

PLANT BIOSECURITY RESEARCH INITIATIVE



International Day of Plant Health
Partnerships for Plant Health – Dr Jo Luck, Program Director, PBRI
Science Exchange, 12 May 2023

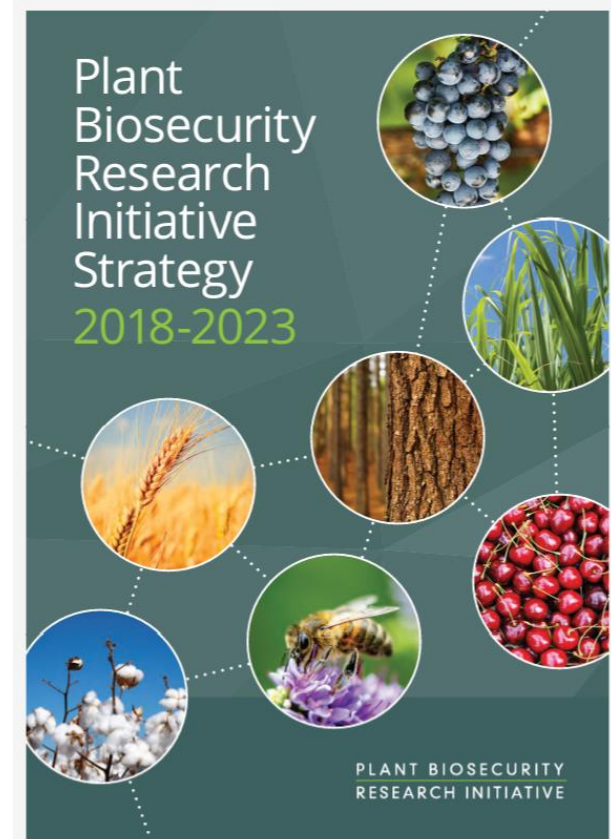
PBRI members

- Formed in 2017 in response to IGAB review.
- Agreement signed by 10 organisations and hosted by Hort Innovation.
- Collaboration between members and with strategic partners for co-investment in plant biosecurity RD&E to protect plant health.



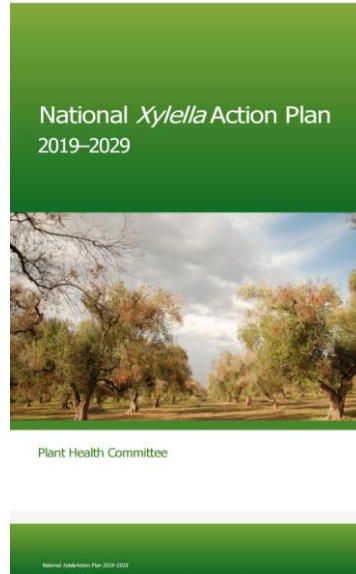
Cross-sectoral Strategy

- Coordinate, prioritise and support cross-sectoral research investments areas together.
- Strategy includes six key focus areas for investment.
- Since 2017, PBRI collectively invested in \$67.4 M research projects through co-design, tenders and project calls.
- New five-year agreement and Strategy 2023-2028.



Preparedness

- Investigating the presence of native insects with vector potential
- Determining their distribution and capacity to acquire and transmit *Xylella*.
- (AgVic, NSW DPI, DAFF, Wine, Hort) in collaboration with B3 NZ.

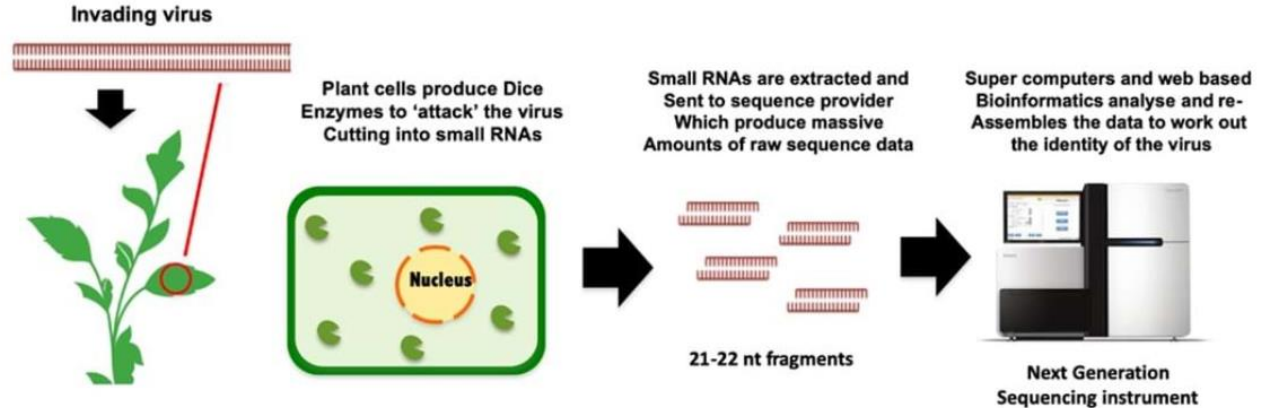


HTS PEQ Screening

> *Biology (Basel)*. 2022 Feb 8;11(2):263. doi: 10.3390/biology11020263.

Side-by-Side Comparison of Post-Entry Quarantine and High Throughput Sequencing Methods for Virus and Viroid Diagnosis

Marie-Emilie A Gauthier ¹, Ruvini V Lelwala ^{1 2}, Candace E Elliott ², Craig Windell ¹, Sonia Fiorito ³, Adrian Dinsdale ³, Mark Whattam ³, Julie Pattemore ², Roberto A Barrero ¹

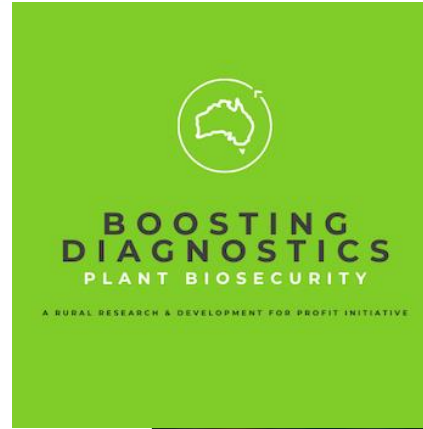


DAFF, Hort Innovation, QUT, AgVic

Diagnostics

Boosting Diagnostics for Plant production Industries (led by GRDC (\$15.7 M R&D4P)

- Improved the ability to detect pests in-field
- High priority exotic pests that threaten production, trade and market access.
- Developed national diagnostic protocols, improved diagnostic tools and methodologies, along with establishing reference collections to support diagnostic functions.



All state and territories, CSIRO, PHA, all RDCs and the Department.

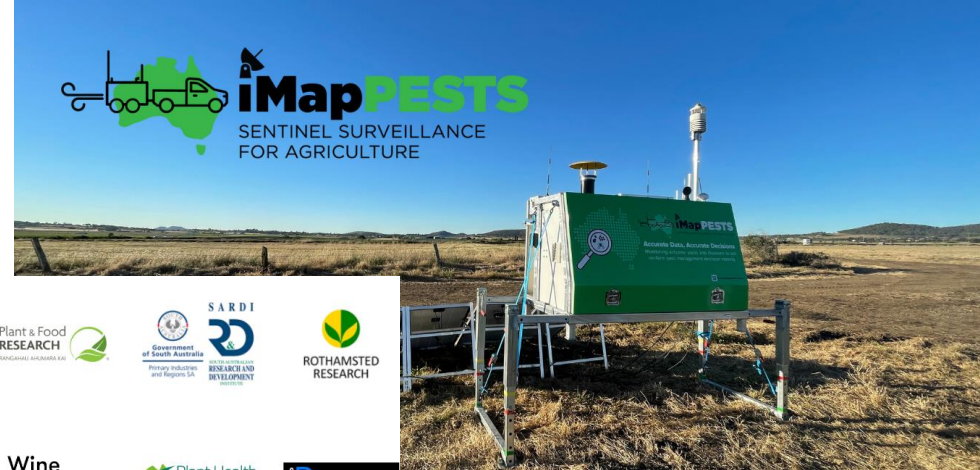


Surveillance

iMapPESTS

(led by Hort Innovation, \$21.7 R&D4P)

Advanced surveillance technologies, such as automated trapping and sampling, supported by diagnostics for a wide range of endemic and exotic plant pests to support early detection and pest management



**Hort
Innovation**

**Forest & Wood
Products Australia**

Agri Samplers Ltd

CRDC
Commonwealth Scientific and
Industrial Research Organisation

**Department of
Primary Industries and
Regional Development**

sra
Sugar Research
Australia

**Plant & Food
RESEARCH**
RANGEMAN ALEXANDER KAY

SARDI
Government of South Australia
Primary Industries
and Regions SA
RESEARCH AND
DEVELOPMENT
INSTITUTE

**ROTHAMSTED
RESEARCH**

GRDC
GRAINS RESEARCH & DEVELOPMENT
CORPORATION

Australian Government
Department of Agriculture,
Water and the Environment

AUSVEG

AgriFutures
AUSTRALIA

**Greenlife
Industry Australia**

VICTORIA
Government
Jobs, Products
and Regions

**Wine
Australia**

**Plant Health
AUSTRALIA**

DATA EFFECTS

**health
LIA**

**ruralR&D
CORPORATIONS**

sra Sugar Research
Australia

**Wine
Australia**

Sustainable Pest management



- FAW Insecticide resistance monitoring
- Continuity Plan for industry
- Podcasts
- Natural predators and biocontrol
- AWM



GRDC, Hort, CRDC, SRA, AgriFutures

Capability Building

- **Biosecurity Extension Community** -120 members from industry and government meet quarterly online – e.g. Bunnings, Horticulture, Bees, Grains, Cotton, Indigenous Ranger Program.
- Connection through sharing incursion experiences – what worked, what didn't work? Panama TR4, Varroa mite, Tomato Potato Psyllid.
- Professional development, mentoring e.g. online extension tips, Industry Liaison Training.
- Forum for frontline practitioners who identify RD&E gaps.



PLANT HEALTH STUDENT NETWORK

FIRST MEETING (VIRTUAL) 09/09/22, 2 PM

WHO ARE WE?

Undergraduate, Honours, Masters and PhD Students
and ECRs working in plant biosecurity, plant
pathology, or any other plant health-related fields!

OUR PURPOSE



COMMUNICATION COLLABORATION COMMUNITY

A community for students in plant health research
to find new opportunities, improve professional
development, stay up-to-date on current findings,
and promote collaborations.

Capability Building

Plant Health Student Network



MoU Partners



Euphresco is a network of organisations that fund research projects and coordinate national research in the phytosanitary area. 70 organisations from more than 50 countries worldwide are members of Euphresco.



Better Border Biosecurity (B3) is a multi-partner, cooperative science collaboration that researches ways to reduce the entry and establishment of new plant pests and diseases in New Zealand.



ACIAR brokers and funds research partnerships between Australian scientists and their counterparts in developing countries. Currently funding more than **170 research projects across 37 countries** throughout the Indo-Pacific, these bilateral collaborative research projects account for approximately 70% of our total research budget.



PHC members include the Chief Plant Health Managers (or equivalent) in each state and territory and the Australian Chief Plant Protection Officer.

Global Network for Plant Health Research

2020



2022



2023

EU HORIZON-WIDERA-2023-ERA-01

Region	Regional champion
Africa	CABI
Australia	PBRI
Caribbean, Central America and South America	INIA-CSIC
Europe-North	EPPO
Europe-South Mediterranean region	CIHEAM-Bari
North America	CFIA and USDA
Pacific Islands	B3
Central Asia	KHA
South-East Asia	APAARI and ACIAR

Euphresco → G-phresco

Giovani, B., Blümel, S., Lopian, R. *et al.* Science diplomacy for plant health. *Nat. Plants* 6, 902–905 (2020).
<https://doi.org/10.1038/s41477-020-0744-x>



Australian Government
Department of Agriculture,
Fisheries and Forestry

12 May

International Day of Plant Health 2023

Join us to celebrate our rich and diverse plant ecosystems



PLANT BIOSECURITY RESEARCH INITIATIVE



Plant Health TV

<https://youtu.be/gFLA9eySCm8>

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Thank you