CitrusWatch: Volunteer coordination & engagement

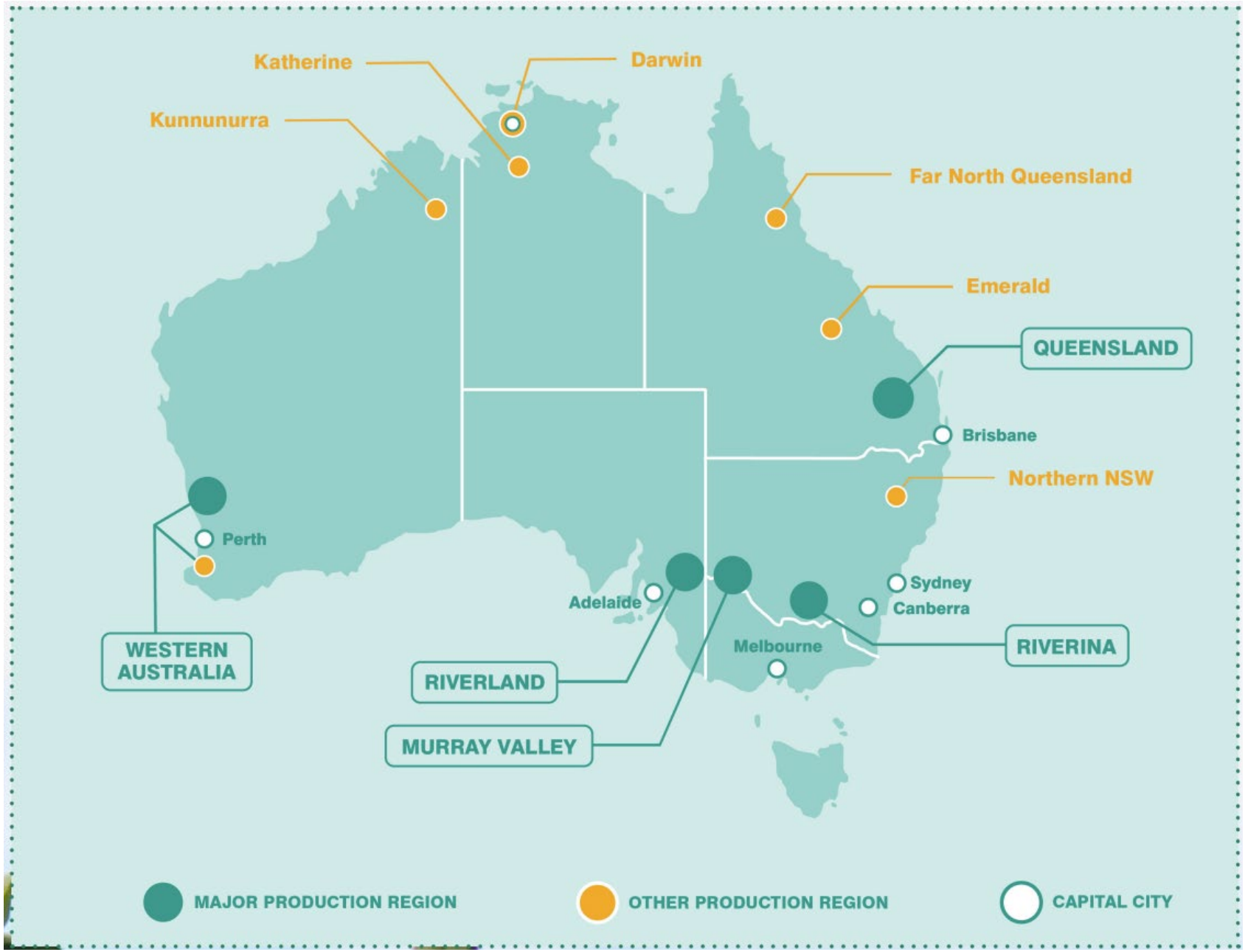
Jessica Lye, Citrus Australia

Image: Asiatic citrus psyllid nymphs. Utkarsh Patil | Dreamstime.com

Hort Innovation Strategic levy investment
CITRUS FUND
Plant Health AUSTRALIA
Citrus Australia
NORTHERN TERRITORY GOVERNMENT
Cesar Australia

The Australian Citrus Industry

- Production regions throughout Australia
- Approx 900,000 tonnes of fruit per annum
- Export to more than 50 overseas destinations
- 30% increase in new plantings over last decade



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Quarantine pests & diseases (Extreme Impact)

Candidatus liberibacter asiaticus

Entry potential: High
Est. potential: High
Spread potential: High
Economic impact: Extreme

Diaphorina citri

Entry potential: High
Est. potential: High
Spread potential: High
Economic impact: Extreme

The CitrusWatch team

Project: CitrusWatch

Funding: Hort Innovation citrus R&D levy / Plant Health Australia levy

Project lead: Rohan Burgess, Plant Health Australia


Rohan Burgess


Yvonne Ogaji


Nathan Hancock


Jessica Lye


Jacqui Mitchell


Ben Burchett

Plant Health Australia | *Citrus Australia* | *NT Gov*

NSW GOVERNMENT
Department of Primary Industries
Department of Regional NSW

Disease diagnostics are undertaken by the Citrus Pathology team at EMAI

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Protecting Australian Citrus

Plant Health AUSTRALIA

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CitrusWatch Surveillance Activities

CitrusWatch maintains a volunteer-based trapping network across Australia, with a focus on urban areas and undertakes targeted surveys across Australia each year.

African citrus psyllid
Trioza erytreae

Citrus variegated chlorosis
Xylella fastidiosa

Surveillance targets

- Priority exotic citrus pests identified in the Aust Citrus Industry Biosecurity Plan
- Over 20 species identified with threat levels of HIGH or EXTREME
- Six are key targets of the program activities

The Asian citrus psyllid
Diaphorina citri

Huánglóngbìng disease
Candidatus liberibacter asiaticus / africanus

Citrus canker disease
Xanthomonas citri

Glassy-winged sharpshooter
Homalodisca vitripennis

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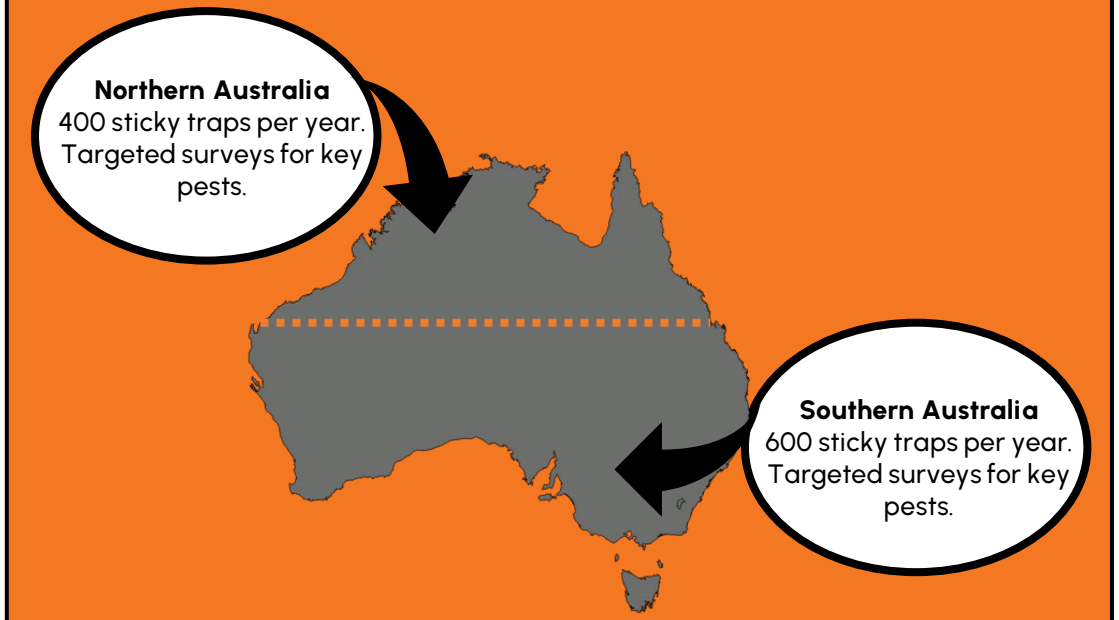
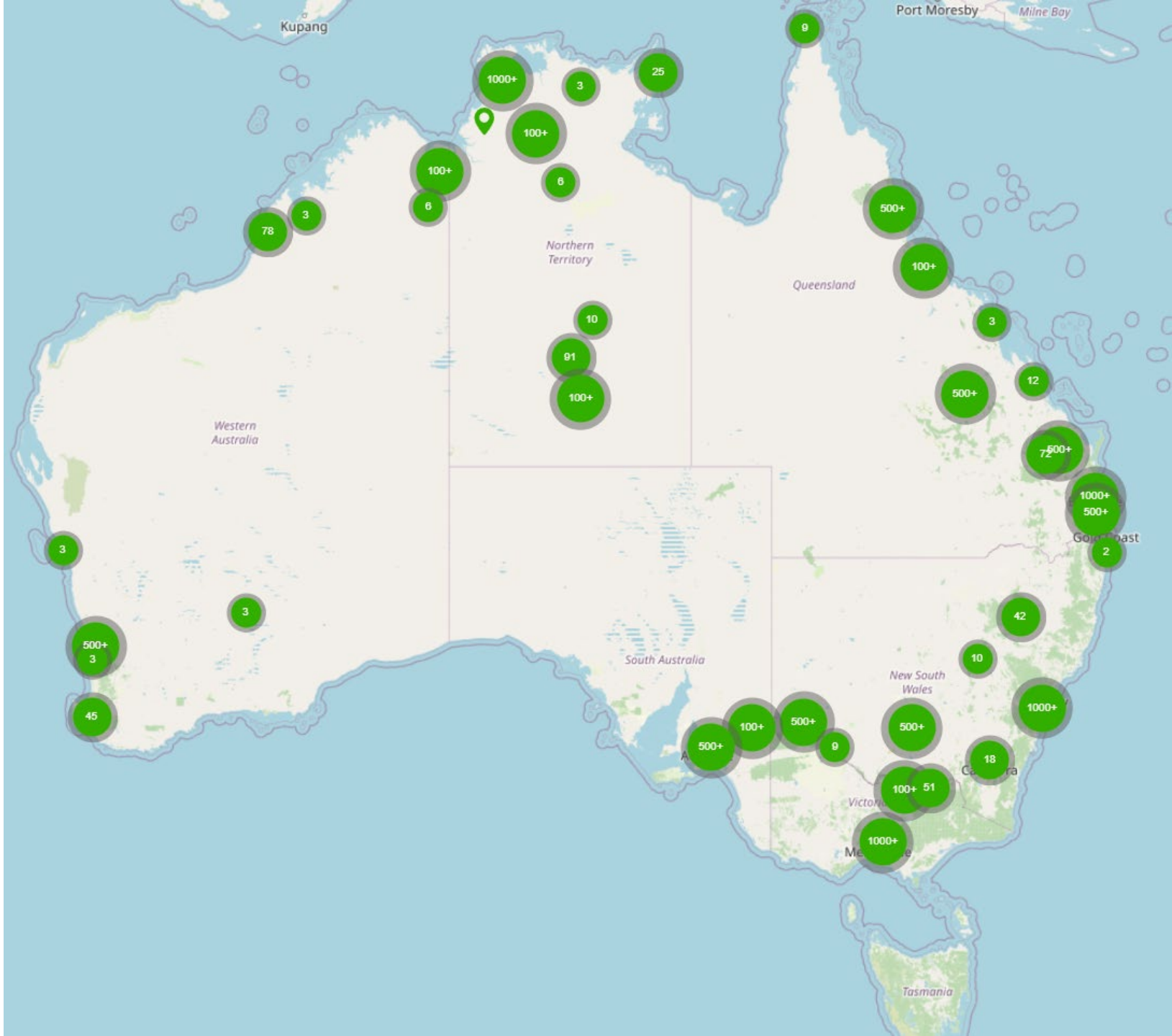
There is a split of responsibilities between program partners in Northern and Southern Australia.



Quarantine pest & disease occurrence records

These records are the result of volunteer trapping and targeted surveys carried out by CitrusWatch (with diagnostics by EMAI) since mid 2021.

13,025 Total Records in AusPestCheck



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The Early Detector Network

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URBAN/RESIDENTIAL							
NSW	ACT	QLD	VIC	WA	SA	NT	**Total**
34	5	142	63	65	15	53	**377**
PRODUCTION							
NSW	ACT	QLD	VIC	WA	SA	NT	**Total**
5	0	13	6	0	3	0	**27**

The Early Detector Network

Evolution of the EDN

- The EDN has been the main vehicle for urban stakeholder engagement and has evolved over time.
- 2021 and 2022: focus on attracting volunteers and testing how the trapping network would run.
- 2023: Increased efforts to develop communication channels to raise awareness among the EDN (and beyond).
- 2024 -2025: trying to create a community of learning that underpins the EDN.

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Early Detector Network trap flow

1.

Volunteers opts in. Receive trap kit & program information.

2.

Deploy according to instructions. MyPestGuide Reporter™ report

Early Detector Network trap flow

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Deploy according to instructions. MyPestGuide Reporter™ report.

3.
Collect after 2 weeks and mail to industry entomologist.

4.
Entomologist updates Coordinator on receival.

5.
Traps screened and triaged. Suspect cases sent to DPI.

6.
Coordinator collates all diagnostics reports & upload to APC.

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Activities to retain & coordinate volunteers

- More regular (succinct) trapping season updates
- Improvements to guidelines/simplification
- Online training and 'How to trap' video
- Educational resources
  - E.g. fact sheets, showcasing online biosecurity resources – BOLT, Pest ID, MyPestGuide, UPHN
- Mid-season and end of season webinars (value adding), e.g. "Dr Bug-a-lugs" Darryl Hardie, Dr Nerida Donovan, Gary Eyles (Eyles Citrus)
- Trap kit gifts (e.g. gardening gloves, magnets, notepads) and prize draws

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Protecting Australian Citrus

Early Detector Network update
Southern Australia: Urban
11 April 2024

Our sixth season of exotic citrus pest trapping has begun. This Autumn we have mailed a total of 384 traps to volunteers and crop scouts across Southern Australia, with additional traps mailed to volunteers across Northern Australia by our project partners in the NT Government.

On a recent visit to California we were again reminded how crucial early detection will be to ensure that Australia remains free from diseases like Huanglongbing (Citrus Greening), which the Asian citrus psyllid can transmit through feeding on citrus. California is currently spending USD45 million per year containing and eradicating Asian Citrus Psyllid and Huanglongbing disease in urban areas.

Thank you to all participants in the network. Your contribution improves our chances of detecting harmful exotic species as early as possible.

Asian citrus psyllid
(Diaphorina citri)

At about 3mm in length the Asian citrus psyllid is very small!

Want to learn more about CitrusWatch?
PHA's Biosecurity Online Training (BOLT) platform provides e-learning courses related to plant biosecurity. Access is free and available to anyone with an interest in biosecurity.

The CitrusWatch course is targeted at those doing surveillance in southern Australia. Information regarding seasonal considerations and data on exotic citrus psyllid activity is relevant to southern Australia and will differ from the northern citrus growing regions. This course aims to upskill Early Detector Network volunteers in the monitoring and detection of harmful exotic citrus pest species.

Start trapping now
You can deploy your trap as soon as you receive it. If you are unsure how to deploy your trap or how to upload a MyPestGuide® report, remember to refer to your hard copy trapping instructions, view them online, or watch our How to Trap video.

Biosecurity training
Access PHA's biosecurity online training
Click here

For further information go to citrusaustralia.com.au/citruswatch

CitrusWatch has been funded by Hort Innovation, using the citrus research and development levy and contributions from the Australian Government. Hort Innovation is the grower owned, not-for-profit research and development corporation for Australian horticulture. Funding is also supplied by Plant Health Australia using the citrus plant health levy. Photos credits: ACP - David Hall, USDA; HLB - Tim Gottwald, USDA;

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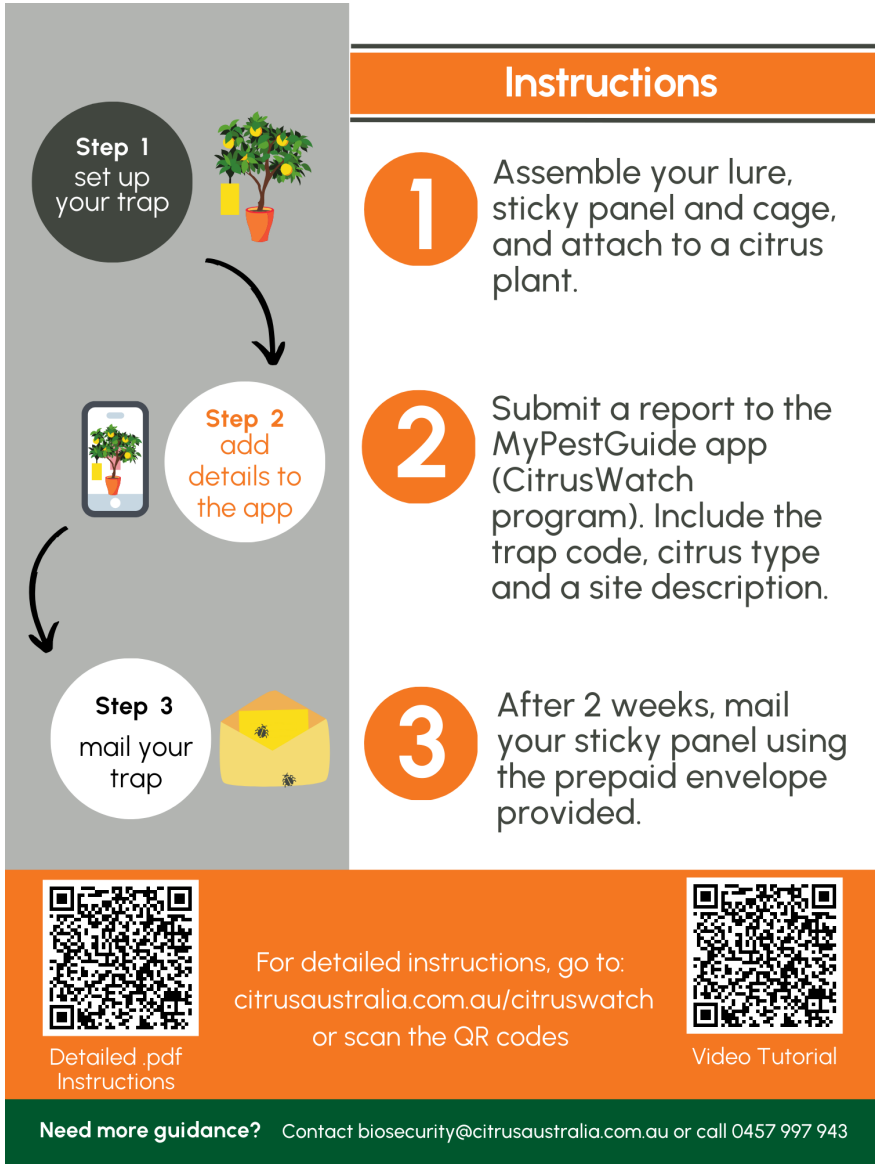

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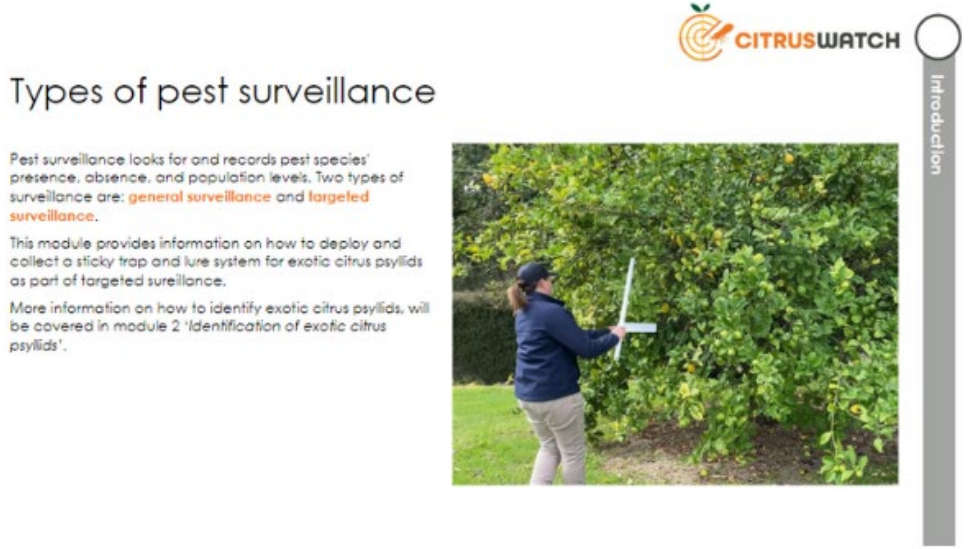

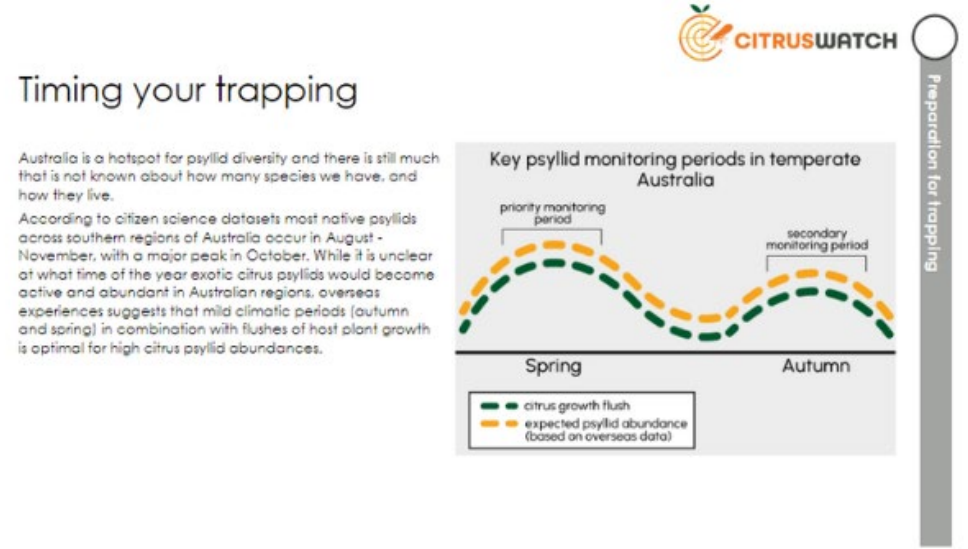

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Prize draw Xmas hamper

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Extending awareness through strategic partnerships

Engaging with 'Knowledge broker' organisations

- Expanding the word outside of the EDN involves relationship development with key organizations
- Focus on developing relationships with local councils to boost program communications
- Other key relationships include:
  - Zoos
  - Botanic gardens
  - Community houses
  - Community gardens
  - State biosecurity agencies

Ben Burchett discussing citrus biosecurity with council staff in Cairns.

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Awareness & recruitment

Activities are varied:

- Bunnings workshops
- Radio/podcast interviews
- Articles for local / regional newsletters & magazines
- Booths at festivals
- School visits

Examples of festival size:

- Melbourne International Flower & Garden Show: 107,500 (2024), 115,000 (2025)
- Perth Garden Show 2025: 11,000
- Kalamunda Garden Festival 2024: 5000
- QLD Garden Expo 2024: 40,000
- SA Autumn Garden Festival 2025: 3000
- National Insect Expo 2024: 7000

Ben – school group presentation

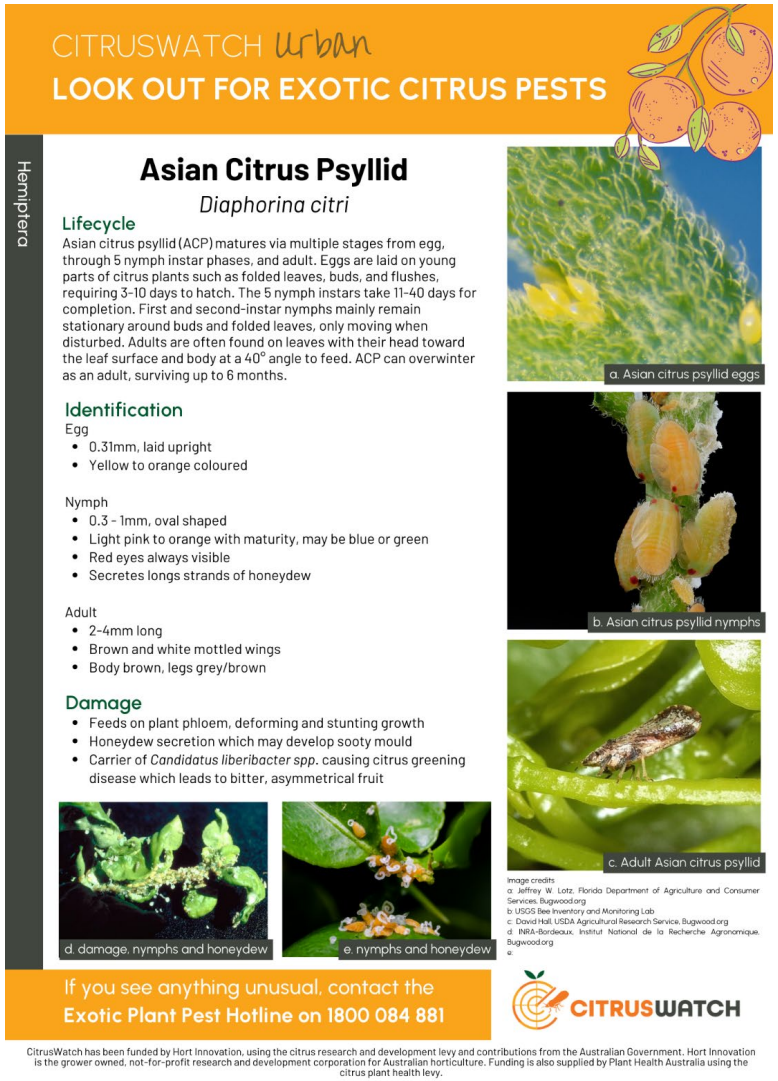
A CitrusWatch booth

Jacqui presenting a Bunnings workshop

Other educational activities

Building a library of resources

- Urban fact sheet series under development (aimed at gardeners)
- Top citrus pest fact sheet translated into:
  - Thai
  - Khmer
  - Mandarin
  - Indonesian
  - Vietnamese



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Awareness & recruitment

Social media

- Instagram @CitrusWatchProgram
- Calendar of campaigns developed
- Campaigns are designed to improve general knowledge of both exotic and endemic citrus pests and diseases
- Improving knowledge about growing high health citrus is also a central focus

Above: An exotic pest identification Instagram campaign published during August and September 2024; Left: A campaign under development that focusses on advice to grow healthy citrus

What have we learnt?

- Attracting and retaining volunteers is resource intensive and is an evolving process

- There is a high level and goodwill and interest amoung the general (non-farming) public when it comes to supporting biosecurity activities

- The EDN benefits have been multi-pronged:
  - Growing occurrence record dataset
  - A body of interested individuals from across Australia who are willing to learn more (Community of Knowledge)
  - A network of people who can help spread messages in the event of an incursion

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Acknowledgements

CitrusWatch Project Team
Rohan Burgess, (PHA, Project Lead)
Yvonne Ogaji, (PHA)
Nathan Hancock (Citrus Australia)
Jacqui Mitchell (Citrus Australia)
Ben Burchett (NT DITT)
Andie Wong (Citrus Australia - previous)
Andrea Sinclair (Nt DITT – previous)

Also thanks to:
Steering Group/CPDPC Members
Early Detector Network volunteers
Urban Plant Health Network
(DEECA)
WA DPIRD
PIRSA
NAQS/DAWE
Citrus WA
Auscitrus
Andrew Beattie

Riverina IPM
BugLuke
Citrus Monitoring Services
CitriCare
Dr Francesco Martoni
Michael Edwards
Dr Greg Chandler
Dr Sharyn Taylor

Department of Primary Industries
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Opt in to the Early Detector Network at

citrusaustralia.com.au/citruswatch

Citrus Australia