



International Plant Propagators' Society Australian Region - Newsletter Summer 2010 - No: 28

Biosecurity

Biosecurity issues have a profound affect on us as plant professionals. Our involvement may be one of providing some general advice on an issue through to planning and implementing a program to manage a threat to our workplace or industry. Is that going to be sufficient?

Earlier this year we heard at the Fremantle IPPS conference about the severe impact of Phytophthora dieback affecting large areas of Western Australia. We also heard about some of the severe disease threats that are affecting plants around the world, and the implications for both parks, forestry and ornamental horticulture.

More recently there has been an outbreak of Mrytle Rust in areas of New South Wales. This has lead to agencies and large sections of the Nursery Industry attempting to control this threat.

Australia has had an enviable history of protecting our environment despite the number of threats that have occurred. But what are the implications of the recent loss of appeal by Australia with the World Trade Organisation regarding fireblight and apple leaf curl midge? Certainly New Zealand farmers are celebrating the decision which will open the way for the export of apples to Australia.

The WTO had earlier found that the restriction on import of New Zealand apples through quarantine measures breached global rules.

Apparently under the WTO's plant and human health rules, any restrictions on trade must be "based on a proper assessment of the risks using internationally

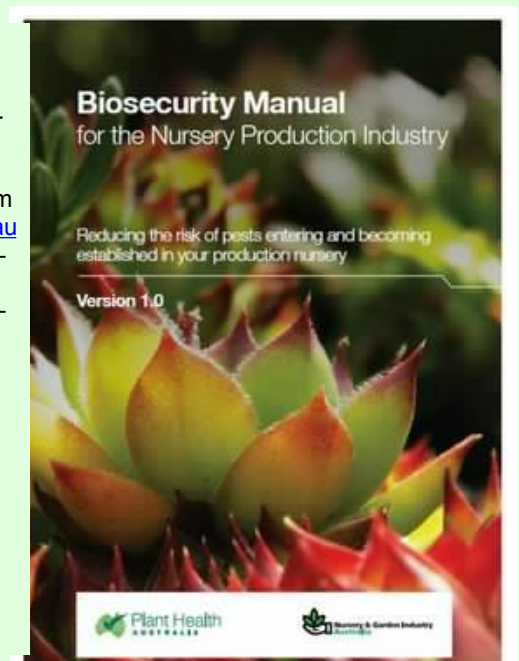
recognised methods, as well as "relevant" scientific evidence."

So what does this mean? The New Zealand industry will need to present a science-based review of the import risk analysis for New Zealand apples. Local growers will be hoping the imposition of biosecurity risk assessments on Kiwi exporters might provide a barrier.

In this issue Dr Anthony Kachenko of NGIA has outlined the current NGIA approach to biosecurity. What is next, and are we ready for it?

Bruce Higgs

The *Biosecurity Manual for the Nursery Production Industry* which can be downloaded from www.ngia.com.au and is also available as a hard copy from NGIA - cover photo provided by Dr Anthony Kachenko NGIA



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President's Comment

Like any business long term success is achieved by those who have the ability to change with the times. Sometimes change is dramatic but others like the subtle changes of the Coca Cola brands over 50 odd years are almost seamless. Good businesses are always trying to get that competitive advantage and improve on the way they do things. IPPS Australia has adapted well in the last 10 years to change but as we have heard in recent years some of the other IPPS regions have not been so fortunate. However, changes are in progress in some cases and it is good to see that GB&I have followed the initiative of Australia and New Zealand region in having their first six pack. For everyone who has been involved with the six pack concept that encourages young propagators to develop I congratulate you. I hope it is a legacy that lasts a long time in some shape or form.

I have seen first hand that International region are adapting to change at a recent board teleconference. The teleconference itself was a change to how they do things let alone the items discussed. More about the International board will be discussed by our International Director David Cliffe in his report in this issue but importantly you have a chance to meet the board members in person in Sydney. Lock in the dates it will be a good one: 27-29th May 2011. Further information on the conference will come out over the coming months.



Dealing with change: we will be looking at ways to keep our conferences relevant and cost effective in the future. I know through organisers Dyllon McPhee, David Cliffe and team that our members and international visitors and for 2011 will be well catered for but we face challenges to keep progressing in the future. That is why it is important that members participate and pass on valuable feedback at conference, so that we keep on improving.

Documenting change is an important part of the monitoring the development of any society. Ian Gordon has started the process of updating our history by contacting previous conference convenors for anecdotes/highlights of these great events - and there's been a few! Seeking and sharing at its best.

Hoping you all had a productive and profitable spring.

Have a great Christmas and a prosperous New Year.

Yours in propagation

Lionel Sach

Executive Officer's Comment

IPPS OFFICE

Even though the IPPS Office slows down at this time of the year, I have still been kept fairly busy tending to general office and in-house duties.



SYDNEY CONFERENCE 2011 – 26th to 29th May 2011

'Evolving coping with change'



Next years conference is a joint **INTERNATIONAL CONFERENCE** and will be held in **SYDNEY, NSW** from **Thursday 26th May to Sunday 29th May 2011**.....so pencil this date onto your calendar. This event is shaping up to be **'One not to be missed'**.

WEBSITE

Thank-you to Members & Executive Committee who keep a regular check on the website for me and advise of changes required. These are then passed onto IPPS's web master for uploading.



The GB&I IPPS Region 2010 6 Pack, a new venture in that region following on from Australia and New Zealand regions

SUBSCRIPTIONS

The Australian Region of IPPS has 235 Members.

A warm welcome to the following New Members;

Mr.	Hans Orth	Orths Nursery	COLDSTREAM	VIC
Ms	Heidi Dougherty	Natural Area Management & Services	WHITEMAN	WA
Mrs	Beverley Drayton-Witty	Natural Area Management & Services	WHITEMAN	WA
Ms	Susan Forrest	Forrest Nursery	DONNYBROOK	WA
Mr.	Steve Fredericks	Yates Australia	CLAYTON	VIC
Ms	Emma Holloway	National Arboretum	DICKSON	ACT

SUBSCRIPTION RENEWALS

Early in the New Year membership subscription renewals will be forwarded out to all Members. Your speedy remittance in this regard would be very much appreciated.

All Members should have received their combined proceedings for the year. If you haven't received your copy please contact me.

CONTACT DETAILS

To ensure Office records are kept 'up to date' I would appreciate it if Members could please notify me of any changed contact details. In particular, if you have changed your telephone provider recently, *please ... please* remember to forward your new email address onto me at pjberry@iprimus.com.au

- Pam Berryman

Editor's Report

PAPERS FROM WA CONFERENCE

Sixteen papers presented at the Fremantle conference earlier in the year were sent to the International Editor in early October. It took some persuasion to get some presenters to send me the papers, but this result is better than last year's conference.

UPDATE OF IPPS HISTORY

The Executive Committee took the decision to have an update of the Australian Region History. The first version of the History was launched at the International Conference in Canberra in 1991. The intention is that the updated History will be launched at the

International Conference to be held in Sydney in May next year.

I need the assistance of the memories of Region members in preparing the update. I will be contacting each past Program Chairperson personally to get their recollections of events at their conference and during the time they spent on the International Board. I would also like to get recollections from other members who have been regular attendees of conferences. Would any member who has information worth putting into the History please put them on paper and email or mail them to me as soon as possible.

My postal address is: 1/251 Herries Street
Toowoomba Qld 4343

My email address is: i.gordon7@bigpond.com

Ian Gordon - Australian Region Editor

HIGHLIGHTS OF THE 2010 INTERNATIONAL BOARD MEETING

Provided by David Cliffe - International Director

In September the International Board of Directors met in Jersey City; Lenox, Massachusetts; and Warwick, Rhode Island with James Johnson presiding at the meeting. All eight regions were represented.

Highlights of the meeting were:

Year-end membership for 2010 was recorded at 1,767 from all regions, a decrease of 172 in the reported numbers compared to the previous year.

Six at-large memberships were acknowledged. Five-year membership plaques were distributed to 78 members for 2010, as reported by the regions. A year-end projection on income and expenses for 2010 reflected the likelihood that operations will end with a small loss of just under \$1400, close to the budget projection for this year.

The Board approved a recommendation from the advising broker for a new investment strategy that allows more global opportunities and more flexibility without more risk, leaving the funds invested in the USA. Other options will continue to be researched for the future.

It was agreed that the International Secretary-Treasurer would be excused from participating in the International Tour and attending the International Board Meetings, saving that expense in the annual budget. Instead, electronic recording of the Board's meeting will be arranged, with minutes being transcribed afterwards.

The International Editor presented reports regarding publication of Volume 58 distributed 2009, and Volume 59 just being mailed in September. Noted was that 50% of members take the Proceedings in book format; 21% take the Proceedings in CD format; and 8% take the Proceedings as both the book and CD, leaving 21% that

do not receive the Proceedings at all with their memberships.

The Board reviewed the final activities associated with mounting the first 56 volumes of the Combined Proceedings on the PubHort website of the International Society for Horticultural Science.

Plans to implement an international newsletter were moved to the Editor's Advisory Committee to explore ways to launch this initiative with minimal cost to IPPS. Approval was given for the International Editor's continued participation in the International Tour, region's conference, and Board meeting, with an expectation that articles about the tour stops will be prepared by Board members and collected by the Editor to put with photos for an overview of the tour for the website and international newsletter.

A change in the Board structure was approved, as follows:

- A position of "Chair" was added to manage the affairs of the Board for a one-year term, with up to two additional one-year terms possible. The individual in this position will be elected by the Board existing at the time of nomination and election, and the chair will be part of the existing Board.
- The position of President will be retained as the representative of the region hosting the International Tour and Meeting, but will not carry responsibility for the Board's management. The position of Second

Vice-President position was eliminated, to avoid additional officers in the new structure.

- **All changes will be presented to the membership for voting as Constitution changes over the next year, with implementation possible for the 2012 year.**
- A new schedule for the International Tour and International Board Meetings was approved for regions to follow, probably beginning with the 2012 International Tour in Japan. The Board-approved policy requires a minimum of seven days attendance by International Board members; to include the regional conference, a tour, and a minimum of 16 hours of meeting time for the International Board.
- The recipient of the Award of Honor for 2011 was identified and approved.
- Officers for 2011 were elected as follows: Greg McPhee (Australia) as President, and Nobumasa Nito (Japan) as Vice President. The Second Vice President position was left vacant in view of the proposed change in the officer structure.

Biosecurity Matters

by Dr Anthony Kachenko

Environmental & Technical Policy Manager,
Nursery & Garden Industry Australia

Biosecurity is a concept that has increasingly gained importance and relevance in relation to the Australian nursery and garden industry. The term, biosecurity, refers to a set of measures that can be put in place at the national, regional or production nursery level to protect against the introduction and spread of exotic pests (insects, diseases, weeds and other biological organisms) and to effectively deal with them should they arrive. In essence, biosecurity is everyone's business including each and every production nursery in Australia.

Production nursery biosecurity refers to a set of measures designed to protect a property from the entry and spread of pests. If a new pest becomes established in a production nursery, it will affect business through increased costs (for monitoring, cultural practices, additional chemical use and labour to apply them), reduced productivity (yield and/or quality reductions) and/or loss of markets. Therefore, it is crucial that every production nursery is responsible for implementing biosecurity measures on-farm. This should also include some basic measures designed for every person visiting or working on production nurseries.

There are a number of simple measures that production nurseries can follow to reduce the threat of new exotic pests entering and establishing on-farm. These measures are listed in the nursery industry Publication titled 'Biosecurity Manual for the Nursery Production Industry' which was developed by NGIA in partnership with Plant health Australia. Each of these measures



Figure 1 Nursery and garden industry's priority pests poster can be downloaded from www.ngia.com.au and is also available as a hard copy from NGIA

should be embedded in everyday nursery management as they make good business sense by reducing the risk of spreading pests. These measures include:

- **Be aware of biosecurity threats**

Make sure that all staff are familiar with the most important exotic production nursery pest threats. Nursery & Garden Industry Australia has several resources, including posters and fact sheets that can assist with this purpose. These can be downloaded from the NGIA website under the Environment>Biosecurity section.

- **Use only clean, pest-free and preferably certified, production nursery inputs**

Ensure pests and other contaminants do not enter production nurseries in the first place through production nursery inputs, such as growing media, fertiliser and propagation material. It is always important to purchase these only from reputable suppliers, preferably with Nursery Industry Accreditation Scheme Australia (NIASA) accreditation or BioSecure HACCP certification. It is also important that records of all nursery inputs are kept up-to-date.

- **Keep it clean**

Practicing good sanitation and hygiene is fundamental to good nursery production and will help prevent the entry and movement of pests onto production sites. Workers, visitors, vehicles, raw material and equipment can spread pests, so it is important that they are decontaminated, or have come from a clean source, before entering and leaving nurseries. Other measures to consider include having a designated visitor's area and using appropriate signage to alert visitors that biosecurity is important and that they share responsibility for maintaining it. Templates for biosecurity signs can be downloaded from the NGIA website under the Environment>Biosecurity section.

- **Check your production nursery**

It is important that crops and raw materials are frequently monitored. Knowing the usual appearance of the plants in a production nursery will help recognise new or unusual events and pests. To achieve this, written and photographic records of all unusual observations should be kept up-to-date. Constant vigilance is vital for early detection of any exotic plant pest threat.

- **Abide by the law**

Respect and be aware of laws and regulations established to protect the production nursery industry, Australian agriculture and your region.

- **Report anything unusual**

One of the most important aspects to remember is to report any suspicious pest immediately. Nursery workers' eyes and experience are the most important tools in the trade. If you have spotted something unusual, or suspect a pest that represents a risk to your business and the Australian nursery industry, simply



Figure 2 Biosecurity signs that demonstrate commitment to production nursery hygiene, safety and auditable systems should be placed at the main gate, external entrances, visitor parking areas and wash-down facilities of production nurseries. A template can be downloaded from www.ngia.com.au

call the **Exotic Plant Pest Hotline on 1800 084 881.**

In addition to these simple measures, NGIA has developed the Nursery Production Farm Management System (FMS) which includes the NIASA, EcoHort and BioSecure HACCP Best Management Practice programs. Membership and involvement in the Nursery Production FMS is open to all production nurseries and growing media suppliers and provides participating business with a good grounding in biosecurity measures and practices. Implementing the Nursery Production FMS in your business encourages good hygiene, pest monitoring and traceability in your operations. Biosecurity traceability allows for the trace-back of plant material and production nursery inputs on your property to its source, the trace-forward of plant material that has left your property, and the provision of records of surveillance and pest management practices undertaken on your property.

The future of the Australian nursery industry will be reliant upon robust on-farm biosecurity measures including effective prevention, control or eradication of exotic pests. This will be vital to the security and health of the Australian community, the productivity and sustainability of each and every production nursery in Australia as well as Australia's terrestrial, fresh water and marine environments. It will also enable open access of Australian nursery products to international as well as domestic markets. For example, with the recent incursion of the exotic pest myrtle rust, several jurisdictions across Australia have tightened their biosecurity requirements and require sophisticated technical justification for risk management measures in order to move nursery stock across the border. To prevent this from happening, think smart and consider implementing some biosecurity measures in your production nursery.

For further information on biosecurity, visit the NGIA website under the Environment>Biosecurity section or contact Dr Anthony Kachenko, NGIA Environmental & Technical Policy Manager on anthony.kachenko@ngia.com.au or 02 9876 5200.

PROFILE

- Elizabeth Smith

Liz is active in IPPS as a regional board member and chairperson of the membership committee.



Photo Liz Smith receiving a AIH Fellowship in November

What are the things that you feel have created your standing in the industry?

Of importance to the industry is that we formed a private training company in 1991, and at the request of the Nursery and Garden Industry in Queensland set up some of the first competency based traineeships in Australia. We make a difference in that we deliver accredited training on the job so there is little down-time for the employer and their staff. The training programs are flexible in that students can commence training at any time and each training program is specific to each trainee, apprentice or workplace and the training program can change over the program if necessary.

This means that students can focus on their particular work interests and grow over the program, and undertake further studies (up to Advanced Diploma in Horticulture) to develop themselves or their career and access higher education if they so desire.

What do I have to share with others (particularly new members) of the IPPS regarding the world of propagation?

The world of propagation is a marvellous place full of exciting things to explore... with links to members all over the world, it is becoming easier to gain and/or access information or assistance in propagating whatever is the challenge at the time.

Another is – never give up, adapt systems and ideas to your particular set of circumstances and remember where plants come from and what environmental factors are triggers for their development and experiment!

What are the significant things you have personally gained through IPPS membership.

Through IPPS membership I have met some old friends and made lots more new ones. The IPPS membership is an incredible network of caring sharing individuals who are very happy to do the extra yards to make sure your questions or concerns are answered.

International Pre-Conference Tour

The notes given to participants in this year's international IPPS tour start with an introduction about visiting "America's BosWash Megalopolis". This is a region having 55 million people in an area that covers about 2% of the nation's land. New Jersey, where we spent a lot of our time is more densely populated than India or

Japan. Coming from Perth, the most isolated capital city on Earth, seeing cities that virtually blend in to each other all the way from Boston in the north down south to Washington was a bit disconcerting if not depressing!

America is all it is cracked up to be. Everything on a grand scale; including great wealth and grinding poverty side by side.



My wife Natalie and I joined the tour at Longwood Gardens in Pennsylvania. This consists of over 1000 acres of rich and varied gardens, started by Pierre Du Pont, the wealthy industrialist, and funded by a foundation and endowment bequeathed by him (Enormous wealth). There is a palatial conservatory (photo above) which has warm climate plants (including an Aussie; *Stenocarpus sinuatus*) in a place that measures the snow falls outside in feet.

From there we travelled to North Creek Nursery, which specializes in growing the local native flora and is doing well from Government policies mandating more environmentally acceptable means of dealing with storm water and runoff – i.e. incorporating more of the local indigenous plants.

This was where we had the first of the many amazing and excessive meals that were served to us by Nursery owners! This one was Mexican style and far too much to eat it all. The meals served to us would become a



feature, and if one's weight were not a problem, an absolute delight. They put on the best of the best for us.

We then travelled on to our hotel in Philadelphia. Outside were



The room where the US constitution was written. The seat up the back is the one George Washington sat in during the process

beggars on every corner and the 18 year old doorman at our flash hotel gets paid \$5.15 per hour for the Saturday night shift (Grinding poverty). The next day we got our first taste of the Americans' love of their history and everything to do with their "Founding Fathers". Philadelphia was the Capital of the new United States while the city of Washington was being established. It is where their declaration of independence and constitution were written. The places where all these things happened are well preserved and we got to visit many of them. Reading Market (est. 1893) was the next place to visit and many of the stall holders were dressed in period costume. It was only afterwards that we found out they were actually Amish folk from nearby Lancaster County and Reading Market is where many of them sell their farm produce.

One of the cultural experiences planned for us was a visit to Wheaton Arts. This was previously a centre of the American glass industry and visitors are able to be guided through the process of making their own glass vase or paperweight or just taking in the museum of glass and looking at and buying the many beautiful handmade pieces on display in the centre's shop. We got lucky as by happy coincidence the grounds were hosting a show of the local Corvette car club and it is fair to say that most of the blokes on the tour were more interested in the huge range and number of immaculately presented cars than in the glass. The dark side of American culture was also on show with deep fried Oreos available for sale at one of the food stalls!

That took care of the weekend and then it was on to start visiting some of the showcase nurseries of the region. First up was Lucas Greenhouses which is owned by George Lucas and even though he is not the Star Wars George his nursery is a bit of science fiction.



Acres and acres of controlled environment greenhouses produce many millions of perfect plants. The place was full of poinsettias when we were there and I

wondered where they could get so many cuttings from. I learned that they are grown on specialised farms in Central and South America which are owned by Americans and the cuttings are freighted to the American growers ready for them to "stick". With the way hygiene and quarantine is in WA this was a bit of a revelation. They do things differently over there.

The main thing to note about the nurseries we visited was the sheer scale of them. Most were 100s of acres and they all had to be set up to take into account the hostile winters. The plants are all grown in greenhouses or what they call "hoop houses" like our tunnels or igloos. These are open in the growing season and covered in plastic for winter. Elaborate fork lift arrangements run the plastic out during fall and then it is cut off at the end of winter, rolled up in hay balers and sent off for recycling. I got the numbers out of one nurseryman and he throws out about \$80,000 worth of plastic every year.

Pride's Corner Nursery in Connecticut gave us a handout that told us, among other things, that they have about 70 miles of internal roads in the nursery, 55 miles of hoop houses and that they use 8 tons of nails every year to secure the plastic over the hoop houses. Generally, it seems to me, nurserymen are less interested in the plants themselves than they are in the processes and logistics involved in growing, selling and distributing these industrial strength quantities of plants. Certainly their range is limited by the climate and not nearly so interesting as what we are able to grow.

New Jersey may be one of the most densely populated places on earth but it has a lot of nurseries and grows a lot of crops, most interestingly cranberries. We visited a cranberry farm on the day they began to harvest the year's crop and it was quite fascinating. The farm has 1500 acres of "bogs" of swampy sand and to harvest the berries, which grow on little ground covering plants, the bogs are flooded and Mexicans in waders are sent in with machines like big lawn mowers that beat the



berries off the bushes. The berries float to the surface, are blown and scooped to the edge of the water where they are augered into waiting trucks.

Our tour included visits New York where we went to see the musical "Jersey Boys" on Broadway, Central Park, the Metropolitan Museum, the Bronx zoo as well as many other highlights too numerous to mention. It went on to parts north where we fluked seeing the trees beginning to colour up for the fall. More museums,

nurseries, meals and visits made it a trip that was a once in a lifetime experience.

If you get a chance, book yourself in to one of these international tours. They're worth it for the company alone, and the scenery and nursery visits are just a bonus.

Next year Australia hosts the tour and even if you can't get on the tour the Sydney conference, which will follow, will have many international visitors to meet and get to know.

Steve Vallance

Question & Answer

Conference Session - continued

What is the best way to transport cutting material over long distances – Wet newspaper or dry newspaper?

- Wrapped up in a moist chux wash is the best way.
- Tony VanderStaay - An example is with getting plants from Sydney. When we put them in wet newspaper from WA by the time we got them they had gone brown. It really does depend on the material. The best way we transport is moist rather than wet. It may depend if it is coming from a dry climate but we have always found that moist is better than wet.
- Clive Larkman – moisten the bottom of the stem and leave the top exposed.
- David Cliffe – This is my question. I have heard so many conflicting discussions on this. Ben Swane told me about a story of being over here (WA) and transporting a whole lot of cuttings in dry newspaper back to the East Coast, and he said they were astounded by the quality of the cuttings when they got back. We have moved lots of cuttings from fairly remote locations in big ice chests and used dry newspaper. It seems to me to be quite successful but like Tony I worry about wet newspaper because when you get them back they will already be gone within 2 days, particularly with some of the eucalypts.
- Di Larkman - We had some lavender shipped out from England a few years ago and it was in chux and I was astounded to see the quality of the plants – moist and it was brilliant. We use this now when we want to bring material back home. A lady sent me some stock from SA this year and it was very soft material and she put it with some *sphagnum moss* in the green glad sealed bags and I couldn't believe it ...it arrived in perfect condition.
- David Parlby - Its not so much about the transporting of it but I have done a lot of work with storage of cutting material and I agree that you don't have it wet. I tried it with wet newspaper or any type of material and its nothing but problems. I found that as long as you

have got it nicely sealed in a moist situation to try and reduce the airflow across your cutting material it tends to come out a lot better.

- I think it is dependent on moisture or not moisture in the package when sending it. I worked for a cutting facility in California and we used to buy unrooted cuttings out of Israel and South America and we found we had great results when they actually chilled the cutting material; harvest it and chill it down to 4 degrees for 12 hours and then ship it. We found we had great results in transporting the cutting material and it lasted a lot better when it was sent chilled.
- Cut Flower growers with gladiolis; wrap them in dry newspaper and put them in a very dry fridge and they will stay like that for 2 months.
- David Cliffe - We don't use foam boxes we use those really big thick heavy ones - cooler boxes. The problem is that we are about 100 kilometers away from where we have to ship them. We ship them in a plane, like a charter plane and trying to cool the space in the boxes is the biggest problem, so it is a 3 o'clock in the morning job and we have been using newspaper in this instance when we want to divide the clones.
- Cali Salzman – One of the best ways I have found is to use a Styrofoam box with dry newspaper and then at the very end I dip a tea towel in water I wring it out so that it is not wet I just place that over the whole lot and put it in the back of my ute in the middle of 40 degrees weather and any air that is coming across the damp tea towel keeps all my material cool and that's on a bush tucker budget so it works for me.
- Alan Rate said that with some of the cuttings from the first speaker he was going to try these suggestions and report back on his results.

Could Carl Barry comment further on the use of willow extract and aspirin (salicylic acid) in propagation?

I think there is a bit of confusion about willow water and aspirin.

Willow water is made by soaking in water the crushed bark and growing tips of willow branches. Just about all willow species are suitable for this. After soaking for a day or so, the willow water is ready for use after the bark has been removed from the solution.

Willow tree bark has been known for thousands of years to relieve pain, inflammation and fevers. Scientific research has shown that the constituent in willow bark that produces this effect is a chemical called salicylic acid. The name comes from the Latin word for willow, salix.

Salicylic acid is not aspirin. Aspirin is acetyl salicylic acid. As you can probably deduce from the names,

these chemicals are related to each other, but they are not the same chemical.

Willow water, an aqueous extract of the willow bark, is known to be beneficial in rooting plant cuttings. There is no argument about this. Most plant cuttings, when put into willow water for a day or so, will root faster than cuttings put into water only. You can see how the logic flows; willow water causes cuttings to root. Willow water contains salicylic acid. Therefore salicylic acid causes cuttings to root. Nice logic, but wrong.

The complicating factor is that willow bark also contains quite high levels of indole acetic acid, which is the name of a rooting hormone more commonly called IAA. You can probably guess where most of the rooting ability of willow water comes from and it is not salicylic acid. The concentration of IAA in willow water isn't that high when compared to commercial hormone products i.e. a few tens of parts per million versus a couple of thousand parts per million. However they can be as effective as each other. Cuttings put into willow water for hours should give similar results to cuttings put into a commercial hormone product for a few seconds. There is a time versus concentration trade off.

If salicylic acid doesn't contribute to rooting of cuttings, then its first cousin, acetyl salicylic acid (aspirin) probably won't either, and this is what the research is indicating.

The question arises is what does salicylic acid do then? Well it does lots of things, but the most interesting to me is the effect it has on resistance to plant pathogens and although this has nothing to do with plant propagation, it will never the less be important in plant culture in the future and this is where a bit of home experimentation could be of some benefit and this is where some work on aspirin and its effect on the response to pathogens by plants would be most interesting.

Has there been any work undertaken in WA with Trichoderma species with various forms of Phytophthora.

There are many papers showing effectiveness of composted pine bark and eucalyptus bark suppressing Phytophthora, does anyone know why this is effective and could it assist in the fight against dieback?

There is no work to my knowledge that has been done on Trichoderma species and Phytophthora cinnamomi control in WA. I used it (and a number of other fungi) in my PhD which was about composted eucalyptus barks to suppress Phytophthora species in container media. I showed that Trichoderma and a range of other fungi could suppress Phytophthora in container grown situations but not KILL the pathogen. So we did not recommend that route as they could be applied in nurseries and effectively suppress the pathogen.

However, plant material looking healthy would then be sold on, planted out and then quite possibly the pathogen could then spread in the environment and become a problem, once the suppressive effects had disappeared over time.

So Trichoderma species are good at suppressing but not eradicating. So not something of value for nursery people who are meant to be growing disease free plants! It is analogous to using many fungicides which are fungistatic not fungicidal.

However, in orchards etc. they would have value, as they could be used to help suppress the pathogen in horticultural crops like Chestnuts, Avocado and other susceptible species.

Trichoderma are primarily colonizers, rapidly using up available substrate and then going into stasis until suitable substrate is available again, at which point spores germinate, the fungus will grow rapidly and effectively for a short period of time, use up the available sugars and then go to a static/dormant state again.

Composted materials (such as pine barks and eucalypt materials) once stable and properly processed (will not heat up again if piled up) is excellent material for suppressing pathogens as Kevin Handreck indicates.

If a tree has been killed by Phytophthora and is chipped/mulched and any of the material contains Phytophthora – **without composting adequately** – the pathogen will be spread in the material and would effectively be a source of inoculum. So it is critical that trees on sites known to be infested with Phytophthora are treated (composted or similar treatment to kill the pathogen) adequately.

Professor Giles Hardy Director, State Centre of Excellence on Climate Change, Woodland and Forest Health, School of Biological Sciences and Biotechnology, Murdoch University, Western Australia, 6150

What can be done about the current cost undercutting in our Industry?

That is quite an open ended question and it depends on what you mean by cost cutting. If your referring to levy collection the levy has been quite static for a number of years. There is an opportunity of looking at whether there is a possibility for future increases to accommodate the current shortfall.

Margy: The big thing with cost -cutting / undercutting is when you get someone who sells a 140 mm pot for a \$1 in volume and the bulk of the Industry is selling the same product for \$4.95 or something like that. My initial reaction to that is the one selling for a \$1 is a silly fool, as they are going to be selling a lot of product, but end up with a large staff infrastructure and not be making any money, as well as damaging the rest of the Industry.



The Perlite Story

Paul Bester, one of our members who works for Australian Perlite kindly contributed photos and information on the manufacture and uses for Perlite. Most of us know it for the use in propagation mixes. But where does it come from and what are it's properties that make it useful to horticulturists?

Perlite is made from hydrated volcanic glass (obsidian) that has been heated rapidly to at least 850 - 900 °C. It then expands up to 20 times in volume, and is white due to reflection of trapped bubbles in the glass. Cyclonic classifiers are used to size the Perlite for it's many commercial uses ranging from use in building materials, as a filter aid, with explosives, and horticulture (hydroponics, soil improvement, propagation). Beside its low density, it is an inert sterile material with a high surface area that enables it to help prevent water loss through evaporation, and have high water holding capacity.

Mixes with 75% coarse perlite and peat moss have been reported to have up to 45% aeration : "Perlite Gradation and Peat/Perlite Mixtures" report by O.A. Matkin; Soil and Plant Laboratory, Santa Ana, California - "The Perlite Institute Inc."

http://www.perlite.org/perlite_info/guides/plants/Perlite%20Institute%20-%20Perlite%20Gradation%20and%20Peat_Perlite%20Mixtures.pdf

Challenge

Well here is a challenge for all our newer IPPS members ... members who only have a few copies of our fantastic collection of IPPS Proceedings on their book shelf.

All paid up members will have by now received an email from our International Editor, Charles W. Heuser advising us about the placing of all the papers from the past Combined Proceedings on the PubHort website operated by the International Society for Horticultural Science (ISHS).

To date there are 32,000 pages of IPPS knowledge with more to come over the next year.

So here is my challenge, [find that email you didn't read properly and have a look at it. Follow the simple instructions listed and get your self signed up to access this vast bank of plant propagation knowledge.](#)

Even though I personally own 44 of the 59 published copies of the proceedings I signed up and was very

pleased to find how easy it is to access the abstracts and the actual papers. This is made easier of course by using the Proceedings Index tag on the IPPS International Website.

This is a major step forward for IPPS - both in service to our members and in sharing our knowledge worldwide.

If you have any questions or problems, please contact your Regional Secretary or the International Office at secretary@ipps.org

Michael Gleeson

Newsletter Editors Comment

Looking back it has been a year of change for the country and economy. For many of us it has seen the breaking of a long drought period, with different growing conditions that that brings about. Once more I would like to wish members and readers a happy Christmas season and prosperous New Year from IPPS.

As always I would like to also thank the many members who contributed something to the newsletter. Especially Anthony Kachenko from NGIA for his contribution on biosecurity, and Steve Vallance for his very readable account and photographs of the International Conference tour in the IPPS Northern Region USA this year.

Don't forget that this newsletter and some past copies are also available on the IPPS website at www.ipps.org.au, and pass your extra copy of the newsletter around at work.

Bruce Higgs - editor "the Propagator" (02) 4736 5004
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Rod Tallis Award

It is that time of year again when our young propagators need to be nudged and encouraged to apply for this prestigious award.

It is not too late to undertake some short duration project or research that could see some worthy propagator at the start of their career gain an award that they can be proud of and mark the start of a successful career in horticulture.

Past editions of "the propagator" may give some ideas for projects, and help is available if you are unsure about designing an experiment.

All that needs to be done is do the work and submit an application. Contact details for Peter Lewis are on the IPPS website at www.ipps.org.au. Don't delay, or you will miss this great opportunity.

If you are a young horticulturist and would like to be a **6 pack member at next years conference**, then Peter Lewis would also like you to contact him.