



## Quarterly Comments

from the (past) APPS President



By the time this issue of *APPS News* reaches members I will (in accordance with the APPS constitution) have resigned as President of our Society, to hand over to the next President and Management Committee, to be elected at the 15<sup>th</sup> Biennial Australasian Plant Pathology Conference (BAPPC). By all accounts (from the viewpoint of just a month away from the Conference opening) the 15<sup>th</sup> BAPPC is shaping to be a very successful event, with large numbers of pre-registrations and submitted papers. The Conference Organising Committee have been working hard for the last 2 years, and the prospects are very positive for another excellent and key event for our Society and plant pathology.

It is appropriate that these comments highlight significant aspects of activities of our Society over the last 2½ years. First, it has been a privilege for me to represent the APPS on a number of occasions around the world, including the Annual Meeting of the American Phytopathological Society, the 2<sup>nd</sup> Asian Conference on Plant Pathology, and at a number of smaller specialist meetings. Our society is

very highly regarded around the world, a reputation built on the outward-looking perspectives of many of our members, and our renowned journal. This is particularly the case in Asia, where many previous and current projects with Australasian input have provided very valuable contributions and solutions to plant pathology problems.

Some personal achievements of APPS members have been highlights. It has been an honour to preside over the award of an APPS Fellowship to Prof John Randles, in recognition of his contributions to plant pathology, teaching in our discipline and the APPS. Dr Ric Cother has completed 7 years of excellent service as Editor-in-Chief of *Australasian Plant Pathology (APP)*, overseeing the continued evolution of our journal as an internationally recognised science publication. Dr Bob Dodman has recently fully retired, after a lifetime of contributions to the APPS as foundation member, Editor-in-chief and publisher of *APP* and APPS Business Manager, contributions recognised with award of Honorary Membership of the Society. Susan Sprague has been awarded the

Alan Kerr Prize for her excellent work at the beginning of a plant pathology career. Besides these particular recognitions, our members continue to make very important contributions to the science of plant pathology and management of plant diseases, assisting to alleviate the economic, heritage and social problems caused by plant pathogens in cropping systems and natural environments.

Important plant pathology meetings have been nurtured or supported by the Society. The positive financial outcome from 8<sup>th</sup> International Congress of Plant Pathology/ 14<sup>th</sup> BAPPC has helped to ensure continued viability of the APPS into the future. Other conferences supported by APPS include the 6<sup>th</sup> Australasian Plant Virology Workshop, the 15<sup>th</sup> and 16<sup>th</sup> BAPPCs, and the 3<sup>rd</sup> and 4<sup>th</sup> Australasian Soilborne Diseases Symposia. These activities are key examples of progress towards fulfilment of the APPS objects. The respective Organising Committees are commended for their contributions to furthering plant pathology communication and knowledge transfer.

My last point here is to commend the work that the out-going APPS Management Committee. These people (Vice President Prof Alison Stewart, Secretary Mark Braithwaite,

Treasurer Dr Ron Close, Dr Ric Cother, Dr Matthew Cromey, Prof John Hampton, Dr Ian Harvey, and Business Manager Dr Peter Williamson) have given the Society excellent service, administering the major activities of APPS during the last 2½ years. Barbara Hall has continued to provide a very important contribution as Editor of APPS News. On behalf of all APPS members, I thank these people for their contributions to the Society, and through these, their assistance of our science.

The APPS is in excellent heart, with a vibrant 15<sup>th</sup> BAPPC in prospect, APP going from strength to strength, and the future of the Society in the good hands of a new Executive Management Committee. It has been a pleasure and honour to work in this position, but also very enlightening, with increasing understanding of the very valuable contributions made by the Society's members, both to biological knowledge and to management of plant diseases.

*Richard Falloon*



### **A note from the APPS newsletter editor.**

It is great to see the membership interest in the Northern Territory, and thank to Rex for his report. As I indicated in the last newsletter, more needs to happen at a State level to raise our profile and encourage membership. The conference reports and book reviews are also welcomed, all good ways of keeping members informed. Please keep sending them in.

***Barbara Hall***

## REGIONAL NEWS

### NORTHERN TERRITORY

NT Branch is pleased to welcome two new members: Chelsea Hennessy and Lucy Tran-Nguyen. Chelsea is based at the Department of Primary Industry, Fisheries and Mines (DPIFM), Berrimah (Darwin) doing research on grapevine leaf rust as part of the National Grapevine Leaf Rust Eradication Program. Lucy has been doing post-graduate research on phytoplasmas in sugarcane and other grasses at the Charles Darwin University (CDU).

The growth in APPS membership in the NT – there are now nine members – is encouraging. A sign of the coming of age of the NT Branch was a branch meeting and seminar day held at DPIFM, Berrimah Farm, on 1 November last year. The event was the idea of Dr Shamsul Bhuiyan of DPIFM at Katherine. It was successful and drew members from CDU and CSIRO as well as DPIFM. It is hoped that the seminar day can become at least an annual event.

The meeting was chaired by Regional *Rex Pitkethley*

Councillor Rex Pitkethley. Presentations included three from CDU - Claire Streten: *Rickettsia-like-organisms and phytoplasmas associated with diseases of strawberries*, Lucy Tran-Nguyen: *Extrachromosomal Phytoplasma DNA* and Karen Gibb: *Studies on vectors of phytoplasmas*. Anna Padovan of CSIRO spoke on *Genetic relationship between cotton wilt and banana wilt pathogens*. Peter Stephens of NAQS spoke on *Control of bacterial spot in stonefruit - is genetic manipulation of the crop necessary?* From DPIFM, Barry Condé spoke on *Screening snake bean and cowpea varieties and lines for resistance to snake bean Fusarium wilt*, Shamsul Bhuiyan's topic was *Biological warfare against sorghum ergot pathogen (Claviceps africana)* and Chris Wicks spoke on *Summary of the Northern Territory's research into Phytophthora in Durian*.

It was a great opportunity for plant pathologists from Darwin and Katherine to share research outcomes and network for future projects. A great day and very energizing.

### News from the Business Manager

Things are finally beginning to quieten down with the closing of subscriptions for 2005. We now have an all time record number of members with a total of 520 currently on the books. Recently the Australian Government Department of Agriculture, Fisheries and Forestry joined as an Executive Sustaining Associate of the society. Hopefully other departments will do likewise. All in all the society is in good shape although previous conference years had better patronage than non conference years.

The world directory of plant pathologists was recently updated and now should reflect the current status of members. If your details are out of date or do not appear you will need to fill out the online form ( [Update Records](#) ) on our web site.

*Peter Williamson*

## CONFERENCE REPORTS

### **The 2<sup>nd</sup> Asian Conference on Plant Pathology (2<sup>nd</sup> ACPP), Singapore National University, 25-28 June 2005.**

*Prof Richard Falloon*

I attended the 2<sup>nd</sup> ACPP, representing the Australasian Plant Pathology Society and the International Society for Plant Pathology.

The Asian Society for Plant Pathology (ASPP) is a confederation of plant pathology and plant protection societies from throughout Asia. The 1<sup>st</sup> ACPP was held in Beijing, Peoples' Republic of China in 2000. The 2<sup>nd</sup> ACPP brought together 240 delegates from 29 countries, mainly in the greater Asian region, but also from Australia, Canada, New Zealand, the Middle East, Russia, Spain, Sudan, the United Kingdom and the United States of America.

The Australasian Plant Pathology Society has assisted development of the ASPP, in recognition of the key role that plant pathology plays in the agrarian activities of Asia. Similarly, the International Society for Plant Pathology gave sponsorship to the 2<sup>nd</sup> ACPP to assist delegates to attend, in recognition of the importance of plant pathology for food security in developing nations. Before the 1<sup>st</sup> ACPP, Prof David Guest and Dr Greg Johnson assisted with development of the new Asian Society, giving advice on promulgation of the Society and on organisation of the 1<sup>st</sup> ACPP. Greg Johnson has continued to be actively involved with the Asian Society as they worked toward the 2<sup>nd</sup> ACPP, and as they have formed a constitutional framework.

The Conference themes covered the full spectrum of plant pathology research. Oral and poster presentations were grouped into topics including Host/pathogen Interactions, Fungal Diseases, Viruses and Viral Diseases, Biological Control, Integrated Pest Management, Plant Resistance and Resistance

Breeding, Epidemiology and Crop Loss Assessment, Prokaryote Diseases, Postharvest Diseases and Mycotoxins, and Nematode Diseases.

**The 3<sup>rd</sup> ACPP will be held in Bali, Indonesia, in 2007.**



### **6th Australian Banana Industry Congress, Cairns, August 2005.**

*Lisa Gulino*

I recently attended the Sixth Australian Banana Industry Congress, in ~~Cairns, August 10~~ -13<sup>th</sup>. It was my first trip to the banana congress and I must say I was most excited! The theme of the congress was 'determining our future'.

**Wednesday 9<sup>th</sup> August:** The conference kicked off this evening with welcome drinks/reception poolside at the Cairns International Hotel. This was my opportunity to see 'who's who' of the banana world! For many (to protect the privacy of those involved, names will not be listed), the welcome reception was followed by a 'few more' drinks at the 'exclusive' (created especially for the congress), 'banana bar'.

**Thursday 10<sup>th</sup> August:** The official opening of the congress kicked off at the very early time of 8:45am. Children from a local dance group put on a great performance, complete with a light show, song and dance, to launch the congress. At this stage, I was greatly impressed by all the lights and action and the first (and as I was to find out later, certainly not the last) time that the very, very catchy tune 'ba-na-na-na-na-na-na-na make those bodies sing' (from the T.V. ad) was played! The official welcome by Pat Leahy (President Australian Banana Growers' Council) was followed by the business

sessions. Mostly, sessions covered the marketing and labor side of the banana industry. However, two plant pathologists did get some of the 'spotlight' in the business session. Gert Keema, (Plant Research International B.C., Wageningen, The Netherlands) presented 'The International Banana Action Plan: Determining the Future' and Tony Pattison (Senior Nematologist, DPI&F), spoke about 'Re-engineering Australian Banana Production'. The last speaker of the day, Len Collins (Chairman for Imports committee, Australian Banana Growers council), spoke about the importance of Banana Imports 'why science must prevail – in the end'. This was quite a plug for scientists (especially plant pathologists), that have been investigating the potential disease threats that could occur if bananas were imported into Australia. At the end of the sessions, the 'banana bar' was open again for business and the who's who of the banana world were in attendance.

**Friday 11<sup>th</sup> August:** Another ridiculously early start (8:00am). Today we traveled to Tully (the wettest place in Australia apparently – it only rained for half of the day), for the Banana Family Field Day. For most of the plant pathologists attending, this was a chance to present our work to anyone that would listen. It was an experience presenting our powerpoint presentations, in what is equivalent to the cattle pavilion at your local show ground!! But the many growers that attended were quite interested in the work being performed. Plant pathology work covered included: Fusarium wilt, bacterial wilts, Black Sigatoka, Nematodes and Banana Corm Rot. A guest international visitor, Augustin B. Molina (INIBAP – Asia and Phillipines) also presented an overview of the 'key important diseases in Asia'.

In between giving talks (each presenter had to give their presentation twice, once in the morning session and again in the afternoon session) we had a chance to wander around the showgrounds and peruse the trade displays and demonstrations. The trade displays were excellent for freebies (both at the congress and

field day), and I manage to score overall: four hats, three stubby holders, one t-shirt, one 'stress' rubber banana, along with several 'NO BANANA IMPORT' stickers (which will take pride on the rear window of my car, and possibly my fridge). Commendation must go to the display from the Biogenkoji Research Institute that was giving away free samples of 'banana wine'. Oh, and thanks to the Tully School children who paraded through the showgrounds and sang (several times) 'ba-na-na-na-na-na-na-na make those bodies sing'. After all the presentations/displays and demonstrations were finished, we were treated to a gourmet BBQ dinner, drinks at the conveniently relocated 'banana bar' and entertainment (somewhere over the other side of the showgrounds) by the renowned country singer Kimberly Bowden. At the end of a long but enjoyable day, most of caught the 'banana' bus back to Cairns.

**Saturday 13<sup>th</sup> August:** The last day of the congress! Started early again (8:00am) with Alvaro Segura (CORBANA, Costa Rica) talking about 'Innovations in Soil Health Management for Latin American Bananas'. Even though it was an early start, I was quite attentive, as this talk was discussing the interest in banana soil health, which is something that we are trying to address in Australian bananas at the moment. This talk was followed by the esteemed Randy Ploetz (Tropical Research and Education Centre, University of Florida) discussing 'non-chemical management of banana pests and diseases'. One important message was to be taken home from this talk, was that biocontrol agents need to be tested in the field if they are to be considered a feasible method for controlling diseases (especially Fusarium wilt). Also discussed in today's talks was the possible introduction of compulsory grower's levy. This levy would be great for researchers, as a certain percentage would be funneled straight into research and another proportion would be put aside in case there is a new disease incursion (as was the case with Black Sigatoka a few years ago). The congress was then closed

again by Pat Leahy and most people were abuzz with anticipation of the social event of the year 'The Banana Ball'. 'The Banana Ball' was all and more than I expected. And yes you guessed it, they managed to play 'ba-na-na-na-na-na-na-na make those bodies sing' a few times throughout the evening (or maybe it was once, I don't really remember if it was reality or a distinct echo my head at this stage?). Overall, my first banana congress was most agreeable, and I can't wait until the next one! Thanks to QDPI&F for allowing me to attend. Also, if you would like more information on the congress and info on the grower's levy and banana information in general, check out the following link: <http://www.abgc.org.au/pages/home.asp>



**THE IXth INTERNATIONAL PLANT VIRUS EPIDEMIOLOGY SYMPOSIUM – Applying epidemiological research to improve virus disease management, LIMA, PERU, 3-7 APRIL 2005**

This successful and stimulating international symposium was held on April 3-7 in the attractive Hacienda style "El Pueblo" Hotel, just inland from Lima, the capital of Peru, located on the countries' central Pacific Coast. The symposium was attended by 104 participants from 26 different countries from five continents. It was the ninth in the series of international symposia held every three years under the auspices of the Plant Virus Epidemiology (IPVE) Committee of the International Society for Plant Pathology. It was also the first symposium in this series to be held in a developing country. The programme started on Sunday 3<sup>rd</sup> April with registration and a welcoming reception in the outdoor restaurant area of the hotel hosted by Dr Pamela Anderson, the new Director General of the International Potato Centre (CIP), which is headquartered in Lima.

On Monday 4<sup>th</sup> April the opening session started with introductory presentations by Dr Pamela Anderson, the principal symposium organiser, and Roger Jones (Australia), Chairman of the IPVE Committee. Dr Anderson emphasised the importance of locating one of the epidemiology symposia in a developing country for the first time. She also briefly explained the history and changing role of CIP as an International Agricultural Research Centre focussed on tuber and root crops, initially concentrating on potato and, more recently, also on sweetpotato. Dr Jones outlined the activities of the IPVE group in the 3 years since the eighth Symposium held in Aschersleben, Germany. The main activity was a successful 1 day meeting organised by John Fletcher (New Zealand) held in Christchurch, New Zealand before the International Congress of Plant Pathology in February 2003.

The opening introductory

presentations were followed by the Chairmans' address in which Roger Jones spoke on the topic "Developing effective integrated virus management (IDM) strategies – the way forward". He emphasised the need to use generic control measures in devising interim IDM approaches where insufficient information on epidemiology and control measures is available for a pathosystem, and the need to validate such interim approaches thoroughly afterwards. He also emphasised that optimum control is achieved by including control measures of low and high selectivity, and ones acting against internal and external virus sources, and against early and late virus spread. He gave examples from diverse pathosystems illustrating IDM validation and individual control measures of these different types. Success in devising effective IDM's in the future will depend on intelligent, innovative and flexible use of available experience, information and new technology. Within the current environment of skills erosion, lack of focus and diminishing research funding, the challenge for the virus epidemiologist is to apply new technologies to greatest effect, while still ensuring adequate epidemiological studies and field validation of control measures and IDM tactics.

The morning session that followed started with a contribution on "Defining conditions favouring spread of *Tomato spotted wilt virus*" by Alan Clift (Australia). Ten years of records of TSWV incidence in different vegetable and ornamental crops were analysed by the Netica program. This identified which factors were important in suppressing virus spread, and quantified their impacts for a diverse range of scenarios. Jerome Kubiriba (Uganda) then spoke on "Spread of *Banana streak virus* in Uganda". The pattern of virus spread in initially healthy plots of banana located within infected fields at different sites suggested that both primary and secondary virus spread was occurring, but clustering of infected plants was limited. Isolation is of pivotal importance as a control measure. Next, Lava Kumar (ICRISAT, India) spoke on

"Epidemiology and management of *Pigeonpea sterility mosaic virus*". The virus and its mite vector depend on pigeonpea and its wild relatives. Early infection causes greatest yield losses and volunteer plants and neighbouring crops are the main sources of infection. Control is achieved through virus resistant cultivars and phytosanitary measures. Carl Spetz (Norway) then contributed on "Potato mop-top virus in Nordic countries". This virus is one of the biggest problems that potato industries in Nordic countries are facing. More than one virus strain seems present. Soils in limited areas still remain free of infestation with the virus. Next, Giovanna Muller (CIP, Peru) discussed "Alternative hosts of *Potato yellow vein virus*". The virus, which is transmitted in the field by the glasshouse whitefly, was first introduced to Peru in 1990 and spread rapidly subsequently. Volunteer potatoes and weeds belonging to several different plant families, especially Polygonaceae, act as infection reservoirs. Overuse of insecticides greatly increased populations of its vector and infection was dispersed widely by planting infected seed potato stocks.

The afternoon session started with a special topic presented by Forest Nutter (USA) on "The role of plant virus epidemiology in risk assessment and risk mitigation". The potential for introduction of damaging plant viruses and their vectors to new countries remains a serious threat to crop biosecurity worldwide. The risk of an epidemic is dependent on quantitative knowledge concerning the host, vector and virus population, and how the environment influences the risk of disease development. In the *Tobacco etch virus* – bell pepper pathosystem in south east USA, perennial horsenettle and groundcherry are the key alternative hosts. Relative source efficiency depends on virus concentration and receptivity to the particular aphid vector species present. Early infection is critical but reducing rate of virus spread by half (using partial resistance or reflective mulch) means that yield loss is

much decreased.

Dirk Janssen (Spain) followed with an interesting presentation on “Viruses diseases in horticultural crops in Almeria, Spain”. Over 28,000 hectares of plastic houses are used to grow vegetables all-year-round at Almeria. This high concentration at one location makes the system vulnerable to introduction of new viruses. During the past 5 years, several serious diseases caused by contact, seed and/or fungus transmitted viruses arrived. Phytosanitary and cultural control measures worked well against them, but control of newly arriving arthropod-transmitted viruses, especially ones spread by thrips and whitefly, has been less successful. A rural hygiene plan and physical protection against whitefly vectors assisted greatly in diminishing virus-induced losses. Keith Perry (USA) then spoke on “Strains of *Potato virus Y* in seed potatoes in Maine, USA”. Both the ordinary and tobacco vein necrosis strains of the virus occur. One isolate caused potato tuber necrotic ringspot disease and others may represent different strain recombinants. Differentiation of strains relied on monoclonal antibodies and micro-arrays but not inoculation of cultivar differentials with hypersensitivity genes to different strains of the virus. Next, Joseph Ndunguru (Tanzania) spoke on “*Papaya ringspot virus* in East Africa”. The crop is mostly grown in small plots for subsistence and local markets, and the incidence of infection is so high that production of papaya is severely diminished. Monoclonal antibodies to the virus were ineffective at detecting some local virus isolates. Herve Lecoq (France) then presented on “Molecular epidemiology of *Watermelon mosaic virus* in cucurbits: from simple to complex patterns”. The approach used involved monitoring the spread of a newly introduced and an indigenous strain of the virus within plots of squash over several years. Samples from all plants were tested weekly by ELISA and PCR to follow the spatial and temporal progress of the epidemics of the two strains. The new strain spread earlier each

year but the ratios of the two strains and their rates of spread varied greatly. Complex interactions and mixed infections between strains influenced the epidemics and patterns of spread found. Next, Paul Guy (New Zealand) spoke on “Plant virus records for New Zealand”. A comprehensive review of the 170 plant virus records in New Zealand was made; 30 new virus species records were added since 1989. However, no records were for viruses native to the country. This contrasts with nearby Australia where there are several despite its shorter history of crop introduction and cultivation. Some introduced viruses have invaded the native flora causing damaging disease outbreaks in New Zealand native plants. Roland Sigvald (Sweden) then spoke on “Epidemiological studies on *Potato virus Y* and *Barley yellow dwarf virus*”. A revision of his predictive simulation model for epidemics of PVY in potato in Sweden was presented. The proportion of tubers infected are now included in the predictions. The model was validated with data from 500 potato fields with good agreement between predicted and observed values. With BYDV, key factors to use in risk assessment were identified.

Tuesday 5th April commenced with an important keynote address by Pamela Anderson (CIP, Peru) entitled “Ecological epidemiology: review, synthesis and application of models for insect-transmitted viruses”. She reviewed the types of mathematical models used for epidemics of insect-transmitted viruses. She then presented the generic model ‘Epivirus’ which has broad application in different plant virus-crop pathosystems. She used epidemics of the whitefly-transmitted Bean golden mosaic disease complex in common bean to illustrate how this and other models are used to identify gaps in current knowledge and to advise on the intervention strategies and virus control measures most appropriate to deploy. The generic ‘Epivirus’ model will soon be made available on the world-wide-web for use by others.

Juan Alvarez (USA) followed with a



presentation on “The epidemiology of *Potato leafroll virus* in Idaho, USA”. He emphasised the importance of hairy nightshade as a reservoir host of the virus for epidemics. Infected plants of this species were introduced into potato plots and disease progress followed using ELISA to test samples. Next, Enrique Moriones (Spain) spoke on “Virus resistance breakdown in tomato associated with mixed infection between *Tomato chlorosis virus* and *Tomato spotted wilt virus*”. A marked synergism was observed when the two viruses were inoculated simultaneously to susceptible tomato, killing the plants. Presence of both in plants carrying TSWV resistance gene Sw-5 broke this resistance. Forest Nutter (USA) then spoke on “Spread of *Soybean mosaic virus* in transgenic soybeans”. Soybeans transformed with the CP of the virus were evaluated for epidemic rate-reducing resistance by quantifying the temporal and spatial spread of the virus from point sources in field plots. Two transformed lines had low infection rates, less clustering of infected plants and greater yields than untransformed controls. Alberto Fereres (Spain) then presented on “Temporal and spatial spread of *Lettuce mosaic virus* in Spain”. In lettuce nursery and field epidemics, the primary inoculum source was seed-infected lettuce plants and spread was by non-colonising winged aphids. The Gompertz model described disease progress best. Clustering of infected plants was followed using the SADIE program and contour maps. Next, John Randles (Australia) spoke on “Mundella yellows disease in eucalypts”. The spatial distribution of this lethal dieback disease in tree plantings is patchy. Because small RNA’s are present along with virus-like inclusions, virus-like agents seem a possible cause of the disease which is not associated with phytoplasma. Brendan Rodoni (Australia) then described “The first detection of *Potato virus Y NTN* strain in Australia”. Potato tubers showing the typical necrotic rings caused by this PVY strain were shown to contain it using PCR, sequencing and by inoculation to potato cultivar differentials. The

sequences found indicated introduction from Europe.

The afternoon session started with a special topic presented by Mike Irwin (USA) concerning “Aerial dispersal of aphids and its implications for IPM”. He emphasised that the whole concept of IPM first started when DDT-resistant pests appeared in cotton in the nearby coastal Canete Valley in Peru. Using the *Soybean mosaic virus*-soybean pathosystem as an example, he stressed the need to always consider vector movement in IPM approaches, with long distance and short distance movement of vectors both being important. In general, non-persistently aphid-borne viruses are best managed at their source while persistently aphid-borne viruses can also be addressed at their sink (ie. in the infected crop).

Steve Castle (USA) followed with a presentation on “Monitoring Pierce’s disease of grapevine in glassy-sharpsooter populations in California, USA”. The proportion of the vector population that is infective and the concentration of the pathogen in them were determined. Both factors were important in establishing the upper threshold numbers of the insect vector for decisions on use of chemical control measures. Next, Jorg Schubert (Germany) spoke on “Sequence variations in *Potato virus Y* strains”. Several isolates from Germany and Poland were sequenced fully, and the sequences compared with those of other already published isolates from Europe and North America. This comparison revealed several recombination points where new variants are likely to arise. Next, Paul Guy (New Zealand) spoke on “Plant viruses in wild plants”. Contrary to generally accepted views, there are a number of examples from different parts of the world of wild populations of plants suffering high virus incidences and severe viral symptoms (damage). This is so whether these viruses are endemic to the wild plants or biological invaders coming from introduced cultivated plants. Examples of diverse pathosystems where this occurs in native plants in Australia,

USA and the UK were provided. Forest Nutter (USA) then talked on “Post-introduction mapping of plant virus spread with GPS and GIS technologies”. He described the USA National Plant Diagnostic Network, which provides a plant disease biosecurity system now operating from five hubs in the USA. Gathering temporally and geo-spatially referenced diagnostic data is one of its roles. GIS is proving a powerful tool to provide maps that identify production areas with different degrees of risk for specific plant virus pathosystems. Next, Gerhard Pietersen (South Africa) spoke on “Spatial and temporal patterns of spread of grapevine leaf roll disease in South Africa”. Grapevine leaf roll is the most important virus disease affecting grapevine in South Africa. Most spread occurred along rows and there was secondary spread by mealybugs. The main infection sources were nearby infected grapevine plantings and use of contaminated rootstocks. Then, Martin Verbeek (the Netherlands) talked about “Epidemiological developments with *Potato virus Y*”. The O, C and N strains of the virus are all present in seed and ware potato crops in the Netherlands, with increasing incidences of the virus found despite decreasing numbers of *Myzus persicae*. Based on molecular data, recombination between strains occurs often in the field. Next, Rene Van Der Vlugt (the Netherlands) described “Natural variation in *Pepino mosaic virus*”. Since 1990, a new strain of this contact-transmitted virus became widespread in tomatoes in European countries. The genetic diversity of >60 Dutch isolates was compared with those published from other countries. Two isolates from the USA grouped separately from the European ones.

This session ended with an open meeting that elected three new regional representatives to the IPVE Committee of the ISPP (Lava Kumar - Asia, Joseph Ndunguru - Africa and Stewart Gray – North America) and discussed the possible location of the next symposium sponsored by the Committee. Provisional offers to host the next symposium

were received from India and Uganda, and, following their confirmation, it was left to the IPVE Committee to decide which offer to accept.

Wednesday 6th April commenced with an interesting keynote address by Tim Chancellor (UK) entitled “Spatio-temporal virus disease dynamics: the case of rice Tungro in the Philippines”. The spatio-temporal dynamics of virus spread over four cropping cycles was analysed in a continuous 150 hectare block of fields that contained rice crops at varying stages of maturity. There was marked clustering of infected plants. Infection of newly-planted fields depended on proximity to older infected fields, relative abundance of leafhopper vectors and the susceptibility of the rice cultivar planted. A spatial simulation model predicted the effectiveness of different control tactics: virus resistant cultivars and fallow periods were more effective than roguing or application of insecticide.

Nilsa Bosque-Perez (USA) contributed next on “The effect of transgenic resistance to *Barley yellow dwarf virus* on aphids in wheat”. Although its *Rhopalosiphum padi* vector normally grows better on infected than healthy plants, it had diminished population growth on transgenic plants infected with the virus. Also, it was less attracted to and less efficient at acquiring virus from them. Deploying transgenic partial resistance in wheat crops is therefore likely to decrease virus spread. Then, Wilmer Cuellar (Finland) talked on “RNA silencing suppression controlled by *Sweetpotato chlorotic stunt virus*”. Infection with SPCSV suppresses the natural RNA silencing in the upper leaves of sweetpotato explaining why ‘sweet potato virus disease’ (SPVD) results from mixed infection of SPCSV with potyviruses. SPVD is the most economically important disease of this crop. A combination of RNase3 and the protein p22 was shown to block the RNA silencing, paving the way to understanding the suppression mechanism. Stewart Gray (USA) contributed next on

“Transmission of two viruses that cause Barley yellow dwarf disease is controlled by different loci in the aphid *Schizaphis graminum*”. Two genotypes of the aphid that differ in their abilities to transmit *Barley yellow dwarf virus* and *Cereal yellow dwarf virus* were crossed and the transmission efficiencies of their F1 progenies determined. There was no genetic correlation between transmission of the two viruses, indicating that more than one locus is involved. Liezel Herselman (South Africa) then spoke on “Molecular markers for a resistance gene to the aphid vector involved in groundnut rosette disease”. This is the most destructive disease of groundnut (peanut) in Africa, and the causal viruses are transmitted by *Aphis craccivora*. Development and application of molecular markers for use in breeding aphid-resistant groundnut was described.

A Scientific Excursion to CIP followed where a comprehensive oversight of the organisations diverse programs was provided, along with a guided tour of the extensive Laboratory and Glasshouse facilities, and an explanation of the potato and sweetpotato virus projects currently underway. Delegates were then treated to a traditional Andean Pachamanca lunch: the delicious food was cooked in an underground oven heated by hot stones, and dug up in front of them following a brief traditional “blessing” ceremony. The day finished with a guided city tour of Lima which included a visit to the impressive archaeological museum, sightseeing and a visit to a large market selling traditional Peruvian handicrafts.

Thursday 7th April commenced with a stimulating keynote address by Mike Jegger (UK) entitled “Evolutionary epidemiology of plant viruses”. The drivers of evolutionary change in plant virus population structure include mutation rates, relative fitness, selection pressures, genetic drift, host dynamics and vector interactions. Re-assortment allows deleterious mutations to be eliminated. Information on the likely contribution of altered cropping practices and

crop protection measures such as pesticide use, host resistance and cultural control to emerging plant virus disease problems can be obtained from retrospective analysis of historical epidemics. This applies especially to situations involving new virus or vector variants or novel virus-vector-host combinations. New approaches that augment a population dynamic model with varying fitness traits and the derivation of evolutionary stable states can offer new insights into the strategic management of plant virus diseases.

Claudia Martins (Brazil) contributed next on “Grapevine leafroll-associated virus 3 genetic variability in Brazil”. Sequenced viral polymerase and CP genes showed that isolates from north-east Brazil were similar to North American isolates, but with some minor amino acid sequence differences. Keith Perry (USA) then spoke on “Structural determinants in virions for non-persistent aphid vector transmission”. A surface charge or structure in the virion seems necessary for successful non-persistent transmission of *Cucumber mosaic virus* by aphids. Dynamic properties of the virions may play a role in their ability to bind to or release from aphid mouthparts. Benny Raccach (Israel) then presented on “The role of helper component (HC) in binding to aphid cuticular proteins and to capsid proteins”. HC serves as a bridge between virion and aphid stylet. To evaluate the role of HC in transmission, the N-terminal of *Turnip mosaic virus* CP was exchanged with the respective fragment of *Zucchini mosaic virus* CP creating a chimeric virus. This exchange allowed the TuMV HC to transmit the chimeric virus but not the wild type ZYMV.

Several presentations on sweetpotato viruses followed. Setumba Mussaka (Uganda) spoke on “Sweetpotato virus disease complexes in sweetpotato in Uganda”. *Sweetpotato feathery mottle virus* (SPFMV), *Sweetpotato mild mottle virus* (SPMMV), *Sweetpotato chlorotic fleck virus* (SPCFV) and *Sweetpotato chlorotic stunt virus* (SPCSV) were found singly and in combination. SPCSV, SPFMV and SPMMV were detected in 90%

of plants found showing viral symptoms. Although the vector of SPMMV is not known, regression analysis suggested that it and SPCSV are transmitted either by different biotypes of whitefly or by entirely different vectors. Emmanuel Byamukama (IITA, Uganda) talked on “Sweetpotato virus disease (SPVD) in Rwanda”. SPCSV, SPFMV, SPMMV and SPCFV were present. Incidence of the SPVD complex was generally low, except in a highland province where the crop is grown continuously. Segundo Fuentes (CIP, Peru) presented on “Sweetpotato virus disease in Peru and its control”. High incidences of SPVD caused by co-infection with SPFMV and SPCSV were found in the costal Canete Valley. SPFMV alone did not diminish yield, but SPCSV alone did so while a combination of the two viruses (ie. SPVD) caused much greater yield losses. A healthy stock program that employs propagation by cuttings under greenhouse conditions, roguing and insecticide application against vectors provides local farmers with healthy planting materials. This healthy stock triples the yields they obtain. Arthur Tugume (Uganda) spoke on “Viruses infecting wild *Ipomoea* in Uganda”. About 90 wild *Ipomoea* species occur in East Africa. More than 1,500 wild plants were surveyed in 22 districts of Uganda: 36% of plants tested positive to viral antibodies, with SPCSV, SPFMV, SPMMV and SPCFV all detected. Multiple infections were common in perennial wild *Ipomoea* species. Peter Sseruwagi (South Africa) contributed on “Diversity of *Bemisia tabaci* in Uganda”. Phylogenetic analysis revealed eight distinct genotype clusters of this whitefly species in Uganda. Both the B and Q biotypes that are important vectors elsewhere were found and the host ranges of the Uganda1 and Uganda8 types were expanded. These findings have important implications over the ease of spread of whitefly-transmitted viruses locally.

The final afternoon session was on Begomoviruses. It started with an interesting special topic presented by Frank van den Bosch (UK) concerning “The effect of

cropping practices on Begomovirus evolution.” Plant disease management tactics introduce selection pressures that can actually make things worse by selecting for evolutionary changes that enable viruses to get round them. Such evolutionary responses nullify the beneficial effects of deploying the management tactics so ones that put minimal pressure on the system and so avoid provoking such responses are preferable. Mathematical models were used to simulate how tactics such as roguing, selection of cuttings and deployment of virus-resistant cultivars affect virus virulence. Roguing diminished virus titre but most other tactics increased it. Not taking virus evolution into account can lead to incorrect control measures being deployed so ‘evolutionary stable approaches’ are preferable.

Yehekel Antignus (Israel) then contributed with an important paper on “Light manipulation by soil mulches to protect crops from spread of Begomoviruses”. Begomovirus diseases are so damaging to tomato in Israel that all tomato crops are now grown in protected houses. However, cucurbit crops are still grown outside and are suffering severe yield losses from Begomoviruses. In field experiments, deploying yellow plastic mulches delayed epidemics of *Squash leaf curl virus* in zucchini more than other plastic mulches providing the greatest yield benefit. Whitefly vector landing rates were seven times lower with yellow as opposed to no mulch. The yellow colour diminishes the contrast between the background (mulch) and the target (plants). The IDM strategy now recommended involves yellow mulch, limited insecticide sprays and virus-tolerant zucchini cultivars. Richard Gibson (UK) spoke on “Farming practices that delay selection of virus-resistant land races of vegetatively propagated crops”. Crop seedlings are rare in subsistence farmers’ fields and tend to be hoed out. With sweetpotato in East Africa, only 1% of farmers had ever grown crops from seedlings and the findings for cassava, another vegetatively propagated crop, were similar. Evolution of

new land races was speeded up successfully when they were encouraged to select superior accessions from seedlings. James Legg (IIATA, Uganda) presented on “A continent-wide perspective on the epidemiology of cassava mosaic viruses in Africa”. The current cassava mosaic disease pandemic in East Africa is expanding both westwards and eastwards to include Tanzania, Rwanda, Burundi and eastern Congo. This expansion is propelled by short distance migration of super abundant *B. tabaci* vector populations, synergistic interactions in susceptible cassava cultivars, and the greater virulence of recombinants between *East African cassava mosaic virus* (EACMV) and *African cassava mosaic virus* (ACMV). Deploying virus-resistant cassava germplasm is helping to manage the pandemic. Joseph Ndunguru (Tanzania) spoke on “Molecular epidemiology of *Cassava mosaic viruses* in Tanzania”. Sequence analysis revealed a higher genetic variability among isolates of EACMV than of ACMV. This has important implications in providing a source of diversity and evolutionary change in the virus. Gowda Maruthi (UK) then spoke on “Molecular epidemiology of tomato leaf curl viruses in the Indian sub-continent”. CP sequencing and phylogenetic analysis revealed at least six viral clusters, each with <85% sequence identity. Two clusters represented previously undescribed viruses. Tobacco, cotton and weed species were infected, and mixed infections were common. The B biotype of *B. tabaci* was found for the first time in the region. Next, Nilima Prabhaker (USA) talked about “The impact of neonicotinoid insecticides on the natural enemies of *Bemisia tabaci*”. Before deploying chemical control, it is important to determine the effects of the chemicals used against valuable biological control agents. Although neonicotinoid insecticides, such as thimethoxam and imidacloprid, were effective in suppressing whitefly vector populations, they killed beneficial parasitoids, such as *Encarsia* and *Eretmocerus spp.* Renato Resende (Brazil) contributed next on

“Resistance to monopartite and bipartite tomato leaf curl disease-inducing Begomoviruses in tomato”. Eight different TLCD-inducing Begomoviruses occur in tomato in Brazil including both monopartite and bipartite virus species. Tomato breeding line TX468-RG has good resistance to the bipartite Begomoviruses, which is controlled by recessive gene *tcm-1*. Three other tomato lines are resistant to the monopartite Begomoviruses, the resistance again being controlled by a single recessive resistance gene. Breeding of tomatoes with both resistance genes is underway. Aldo Rojas (Nicaragua) spoke next on “A complex of Begomoviruses affecting tomato”. Phylogenetic analysis revealed that the indigenous Begomoviruses of the Americas belong to three major clades and to another intermediate grouping. *Tomato severe leaf curl virus* was subdivided into two strains which fitted in different clades due to past recombination of one of them with another Begomovirus. Mixed infections are common providing a high risk of evolution of new strains and species by recombination. Gratian Rwegasira (Tanzania) presented the final talk which was on “The effect of vectors and environment on incidence and severity of sweetpotato virus disease in Tanzania”. Data on the effect of insect vectors, different virus inoculum levels and climate variability on the incidence and severity of SPVD was collected from farmers’ fields at six different locations in the Great Lakes region of East Africa. The findings were used to guide decision making over which control measures to recommend against SPVD.

One of the important features of the symposium not mentioned above was the large number of interesting posters, more than 35 in total on a very diverse array of topics. The four poster sessions were held after the afternoon sessions and provided a good opportunity to engage in further discussions.

At the end of the final oral session, presentations were made to Pamela Anderson, Francisco Morales and Luis Salazar to thank them for all their hard work in organising such

a successful symposium and to Martha Huanes and her team for their invaluable conference support. At the conference dinner that followed, participants were treated to a delicious multiple course meal and the local “Pisco sour” drink and a choice of wines, followed by a most entertaining display of typical folk dancing from different regions of Peru including audience participation. An excellent evenings’ entertainment was had by all.

This ninth in the series of triennial International Symposia on Plant Virus Epidemiology was not only scientifically stimulating but also very well organised. It successfully maintained the high standards set by past meetings of the IPVE. The attractive setting of the “El Pueblo” Hotel with its well maintained lawns and garden, extensive sports facilities, and delightful café and outdoor restaurant secluded within a its surrounding ‘horseshoe of hills’ all helped to provide an ideal ‘backdrop’ to the event. The Director General of CIP and her staff are to be congratulated warmly over a job well done.

Roger Jones, 30/6/05



**2ND Joint Conference of the  
International working groups on  
legume and vegetable viruses  
FORTLAUDERDALE, FLORIDA  
10-14<sup>TH</sup> APRIL 2005**

This stimulating international conference was held on April 10-14<sup>th</sup> in the Riverside Hotel in Fort Lauderdale, Florida. It was the Second Joint Conference of the International Working Groups on Legume and Vegetable Viruses. It marked the last stage in the merger of the two groups to form the new International Working Group on Legume and Vegetable Viruses (IWGLVV), this merger being ratified by a vote at the conference. The

conference was attended by 45 participants from 15 different countries from five continents. There were 17 talks on vegetable viruses, nine on legume viruses and one that addressed both. There were also 17 posters on legume or vegetable virus topics. Presentations ranged from basic and molecular to ecological and applied and there was a major emphasis on new and emerging plant viruses.

The programme commenced on Sunday 10<sup>th</sup> April with registration and a welcoming reception in the poolside area of the hotel and on Monday 4<sup>th</sup> April with introductory comments by the principal symposium organiser, Gail Wisler, Chairperson of the Plant Pathology Department, University of Florida, Gainesville. Scientific papers were presented on Monday 4<sup>th</sup> April, Tuesday 5<sup>th</sup> April and Thursday 7<sup>th</sup> April, with sessions on virus detection, molecular genomics, new and emerging viruses and virus resistance. Wednesday 6<sup>th</sup> April was devoted to a full day excursion.

There were three general presentations. Piero Caciagli (Italy) provided a short history of the International Working Group on Vegetable Viruses and Roger Jones (Australia) did the same for the International Working Group on Legume Viruses. The third general talk by Andrew Schuerger (USA) reflected the proximity to the Cape Canaveral Space Centre! He spoke on “Cross contamination of microbes between earth and Mars – is there a risk”.

Highlights of the conference included the following contributions:

1) Two papers from Joe Vettens’ group at Braunschweig (Germany) on emerging legume viruses in Africa. Using monoclonal antibodies and sequencing to differentiate them from *Faba bean necrotic yellows virus*, two new Nanovirus species tentatively named *Faba bean necrotic stunt virus* and *Faba bean yellows virus* were reported. Both new viruses occur in Ethiopia and the first of them also in Morocco. A new Polerovirus, *Chickpea stunt virus*, was found infecting cool season legume crops. It was

transmitted by *Aphis craccivora*, distantly related serologically to *Beet western yellows virus* (BWYV) and had 70-78% sequence homology with BWYV and *Groundnut assistor virus*. It existed in two clades, clade I found so far in Ethiopia and Sudan and clade II in Syria, Egypt and Morocco. These findings are undoubtedly just the 'tip of the iceberg' as regards presence of additional nanoviruses and luteoviruses in Africa and elsewhere.

2) Papers by Rene Van Der Vlugt (The Netherlands) and Kai-shu Ling (USA) comparing the sequences of numerous *Pepino mosaic virus isolates* from Europe and the Americas. This damaging virus on tomato spread recently throughout the Americas and Europe through movement of contamination of tomato seed between different countries, becoming a significant concern for quarantine authorities worldwide. Two groups of isolates from Chile and the USA have CP sequences that are most divergent not only from each other but also from the European ones which are all very similar.

3) Two papers on emerging Begomoviruses of cucurbits by Judith Brown (USA) and Yeheskel Antignus (Israel). Antignus described the diseases caused by two Begomoviruses from cucurbits, *Squash leaf curl virus* (SLCV) and *Watermelon necrotic stunt virus*. Both are damaging new world (bipartite) Begomoviruses that have now spread outside the Americas. Brown described the properties of four new world Begomoviruses in the SLCV clade, SLCV itself, *Squash mild leaf curl virus*, *Cucurbit leaf curl virus* and *Melon chlorotic leaf curl virus*. They all infect Cucurbitaceae and *Phaseolus vulgaris*. SLCV seems to be the ancestor of the clade.

4) An interesting study on cucurbit viruses in the Sudan, the centre of origin of melon and watermelon presented by Herve Lecoq (France). Ten years of surveys revealed five viruses to be common, *Watermelon chlorotic stunt virus* (a Begomovirus), *Cucurbit aphid-borne yellows virus* (a

Polerovirus), *Squash mosaic virus* (a Comovirus), and the Potyviruses *Zucchini yellow mosaic virus* and *Moroccan watermelon mosaic virus*. Four other viruses that often infect cucurbits elsewhere were found at lower incidences. In addition, an ancestral melon species contained a new Sobemovirus, *Snake melon asteroid mosaic virus*, which had 71% amino acid sequence identity with *Rice yellow mottle virus*. This virus infected melon and watermelon but did not systemically infect pumpkin, squash and zucchini, which originated elsewhere in the world. Interestingly, another common cucurbit virus, *Watermelon mosaic virus*, was not found in the centre of origin of watermelon (the Sudan). In another paper, Lecoq provide evidence that this cucurbit Potyvirus actually arose by recombination between two legume-infecting Potyviruses, *Bean common mosaic virus* and *Soybean mosaic virus*.

5) Several papers and posters were presented by John Walsh (UK), Christian Obermeier (UK) and Rainer Kramer (Germany) that described recent progress with virus diseases of Brassicas. Obermeier described investigations on the genomics of plant virus co-evolution in wild *Brassica oleracea* and *B. rapa* populations. Competition experiments suggested that local *Turnip mosaic virus* isolates have greater fitness in their original wild hosts than non-local ones. Walsh discussed mapping resistance genes to TuMV in the *Brassica* genome and identifying viral determinants of virulence. To date, eight TuMV resistance genes have been mapped and determinants of virulence for six *Brassica* resistance genes identified. Cross protection was being investigated as a TuMV control strategy in cabbage. Effects of TuMV, BWYV and *Cauliflower mosaic virus* (CaMV) on stored cabbage were described. BWYV induced leaf tip burn and TuMV induced cigar burn (internal necrosis). Mixed infection with CaMV and storage both exacerbated the symptoms caused by the other two viruses. Kramer used intergeneric somatic

hybridization between *B. oleraceus* and *B. sativus* to transfer TuMV resistance into *Raphanobrassica* hybrids to show that it was possible to generate new donors with durable resistance to different TuMV pathotypes in vegetable Brassicas.

The Scientific Excursion on Wednesday 13<sup>th</sup> April was very informative. It included visits to commercial fields of tomato devastated by multiple infection with different Begomoviruses, seeing naturally-infected weed hosts with bright yellow symptoms caused by Begomoviruses, inspection of an impressive field trial on control of Begomoviruses in *Phaseolus vulgaris* using host resistance and a guided tour demonstrating virus research underway at a cyclone-damaged field station. The research station improves tropical crops grown in the southernmost part of Florida. Its research included impressive plantations of papaya with transgenic resistance to *Papaya ringspot virus*. Picnic lunch even included delicious transgenic papaya! The excursion passed by pristine areas of the Florida everglades and finished with a tour of an extensive botanical garden full of tropical plants from around the world.

On Tuesday 12<sup>th</sup> April, participants enjoyed a “Jungle Queen Dinner Cruise” along the Fort Lauderdale canal system, which is lined by some of the most opulent mansions and seagoing pleasure cruisers and yachts to be seen anywhere in the world.

At the end of the final oral session, it was announced that the next conference, the first of the newly combined Working group, would be in Ljubljana, Slovenia in September 2008 at the time of the next International Congress of Plant Pathology in Italy. Membership of the five-person transitional steering committee of the merged Group was also agreed, with Piero Caciagli (Italy) as the president and Ko Verhoeven (the Netherlands) the secretary. Presentations were made to Gail Wisler to thank her for all her hard work in organising such a successful symposium.

Roger Jones, 30/6/05

## BOOK REVIEW

### **Nematology Advances and Perspectives – Volume 1: Nematode Morphology, Physiology and Ecology and Volume 2: Nematode Management and Utilization**

Edited by ZX Chen, SY Chen and DW Dickson (2004)

Published by CABI Publishing and Tsinghua University Press (1234 pp.)

These two volumes represent a comprehensive resource with a strong focus on plant parasitic nematodes and therefore an important work not only for nematologists but also for plant pathologists with broad interests.

Volume 1 is rightfully dedicated to Dr Alan Bird, who made a significant contribution to nematology internationally and was a valued part of the nematology group at the Waite Campus. Alan’s chapter on surface adhesion to nematodes in Volume 1 is an elegant summary of the topic that has special interest to this reviewer.

Although the two volumes largely focus on plant parasitic nematodes, with Volume 1 commencing with a history of plant nematology, the coverage also includes soil, marine and entomophilic nematodes. The chapters in Volume 1 on the biology, morphology, physiology and ecology of nematodes give a detailed treatment with applicability well beyond plant nematology. This volume finishes with a practical chapter on the culture of nematodes of various trophic requirements other than the parasites of vertebrates.

The true value to the generalist plant pathologist is seen in Volume 2. This volume introduces the widespread and damaging nematodes species responsible for significant yield loss in world agriculture. The treatment is not intended to provide a manual for nematode disease management in particular crops and production systems; there are already other useful publications with this approach. Rather, the general principles are



approached from the nematode side and their impact on plants.

The second volume goes on to give a comprehensive coverage of opportunities to mediate plant nematode impact through host resistance, cropping practices, biological control, nematicides and regulation. Particular attention is given to biological control with separate chapters covering antagonist plants, fungi and bacteria.

The second volume also includes sections on entomopathogenic nematodes and their use and potential use for control of invertebrate pests of agriculture. There is a highly worthy chapter on taxonomy of entomopathogenic nematodes. However, it sits quite uncomfortably in this volume and does not contribute to its overall flow.

As with any monograph of moderate gestation, the latest findings cannot be included, but most of the authors have produced contributions that are up to date (including current taxonomy) and highly relevant. Of course, providing comprehensive treatment of the topics requires much old ground to be traversed.

The book is not particularly strong on illustrations and some are the tried and true,

but it does include many new and clear diagrams that help the reader's understanding and visualisation of the concepts. Generally the presentation is of the high standard we expect of CABI, but it is not too hard to find the odd niggling typographic error.

The editors and authors are to be commended for an excellent contribution to the nematological literature. These volumes will be useful to both specialist nematologists and plant pathologists with broad interests. In addition, it is sure to prove an excellent resource for plant pathology and zoology students and young graduates needing a one-stop overview of plant and related nematology. Given the steady decline in plant pathology and nematology in Australian universities, such resources take on greater importance.

In conclusion, these volumes should be considered essential acquisitions for plant pathology laboratories and libraries of training institutions. They don't replace the crop specific pathology and nematology manuals but provide a solid background and set such works in a proper context.

*Ian Riley*, University of Adelaide and SARDI Crop Pathology, Adelaide

### **Spore settling tower needs a good home**

The CRC Tropical Plant Protection will finish on 30 June 2006. In readiness for this we are trying to have a cleanup of our facilities.

We have found that we have a spore settling tower that is surplus to our needs. We would be happy to give it to someone who might use it. We are happy to give it away at no cost but would require the person to collect it or to pay for transport. It is currently located at The University of Queensland, St Lucia.

Brown JF and Kochman JK (1973) A spore settling tower for uniform inoculation of leaves with rust urediniospores. APPS Newsletter 2: 26-27.

For further details contact Julie Mackie  
Ph 07 3365 4767, email [julie.mackie@uq.edu.au](mailto:julie.mackie@uq.edu.au)

## **4th Australasian Soilborne Diseases Symposium (4<sup>th</sup> ASDS)**

Supported by the Australasian Plant Pathology Society

**Millennium Hotel, Queenstown, New Zealand  
3-6 September 2006**

The 4<sup>th</sup> ASDS, continuing the excellent traditions established by the first three Symposia, will consider five main themes;

- Soil health
- Detection of soilborne pathogens
- Biotechnology/genetic resistance and soilborne disease
- Biocontrol of soilborne diseases
- Management of soilborne disease

Offered oral and poster papers will be accepted on all aspects of soilborne plant disease. Offered papers will be each accompanied by a two page paper summary, required by 30 April 2006.

### **Contact:**

Symposium Secretariat, Helen Shrewsbury and Jan Latham  
Professional Development Group

PO Box 84, Lincoln University, Canterbury, New Zealand

**Website:** (for Symposium information and registration of interest) [www.asds2006.org.nz](http://www.asds2006.org.nz)



## **8th International Mycological Congress Cairns, Australia ~21-26 August 2006**

On behalf of the Australasian Mycological Society and the organising committee, we cordially invite our colleagues of the world mycology community to actively participate in the 8<sup>th</sup> International Mycological Congress, which will be held in Cairns, tropical north Queensland in 2006. This will be the first time an International Mycological Congress will be held in the Southern Hemisphere. For more information on IMC8 please visit the website and register your interest in attending: [www.sapmea.asn.au/imc8](http://www.sapmea.asn.au/imc8)

### **Call for Abstracts**

Contributions are invited for abstracts addressing one or more of the Congress themes. You may choose to submit your abstract for either an oral presentation in a formal concurrent session or a poster presentation. Posters will be on display at the congress and authors will be allocated a time to discuss their work with delegates. If you wish to submit an abstract for consideration by the Scientific Committee, You must also intend to register for the Congress.

### **Deadlines:**

Call for Abstracts – July 2005

Abstracts Close – March 2006

### **Abstract Submission**

On-line submission is the only method of abstract submission.

Please visit [www.sapmea.asn.au/imc8](http://www.sapmea.asn.au/imc8)

Abstract requirements and instructions for the submission can be viewed on-line.

*IMC8 Organizing Committee,*  
Wieland Meyer and Ceri Pearce



## New Members

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

1275	Mr	Chris Anderson	NSW	AUSTRALIA	Full
1274	Mr	Abdullah Al-Sa'di	QLD	AUSTRALIA	Student
1277	Mr	David Armour	QLD	AUSTRALIA	Full
1269	Ms	Barbara Czerniakowski	VIC	AUSTRALIA	Full
1272	Dr	Candace Elliott	VIC	AUSTRALIA	Full
1273	Mr	Harjono Djoyobisono	VIC	AUSTRALIA	Student
1281	Dr	Sabine Perrone	VIC	AUSTRALIA	Full
1268	Dr	Modika Perera	WA	AUSTRALIA	Full
1276	Dr	Zhaohui Wang	WA	AUSTRALIA	Full
1280	Dr	Isti Noor Istifadah	JAWA BARAT	INDONESIA	Full
1270	Dr	Seona Casonato	NEW ZEALAND		Full
1278	Mr	Jonathan Rees-George	NEW ZEALAND		Full
1279	Dr	Pia Rheinlander	NEW ZEALAND		Full
1282	Mr	Leonid Roguinski	RUSSIA		Full
1283	Dr	Valentina Roguinskaya	RUSSIA		Full
1271	Dr	Safaa Kumari	SYRIA		Full
1284	Dr	Dan Purcifull FL	USA		Retired

and the Department of Agriculture Fisheries and Forestry, CANBERRA CITY ACT AUSTRALIA, as an Executive Sustaining Associate.



## Don't forget to have your say!

This is your newsletter so be sure to let us know what is going on in your state.

APPS NEWS is the official newsletter of the Australasian Plant Pathology Society, published quarterly. Items for inclusion should be sent to Mrs B. Hall, Plant Research Centre, SARDI, GPO Box 397, Adelaide, SA. 5001. Ph. 08 8303 9562, Fax 08 8303 9393, Email: hall.barbara@saugov.sa.gov.au. **Next deadline: 18th November 2005.**

Editor-in-Chief APP (outgoing): Dr Eric Cother, NSW Agriculture, Orange Agricultural Institute, Forest Road, Orange, 2800. Ph. 02 6391 3886, Fax. 02 6391 3899, E-mail: ric.cother@agric.nsw.gov.au. (new): Dr Keith Harrower, School of Biological & Environmental Sciences, Central Queensland University, Rockhampton, Qld 4701. Ph 07 4930 6354, Fax 07 4930 9209, E-mail k.harrower@cqu.edu.au

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