



CITRUS INDUSTRY BIOSECURITY STRATEGY

2023-2028





CONTENTS

BACKGROUND 3

 The wider biosecurity context..... 4

 The citrus biosecurity context 4

THE STRATEGY 6

 Vision 6

 Implementation 6

 Priorities, objectives & activity areas.....7

REFERENCES 8

APPENDIX 1. PAST STRATEGIC PRIORITIES 9

Front cover image: Asian citrus psyllid adult. Copyright Utkarsh Patil / Dreamstime.com

This five-year strategy has been developed by Citrus Australia Ltd., in consultation with Plant Health Australia, the Citrus Pest & Disease Preparedness Committee, and the wider citrus industry. The material in this publication is licenced under Creative Commons Attribution 4.0 International licence, with the exception of any:

- third party material;
- trade marks; and
- images and photographs.

Persons using all of part of this publication must use the following attribution:

© Citrus Australia Ltd. 2023

Disclaimer

While care has been taken in the preparation of this publication, it is provided for general information only. It may not be accurate, complete or up-to-date. Persons rely upon this publication entirely at their own risk. Citrus Australia Ltd. and its members and stakeholders do not accept and expressly exclude, any liability (including liability for negligence, for any loss (howsoever caused), damage, injury, expense or cost) incurred by any person as a result of accessing, using or relying upon this publication, to the maximum extent permitted by law. No representation or warranty is made or given as to the currency, accuracy, reliability, merchantability, fitness for any purpose or completeness of this publication or any information which may appear on any linked websites, or in other linked information sources, and all such representations and warranties are excluded to the extent permitted by law.

Primary author contact details

Name: Dr Jessica Lye
Address: 94 Lemon Ave, Mildura VIC, 3500
Email: Jessica.lye@citrusaustralia.com.au

This document should be cited as:

Citrus Australia Ltd (2023) Citrus industry biosecurity strategy 2023-2028. Citrus Australia Ltd.



BACKGROUND

The Australian citrus industry has a sizable production base that requires protection from exotic pests and diseases. With 1500 businesses directly involved in citrus production, and many associated businesses providing support services to grow, harvest, pack, transport, and market citrus, the wider citrus industry contributes to the economies of many regional areas and supplies high-quality citrus produce and citrus products across Australia and the world.

The Australian citrus industry has previously integrated biosecurity priorities into broader strategies, such as the Citrus Australia Three Year Strategic Plan (2020-2022) and the various industry R&D investment plans overseen by Hort Innovation. A compilation of previous strategic objectives and priority areas can be found in Appendix 1.

There are numerous current research, development and business activities that support better biosecurity for the citrus industry, and Australian agriculture more broadly. In turn, there are many additional activities that could be undertaken to further improve the preparedness of Australian citrus against the threat of exotic pests and pathogens. This strategy represents the first nation-wide plan for guiding biosecurity activities for the improvement of Australian citrus industry resilience. The strategy highlights four priorities and 16 activity areas to guide efforts from 2023-2028.

The wider biosecurity context

Pressure on border biosecurity resources and post-border resources is increasing. During the period of 2012-2017, the annual number of interceptions of biosecurity risk material at Australian ports of entry increased by almost 50 per cent¹. Forecasting shows that even if investment in interventions is almost tripled leading up to 2025, Australia would still experience increased national biosecurity risk compared to current risk levels².

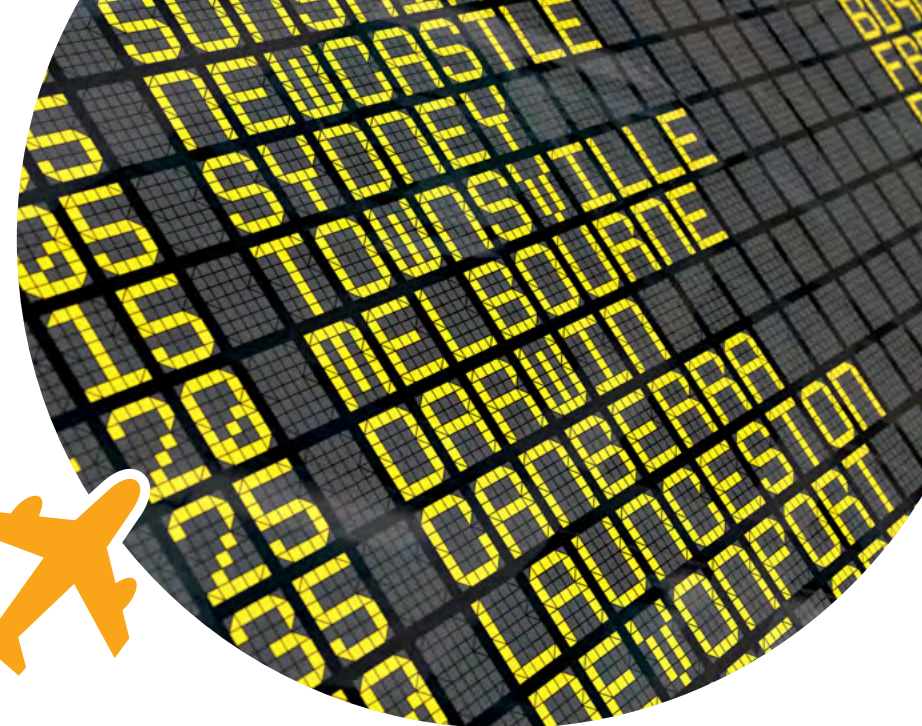
The growing risk from pest species at the Australian border is related to steadily increasing trade (sea and air freight), increasing numbers of incoming air and sea passengers, and expansion of global species distributions. It has been estimated that approximately 38,000 people entered Australia with undetected high biosecurity risk material in the first nine months of 2020³. The emergence of new pest threats is becoming a frequent occurrence, with increasing detections of new insecticide resistance, changing regional climates, the evolution of novel biotypes, and the expansion of species distribution to new areas. These factors are making it increasingly difficult for biosecurity professionals to accurately predict and respond to the risk of entry, establishment, spread, and impact of exotic pest and pathogen threats.

In a 2021 report, the CSIRO highlighted the need for transformational change to Australia's biosecurity system in the lead up to 2030. In the absence of changes to national coordination, community engagement, data capture and sharing processes (by and between jurisdictions and industry alike), scientific / technical capability, and resource and implementation planning, the current system will not be sustainable².

The citrus biosecurity context

Between 2012-2017, border interceptions of national priority plant pests that could significantly affect the citrus industry included citrus canker (39 interceptions), citrus longhorn beetle (9 interceptions), and Asian citrus psyllid (16 interceptions)¹. In 2019, more than 12,000 citrus items were intercepted at Australia's international airports⁴. Incursion and establishment of exotic citrus psyllid-huanglongbing/ citrus greening complexes would have the potential to decimate citrus growing businesses. Since 2005, the spread of huanglongbing throughout Florida citrus orchards has resulted in a 74% reduction in production and the closing of many nursery businesses that could not afford to make legally required changes to their operations to manage the psyllid vectors.

The current Citrus Industry Biosecurity Plan considers the potential risk posed by several hundred pests and pathogens – this is an expanded list since development of the original plan in 2015. As the list of potential risks continues to increase, biosecurity expertise and resourcing remains a limitation on the extent of surveillance, response and preparedness work that can be achieved.



It has been estimated that approximately 38,000 people entered Australia with undetected high biosecurity risk material in the first nine months of 2020³.

As an industry we are regularly assessing how best to protect and prepare citrus growing businesses more efficiently and effectively.



HLB infected citrus tree. Copyright Edgloris Marys | Dreamstime.com

The Australian citrus industry is a leading horticultural industry in biosecurity preparedness and response. Citrus Australia is supported by a Citrus Pest and Disease Prevention Committee (CPDPC), which focuses on addressing issues relating to exotic pest prevention, preparedness and control. As an industry, through activities of the CPDPC, the biosecurity program 'CitrusWatch', numerous exotic pest preparedness and traceability project partnerships, and representation on multiple national biosecurity committees and forums, we are increasing our investment into surveillance and capability enhancing operations and are regularly assessing how best to protect and prepare citrus growing businesses more efficiently and effectively.

Many collaborators currently support citrus industry biosecurity efforts, formally and informally, including assessing huánglóngbìng (HLB) tolerant rootstocks (NSW Department of Primary Industries (NSW DPI)), collaborating on

international breeding programs for HLB resistance (Queensland Department of Agriculture and Fisheries (QDAF)), supporting HLB and Asian citrus psyllid (ACP) management capability in neighbouring countries (NSW DPI), and researching and testing of citrus diseases (NSW DPI). The Australian citrus propagation program, run by AusCitrus and supported by NSW DPI has been a crucial element in storage and national supply of high health planting material, as well as ensuring protection and curation of citrus foundation blocks. Through management of industry levies, Hort Innovation and Plant Health Australia support the funding of several industry biosecurity activities. Plant Health Australia also plays an important role as a partner in the CitrusWatch program, and as steward of the Emergency Plant Pest Response Deed (EPPRD). Australian state governments are also crucial collaborators, as participants on the CPDPC, as co-signatories of the EPPRD, and through interaction with, and support of CitrusWatch.

THE STRATEGY

Vision

A culture of awareness and preparedness for a resilient citrus industry.

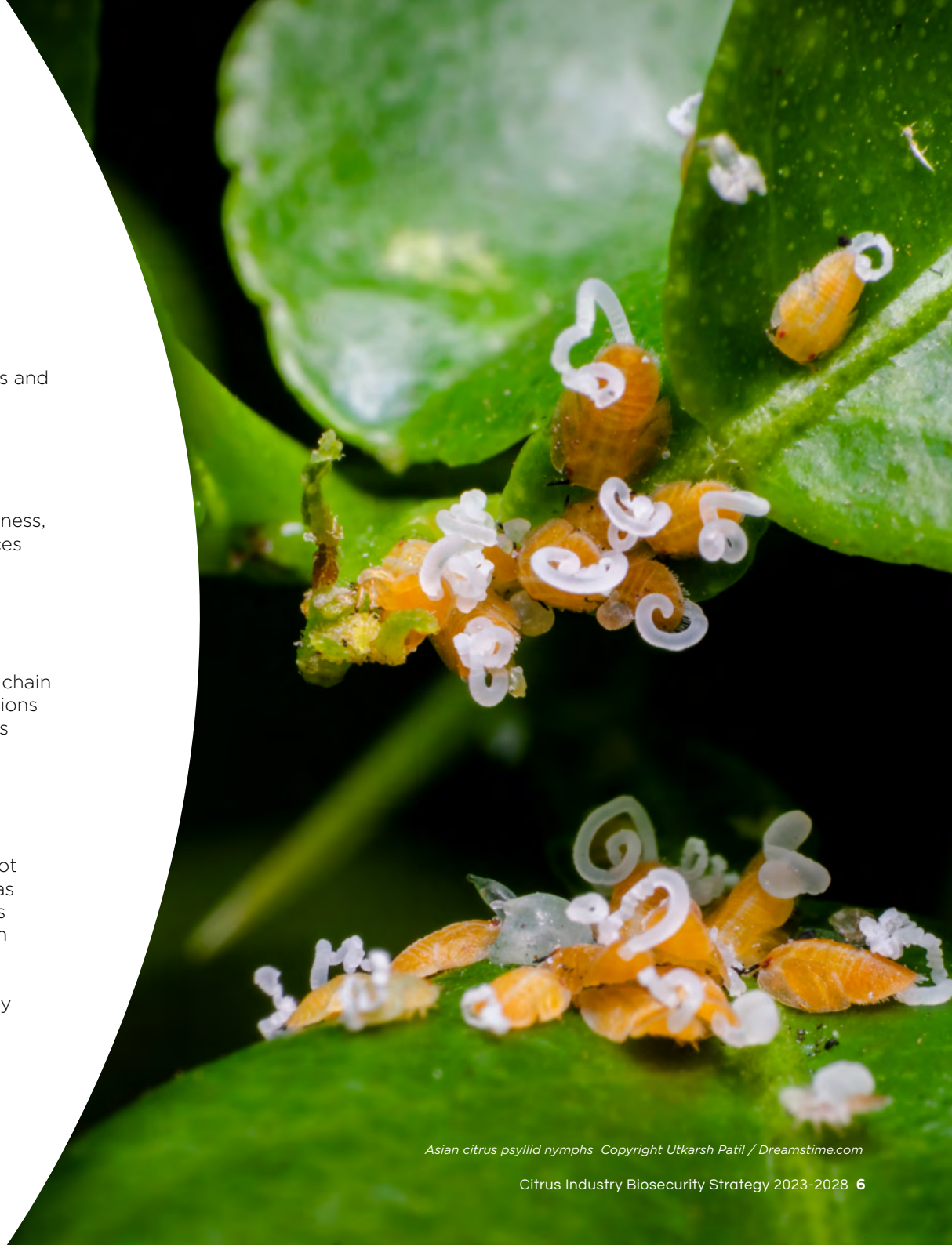
- The industry demonstrates a culture of biosecurity preparedness.
- The collective awareness of biological threats to the industry is high.
- Industry stakeholders have taken steps to prepare for exotic pest incursions and to limit the spread and impact of established pests.
- Australian citrus growers have confidence in retention of market access.

What will success look like?

Our industry is proactive and strategic in its approach to biosecurity preparedness, learning from the latest scientific findings, risk assessments, and the experiences of overseas counterparts. We form domestic and international collaborations to better understand and manage our risks. There are clear learning pathways available for industry members to better understand biosecurity risks and risk mitigation strategies. We have up to date and rigorous industry datasets for citrus production and pest surveillance, which provide support for successful management of biosecurity incidents. Australian citrus businesses and supply chain affiliates consider biosecurity in their business planning and day to day operations and acknowledge its importance as a key part of asset protection. Industry has confidence in the processes associated with response management that will protect their assets and provide confidence in business continuity.

Implementation

It is not Citrus Australia's intention to implement the plan on its own, it does not have the capacity or resources to do so effectively. An implementation plan has been developed with input from Plant Health Australia that will guide activities during each year of the strategy. Outputs identified in the implementation plan will enable tracking of activity area progress against the strategy. The CPDPC will be a mechanism for continued oversight of progress against the strategy and implementation plan. While some activities are underway, through industry or government funded programs, other activities will require prioritisation and acquisition of funding throughout the five year period.



Priorities, objectives & activity areas

Priorities	Objectives	Activity Areas
1. Data & information	<ul style="list-style-type: none"> • Improve data collection, collation, and interpretation to support informed and contextualised decision-making. • Identify emerging industry risks. • Develop an improved ability to address risks through an informed understanding of the wider biosecurity context (e.g. risk pathways, emerging pest species, industry structure and operations, and advances in technology and research). 	<ol style="list-style-type: none"> 1.1 Ensure adequate funding to support R&D activity and response. 1.2 Conduct spatial and temporal mapping of industry operations and risk material. 1.3 Improve surveillance rigour for the detection of exotic species and collection of evidence of absence data. 1.4 Carry out horizon scanning for threats and opportunities. 1.5 Improve data quality and data governance.
2. Education & upskilling	<ul style="list-style-type: none"> • Achieve a step-change in industry thinking towards the relevance of biosecurity for asset protection. • Support integration of biosecurity training into relevant learning pathways and create industry opportunities for information exchange, upskilling and boosting of biosecurity leadership capability. • Increase industry capability to address incursion and market access disruptions in a structured and informed way by building a team of highly skilled biosecurity leaders and advisors for the industry. 	<ol style="list-style-type: none"> 2.1 Determine training and knowledge needs. 2.2 Develop career pathways. 2.3 Develop opportunities to build biosecurity leadership capacity for the industry.
3. Business resilience & response preparedness	<ul style="list-style-type: none"> • Build the capacity for citrus growing businesses to withstand the market shocks caused by exotic pest species incursions through strategic industry level preparedness work and supporting farm business level planning. • Ensure that businesses are aware of the phases of an exotic pest incursion response, what to do when a response affects their business, and where to go for the source of truth in a response. 	<ol style="list-style-type: none"> 3.1 Identify response reference materials. 3.2 Improve response frameworks, and industry representation and capability. 3.3 Conduct surveillance and diagnostics for early detection and proof of freedom. 3.4 Improve planting material quality and traceability.
4. Communication & collaboration	<ul style="list-style-type: none"> • Ensure that communication links are in place with all citrus growing businesses, as well as relevant supply chain businesses. • Understand the best procedures to follow for crisis communication to industry during an incursion. • Build pathways of communication to support education, upskilling and data gathering during 'peace time'. • Improve efficiency and effectiveness of biosecurity activities through strategic partnerships. 	<ol style="list-style-type: none"> 4.1 Strengthen industry collaborations and relationships. 4.2 Plan biosecurity incident communications. 4.3 Strengthen and increase industry communication links. 4.4 Raise biosecurity awareness among urban residents.

REFERENCES

¹ Inspector-General of Biosecurity (2019) Pest and disease interceptions and incursions in Australia, published by the Department of Agriculture and Water Resources, Canberra, CC BY 4.0.

² CSIRO (2020) Australia's biosecurity future: unlocking the next decade of resilience (2020-2030), published by the CSIRO

³ Australian National Audit Office (2021) Auditor-General Report No. 42 2020-21 Responding to Non-Compliance with Biosecurity Requirements, published by the Department of Agriculture, Water and the Environment.

⁴ Department of Agriculture, Fisheries and Forestry (2019) Significant disease of citrus trees stopped at border, accessed December 2022. <https://www.agriculture.gov.au/about/news/media-releases/significant-disease-citrus-trees-stopped-border>



APPENDIX 1. PAST STRATEGIC PRIORITIES

Previous strategy	Biosecurity related objective	Objectives
Citrus Industry Strategic Plan 2006 - 2011	Encourage a focus on “whole-of-chain” productivity improvement	<ul style="list-style-type: none"> • Develop a policy framework to ensure the maintenance of biosecurity controls on imported fruit to minimise the risk of disease and/or pest incursions
WA Citrus Biosecurity Strategic Plan 2016	To achieve ultra-low losses of fruit or fruit sales from biosecurity issues.	<ul style="list-style-type: none"> • Ensure preventative measures are in place for threats & preparedness for incursions • Actively contribute to incursion response as eradication or containment • Foster and engage community, government and industry stakeholders • Meet export market access requirements and use good biosecurity practices
Australian citrus R&D plan 2012-2017	Improve efficiency and sustainability (Securing our Production Base - Protecting our orchards from biosecurity & environmental threats)	<ul style="list-style-type: none"> • Strengthen industry planning and preparedness in relation to biosecurity and other risks, and facilitate awareness of new invasive pests and diseases • Support maintenance of clean planting material and encourage plantings that are based on high health, genetically superior nursery trees • Support improved pest management strategies • Investigate sustainable use of water, soils and other natural resources
Citrus Strategic Investment Plan 2017-2021	Growers and the industry reduce biosecurity, phytosanitary and agrichemical-related risks	<ul style="list-style-type: none"> • Scientific evidence available to support market access opportunities identified in the citrus export plan • Protection plans and remediation/contingency plans against the introduction of new destructive invasive pests and pathogens (such as HLB and Asian citrus psyllid) available and implemented • Enhanced programs to manage serious endemic pests, diseases and weeds, including fruit fly, citrus gall wasp and fungal pathogens, including support for PFAs • Plant material imported only through plant quarantine using the most effective and efficient pathogen detection and elimination technology Security of budwood multiplication systems • Establish traceability and certification systems by Auscitrus for citrus industry nurseries - both commercial and domestic
Citrus Strategic Investment Plan 2022 - 2026	Improve industry preparedness, responsiveness and resilience to biosecurity threats including plant material, including contingency plans against exotic threats, diagnostic capacity, strong post-entry quarantine capacity, a register of nurseries, and budwood traceability systems	<ul style="list-style-type: none"> • Centrally coordinated biosecurity R&D that minimises duplication and maximises value for money. Improved surveillance and diagnostic tools for high-priority citrus pests • Maintenance of high-health budwood material • Improved traceability systems for better responsiveness to incursions, and ensuring confidence in the supply chain • Preparedness for the greatest threat to citrus production in Australia - huanglongbing (HLB; Candidatus Liberibacter asiaticus) and its psyllid vectors - including greater understanding of new scion/rootstock-resistant combinations

APPENDIX 1. PAST STRATEGIC PRIORITIES (CONTINUED)

Previous strategy	Biosecurity related objective	Objectives
Citrus Australia Biosecurity Statement		<ul style="list-style-type: none"> • Traceability and quality standards for nursery stock • Improved detection resources and technology • Research expertise for industry viability • Support the National Plant Biosecurity Strategy
National Citrus Biosecurity Surveillance Strategy	<p>Improve the availability and quality of surveillance data to support market access requirements and the early detection of exotic citrus pests. Optimise surveillance efforts for citrus pests at points of highest risk and greatest return.</p> <p>Maximise the effective use of resources for citrus surveillance activities through a risk-based, partnership approach between industry, government and community.</p>	<ul style="list-style-type: none"> • Improved partnerships through coordination and collaboration • Enhanced capability and capacity to undertake citrus biosecurity surveillance • Smart surveillance through risk assessment, analysis, tools and diagnostics to support detection of citrus pests • Improved capture and analysis of citrus pest surveillance data
Citrus Australia Three Year Strategic Plan 2020-2022	<p>To protect industry from exotic pests and diseases and advocate for industry in the event of an incursion</p> <p>To do the work individual businesses cannot do in driving biosecurity, labour, energy, water and other policies</p>	<ul style="list-style-type: none"> • Use networks to communicate Citrus Australia policy; use various means to consult with industry including person to person, groups, committees, forums, surveys; leverage Citrus Australia's position to influence policy makers; grow networks of political advisors and key department staff; inform industry of exotic pest incursions; engage industry in levy consultation • Ensure appropriate professional staff are engaged and enabled to provide services; deliver outcomes of projects; provide a range of ways to deliver/access information from Citrus Australia; communicate industry R&D outcomes via various mediums • Provide opportunities for members to engage with Citrus Australia; highlight member achievements; seek opportunities to provide deeper analysis for members through networks and partnerships



For more information contact:

Citrus Australia

e.office@citrusaustralia.com.au

Citrus 
Australia