



Friday, September 6, 2019

Pest and disease surveillance unit to be launched at Hart Field Day

A new cutting edge, mobile pest and disease surveillance unit will be launched at the Hart Field Day on Tuesday, September 17.

Part of a \$21 million Australian Government Department of Agriculture Rural Research and Development for Profit initiative – led by Hort Innovation, with support from 17 partner organisations across a broad range of industries from grains to viticulture, and horticulture to forestry - iMapPESTS: Sentinel Surveillance for Agriculture is the first of its kind in Australia.

Visitors to the Hart Field Day will be the first to see the mobile pest and disease trapping and monitoring unit in action as it begins its inaugural trial at the Hart Field-Site Group cropping trial site throughout spring.

South Australian Research and Development Institute researcher Dr Rohan Kimber said the Sentinel would provide fast-tracked, regional pest information and was the first step in developing a system that would eventually provide vital information directly to growers and consultants.

“It is a mobile trapping unit with four to five different air samplers that can sample airborne pests and diseases,” he said.

“It will enable us to survey a region or a specific site and capture airborne fungal spores and insects with the capacity to also analyse specific conditions such as time, wind speed and weather.

“The iMapPESTS Sentinel is the first big step change to the way information can help pest and disease management, eventually this information will be able to be visualised to growers and consultants via a web interface and deliver real-time, actionable information to growers.”

While the Sentinel unit on display at Hart is the first of its kind, Dr Kimber said eight units would eventually be deployed across Australia, and across industries.

“Hart is our first test site, partly because it is a key grain growing region and we have had strong ties with the Hart Field-Site Group over a number of years,” he said.

“It will remain on site for the spring while we undergo the inaugural testing and ‘iron out any bugs’ in the system.

“It will then move to the viticulture region of the Barossa Valley, and then we anticipate it may move to the lower northern plains of Adelaide to serve the horticulture industry, and in the meantime a second prototype will be launched in Northern Queensland from late December.”

One of the target pests on the iMapPESTS pest and pathogen list for surveillance and diagnostics is the green peach aphid, and one of the key team members in putting together an initial proposal for the new technology, Jessica Lye from **cesar** will also be a key presenter at the Hart Field Day.

Redlegged earth mite is also in her sights, and she will provide field day visitors with an update on insecticide resistance, where resistant populations are found, different types of resistance, and strategies for limiting the risk of resistance evolving.

“A more recent development in South Australia has been the detection of several redlegged earth mite populations with extremely high resistance to pyrethroid chemicals such as bifenthrin, alpha-cypermethrin, as well as moderate resistance to organophosphates like chlorpyrifos and omethoate,” Dr Lye said.

“The spread of resistance can be slowed if techniques described in the green peach aphid and redlegged earth mite resistance management strategies are applied.

“I’ll be updating growers at the field day on recent prediction modelling work, that indicates which grains pests are at a high risk of evolving resistance in future.”

See and hear more about the Sentinal pest and disease surveillance unit at the sessions ‘*Disease and insect surveillance*’ and at the official launch during the event welcome at 10am, and hear Jessica Lye speak on insecticide resistance during the ‘*Green peach aphid and redlegged earth mite*’ sessions throughout the field day.

To register for the Hart Field Day, or for more information, take a look at the Hart Field-Site Group website www.hartfieldsite.org.au or contact Sandy Kimber on 0427 423 154 or email admin@hartfieldsite.org.au

Media contact: Hart research and extension manager Dr Sarah Noack 0420 218 420.



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Dr Rohan Kimber, pictured (left) with the Sentinal, a mobile pest and disease surveillance unit.