MEDIA RELEASE

For immediate release: 30 July 2010

Biosecurity researchers aid the surveillance of exotic disease

By Kate Scott

You could be forgiven for thinking it's a military operation planning room. Topographical maps are spread across the table with bright coloured dots indicating where the threat was located and hopefully eliminated. Satellite imagery of the local terrain is projected on to a white screen at the front of the room showing lush agricultural areas and mountainous state forests. There are no military uniforms though. This meeting is a gathering of scientists from the Cooperative Research Centre for National Plant Biosecurity and Industry & Investment New South Wales staff who are planning surveillance strategies to monitor this exotic threat.

The threat is *Uredo rangelli* (Myrtle rust) which was recently detected at a NSW Central Coast cut flower growing facility. Very closely related to the rust fungus causing guava rust, it infects the Myrtaceae family of plants (which includes many Australian native species). This is the first detection of Myrtle rust in Australia and while it's not been found on eucalypts, there is limited knowledge of its impact or behaviour under Australian conditions.

CRC chief executive officer, Dr Simon McKirdy said the CRC was approached by Australia's Plant Health Committee (PHC) to deploy scientific resources and assist with surveillance of the rust.

"Given our plant biosecurity research activities, PHC approached us as part of their management strategy. We have flown in researchers from across the country to provide as much assistance as we can," he said.

However not all researchers are able to participate in the face-to-face meeting. Based in Melbourne, CRC PhD candidate Mr John Weiss contributes to the discussion via a mobile phone strategically placed among the maps on the table. He reads out GPS coordinates; often repeating himself so he can be heard through the intermittent telephone reception. John is looking at regional satellite imagery of vegetation condition provided by NASA using dates specific to the incursion. He is checking for new spurts of growth among the surrounding foliage and comparing this with wind and weather patterns from the Bureau of Meteorology. Combining this information provides the team with the best options of where to place the surveillance devices. He also conducts a thorough analysis of future weather and wind patterns to see where sporulation and dispersal could occur if the rust is still in the area.

Also attending the meeting and to provide assistance with trapping potential spores is CRC PhD candidate Craig Feutrill. Craig made the long drive to the Central Coast from South Australia's Barossa Valley and observers could mistake the trapping device being towed behind his car as a piece of military equipment, or perhaps even a rocket launcher. Instead it's a nine-metre tall suction device which sucks in 45 cubic metres of air per minute. The air is funnelled into a cone and will drop any spores into one of eight jars filled with ethylene glycol (radiator fluid). These 70ml jars sit on an automated turntable to isolate the daily samples, which will then be collected and analysed by plant diagnosticians.

With Craig's PhD research almost completed, he explains that this is the first time the suction trap has been used to collect spores. "My PhD was about trapping aphids, so it's great to see the trap used for another purpose. Hopefully any data found, or not found, will be useful for NSW and their management of this incursion," he said.

Rusts are highly transportable and while the spore traps will be monitoring for dispersal through wind movement, CRC researchers will also be deploying forensic type methods to check for contamination on clothing and other porous objects. Ms Dominie Wright from Western Australia's Department of Agriculture and Food has a number of 'forensic kits' with her, which will be given to the I&I NSW staff monitoring the sites. The tape she uses is a special tape that the police use to collect forensic evidence at crime scenes which will be pressed over clothing to pick up any potential rust spores. The samples are sealed in a clear evidence bag, labelled with location and date before being sent for diagnosis.

After a full day of planning, over ten suitable sites were identified for surveillance activities. Craig's trap will be used along with standard spore trapping devices leased from Queensland's sugar industry's research organisation BSES. The sites will be monitored weekly by I&I NSW staff and samples thoroughly sealed and carefully labelled and sent to the laboratory for diagnosis.

Director of Plant Biosecurity for Industry & Investment NSW, Dr Satendra Kumar says that while the conditions aren't favourable for spore trapping, it is really important for NSW to have the CRC involved. "With the onset of winter weather conditions, it's not an ideal time to be looking for spores. However, having the traps working now, and getting staff used to changing their tapes provides a good practice run before the warmer spring and summer weather sets in and spore activity is likely to be higher," he said.

Dr Kumar says ongoing work by I&I NSW and now under the Interim Response Plan, work is directed towards possible eradication of Myrtle rust. "To demonstrate the success of eradication, various facets of surveillance including spore trapping will be necessary and I hope the CRC can continue to help with this," he said.

Now the traps are deployed in strategic locations, I&I NSW staff will monitor them weekly. CRC researchers have returned to their respective states and wait anxiously to hear whether any spores are found during the surveillance activities. In all plant pest surveillance activities, receiving a 'zero' is the highest score possible, indicating that eradication strategies have been effective.

Information on Myrtle rust and what to look for can be found on the I&I NSW website http://www.dpi.nsw.gov.au/biosecurity/plant/myrtle-rust#What-can-I-do?

ENDS

For more information contact: Ms Jane Moran, CRC's Impact Management Program Leader, 03 9210 9210 or 0417 546 138, j.moran@crcplantbiosecurity.com.au

Media contact: Kate Scott, Communications Manager, 0402 299 611
k.scott@crcplantbiosecurity.com.au

Images: High resolution images of the nine-metre suction trap are available to accompany this media release from www.crcplantbiosecurity.com.au/news/media-releases