

## CALENDAR

## 23 JUNE, 2019

Executive Committee Meeting  
& OA Levy Payers Day  
Melbourne Convention Centre,  
VIC

## 24 - 26 JUNE, 2019

Hort Connections  
Melbourne Convention Centre,  
VIC

## 18 - 19 OCTOBER, 2019

AGM and Conference  
Swan Hill, VIC

## Hort Innovation onion industry leaders visit Mannum operations

**Late last year Onions Australia CEO, Lechelle Earl met with Sam Turner, the onion industry's Relationship Manager and Samantha Ferguson, Hort Innovation Marketing Manager at Rivapak Onion Packing Facility in Mannum, South Australia, to discuss onion industry R&D priorities going forward.**

The meeting proved very positive, with the following key industry points discussed:

- Grower attendance at upcoming international trade shows.
- Crisis management plan development and what this is going to look like.
- New export facilitator roles which will hopefully start in the new year, and how these will benefit growers looking to export through providing a mentoring role going forward.
- Progress of the current communications project which is due for completion in the middle of 2019.
- And the work that needs to be done on identifying frontier markets.

Lechelle said it was great to have the two Sams visit South Australia.

"It was an honour to have our Hort Innovation representatives tour a premium onion farm and packing shed, demonstrating the process of onions from paddock to packaging," Lechelle said.

"It's always fascinating to introduce industry people to the world of onion production and both Sams had a wonderful time on farm where they also got a tour of the packing shed.

"Genuine thanks go to Steve Rathjen and his family for hosting us and leading such an informative tour, complete with outstanding country hospitality."

Steve Rathjen, co-owner of Rivapak, said it was great to have Sam and Sam visit him on-farm in Mannum just before the beginning of harvest in November 2018.



► *Onion industry Relationship Manager Sam Turner and Hort Innovation's Marketing Manager Samantha Ferguson with Steve Rathjen at his Rivapak Onion Packing Facility in Mannum, South Australia.*

"We walked some crops and showed them a range of varieties and plantings, from onions that were virtually ready to harvest through to small onions, as well as the water monitoring technologies we are currently using on farm," Steve said.

"It was also great for Sam and Sam to tour the packing shed and see it in action. During their visit we were only pre-packing for major supermarkets, however it still gave them a good understanding of the packaging process."

According to Steve, onion crops were a little down last season compared to previous years in South Australia due to heavy winds and the extended dry period they experienced. Although they experienced no issues with disease, with little mildew pressure in the Mannum region.

With a lot of different short, intermediate and long day varieties in the ground this season, Steve is predicting his harvest will finish at the end of March.



► *Rivapak Onion Packing Facility in Mannum, South Australia.*



T: 08 8725 8862  
M: 0458 11 11 26  
F: 08 8725 8863  
lechelle@onionsaustralia.org.au  
PO BOX 9420  
Mount Gambier West  
SA 5291  
[www.onionsaustralia.org.au](http://www.onionsaustralia.org.au)



This project has been funded by Hort Innovation using the onion research and development levy and funds from the Australian Government. For more information on the fund and strategic levy investment visit [horticulture.com.au](http://horticulture.com.au)

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## Study finds that soil temperature is key to understanding disease risk

**The Tasmanian Institute of Agriculture (TIA) has released additional results from its 'Development of an onion white rot forecast model for Tasmania' project (VN14001), finding that soil temperature appears to be an important factor in disease development.**

Onion white rot (OWR), caused by *Sclerotium cepivorum*, is a widespread and destructive fungal disease of commercial onion crops. This disease is influenced by a combination of factors. White rot inoculum (sclerotia) and onion roots in the soil interact with environmental factors such as temperature and moisture. When combined with the time of planting, environmental factors can influence disease development. Improving our knowledge in these areas enables development of better integrated disease management options.

The two-year study included multiple commercial onion crop trials from Hagley to Rocky Cape in north-west Tasmania and planter bag studies in both outdoor and controlled environments. The research included the effect of planting date, environmental conditions, inoculum depth and root growth patterns to provide further insight into OWR disease development and management.

Onions are grown over a relatively long period in Tasmania (from May until late February). To reflect this, information was collected for three planting periods: early, intermediate and late crops (May, July and September). The incidence of infected bulbs in the bag trials was highest when onions were planted from May until early August and lowest when onions were planted in September. This relates to soil temperatures during the life of the crop and how this influences survival and growth of the fungus, which prefers cool temperatures.

In controlled environment studies, temperatures between 15 to 20 °C were optimum for fungal activity and onion infection. The number of infections was reduced with sustained temperatures above 22 °C. Soil temperatures recorded at commercial field sites during the project showed that soil temperatures in the top 100 mm of soil can be above 22 °C periodically from October; and more so from November to February.

Root growth was fastest for the onions planted in September and yet they



► Dr Suzie Jones working on planter bag trials in the laboratory at the TIA Vegetable Research Facility at Forth in Tasmania.

had the lowest incidence of infected bulbs compared to onions planted from May to August. The higher temperatures experienced in the top 100 mm of soil from November to February are likely to have reduced the ability of the fungus to reach the base of the onion bulbs planted in September.

Fields with a history of OWR and considered to be at risk of infection would be best planted late in the season. However, the fungus appears able to survive in lower cooler soil depths and progress up towards bulbs if soil temperatures decrease towards the end of the season and before harvest. Fungicide management is still recommended with adjustments to timing and compliance with regulation guidelines.

This research provides growers with new data and recommendations but there is still work to be done to optimise management of this disease. Further work is required to define the soil temperature ranges for onion white rot sclerotia germination and fungal activity, including under commercial field conditions.

One promising future management option is to reduce the residual sclerotia, that can remain dormant in the soil for decades between onion crops, by applying natural garlic or onion extracts to stimulate sclerotia germination in the absence of onion crops. This strategy needs further research and testing to establish the quantity of active ingredient required and the optimum

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timing and conditions to apply this treatment. Increasing the effectiveness of fungicide applications, by targeting the root zone where the fungus is most active, is another management option that needs further testing under field conditions.

In addition to the research findings themselves the study also resulted in the establishment of a relationship with Dr Fred Crowe, one of the worlds most esteemed experts on onion white rot disease. Dr Crowe provided information and technical advice throughout this study and the Tasmanian onion industry hopes that collaboration with Dr Crowe and his fellow researchers in the USA continues and develops over time.



▶ Onion bulbs infected with white rot showing symptoms of rotted roots and white mycelia.

Dr Fred Crowe was the guest speaker at this year's Onions Australia Conference in Ulverstone Tasmania and he also spoke at the Tasmanian Institute of Agriculture's Open Day. Find out more about Dr Crowe's insights into Allium White Rot research activities in the US via a podcast with Dr Crowe which is now available on the Onions Australia website: <http://www.onionsaustralia.org.au/news-updates/podcasts/>

Find out more about Dr Jones' research by accessing the project's final report on the Hort Innovation website here: <https://horticulture.com.au/resources/final-report-order-form/>

## The 2017/18 Onion Fund Annual Report now available

**As onion levy payers, make sure you know how your levy was invested during the most recent financial year!**

All the key investment and project information from 2017/18 is available in Hort Innovation's most recent Onion Fund Annual Report.

The Report can be downloaded from the Hort Innovation Onion Fund Annual Report Portal at <https://horticulture.com.au/wp-content/uploads/2018/10/Hort-Innovation-Onion-Fund-2017-18.pdf>

If you prefer to read a hard copy of the annual report, simply use the form available through the portal here (<https://horticulture.com.au/fund-annual-report-portal/>) to place an order and have your report mailed to you.

And if you'd like to get closer to what the onion levy is achieving throughout the year, remember to sign up to Hort Innovation's free membership program at [www.horticulture.com.au/membership](http://www.horticulture.com.au/membership).



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# Recent Onion Biosecurity Plan meeting keeps industry prepared

As part of the process of continual biosecurity improvement in the onion industry, the 2018 onion industry biosecurity panel recently met to review the implementation of the preparedness activities proposed in the onion biosecurity plan.

Onions Australia has been a signatory to the Emergency Plant Pest Response Deed since 2008. As part of this, the industry is working towards implementing a number of preparedness activities included in the onion biosecurity plan in preparation for exotic pests. One of these preparedness activities was this year's launch of the Biosecurity Manual.

During the recent biosecurity panel meeting, key industry representatives including Onions Australia CEO Lechelle Earl, Penny Measham and Rebekah Pierce, met to review the activities that were to be completed during the last 12 months.

The group reflected on the exotic pests that have changed status over the last 12 months, mainly viruses, as well as thrips and nematodes. They also looked to the future and discussed plans for the next year.

To ensure the industry stays as prepared as possible, the Onions Australia executive committee will be carrying out training on the Emergency Plant Pest Response Deed works in April



► The onion industry disease poster is keeping biosecurity top of mind.

2019. Consultation with growers to review key aspects of the implementation table from the biosecurity plan has also been scheduled for June 2019.

If you have any issues or information you would like tabled at the meetings, please contact OA CEO Lechelle Earl via email: Lechelle@onionsaustralia.org.au.

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