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FOREST PRODUCTS COMMISSION



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State Biosecurity Forum 2012

The Threat of Eucalypt Rust

How prepared are you?



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# What's in a name?



# What's in a name?



- *Puccinia psidii*
- *Uredo rangelii*
- *Eucalypt rust*
- *Guava rust*
- *Myrtle rust*
- *P psidii s.s. (sensu stricto) s.l. (sensu lato)*

# Result

- Confusion (what are we dealing with?)
- Delay in eradication
- Missed opportunity
- Economic cost



# Don't be fooled

Rusts are defined by their nature NOT their  
name

# What are we dealing with?



- Rusts are highly transportable
- Their spores can be spread via contaminated clothing, infected plant material, on equipment and by insect movement and wind dispersal.
- Rusts affect commercial plant growing operations, native ecosystems, gardens, street vegetation – equal opportunity rust!

# What are we dealing with?



- They typically attack young plants and new growth on established plants and can be controlled in commercial operations with the use of fungicides
- Spread and establishment is dependent upon availability of susceptible host tissues

# *P psidii*



- *P psidii* has been identified as one of the biggest exotic disease risks to Australian native flora.
- It is recognised that susceptible young trees are killed by Eucalyptus Rust (NGIA Guava Rust Contingency Plan, March 2009).



# *P. psidii* in Western Australia



- The potential host range includes all WA Myrtaceae
- 2,661 known species including 74 threatened species
- The disease would significantly affect forest plantations and nurseries

# *P. psidii* in Western Australia



- There is also a potential catastrophic environmental consequence to the State's natural environment including threatened species both plant and animal
- Altered fire management and behaviour
  - Areas may not be able to be burnt due to spread risk of the disease. This in turn could build up fuel age and as a consequence increase wildfire intensity

# *P. psidii* in Australia



(a–c) Uredinia on leaves and shoots of *Agonis flexuosa* cv. 'Afterdark'

(d) Shoot death of *A. flexuosa* following severe infection.

(e) Flecks and spots on adaxial surface of *Syncarpia glomulifera*.

(f, g) Leaf spots with uredinia on *S. glomulifera*

(h) Leaf spot and uredinia on *Callistemon viminalis*.

(Carnegie *et al* 2010)

# *P. psidii* in Australia



Photo: Dr Louise Morin ©CSIRO



# *P. psidii* in Australia



Photo: Dr Angus Carnegie © I&I NSW

# *P. psidii* in Australia



Photo: Geoff Pegg © Biosecurity Queensland

# The problem.....



- It has a very wide host range across the Myrtaceae genera, which includes many native species such as Eucalypts, Acacias, Melaleuca, Callistemon, etc.
- To date over 160 species have been identified as susceptible, including most commercial hardwood species.

and it gets worse.....



- Two of the most susceptible host species are *Agonis flexuosa* and *Chamelaucium uncinatum* more commonly known as....

WA Peppermint & Geraldton Wax!



# If it gets here in WA.....



- There are known susceptible hosts from Esperance to Geraldton and it will find others in the natural environment.

# If it gets here in WA.....



- It won't just be in the forests
  - It will be in our streets and gardens
- Visual amenity will be affected
- The cost of eradication or control will be massive.

# If it gets here in WA.....



- Industries likely to be affected include cut flower and wildflower operations, plantation and native forest industry (including sawn timber and manufacturers)
- The State's export market may also be affected as countries free of the disease prohibit exports from infested countries

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# *P. Psidii* in the Eastern States



# Myrtle Rust in Australia



- An outbreak of Myrtle rust was confirmed at a cut flower/foilage nursery near Gosford, New South Wales on 19<sup>th</sup> May 2010.
- The infection was found on 100% of approximately 1000 plants of *Agonis flexuosa* (WA peppermint), which were all subsequently treated with fungicide.

# Myrtle Rust in Australia



- Cut foliage had been sent to the Sydney markets in the month prior to the positive identification of the fungi as the nursery operator thought it was a ‘scale insect’ infection.

# Myrtle Rust in Australia



- Since it was first detected in NSW in 2010, Myrtle Rust has spread through NSW, Queensland and Victoria
- Myrtle Rust has been detected in 21 local government areas in Queensland, with 196 known infected premises and a further 618 suspected reports (yet to be officially verified).

# Myrtle Rust in Australia



- It is considered endemic in NSW, with a confirmed distribution from Batemans Bay to the Queensland border.
- In Victoria it has been found at 64 sites.



# Myrtle Rust in Australia



- The spread of Myrtle Rust has been slowed in recent months by the cold weather.
- However, as we move into the warmer and wetter spring months, it is expected that the rate of spread of Myrtle Rust will again increase.

# And now the good news



## **We have the Nullarbor!**

- WA has an advantage in the prevention of the arrival of Myrtle Rust due to the drier biophysical environment which extends between this state and the eastern seaboard.

# And now the good news



- Since it was detected in 2010, WA has imposed special temporary import controls on the importation of Myrtaceae species from all States except Tasmania.

# How prepared are you?



- Does this mean *P. psidii* will not get into WA?
  - No. The nature of rusts suggest that at some point we will get an outbreak.
    - Too many vectors to control
- Can we stop it spreading if there is an outbreak in WA?
  - Yes. If we can eradicate quickly with fungicide there is a good chance that we can stop it.

# How prepared are you?



- **Constant Vigilance!!**
  - Be on the look out.
- **Report anything suspicious**
  - Exotic Plant Pest Hotline 1800 081 881 or to your local DAFWA
- **Don't risk spreading the rust!**
  - Remember all rusts are highly transportable
    - Vehicles and clothes

# How prepared are you?



- Biosecurity systems only work when protection is at many levels – at the national level (AQIS), at the state level (DAFWA), at a regional level (Industry groups and associations) and at the individual farm or property level.

# How prepared are you?



- Inspect your properties regularly
  - Report anything unusual
- Take the time to recognise the pests
  - Simple ID books are available (DAFF A Field guide to Exotic Pests and Diseases)
- Keep up to date with pest information
  - Plant Health Australia website
  - [Farmbiosecurity.com.au](http://Farmbiosecurity.com.au)

# Farmbiosecurity.com.au



- Farm Biosecurity is a national education and engagement campaign which aims to help producers reduce the risk of diseases, pests and weeds.
- It provides information about farm biosecurity and preventing emergency animal disease and exotic plant pests.



# Farmbiosecurity.com.au

The screenshot shows a web browser window displaying the farmbiosecurity.com.au website. The browser's address bar shows the URL <http://www.farmbiosecurity.com.au/>. The website's header features the 'farmbiosecurity' logo in a stylized font. Below the header, a navigation menu includes links for 'About this site', 'Farm biosecurity', 'Secure your farm', 'Secure your future', and 'News and events'. A search bar is also present. The main content area is titled 'Whether you are a livestock producer, a plant producer or both, farm biosecurity is important. Here you'll find tools to help assess the risks on your property and ways to reduce them.' This section contains several interactive elements: a 'Toolkit' button, a 'Subscribe now' button, and a 'Latest News' button. Below these are four featured content blocks: 'Product Movement' (showing green apples), 'People Movement' (showing people walking in a field), 'Equipment & Vehicles' (showing a red tractor), and 'Pests & Weeds' (showing a close-up of a plant). A 'Latest News' block highlights an 'AWARD WINNER HAS MULTI-LAYERED APPROACH TO BIOSECURITY' dated 27 Sep 2012, mentioning Steve Rathjen, a Murrumbidgee onion grower. The footer of the website features the slogan 'secure your farm: secure your future'.

# Vehicle Biosecurity Kit



- Brush and pan
- Stiff brush for removing soil and plant matter from shoes, clothes, equipment and vehicle tyres
- Disposable gloves
- Handwash or hand sanitiser

# Biosecurity Kit



- Spray bottle containing cleaning agent such as a detergent, dilute bleach solution or 70 % methylated spirits
- Paper towel
- Plastic bags for holding dirty clothes, shoes or equipment
- [http://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0017/424007/Vehicle-biosecurity-kit-plant-industries.pdf](http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0017/424007/Vehicle-biosecurity-kit-plant-industries.pdf)

# Biosecurity



Remember – Biosecurity is everyone's  
business

Thanks for listening!



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