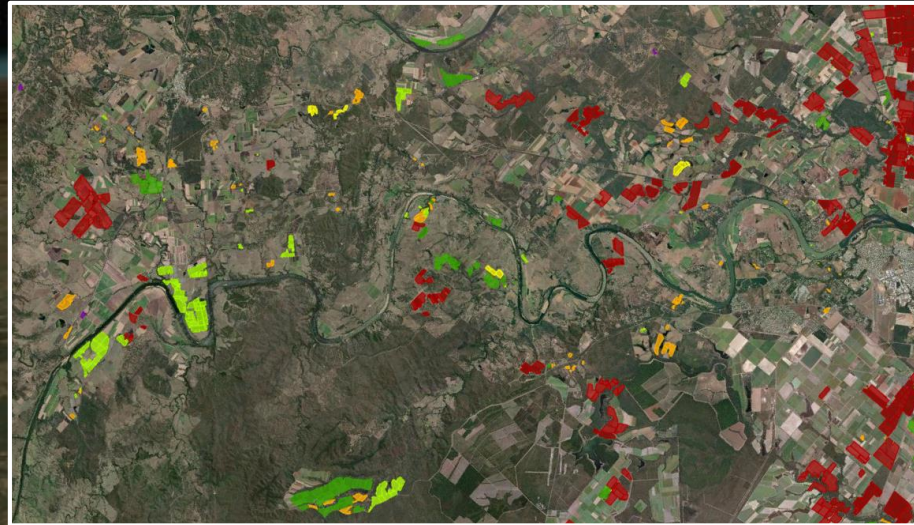




In 2017 the extent of every avocado, macadamia and mango orchard was mapped.



We are now updating the map and adding banana, citrus and olive crops.



 @une_aarsc

 www.une.edu.au/aarsc



Australian Tree Crop Rapid Response Map

Phase 1 Map: (2017)

- Avocado
- Macadamia
- Mango

Phase 2 Map:

- Update phase 1
- Larger scale (1ha)

Add:

- Citrus
- **Olive**
- Banana



<https://goo.gl/rnqadK>

Inputs – Ancillary data

ACLUMP Jurisdictions:

“ACLUMP promote nationally consistent standards for land use information in Australia”



ACLUMP: Australian Collaborative Land Use and Management Program

ABARES: Australian Bureau of Agricultural and Resource Economics and Sciences (Department of Agriculture, Water and the Environment)

Inputs – Ancillary data

Industry + Stakeholder Engagement

- Anonymised
- Geocoded to points
- **Location only not extent**
- Mapping program (tiles)
 - *crops outside these are also mapped*

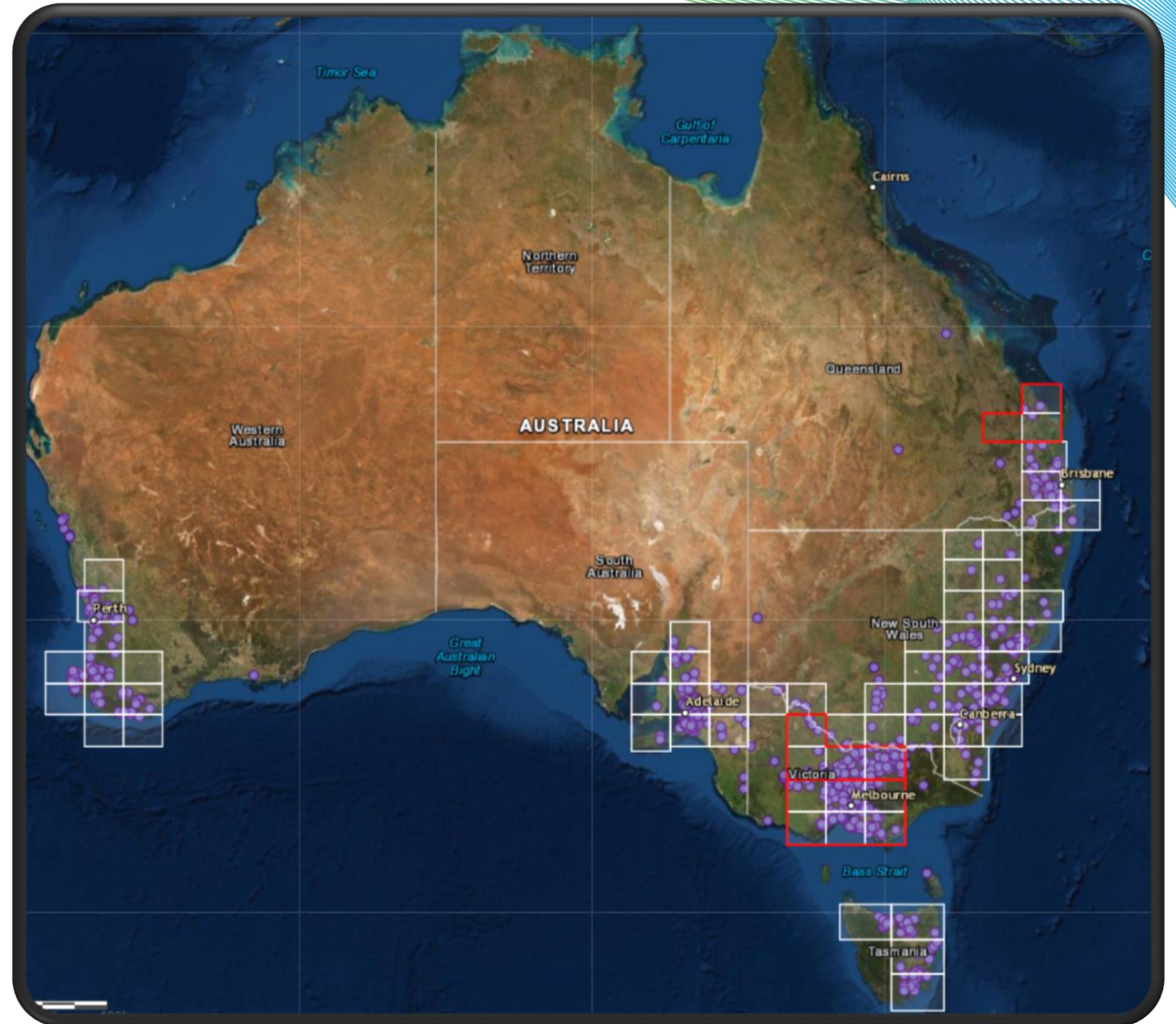
Industry contribution is important for:

- classifying tree crops correctly
(they look-a-like from above)

Engaging industry experts:

- Improves the map!
- Location-based tools (apps)
- Critical for mapping new groves

“Contribute via the land use survey & industry engagement apps”

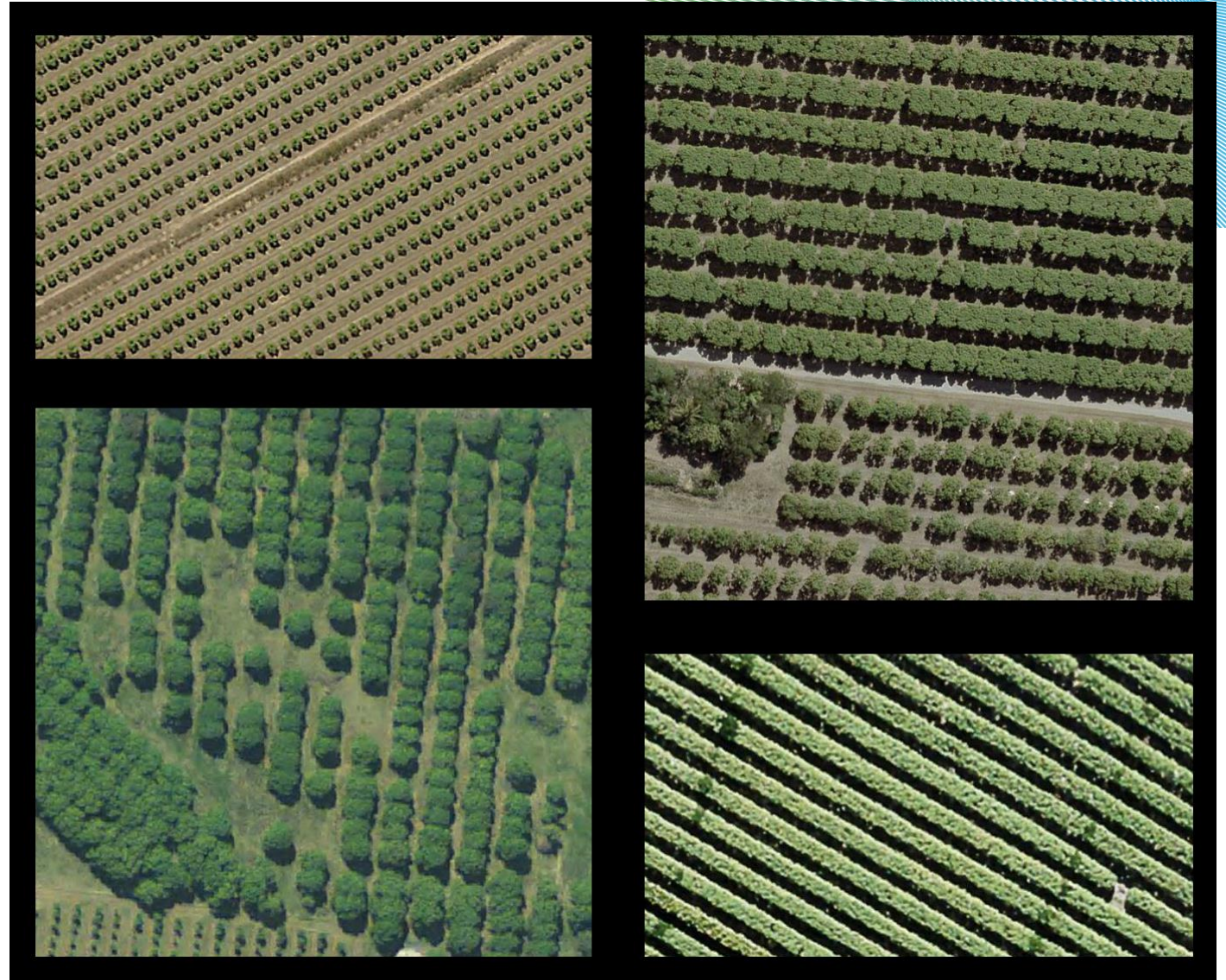


Inputs – Imagery

Open-source: Freely available

Multiple sources:


- Satellite
- Airborne and...
- Street-view

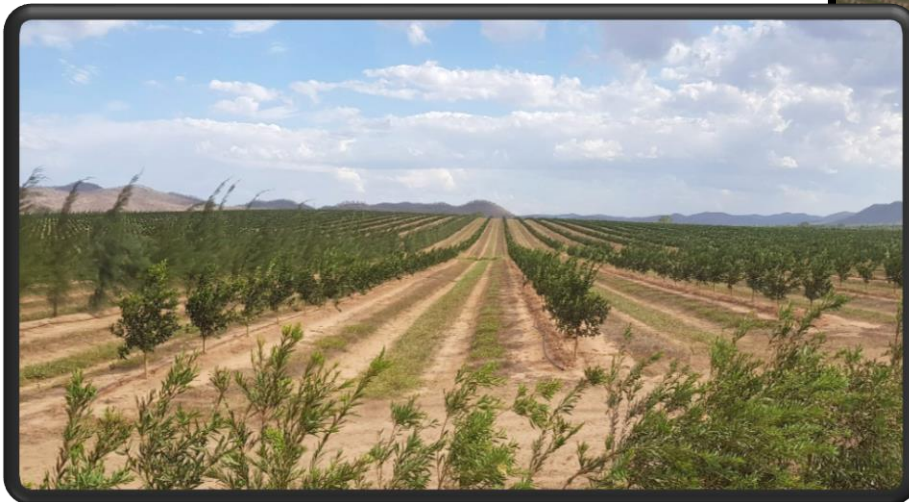
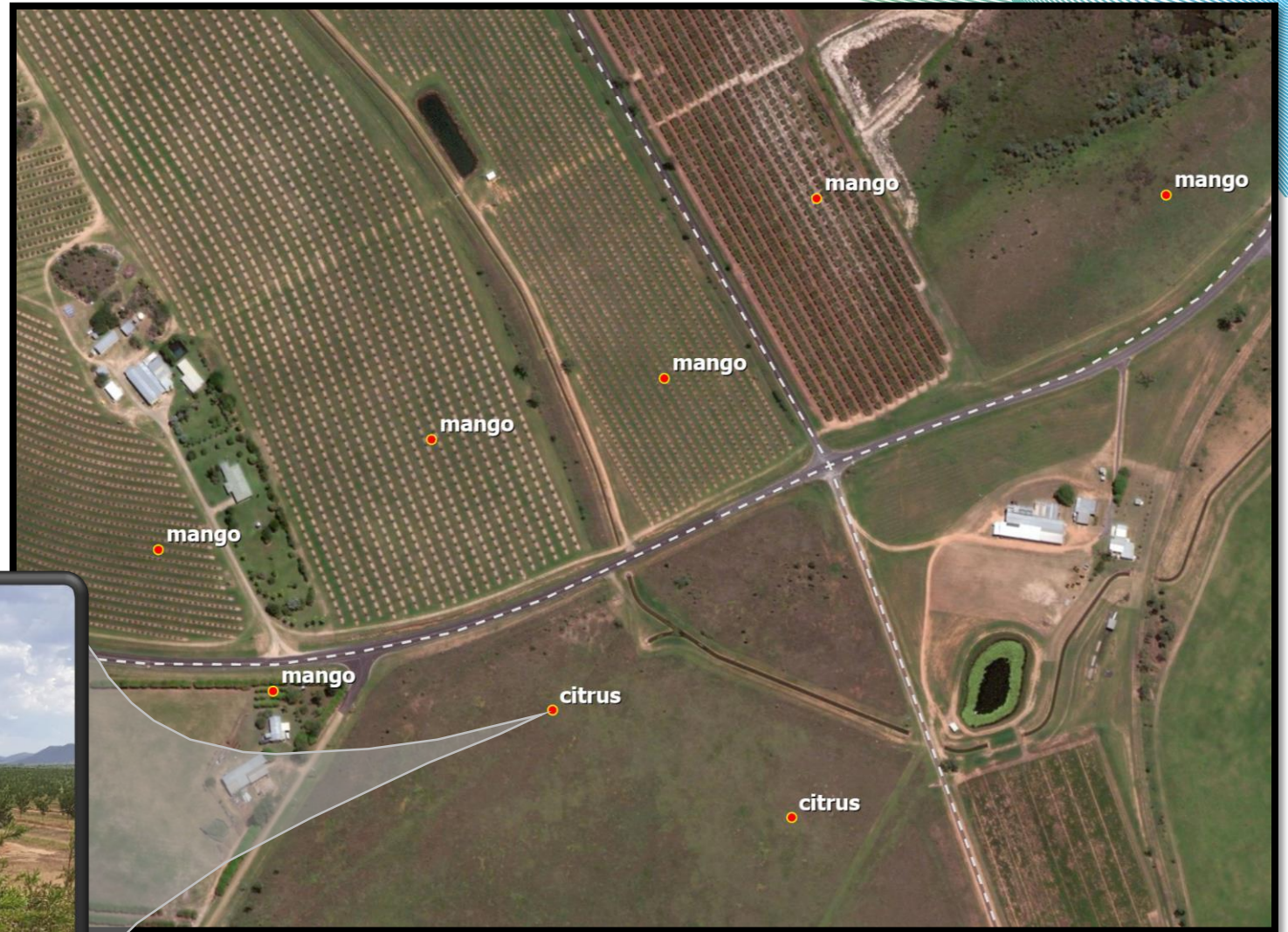


“Land management practice varies greatly”

Inputs – Fieldwork

- Ground-truth
- Improves thematic accuracy (correct commodity)
- Find new crops—can't see them yet in the imagery!

COVID-19... 



Output – Tree crop, location & extent

‘Web-GIS’ enabled:

- Maps & Apps
- Dashboards

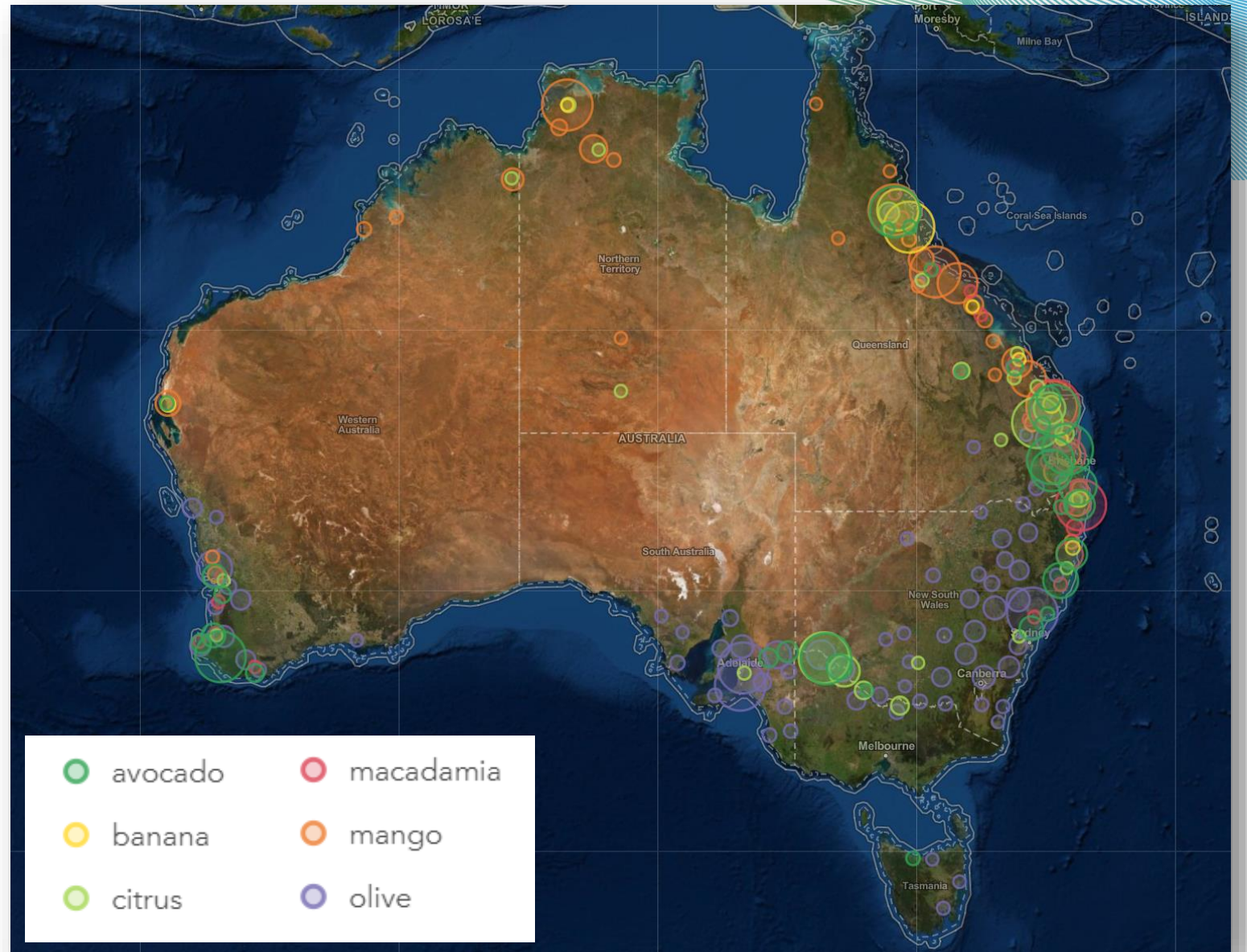
For you... **“No GIS? No worries!”**
Access by anyone, on any device

For us... Update & maintain map

Features are aggregated polygons...
each showing:

- Commodity
- Source
- Year
- Area

***“No personal or commercial
information is captured or
published in the map”***



Applications – Industry demographics

How much & where?

- Consistent – nationally
- Multiple-scales

“Location is the common framework for integrating data”



Applications – Natural disaster

Response and recovery:

- Cyclone
- Flood
- **Fire**
- Hail

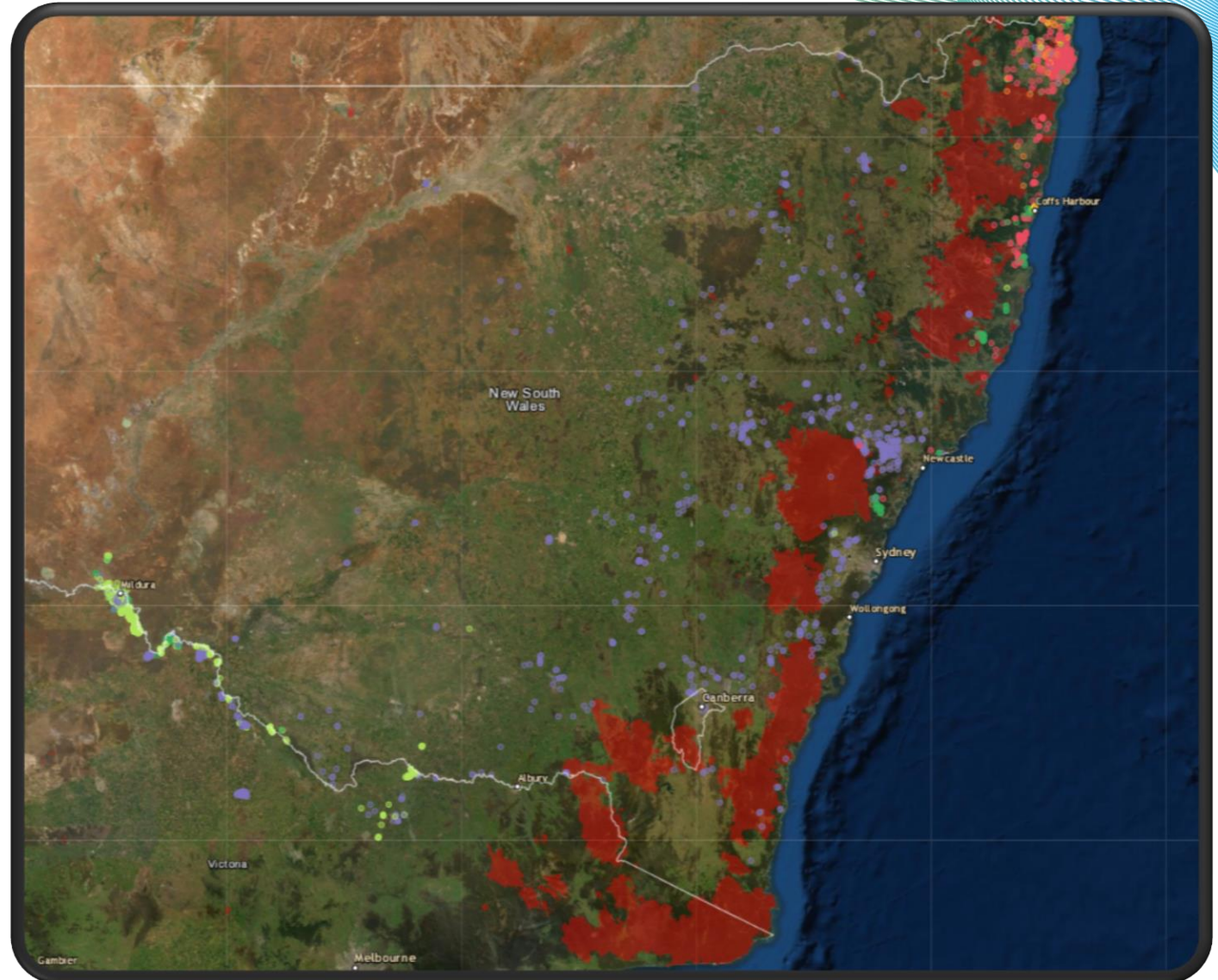
Map updates ‘Live’

Eg. Australian Bushfire Rapid Response Web Map:

- ✓ Tree Crops (us)
- Burnt area extent...

“[EMSINA](#) layer was updated every 10 mins!”

<https://arcg.is/14vXOb>



Applications – Biosecurity

- Preparedness
- Response
- Recovery

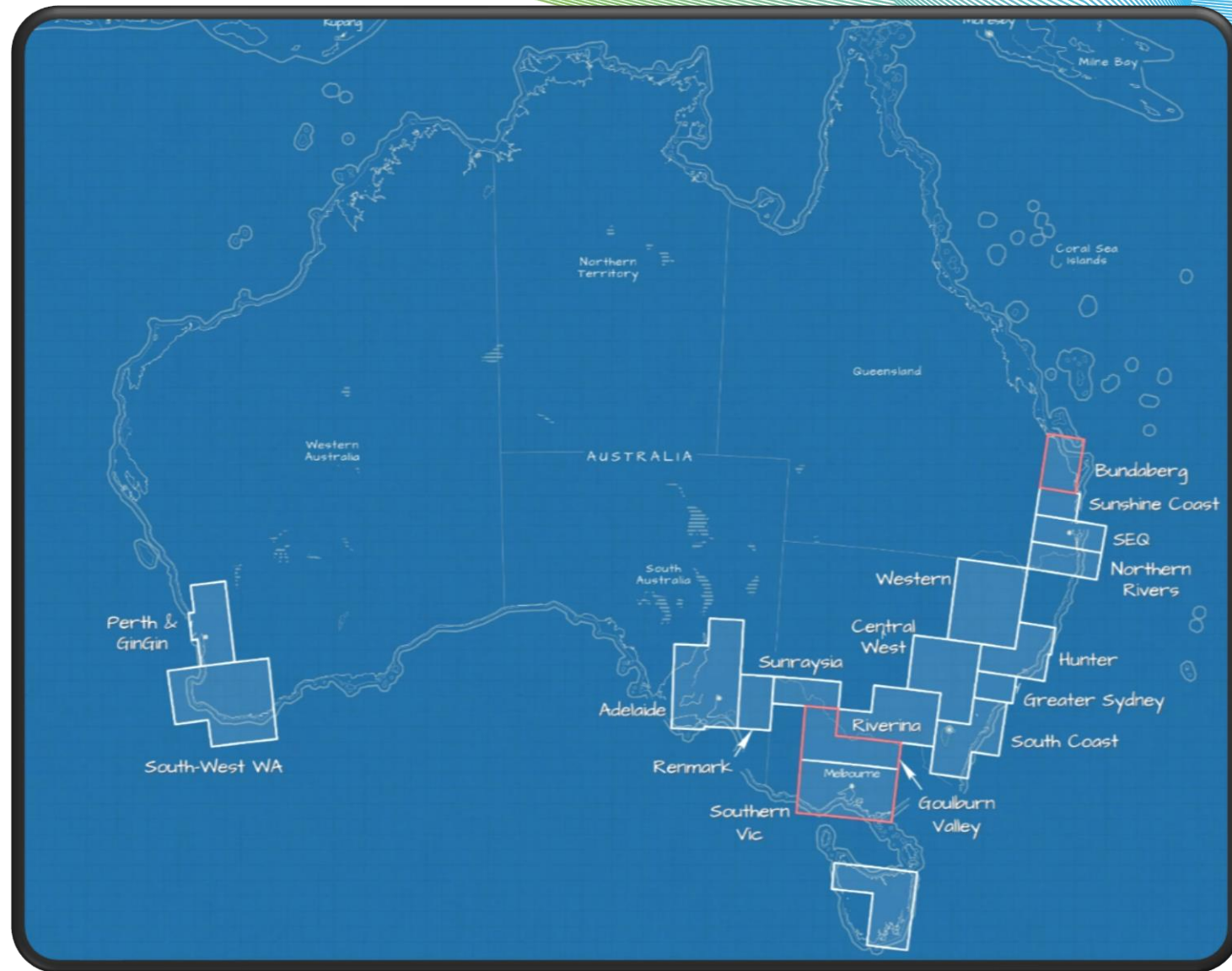
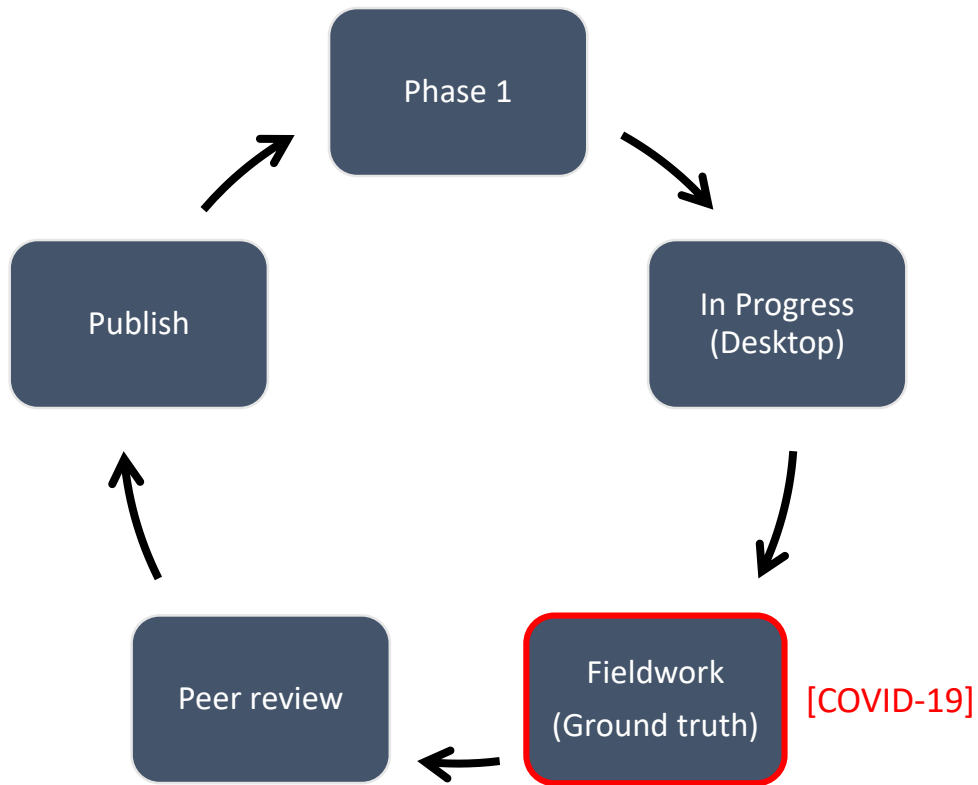
Tree Crop Mapping informs:

- Containment
- Exclusion zones
- Manage risks
- Model vectors
- Manage eradication



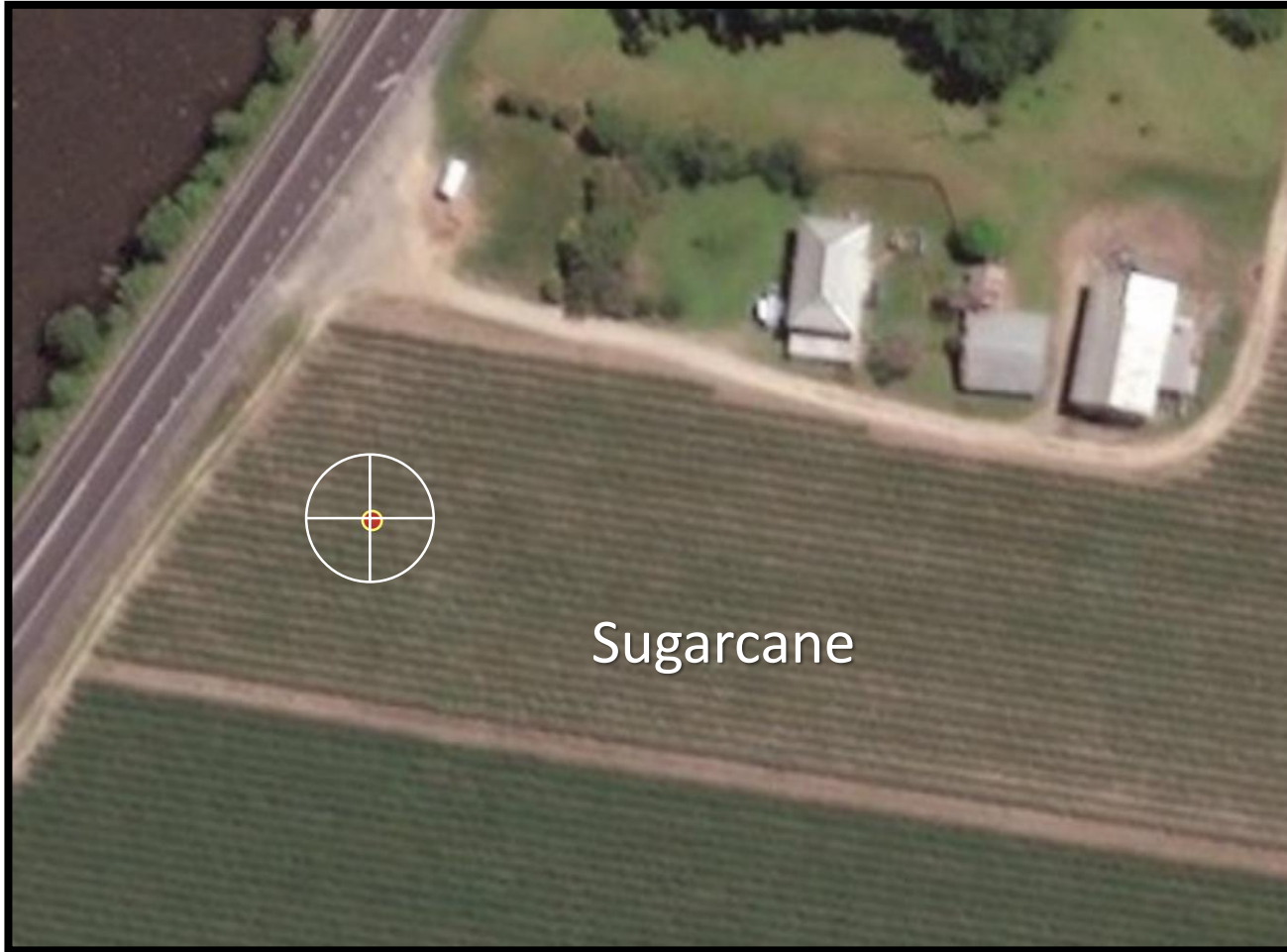
Eg. Panama TR4 disease...

National Mapping Program – Olives



18 regions (rolling update)

Phase 2 Challenges — New crops



Macadamia

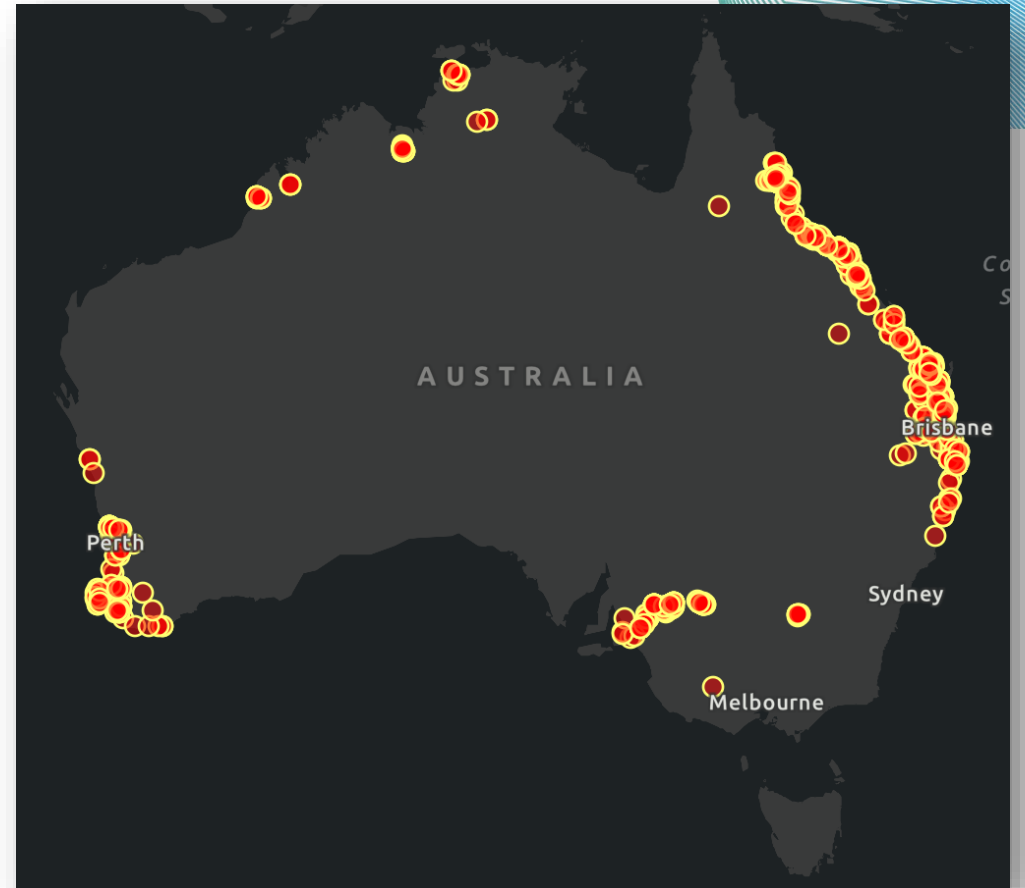
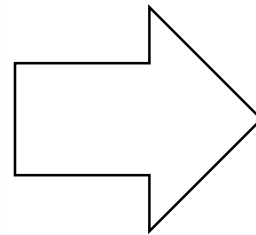
Please select crop: Macadamia

Comment

New crop



Get the app, improve the map!



www.une.edu.au/webapps

Industry Engagement Web App (Peer review)

As a result of COVID-19 travel restrictions, fieldwork cannot be carried out in the foreseeable future and has been postponed.

The engagement of experts (including industry, growers and ACLUMP) in peer review will be even more critical, this app is a solution.

Add your 'ground-truth' via this app, we will interpret it and update the map.



Welcome to the Australian Tree Crop Industry Engagement App!

This interactive platform displays the draft mapping of commercial tree crops throughout Australia and allows industry experts and stakeholders to contribute by adding observations and reviewing the map. Included commodities are: avocado, banana, citrus, macadamia, mango and olive.



This initiative is led by the University of New England research team from the Applied Agricultural Remote Sensing Centre and is funded via the federal government Rural R&D for Profit program and through co-investment from the project partners; Hort Innovation, industries, state governments and universities.

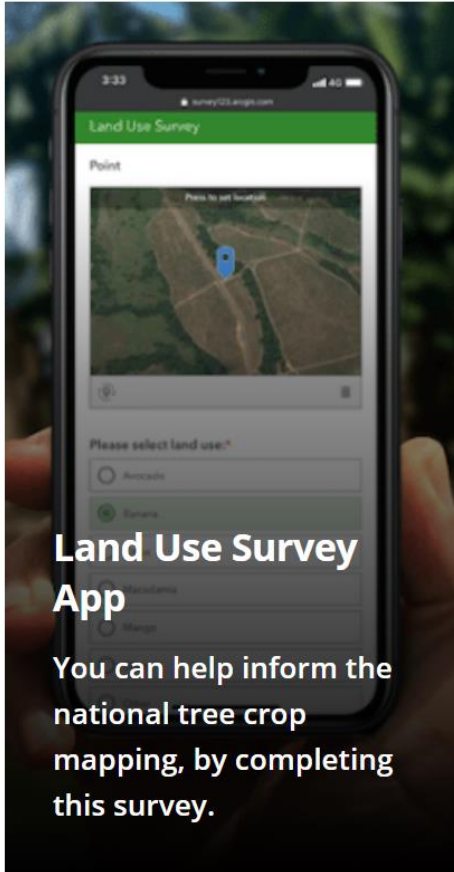
All information acquired through this app will be analysed prior to updating the map. No personal or commercial information will be acquired or presented.

Please note the imagery shown in the map varies in its currency (age). We are particularly interested in mapping new crops which are not yet visible in the imagery. More details about this web application are available on the Item Details page.



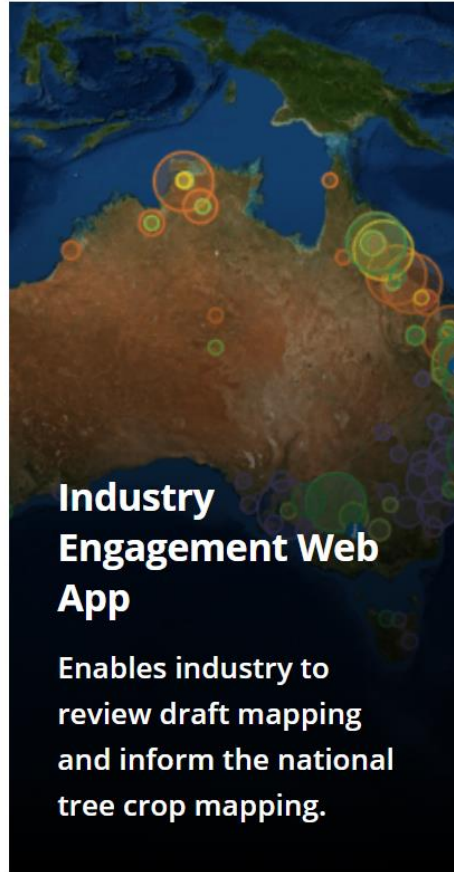
www.une.edu.au/webapps

Mapping Applications



Land Use Survey App

You can help inform the national tree crop mapping, by completing this survey.



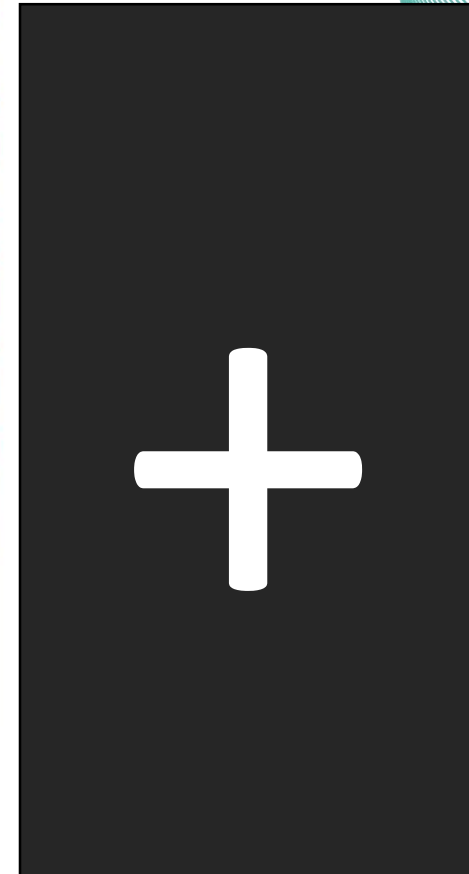
Industry Engagement Web App

Enables industry to review draft mapping and inform the national tree crop mapping.



Australian Bushfire Rapid Response Map

This interactive map displays the 2019/2020 bushfire extent, and potential impacts to tree crops.

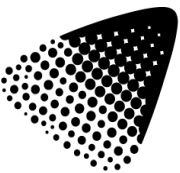


Launch from: www.une.edu.au/webapps

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AARSC
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Remote Sensing Centre



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