watching them zooming around and attaching to plant cells - the wonderment of it!

Plant pathology likes: The multi-disciplinary nature. The plant-pathogen interaction (observing how two organisms interact and trying to decipher that interaction is the best). The people.

Plant pathology dislikes: The declining number of students and perhaps lack of emphasis on field plant pathology as a discipline - a concern. Lack of funding.



Pathogen of the Month

“Pathogen of the Month” celebrated its first birthday in February, an initiative developed by the WA team to disseminate current member’s research or interests in a monthly one-page PDF spread. Since its inception, a range of pathogens including fungi, nematodes, virus and mycoteds have been released. A year later, POTM has received its own web home on APPS and includes a table of contents with pathogen name, disease, host and contributor.

POTMs are racking up some interesting web statistics. Over the period September 2007 to February 2008, three of the POTMs were in the top five downloads from the APPS website, with up to 128 downloads/month. Additionally, a Google search of “Pathogen of the Month” often places the APPS website in the top two or three of the results.

And some more good news. POTM is going national! Start looking out for contributions from fellow pathologists across the Nullabor after May. If you are keen to contribute a POTM, contact Daniel Hüberli (D.Huberli@murdoch.edu.au) of the WA team.

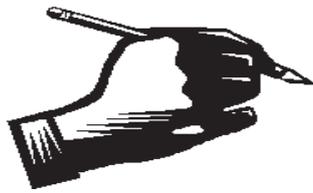
All POTMs can be downloaded from the APPS website; click on “Pathogen of the Month.”

2007

Month	Pathogen (Disease)	Host/s	Contributors
Feb	<i>Armillaria luteobubalina</i> (Armillaria root rot)	Aust. natives	Colin Crane, Richard Robinson
Mar	Wheat streak mosaic virus	Cereals	Roger Jones, Mark Holland, Brenda Coutts, Geoff Dwyer
Apr	<i>Quambalaria coyrecup</i> (<i>Corymbia</i> canker disease)	<i>Corymbia calophylla</i> , <i>C. ficifolia</i>	Trudy Paap
May	<i>Meloidogyne fallax</i> (Root knot nematode)	Crops and more	Vivien Vanstone, Jackie Nobbs
Jun	<i>Phytophthora ramorum</i> (Sudden Oak Death)	Wide range include Aust. natives	Kylie Ireland, Daniel Hüberli
Jul	<i>Candidatus</i> Phytoplasma (Witches’ broom, big bud, little leaf, yellows)	1000+ plant spp.	Kirsty Bayliss
Aug	<i>Xanthomonas axonopodis</i> (Citrus canker)	Citrus and other Rutaceae spp.	Aaron Maxwell
Sep	<i>Puccinia graminis</i> sf.sp. <i>tritici</i> Stem rust of wheat	Wheat and some other cereals	Manisha Shankar, Robert Loughman, Robert Park
Oct	<i>Mycosphaerella cryptica</i> (<i>Mycosphaerella</i> leaf disease, leaf blotch, crinkle leaf disease)	<i>Eucalyptus</i> spp.	Kate Taylor, Paul Barber
Nov	<i>Tilletia indica</i> (Karnal bunt)	Wheat, durum, triticale	Dominie Wright, Mui-Keng Tan
Dec	<i>Zythiostroma</i> sp. (Aerial canker in Banksia)	Proteaceae spp.	Chris Dunne

2008

Jan	<i>Uromycladium tepperianum</i> Galls and witches’ brooms of wattles	Aust. <i>Acacia</i> spp., <i>Paraserianthes</i> spp.	Alan Wood
Feb	<i>Microdochium panattonianum</i> (Anthracnose)	Lettuce	Hossein Golzar, Roger Shivas
Mar	<i>Giberella circinata</i> (Pine Pitch Canker) (anamorph = <i>Fusarium circinatum</i>)	<i>Pinus radiata</i>	Aaron Maxwell
Apr	<i>Heterodera carotae</i> (Carrot cyst nematode disease)	Cultivated and wild carrots	Abu-Baker M. Siddique



Jottings from the APP Editor-in-chief

This is one of two documents that I am preparing for APPS – the other is a report for the AGM and I hope to finish that in the next couple of days. I shall try not to include here material destined for the AGM report but, sometimes, duplication is unavoidable.

You might not know that most of the Keynote Addresses from the Adelaide conference were published in the December issue (36-6). All of these papers and authors were a pleasure to deal with and the authors were well prepared to meet the deadlines which I set out in early 2007. The McAlpine Lecture by Graham Stirling was published in the first issue of this years volume (37-1) due to technical difficulties and Graham's involvement with overseas work. Although it would have been nice to have it in 36(6) I greatly appreciate Graham's remarkable efforts to get it readied for the next issue and I am grateful for his outstanding compliance. One keynote address was also presented in 37(1) due to the tardiness of the author in presenting the manuscript to me. My email correspondence to that person started to show my exasperation but, eventually, a very good paper ensued.

At the Adelaide conference I, with Graham Stirling and Kirsty Owen (a Senior Editor of APP), planned for a special nematology issue of APP. This has now gestated thanks to Graham, Kirsty and a group of very professional nematologists in Australia and New Zealand. This special nematology issue will appear in June this year and contains a selection of thought provoking papers. As an undergraduate and while doing a masters course in plant pathology at Exeter University with John Webster and John Tarr, I was probably 'exposed' to nematodes for a mere 2 weeks. Graham Stirling with help from Kirsty and myself have handled the reviewing and editing of these papers and all of them I found fascinating. Perhaps, in my next life, I shall deal with nematodes (and fungi). I encourage every one of you to wait, with baited breath, for the June issue of APP and to sit back with a nice glass of something and read these papers. They are beguiling, interesting and thought provoking. You have been warned.

I am aware that in Brisbane during the period 13-18th July there will be the 5th International Congress of Nematology. Such is the importance of this conference, which will attract ca. 450 delegates with an interest in nematology from around the world, that with a little persuasion to CSIRO Publications from me, a copy of the June issue of APP will be placed in every attendees satchel. This is valued at about \$4000 and so we should show some gratitude to our friends at CSIRO Publications – especially Andrew Stammer, the Manager of Publications for their generosity. Hopefully, funding will also be available to present Graham's McAlpine Lecture in the same satchel. This will bring APP to the notice of the worlds nematologists (especially the plant-nematologists) and our presence will also be 'spread' to some other plant pathologists elsewhere. I wish the nematology conference all the best and I hope to get down to Brisbane for one day at the conference as an 'observer'. Please lookout for the special issue as it has taken a lot of work on Graham and Kirsty's part and they have really pooled their resources to organize a proper procedural peer-review of each paper and I have, with great interest, read every one of the contributions. I have been inspired.



On other matters very dear to my heart – I wonder what the ‘Impact Factor’ of these jottings is? Does anyone ever read them? I have never had a response. A comment or three from the Australasian Plant Pathology community would be helpful. I notice that Barbara Hall is looking for a replacement – you can only do a job for so long! I would hope that Barbara’s call for an interested and energetic person is answered soon.

I note, with regret, that, from the past two Biennial Conferences, I have rarely seen a paper from some of our postgraduate student plant pathologists. Sure, I have read and judged every poster presentation and I believe that some would make the basis for excellent papers for either APP or APDN – the latter offers a much faster gestation period between receipt and acceptance. Why are these papers not forthcoming? Why the reticence? I am quite prepared to make allowances for papers from good postgraduates and help them to publish which will assist in their final thesis examination. In a thesis it is often ‘helpful’ to list those papers which have been accepted after ‘peer-review’ rather than just ‘presented’ at a conference. Come on supervisors – get them to submit something.

I also feel that various members of the Editorial Boards of both APP and APDN are frustrated by the time it takes to get a review back. Our members should be publishing at least some of their work in APP or APDN. Members of APP are often asked to be reviewers and I know that some (I will offer no names) are very efficient and get something back to the Senior Editor handling the paper in a month. Others drag things out (again I will offer no names) like you would not believe. We are all busy but I would ask you, as a fellow member, that if you are asked to review a paper that you do it in a timeframe that you would expect your own papers to be handled.

Changes to the Editorial Board of both of our journals are planned. Additional help will be engaged. At the moment it takes about 25% of my time – donated by CQU – to carry out my editorial duties. I went to China with my wife for 3+ weeks in December and returned to 234 APP-APDN related emails. I went to Tasmania to work in February for 3 days and came back to an unprecedented 54 APP-APDN emails. Quite a few were about long overdue reviewer reports. I am now trying to increase the editorial boards to handle the increased submissions that I receive. However, about 25% still do not leave my office, either since they are so poor in quality or they do not format to APP/APDN style and look like they have been resubmitted from another journal. Some authors do not study the ‘Guidelines for Authors’ on our website.

I would like to welcome Morag Glen from CSIRO-Ensis in Hobart to the Editorial Board of APDN. This little journal does remarkably well and I am informed by CSIRO Publications that over the past 6 months for which data are available, that downloads exceed 2500 in every month with remarkably high downloads in October and November 2007 of 3316 and 2982, respectively. We are now into volume 3 of APDN and I invite you to browse its websites – perhaps there is room for your contribution.

Please write if you have useful comment – or any comment.

Kind regards

Keith Harrower
(E-i-C, APP + APDN)

NEWS FROM THE BUSINESS MANAGER

Now that most members have renewed their subscription for 2008 we can see the trend for reduced membership continues. I'm sure this does not reflect the total number of plant pathology positions in Australasia although they have been declining in recent years. The ideal number for the society to cover the cost of the journal is around 500. Please encourage your colleagues to join.

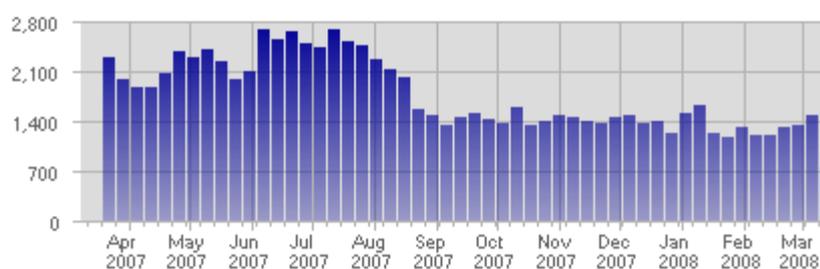
Members in each region

	WA	Vic	Tas	SA	QLD nth	QLD sth	PNG	NT	NSW	NZ sth	NZ nth	ACT	Rest
2008	51	50	16	36	16	77	2	6	59	28	30	21	29
2007	57	53	16	36	12	83	2	5	69	31	30	22	36
2006	39	70	18	34	13	93	4	8	72	22	38	24	36

Membership over the past 7 years

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number	447	478	473	466	449	516	480	457	421

The web site has undergone major changes in recent months and continues to be well visited. The majority of visits are from North America and Europe. Below is the breakdown of visits for the past year. The *Pathogen of the Month* is very popular thanks to the excellent contribution by the Western Australian region. Members are encouraged to add sections to their regional pages or the member area to make them more useful.



Historic Breakdown Previous 12 Months (Visits per week)

This report shows Traffic and Activity in Visits. This is not the hit rate or the number of pages viewed but the number of times someone has entered the site.

Peter Williamson



APPS Honorary Members & Fellows

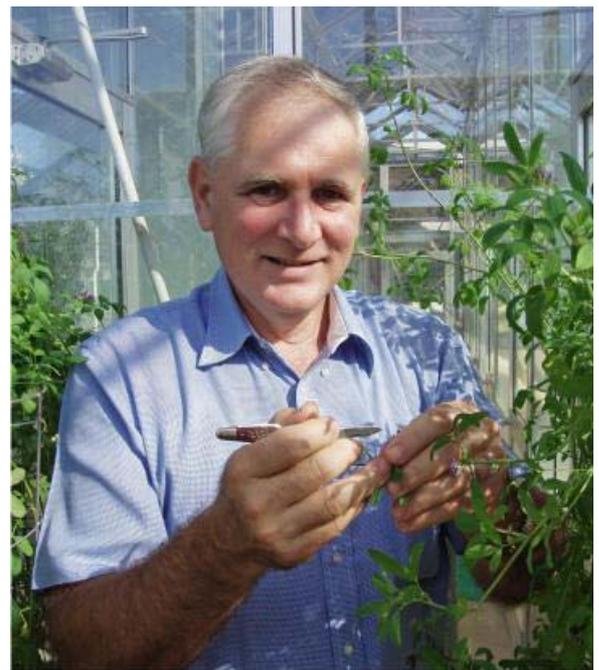
Over the last few editions of the newsletter, profiles of the Fellows and Honorary Members of APPS have been included in the newsletter and are placed on the web. Written by colleagues, these profiles are intended to introduce to you the luminaries of our society. The definitions of both are outlined in the constitution, and can be viewed on the web page. Fellows are people who have "rendered distinguished service to the science of plant pathology", and Honorary Members are those who have "made an outstanding contribution to the Society".

The first profile is of John Irwin, a Fellow of the Society since 1999, written by Susan McKell. The second profile, of our most recent Fellow from 2007 Joe Kochman, was adapted from the nomination written by Malcolm Ryley & Gary Kong.

John Irwin - Fellow, 1999

In a distinguished plant pathology career, John Irwin has managed to blend his achievements in fundamental genetic research to commercial plant breeding programs and produce significant economic benefit to Australia's agricultural industries.

Highlights in John's career include being the first person in Australia to demonstrate that two fungal root and crown diseases, caused by *Phytophthora* and *Colletotrichum*, were the major causes of poor lucerne persistence and productivity over much of Eastern Australia. More recently, John has developed a genetic map for lucerne, representing only the third autotetraploid lucerne genetic map which has been published, and the first to report chromosomal locations of disease resistance genes in autotetraploid lucerne to *Phytophthora medicaginis*, *Colletotrichum trifolii* (3 races-) and *Stagonospora meliloti*. John's work in these areas has contributed to the development and commercialisation of a number of new disease-resistant forage cultivars that represent substantial productivity increases for farmers in Australia and overseas.



From an early age, John enjoyed a fascination with plants and farming, and following school he elected to study Botany as part of a Bachelor of Agricultural Science at The University of Queensland in 1968. John would not have known then that it was the start of a (now) 40-year association with UQ, but his undergraduate years soon extended to Honours and Masters degrees which he juggled while working as a plant pathologist



with the (now) Queensland Department of Primary Industries and Fisheries. A PhD scholarship to study at the University of Wisconsin (Madison) in the United States further fuelled John's interest in research, and a lecturing position at The University of Queensland followed soon after. In what must have been a truly rewarding stage in his career, John was awarded a higher doctorate in Agricultural Science in 1992, appointed to Professor by UQ, and was successful in funding a Cooperative Research Centre bid, all in the same year.

John served as CEO of the CRC for Tropical Plant Pathology from 1992-1999 and the subsequent Cooperative Research Centre for Tropical Plant Protection until 2006. John's vision and leadership in this role was quickly realised with the Centre achieving recognition as "the leading Australian, and a significant international, Centre researching plant diseases and their control" by 1997. Now a Professor with the School of Integrative Biology at The University of Queensland, John has continued his involvement with Cooperative Research Centres as a Director for the Canberra-based CRC for National Plant Biosecurity and, as a skills-based appointment, will continue to apply his expertise in research management across a wide range of Australia's plant industries and sciences for some time to come.

John's strengths in research administration have been underpinned by strong individual research, and a cursory scan over his personal research career involves some enviable statistics. John has published 158 refereed journal articles, authored 12 refereed book chapters, been part of successful research grant bids totalling almost \$30 million, and held rights to numerous Australian Plant Breeder licenses and technology patents. The financial benefits from his research to Australia's agricultural industry, principally around productivity gains due to new lucerne cultivars, is estimated to be well in excess of \$100 million.

John's scientific achievements have been recognised with a number of awards over a distinguished career, perhaps most notably the Australian Medal of Agricultural Science in 1992 (awarded by the Australian Institute of Agricultural Science) and the Clunies Ross National Science and Technology Award in 2002. More recently, John was the recipient of the 2006 Farrer Memorial Medal from the NSW Department of Primary Industries, rewarding John's significant contribution to the field of agricultural research and, in particular, his efforts in reducing risk of disease in tropical plants.

In his oration for the Farrer medal, John described a 30 year research path towards understanding the etiology, epidemiology and genetics of host-parasite interactions and developing disease-resistant cultivars of lucerne, *Stylosanthes*, soybean, cowpea, chickpea and oats. During his career, John's research has led to the commercialisation of nine new disease-resistant forage crops, representing a significant proportion of Australia's current proprietary seed market. Continuing this interest, John's research now concentrates on the genetic improvement of lucerne varieties through DNA marker approaches and he is now looking to recent advancements in hybridising lucerne with *Medicago arborea* to deliver significant yield increases for future lucerne cultivars.

John has been a member of the Australasian Plant Pathology Society since 1972. During this time, his involvement has included roles as Senior Editor of the Australasian Plant Pathology journal, Program coordinator for the 1989 APPS Conference in Brisbane, induction as Fellow of the Australasian Plant Pathology Society in 1999, and delivery of the Daniel McAlpine Memorial Lecture, which opened the 11th Biennial APPS Conference in Perth in 1997.

**Sue McKell, CRC for National Plant Biosecurity
March 2008**

Joe Kochman - Fellow, 2007

Joe Kochman was a foundation member of the Australasian Plant Pathology Society (APPS). His contribution to Plant Pathology and Agricultural research, development & extension in Australasia was recently recognised by Joe being made a Fellow of the APPS, presented at the Adelaide Conference in September 2007.

Joe obtained his B.Sc., and later his Honours and PhD degrees at the University of New England, Armidale under the guidance of Dr John Brown. In 1974 he joined the Plant Pathology Branch in the then Queensland Department of Agriculture and Stock as a Plant Pathologist. Much of Joe's early research was with sunflowers, particularly in the identification of pathotypes of *Puccinia helianthi*, the casual agent of rust, and in the identification and development of germplasm with resistance to *P. helianthi*, and to *Alternaria helianthi*. He led a number of consecutive sunflower pathology projects in collaboration with the Grains Research and Development Corporation (GRDC), Cooperative Research Centre for Tropical Plant Pathology (CRCTPP), Agseed Research, Pacific Seeds and Pioneer Hi-Bred. He was a founding member of the Australian Sunflower Association and served as President, Vice President and a member of the working committee during his 20-year association with the sunflower industry. In 1990 Joe received the Australian Sunflower Association's Sunflower Award in recognition of his work on sunflower diseases.

In 1993 Joe discovered Fusarium wilt of cotton (caused by *Fusarium oxysporum* f.sp. *vasinfecta*) for the first time in Australia, and immediately embarked on an extensive R, D & E program to manage the disease. In 2000, Fusarium wilt caused an estimated \$57 million in losses to the Australian cotton industry. Joe has supervised a team of pathologists, extension specialists, agronomists and postgraduate students who have worked on all aspects of the problem, including containment, farm hygiene practices, rotational crops, and molecular characterisation of the pathogen.

He and his team have also collaborated closely with CSIRO and Deltapine to identify sources of resistance to the pathotypes of the pathogen in Australia. Joe has been recognised for his services to the Australian Cotton Industry through several Awards – the 1998 Australian Cotton Grower's Association "Cotton





Researcher of the Year”, and the 2003 Australian Cotton CRC “Achievement Award for outstanding Collaboration for Involvement in the activities of FUSCOM”.

Throughout his career, Joe has significantly contributed cooperative research in many areas. He was a member of a multi-agency team which developed the successful application for funding of the Cooperative Research Centre of Tropical Plant Pathology, in which he served as a Program and Project Leader. He was a member of the Grains Research and Development Corporation Oilseeds Taskforce , and a founding member of the Fusarium Working Group and the FUSCOM committees of the CRC for Sustainable Cotton Production and Australian Cotton CRC. He was also involved with the development of the CRC for National Plant Biosecurity.

Joe has had a significant involvement in biosecurity issues. His expertise was sought by the Pakistani government to develop protocols for testing of sunflower seed prior to export. He has provided valuable advice to biosecurity managers on operational procedures and scientific protocols for many biosecurity issues, including boil smut of maize, sorghum ergot (1996) and citrus canker (2004), and has undertaken several reviews on protocols for the importation of bulk grain into Australia.

Through his professional life of over 32 years, Joe has been committed to the training of younger scientists and technicians involved in plant pathology research. He has directly mentored plant pathologists who have been members of R,D&E teams which he has led readily providing advice and opinions, and encouraging them to explore new areas to further their Plant Pathology training. He has co-supervised 10 post-graduate students at several Universities, including the University of Queensland and University of New England, and has been asked to examine postgraduate theses from a number of Universities. Joe has been vocal in upholding high standards of training within the discipline.

Joe has played a very active role in Plant Pathology development activities within the Department of Primary Industries and Fisheries, having been an active committee member of three Plant Pathology Development Workshops. Most of the Plant Pathologists and technical officers in Queensland (including those from external organisations eg., CRCTPP, AQIS, BSES) attended these 3 day workshops, where they were able to network with colleagues, participate in hands-on scientific workshops, visit field trials, and be trained in diverse aspects of Plant Pathology. Joe has also actively supported APPS, through his participation in regional APPS activities such as organising, chairing and presenting seminars, and by his attendance and participation in APPS conferences.

Throughout Joe’s career he has contributed significantly to the sustainability and profitability of agriculture in Australia, and to the future of Plant Pathology in Australia. For his services to Australian Agriculture he was awarded an Australia Day Achievement Medallion in 2006.

Malcolm Ryley & Gary Kong



BOOK REVIEWS

Mineral Nutrition and Plant Disease

**Edited by Lawrence E. Datnoff, Wade H. Elmer, and Don M. Huber
ISBN 978-0-89054-346-7. APS Press (2007) 278 pp hard bound**

This book brings together aspects of soil science, plant physiology and plant pathology to provide a summary of the current understanding of the effects of mineral nutrition on plant diseases. Well-referenced data from a range of scientific fields have been compiled to provide eighteen chapters that can be read individually, or as part of a larger discussion of the information available on the relationship between nutrition and plant disease. The authors and editors have produced a volume suited to the stated aims, of providing a text useful for managing plant diseases, and for teaching introductory courses in plant pathology.

The book has been divided into two summary chapters and 16 chapters about individual elements and plant disease. There is a 14-page index, allowing easy cross-referencing of a single pathogen (such as *Botrytis cinerea*) across different nutrients, or of a single nutrient across chapters where discussions of interactions are provided.

The first summary chapter offers an introduction (or refresher) on the chemistry of plant nutrients in the soil. Chapter two provides a summary of the physiological role in the plant of each of the minerals discussed in the text, with numerous references if the reader desires greater detail. Both summary chapters bring together information from a range of sources and present it in a logical manner, providing a good foundation for the later chapters about individual nutrients.

The individual nutrient chapters cover the 14 most important plant minerals, from Aluminium to Zinc. Each nutrient chapter can be read alone, and contains an introduction to the element, often with a summary table of the reported pathogen, plant and nutrient interactions. Where mechanisms are known for the observed effects of nutrients, these are presented and possible mechanisms are suggested where knowledge is currently lacking. Chapter length varies with the volume of research on each nutrient, and with the perceived importance of each element with regard to plant diseases.

The chapters flow well, linking examples, figures, references and discussion. They provide discussion of the issues concerning research on nutrients and plant diseases. These include the difficulties of distinguishing direct effects, such as stronger cell walls with added calcium, from indirect effects, such as greater microflora activity suppressing disease as a result of increased nutrient leakage of cells in response to nutrient addition. Problems with the interpretation of previous work are presented and discussed well. Figures provide good summaries of key metabolic pathways and other relevant information discussed



in the text. Subheadings and tables allow rapid reference to sections of the chapter as required.

The book provides a very useful single collection of information from a wide range of sources and represents a valuable resource for both pathologists and plant physiologists seeking to understand more about the relationship between mineral nutrition and plant diseases.

Dion Mundy, Scientist, Horticultural and Food Research Institute of New Zealand LTD (HortResearch) based at the Marlborough Wine Research Centre.

Integrated Pest Management for Crops and Pastures

by Paul Horne and Jessica Page
published by Landlinks Press, February 2008. Paperback, 136 pages
ISBN 9780643092570

Paul Horne and Jessica Page are well-known practitioners of integrated pest management (IPM) and this book targets farmers of broadacre cropping and grazing systems who are considering applying IPM in their systems.

Integrated pest management (IPM) is a common technique used in horticultural and intensive agricultural production systems but is less prevalent in broadacre cropping and grazing systems. This book seeks to address this by describing the principles of IPM, the pest and beneficial insect species likely to be encountered and providing examples of IPM success in broadacre cropping and grazing systems.

Chapters 1 & 2 introduce the general concepts of Integrated Pest Management and begin to advise farmers on the first steps in implementing IPM. A series of tables in Chapter 2 provides a step-by-step guide to developing a hypothetical IPM strategy for canola, which will be a very useful tool for farmers contemplating IPM. The process of identifying pest, biological controls, cultural controls, chemical controls and monitoring methods provides the introduction to the thought process needed for IPM implementation.

Included in the book is a section on pests and their biological controls that are likely to be found in broadacre cropping and grazing systems. A series of excellent colour plates will give farmers a head start in basic insect identification. Cultural and chemical control options are discussed in subsequent chapters, with good examples of integrated cultural controls given for pasture, canola and cereals. The final chapters of the book focus on insect monitoring techniques and the IPM decision-making process, with good hypothetical examples of the decision making process provided. Case studies from various farmers who have implemented IPM are a valuable addition to the book.



IPM is a fluid process and not prescriptive which makes the author's task difficult in advising farmers how to successfully implement IPM on their property. The need for experienced IPM practitioners to help with the decision making process, and correct identification of insects, may leave the reader wanting more but this book will provide farmers with the overall concepts of IPM and an insight into the IPM decision making process.

Angela Lush, SARDI

Compendium of Rose Diseases and Pests. 2nd edition.

Horst, R.K. and Cloyd, R.A. (2007) The American Phytopathological Society Press, Minnesota. 83 pp.

The revised 2nd edition (2007) of the 'Compendium of Rose Diseases and Pests' covers infectious (39 pp.) and non-infectious (8 pp.) diseases and insects and mites (16 pp.). The compendium is a short (83 pages) ~A4-sized informative and well-written resource book printed on high quality glossy paper. It features many (170) helpful black & white and, principally, colour images. The text has been updated by its authors R.K. Horst and R.A. Cloyd, including with recent references, from the 1st edition published by the American Phytopathological Society (APS) in 1983. A useful appendix with common and scientific names is provided along with an extensive glossary and comprehensive index.

Expectedly, versus lesser problems, proportionally more space in the book is devoted to describing the major diseases (e.g. Powdery Mildew) and pests (e.g. Rose Aphid) of roses. In some key cases, life cycles are described and depicted. Interestingly, some diseases, such as non-pathogenic mercury vapour poisoning, are described from a (hopefully) historical perspective. The book is written with a slight North American bias. Nonetheless, commendable effort is clearly made by the authors to make it relevant to rose growers and plant pathologists around the world. Commendably, integrated pest and disease management is advocated and the basic underpinning practices described.

The second edition leaves some room for further improvement in terms of the quality and subject of certain images. In some cases, there is little difference between multiple images presented for individual diseases and pests. Also, certain images are of questionable quality. Finally, some diseases and pests are not depicted, and there is also scope to add, for example, additional diagnostic images taken under dissecting and compound microscopes. Nonetheless, the quality of the generally helpful images is good overall. Most of the units of measure mentioned in the book are SI / metric (e.g. oC), but there are infrequent lapses into imperial (e.g. lb/acre).

Overall, the 'Compendium of Rose Diseases and Pests' can be considered a good buy for rose enthusiasts and commercial rose growers, and also for



students and applied plant pathologists and agronomists wishing to identify and manage pests and diseases, including nematodes, on roses. Certainly, the book is a must for public, college and university libraries. At around Aus\$64 (<http://www.shopapspress.org/>; 11.03.2008), this colourful and informative book represents value for money. The authors, APS and sponsoring Fred C. Gloeckner Foundation are to be commended for their publication of this 2nd edition.

Daryl Joyce, School of Land, Crop and Food Sciences, Queensland University.

The Study of Plant Disease Epidemics

By Laurence V. Madden, Gareth Hughes, and Frank van den Bosch
ISBN 978-089054-354-2. APS Press 2007.

The publication of *"The Study of Plant Disease Epidemics"* last year was highly anticipated amongst the plant disease epidemiology community world-wide and marks the latest major addition to general epidemiology texts. It builds upon the previous publication of the first author, *"Introduction to Plant Disease Epidemiology"* in 1990 and the late C. L. Campbell (to whom this new publication is deservedly dedicated). There is no doubt the content and tone of the publication has lived up to its expectations and more! In particular, this publication focuses on cohesively augmenting the literature with advancements in the discipline over the last 17 years.

"The Study of Plant Disease Epidemics" first examines the concepts used in plant disease epidemiology and reviews the historical developments of the discipline hinging upon the turning point of the discipline, the publication of *"Plant Diseases: Epidemics and Control"* by J.E. Vanderplank in 1963. Further subjects examined in this publication include measuring plant diseases (concepts, assessment using scales and disease area diagrams, remote-sensing, and issues associated with reliability, accuracy and agreement), introductory modeling including fitting of linear and nonlinear models to data, temporal analyses for quantifying and comparing epidemics and the use of models to incorporate crop growth and vector transmission, spatial analysis of epidemics including dispersal and disease gradients and disease spread, including ways to spatially analyse different data types, sampling issues associated with estimating plant disease intensity, the use of decision making tools such as operating characteristic curves in plant disease management, and modeling concepts associated with epidemics and crop yield. Particularly welcome inclusions within this publication are detailed sections on subjects which have become increasingly popular within the last few years, including:

- 1) the H – I – R (Healthy – Infectious – Removed) and H – I – L – R (Healthy – Infectious – Latent – Removed) model concepts, including information in



- especially designated boxes on the derivation of these differential equations for estimation of a range of parameter values;
- 2) Latest concepts and techniques to describe spatial and spatio-temporal patterns of epidemics, such as Spatial Analysis by Distance IndicEs (SADIE), of which section III (Patterns of Plant Disease) is conveniently sectioned based on data type available (e.g. sparsely sampled incidence, count, and severity data, and analysis of intensively mapped data) and then further defined by stochastic simulation models and distance-based methods.
 - 3) Decision making including operating characteristic curves and risk algorithms.

There is no doubt this publication is not for the mathematically faint-hearted! However, those with an interest in this discipline will concur that the use of mathematics and statistical models to describe epidemics is clearly essential, and the authors have presented this material in a non-confrontational manner. A welcome addition to this publication is transfer of the theoretical concepts to practical reality with the inclusion of SAS input and output files examples for various procedures (including detailed explanation within the text). Other "practical" venues for plant disease epidemiology include the publication by Francl and Neher (1997) entitled "*Exercises in Plant Disease Epidemiology*", and the series of plant disease epidemiology workshops held in conjunction with the American Phytopathological Society Meetings annually. However, rarely do we see an example of an efficient marriage of theoretical derivation of concepts and practical analysis of "real" data.

Each chapter also contains citations of selected literature for each concept and a list of suggested readings at their conclusion. This makes navigating the extensive web of epidemiological literature considerably easier, and therefore the publication is a key starting point for those just starting to immerse themselves in this discipline.

There have been several similar additions (books and edited books) to the plant disease epidemiology literature published since 2000 (e.g. '*The Epidemiology of Plant Diseases*' by D. Gareth Jones; '*Comparative Epidemiology of Plant Diseases*' by J. Kranz; and '*The Epidemiology of Plant Diseases, Second Edition*' by B.M. Cooke, D. Gareth Jones, and B. Kayle). However, "*The Study of Plant Disease Epidemics*" clearly and cohesively synthesises many aspects of plant disease epidemiology from the principles of disease intensity assessment to the various modeling approaches to crop loss assessment. Its tone is instructional and would be of benefit to plant pathologists wishing to augment their skills in plant disease epidemiology, or for teachers of graduate/advanced level classes in plant disease epidemiology, biological systems modeling, and disease management. At \$89 USD, it would make a fantastic gift for Christmas or PhD graduation! I commend the authors on this historical addition to the plant disease epidemiology literature and highly recommend this publication to all plant pathologists and advanced students.

**Sarah J. Pethybridge, Tasmanian Institute of Agricultural Research,
University of Tasmania – Cradle Coast Campus, Burnie, Tasmania.**



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Photos in banner - top to bottom: Chickpea trial site, Powdery mildew on cucumber, Powdery mildew on peas, Sclerotinia on cucumber, Strip rust, ELISA plate, Fusarium crown rot on wheat, wetlands in NT, Chickpea trial site. Thanks to Hugh Wallwork, Kaye Ferguson, Jenny Davidson and Rohan Kimber.

New Members

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

WA	Francisco Tovar Alex Rea Jayden O'Brien	NT	Rachel Meldrum
		Italy	Maria Lodovica Gullino
SA	Sue Pederick Cathy Todd Kiong Hook Kueh	Pakistan	Kazmi Munawar
		Thailand	Pissawan Chiemsombat
NSW	Nicola Wunderlich		

Looking for an editor

In the last few years this newsletter has progressed from an A5 printed black and white paper copy, to a multi coloured web based collection of articles and information. With the progression still continuing, now is the time for some web savvy keen member to take on the challenge of moving this newsletter to the next level.

If you are interested, please contact me
(hall.barbara@saugov.sa.gov.au) to discuss possibilities.