

# National Fruit Fly Strategy Implementation Report 2021-22

## Funding Statement

National Fruit Fly Council Phase 4 is funded by Hort Innovation with contributions from fruit fly affected industry research and development levies, Plant Health Australia, state and territory governments, and the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.



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## Glossary of Terms

Acronym	Term
AFFTAC	Australian Fruit Fly Technical Advisory Committee (a sub committee of Plant Health Committee)
ANQAP	Australian National Quality Assurance Program
ATGA	ATGA
CSIRO	The Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry (pre June 2022, DAWE, Department of Agriculture, Water and the Environment)
DPIRD	Department of Primary Industries and Regional Development WA
GSPFA	Greater Sunraysia Pest Free Area
ICA	Interstate Certification Assurance
LAMP	Loop-Mediated Isothermal Amplification
NRE Tasmania	Department of Natural Resources and Environment Tasmania
NSW DPI	NSW Department of Primary Industries
PFA	Pest Free Area
PHA	Plant Health Australia
PHC	Plant Health Committee
PIRSA	The Department of Primary Industries and Regions, South Australia
QDAF	Queensland Department of Agriculture and Fisheries
SIT	Sterile Insect Technology
SDQMA	The Subcommittee on Domestic Quarantine and Market Access





## About this report


The 2021–22 Implementation Report summarises progress and achievements from 1 July 2021 to 30 June 2022. Progress in each of the eight key result areas from the National Fruit Fly Strategic (NFFS) 2020-25 is tracked against the strategic framework and objectives within the NFFS.


The Implementation Report is finalised in June of the previous financial year and published along with the next financial year's Implementation Plan.

A colour code is used to report on performance, as shown below.

### Performance reporting key

	Activity is completed
	Activity is on schedule
	Activity is behind schedule or has been modified
	Activity will not be met

Where a KPI has been modified due to COVID-19 restrictions, such as interstate travel or the size of events, the symbol  is used.

Where a KPI has been modified due to the flooding in northern NSW and QLD, the symbol  is used.

# The strategic framework 2020 - 25

## Purpose

To reduce the risk of exotic fruit fly incursion, enable the effective and efficient management of established fruit fly species, and aid a robust national system to manage risk and underpin market access.

## Vision

Australia has a robust fruit fly management system that supports growth in horticultural production, market access and trade.

## Goal

Australia will have a contemporary, viable, cost-effective, and coordinated national approach to fruit fly management, with stakeholders committed to the national strategy.

## Strategic objectives



### 1. MAINTAIN AUSTRALIA'S FREEDOM FROM EXOTIC FRUIT FLY

Maintaining freedom from exotic fruit flies is essential to the sustainability of Australia's horticultural industries.

**Key Performance Indicator:** *Incursion(s) of exotic fruit flies in Australia are detected early and eradicated*



### 2. MINIMISE THE INCIDENCE AND SPREAD OF FRUIT FLY

Improving the management and suppression of established fruit fly species and preventing their further spread will help support productivity, reduce management costs, and enable trade and market access opportunities through low pest prevalence and pest-free areas.

**Key Performance Indicator:** *Domestic and international recognition of fruit fly pest free areas is retained or increased.*



### 3. IMPLEMENT NATIONAL SYSTEMS THAT SUPPORT MARKET ACCESS

Providing markets (domestic and international) confidence in our fruit fly system will ensure Australian growers can capitalise on our reputation for high-quality produce.

**Key Performance Indicator:** *There is no critical non-conformance in the national fruit fly assurance system.*



### 4. FACILITATE A COOPERATIVE AND COMMITTED NATIONAL APPROACH TO FRUIT FLY MANAGEMENT

The cooperation of governments, industries and communities that operate in different fruit fly management areas is vital to the success of the fruit fly system.

**Key Performance Indicator:** *Consistency between governments, industries, and communities' strategy and strategic fruit fly objectives.*

# Priority areas

Eight different yet interdependent priority areas have been identified for the strategy.

<p><b>1. Market access</b></p>  <p>Develop a framework of policy, legislation and operations that enables market access with the least trade restrictive measures, and is legally enforceable and technically justified.</p>	<p><b>5. Surveillance</b></p>  <p>Ensure a nationally consistent surveillance framework that clarifies fruit fly distribution, prevalence and control.</p>
<p><b>2. Management of established fruit fly</b></p>  <p>Build and promote efficient and effective methods to manage established fruit fly species, reduce the impact on production, and facilitate access to sensitive markets.</p>	<p><b>6. Diagnostics</b></p>  <p>Maintain and enhance rapid diagnostic capability and capacity to support responses to incursions or outbreaks and to confirm area freedom.</p>
<p><b>3. Prevention, preparedness and response</b></p>  <p>Continue to support the development and resourcing of prevention, preparedness and response measures for incursions or outbreaks.</p>	<p><b>7. Communication and engagement</b></p>  <p>Adopt systems and mechanisms for the efficient and effective communication, training, extension and uptake of fruit fly information by a broad range of audiences.</p>
<p><b>4. Research</b></p>  <p>Maintain and enhance fruit fly research capability, capacity and resources, pursuing research and extension that focus on nationally agreed priorities.</p>	<p><b>8. Cooperation</b></p>  <p>Maintain and enhance engagement processes that coordinate, progress and improve fruit fly management systems.</p>


# 1. Market access




Develop a framework of policy, legislation and operations that enables market access with the least trade restrictive measures, and is legally enforceable and technically justified.

Australia has strong domestic and international biosecurity systems vital for supporting market access for fruit fly affected industries. These systems must reflect internationally accepted standards and protocols, uphold risk management principles, and be transparent and scientifically robust to maintain confidence among domestic and international trading partners. It is essential that fruit fly policy, legislation, and operations continuously improve to meet market access needs.

Stakeholder Activities				
Strategic objective	Activity	Status	Delivery Lead	Update
	Create awareness for generic insect and fruit fly treatment schedule for irradiation while supporting the inclusion of new insect pests with relevant research		Steritech	Work is underway through an International Atomic Energy Agency (IAEA) project researching bands of generic dose rates for irradiation across crops and various pests including fruit fly
2	Continue to explore and develop systems approaches to fill the void left by chemical losses		NSW DPI	Cherry seasonal pest absence protocol referred from SDQMA to AFFTAC for final technical review. Systems approaches are being developed to continued use of ICA-21 for blueberries
	Explore the strategic and technical application of irradiation as a fresh produce fruit fly treatment at a national irradiation forum		Steritech	A Strategic workshop: building capacity in phytosanitary irradiation is being held in Melbourne on Thursday 15 Sept and will bring together key stakeholders including industry, research and government organisations to ensure phytosanitary irradiation continues to be developed effectively to protect and grow Australia's horticultural sector
2	Support Victoria's work to strengthen the domestic protocol for fumigation of host fruit (ICA04) to better address risk and align with arrangements at the national border		Multiple agencies	Agriculture Victoria submitted the revised version of national ICA-04 protocol which was supported by the states and agreed to by SDQMA
2	Hort Innovation ST15030 National Medfly R&D Centre		Murdoch University	This project is nearing completion

Stakeholder Activities				
Strategic objective	Activity	Status	Delivery Lead	Update
2	Monitor and report against the domestic phytosanitary system for fruit fly through the National ICA Audit Program.		Multiple agencies	COVID restrictions have impacted on the delivery of the national audit program. SDQMA has since agreed to an alternative approach to undertaking NIAP audits
3	Investigate and rectify areas of non-compliance identified in the national and domestic systems that underpin market access		Multiple agencies	<p>QDAF continues to implement surveillance activities (including maintaining a trapping network at international ports and other high risk sites), risk mitigation measures for key risk pathways, and to respond to suspect reports and new detections, to support area freedom claims for exotic fruit flies, including Mediterranean fruit fly.</p> <p>In NSW DPI, trap base has been introduced and monthly monitoring is taking place for other fruit fly of concern</p> <p>Agriculture Victoria: Pest Quarantine Manual now live and accessible through the Agriculture Victoria website. Ongoing support and advice for industry in relation to movement of produce domestically.</p> <p>PIRSA: The Department has followed and investigated reports of non-certified produce entering South Australia. No non-compliance identified.</p> <p>DPIRD WA: continued maintenance of trapping base as agreed.</p> <p>NRE Tasmania: Undertaken minor ICA updates (i.e. labelling) plus continuing focus on maintaining securing our borders and collaboration with Agriculture Victoria pre-border.</p> <p>DAFF: States and territories will be subject to a minimum of one periodic audit within every 24 months against the relevant performance standards as endorsed by PHC. Compliance will be assessed against the performance standards and follow up audits will be conducted to verify that agreed corrective actions have been taken to address non-compliances</p>
3	Develop new and amend existing Interstate Certification Assurance and Certification Assurance to meet market access needs for NSW growers		NSW DPI	DRAFT ICA17 protocol circulated to include Phyto Certificates & ePHC/PHAC-Possible CA for blueberry rust to WA. Support ICA-21 for blueberries to continue trade

Stakeholder Activities				
Strategic objective	Activity	Status	Delivery Lead	Update
3	Undertake Risk analysis to support proposed market access tools proposed by other jurisdictions		NSW DPI	Risk analysis of TPP and RIFA undertaken to determine entry conditions
3	Provide support in market access protocol development where warranted		NSW DPI	Research efficacy of treatment conditions to support ICA-21 for blueberries
3	Continue to contribute to the development and periodic review of domestic trading protocols used to support trade of host produce across jurisdictional borders with varying fruit fly status. This includes working with DAWE to achieve an elevated level of consistency in the use of Methyl Bromide (MeBr) fumigation and irradiation/microwave technology as measures to enable domestic and international market access		Agriculture Victoria	Work continues to support the application of end point treatments for fruit fly such as fumigation and irradiation
3	<a href="#">Hort Innovation AM19002</a> Building capacity in irradiation pathways for export – Aims to build confidence in, acceptance, and capacity to use phytosanitary irradiation for market access		Agriculture Victoria	The project completed 5 literature reviews concerning the impact of phytosanitary irradiation on pest mortality and sterility, pest vectoring of disease, impacts on horticulture products (quality and shelf life), available methods to detect the irradiated products, and cultural and regulatory barriers to adoption. Research has commenced to identify the effective dose for a priority pest for the table grape industry; pest vectoring of disease and impacts on product quality for priority horticulture exports crops (fruits and vegetables)
3	Negotiate international market access protocols for fruit fly that maintain, improve or open market access		DAFF	In 2021-22, access for peaches and nectarines to Vietnam utilising irradiation and cold treatment, was achieved. Furthermore, a pathway for in-transit cold treated citrus and table grapes (sourced from a PFA) with Korea has been established and pathway access has been improved with New Zealand and Vietnam for several commodities with the use of irradiation treatment

Stakeholder Activities				
Strategic objective	Activity	Status	Delivery Lead	Update
3	Communicate international market access requirements for fruit fly and associated issues to industry and state/territory governments		DAFF	DAFF continues to routinely provide technical, policy and operational advice to states and territories regarding fruit fly management and international market access, both informally and via formal interstate committees and working groups, and to industry as required via established communication channels. The department has provided written advice to South Australia, Tasmania and Western Australia regarding ICA 21
3	Support development of alternative market access approaches (e.g., Areas of Low Pest Prevalence, winter windows, system approach, climate models) to underpin trade negotiations for fruit flies		DAFF	Work in this space is ongoing including research into systems approach
3	Strengthen current market access data packages and address any perceived gaps to support market access negotiation of international market access		DAFF	PHC have endorsed the overarching Management Principles (Part A) for Australia's National Fruit Fly Management Protocol (Protocol) as well as Operations Standard No.1 – Pest Free Areas (Part B) which is the key market access document for trade from fruit fly free areas. Delivery Guidelines and Delivery References continue to be progressed through AFTAC in a more modernised format, working towards clarification of ambiguities and current procedures of fruit fly management, in-line with state and territory priorities
3	<a href="#">Hort Innovation AM17001</a> Developing a national systems approach for meeting biosecurity requirements to access key Asian Markets		CSIRO	This project is nearing completion with potential to extend
3	Hort Innovation MT14052 project developing phytosanitary data packages to support industries long-term international market access aspirations		QDAF	Covid restrictions, flood damage and problems sourcing equipment have resulted in delays

Stakeholder Activities				
Strategic objective	Activity	Status	Delivery Lead	Update
4	Continue to maintain and fully implement heightened border inspections through to 2021/2022 as one of the Tasmanian governments' highest biosecurity priorities to maintain Tasmania's pest-free status with respect to fruit flies		NRE Tasmania	The 'Securing Our Borders' initiative successfully completed its third season of operation. Consisting of risk based targeting of high-risk fruit fly host produce pre-border and at the border, it has ensured intensive inspections have occurred. The initiative runs from September to March each year. During the remaining period a lower level of inspection occurs based on a reduced entry of high risk product
4	Continue to work with the Australian Government and other governments and industries contributing to the national progression of the fruit fly management system		NRE Tasmania	Participation at all levels and in all associated national fora including NBC, PHC, SDQMA, and NFFC
4	Finalise the stabilisation phase of Australia's National Fruit Fly Management Protocol		DAFF & multiple agencies	<p>DAWE: The overarching documents within the Protocol have been endorsed by PHC (Dec 2021). However, supporting documentation intending to provide consistent guidance, instruction and technical requirements to maintain fruit fly management systems continue to be progressed through AFFTAC in line with state and territory priorities.</p> <p>Fruit fly management processes and procedures lacking subordinate documentation continues to present a risk for consistency of fruit fly management actions and the department will continue to provide advice on where this impacts market access to assist with prioritisation.</p> <p>State jurisdictions continue to be represented on AFFTAC and to respond to requests for input/approval of Australia's National Fruit Fly Management Protocols and associated documents</p>

Stakeholder Activities				
Strategic objective	Activity	Status	Delivery Lead	Update
4	Monitor national fruit fly system assurance activities that underpin international market access, including obligations to demonstrate pest status		Multiple agencies	<p>QDAF: Qld continues to implement surveillance activities (including maintaining a trapping network at international ports and other high risk sites), risk mitigation measures for key risk pathways, and to respond to suspect reports and new detections, to support area freedom claims for exotic fruit flies, including Mediterranean fruit fly.</p> <p>NSW DPI: Trap base has been introduced and monthly monitoring is taking place for other fruit fly of concern</p> <p>Agriculture Victoria: continued work on maintaining trapping network re export.</p> <p>PIRSA: ongoing investigation of options to enhance assurance activities particularly through the Commonwealth 'Building Resilience' program.</p> <p>DPIRD WA: ongoing maintenance of trapping grid.</p> <p>NRE Tasmania: Continuation commitment to the securing our borders initiative as well as ongoing maintenance of updated trapping grids.</p> <p>DAFF: Australia's National Fruit Fly Management Assurance Framework (Assurance Framework) has been endorsed by PHC. The package includes an overarching Assurance Framework policy document and the Audit Guideline and Performance Standards. This document set provides clarity around the expectations of states and territories by the Australian Government to assure itself, and trading partners, that it can continue to certify that host produce for international export meets the conditions required by the authorities of importing countries. Accordingly, the Australian Government intends to audit all state and territory jurisdictions within the next 24 months</p>

**Stakeholder Activities**

Strategic objective	Activity	Status	Delivery Lead	Update
4	Seek acceptance of Australia’s National Fruit Fly Management Protocol from trading partners		DAFF	The overarching documents within the Protocol have been endorsed by PHC. The Australian Government will issue Operations Standard No.1 – Pest Free Areas (Part B of the Protocol) to international trading partners where requested. Issuance of Part B will be in accordance with the international impact assessment submitted to PHC in January 2022 (OoS2022-01) and PHC will be kept informed of onward distribution





## 2. Management of established fruit fly



Build and promote efficient and effective methods to manage established fruit fly species, reduce the impact on production, and facilitate access to sensitive markets.

A better understanding of established fruit flies helps to improve the effectiveness of control methods and tools. Growers must have management and disinfestation options to control fruit flies and maintain or gain market access. These options must be economical and underpinned by evidence and confidence in supporting assurance systems.

Key stakeholder activities				
Strategic objective	Activity	Status	Delivery Lead	Status
2	Convert existing trapping in the Sydney basin, MIA and Sunraysia to trap base		NSW DPI	Trapbase has been implemented in Sydney basin, Guyra and MIA. Surveillance in Sunraysia is continuing under Ag Vic
2	Implement reviewed trapping grid in the Sydney basin		NSW DPI	The trapping grid has been reviewed and is compliant with requirements
2	Agriculture Victoria will work with regional coordinators and governance groups of the Goulburn Murray Valley, the Yarra Valley and the greater Sunraysia region to develop implementation plans to meet agreed outcomes specified in the strategy implementation plan, a key outcome being an investigation of sustainable funding mechanisms for industries to secure funding for biosecurity activities		Agriculture Victoria	Implementation plans have been developed and will be updated annually. Sustainable funding options are to be investigated and have been included in the current round of grants
2	Connect Agriculture Victoria researchers with local agronomists to provide input and feedback on short term research project into trapping strategy for table grapes		ATGA	A meeting was facilitated by ATGA in June ensuring fine tuning of the trapping strategy for the table grape industry.
3	Hort Innovation FF18003 SITplus production facility – proof of concept		PIRSA / Western Sydney University	Final project fly releases conducted in April 2022. SA Factory facility secured funding until June 2023
4	Continue to provide management information from DPI and the Local Land Services website		NSW DPI	The LLS website continues to be used to communicate fruit fly related information (i.e. 'Action Guide' and 'Facts Sheets')
2	Replace Pestmon with MAXX for efficiencies in diagnostic and reporting		NSW DPI	No surveillance or diagnostic data now entering Pestmon. Historical surv and diagnostics data in Pestmon avail in MAXX

3	<a href="#">Hort Innovation MT19003</a> Parasitoids for the management of fruit flies (Diptera: Tephritidae) in Australia		Agriculture Victoria	An update was provided via Hort Innovation Website Sep 2021. Article published in Winter 22 edition of Australian Fruit Grower Magazine (APAL) Final Report being prepared. Due 30 May 2022.
3	Hort Innovation FF17001 Post factory pilot SITplus fly production		Macquarie University	Final aerial delivery of sterile flies completed in Apr 22, with data analysis by Plant and Food Research (NZ). Project variation approved for a no cost extension until May 2024 to enable additional work to translate outcomes for community/grower operated programs
2	Hort Innovation TG19001 Trapping efficacy in table grape vineyards for area wide management of Queensland fruit fly that supports market access (is not a market access project – it is about working out where Queensland fruit fly comes from to invade vineyards, which part of the vineyards at most at risk, etc)		Agriculture Victoria	Final Report being prepared
2	In collaboration with Local Land Services and Growers, DPI run weekend information stalls targeting backyard growers in the Murrumbidgee Irrigation Area and Sunraysia areas		NSW DPI	This activity has been delayed until further notice
2	Implement a revised trapping grid in Sunraysia		NSW DPI	Draft review is currently being circulated for feedback
2	Evaluate the southwest general fruit fly surveillance program and use the key findings to inform decision making processes across the broader fruit fly reporting and awareness program		Agriculture Victoria	Draft report prepared with findings proposed to be actioned through DQ communications plan over 2022/23 financial year
2	Grower workshop with updates from Agriculture Victoria researchers regarding mass releases and trapping strategy plus updates from the Greater Sunraysia Pest Free Area		Citrus Australia, ATGA , Agriculture Victoria and GSPFA	This activity has been delayed until 2022

### 3. Prevention, preparedness and response




Continue to support the development and resourcing of prevention, preparedness and response measures for incursions or outbreaks.

Australia works hard to maintain freedom from exotic fruit flies and minimise the spread of established fruit flies into pest-free areas. Understanding fruit fly characteristics and risk pathways can help in the design of detection and control measures to manage incursions and prevent fruit fly spread. Governments, industries, and communities also have a role to play in taking steps to prepare for potential risks, including planning for fruit fly eradication and for business continuity. There are high returns on investment for prevention and preparedness activities and these remain a priority for Australia’s fruit fly management system.

Key stakeholder activities				
Strategic objective	Activity	Status	Delivery Lead	Update
2	Update map of all commercial and abandoned mango orchards in Australia (including the Cape York Peninsula) to assist with managing biosecurity threats		Australian Mango Industry Association / Uni of New England / Central Queensland University	All associated mapping web apps can be found on the platform below. <a href="https://www.une.edu.au/research/research-centres-institutes/applied-agricultural-remote-sensing-centre/collaborative-r-and-d-opportunities/industry-applications-and-maps">https://www.une.edu.au/research/research-centres-institutes/applied-agricultural-remote-sensing-centre/collaborative-r-and-d-opportunities/industry-applications-and-maps</a> The National Mango Tree Crop Dashboard has also been added to the Australian Mangoes website. <a href="http://www.industry.mangoes.net.au/resources/resources-library/national-mango-tree-crop-map-dashboard">www.industry.mangoes.net.au/resources/resources-library/national-mango-tree-crop-map-dashboard</a>
2	Agriculture Victoria is working with the NSW DPI on a Mediterranean fruit fly preparedness and response simulation activity which is anticipated to occur in August/September 2021		NSW DPI	NSW delivered a successful exercise on 8-9 March 2022 with learnings ensuring enhanced responses in the future.
1	Engage with stakeholders on pest prioritisation of exotic fruit flies		DAFF	Stakeholders were engaged as part of the 2019 development of the National Priority Plan Pests on the prioritisation of exotic fruit flies
3	Complete translation of all existing regulatory requirements associated with fruit fly for operation under the new Biosecurity Act 2019. This includes updated listings and translation of import processes to work under the Biosecurity Act		NRE Tasmania	Translation of remaining components of the Plant Quarantine Act 1997 to the Biosecurity Act 2019 is expected to be completed by the end of the calendar year 2022 with the former legislation being rescinded

1	Administer the Exotic Fruit Fly in Torres Strait Response Plan to eradicate incursions of exotic fruit fly species from Torres Strait in response to detections from Northern Australia Quarantine Strategy surveillance		QDAF, DAFF	<p>The program is delivering Milestone 2 of 6, as per the agreed Response Plan.</p> <p>DAFF: The National Exotic Fruit Fly in Torres Strait Eradication Program Version 1.0 was endorsed by the National Management Group and implemented on 1 July 2021. QLD continues to successfully administer the Response Plan with NAQS providing significant operational and technical support for the response. Specific elements of the eradication program include a:</p> <ul style="list-style-type: none"> <li>· pre-emptive male annihilation technique (MAT) and protein bait spray program on islands where annual incursions are considered probable.</li> <li>· reactive eradication program that is implemented on a needs basis according to the monitoring results</li> </ul>
1	Communicate potential or identified areas of risk of exotic fruit fly incursion		DAFF / QDAF	Qld continues to communicate and engage with stakeholders with regard to the risk pathways for introduction of exotic fruit fly through a range of mechanisms, in particular Torres Strait and Northern Peninsula Area communities
2	Implement incursion and eradication procedures for exotic incursions on an as needs basis		States, Territories, PHA, DAFF and Industry	<p>National Exotic Fruit Fly in Torres Strait Eradication Program is being implemented in accordance with the approved Response Plan. No other exotic fruit fly incursions during the period.</p> <p>VIC: Victoria's Med Fly preparedness plan has been updated. Including ensuring adequate training and personnel to perform roles in the event of detection.</p> <p>PIRSA: Updates have been undertaken on the South Australian Plant Quarantine Standard to ensure alignment with the new National Management Protocols</p> <p>DPIRD WA: baseline activities have continued with a CSIRO project being prepared to work on post-harvest disinfestation as well as ongoing work through the Hort Innovation funded phenology and ecology research project.</p> <p>NRE Tasmania: Updated Tasmanian Fruit Fly Standard to ensure alignment with new National Management Protocols (i.e. consistency of language)</p>

				DAFF: Process for implementation and eradication of exotic incursions would be undertaken under the Emergency Plant Pest Response Deed and PLANTPLAN as required
2	Implement incursion and eradication procedures in pest-free areas in accordance with Australia's National Fruit Fly Management Protocols		States, Territories, PHA, DAFF and Industry	No incursions or eradication procedures required in pest free areas in QLD/VIC/NSW during the period. PIRSA: large scale response underway in Riverland. DAFF: DAFF continues to provide advice on an 'as needs' basis to jurisdictions eradication programs in alignment with the Protocols and international standards. It is the aim of the Protocols to eliminate this need by clarifying ambiguities and policy requirements
1	Hort Innovation FF18001 Biosecurity preparedness for oriental fruit fly and exotic fruit flies		NSW DPI	Milestone 103 submitted, in collaboration with PHA a biosecurity incursion exercise is scheduled for early 2023
2	Continue to maintain the trapping grid for exotic fruit flies in metro Adelaide and in the SA Riverland		PIRSA	On track with temporary increase in density of the trapping grid in key areas for additional assurance.
1	Hort Innovation ST19017 Biosecurity preparedness through developing capacity for in-field detection of spotted wing Drosophila (part of RRD4P project: Boosting diagnostic capacity for plant production industries)		Agriculture Victoria	New surveillance trap / metabarcoding assay developed and validated. Surveillance system successfully trialled in initial field study
2	Continue to invest significantly to eradicate 11 outbreaks of Medfly and six outbreaks of Queensland fruit fly in South Australia		PIRSA	Investment continues with 11 MedFly and 1 Qfly outbreaks completed in Metro and Pt Augusta
4	Deliver fruit fly control responsibilities in the areas of Victoria adjacent to Riverland Pest Free Area		Agriculture Victoria / PIRSA	Victoria (Vic) and South Australia (SA) have an agreement under a Memorandum of Understanding that enables SA quarantine officers to enter Lyndsay Point (just across border in Vic) to undertake vital surveillance work
2	Continue preparedness/contingency planning workshops in the SA Riverland and other growing areas to prepare growers for the event that more outbreaks of fruit fly are detected		PIRSA	Workshops and preparedness activities delivered in collaboration with the Riverland Fruit Fly Committee
4	Formalise a national SIT policy for consistent application of this technology		DAFF / PHC	A draft proposal on the use of Sterile Insect Technique (SIT) in PFAs has been provided to DAFF and will be provided to the NFFC, governments, industries and SIT providers for consideration once finalised.

				<p>In 2021 DAFF provided detailed information on the options and pathways to implementation of SIT deployment in (and adjacent to) pest free areas. Because these all entail risks and opportunity costs to a range of stakeholders, interested groups were asked to consider these and return with a proposal for further consultation and consideration by affected stakeholders</p>
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## 4. Research



Maintain and enhance fruit fly research capability, capacity and resources, pursuing research and extension that focus on nationally agreed priorities.

Research, development and extension activities underpin all elements of fruit fly management, including operations, legislation, regulation, market access, biosecurity and improvements in management practices. Research provides technically justifiable approaches and innovative solutions to enable market access and sustainable production. Capability and capacity must be maintained, and that research, development and extension are prioritised, coordinated and strengthened through national and international research linkages.

Key stakeholder activities				
Strategic objective	Activity	Status	Delivery Lead	Update
2	Assist in the development of an irradiation diagnostic tool		NSW DPI	Completed
1	Hort Innovation FF19000 Sex determination of fruit fly pupa using Near-Infrared Spectroscopy		QDAF	An extension has been sought to allow for upscaling of trial results
1	Australian Centre for International Agricultural Research Development of the area-wide management approach for fruit flies in mango for Indonesia, Philippines, Australia and the Asia Pacific Region		QDAF	Good progress has been made and an extension to expand activities in the region
2	Phenology, demography and distribution of Australia's fruit flies		QDAF	Project has been extended to Nov 2022
3	International Atomic Energy Agency - Coordinated Research Project: Irradiation Technology for Phytosanitary Treatment of Food Commodities and Promotion of Trade		QDAF	First meeting held and research priorities identified for delivery of work. Next meeting to be held in Cairns in late 2022
3	Victoria is undertaking a range of research projects to ensure surveillance, diagnostics and management are improved through the development and application of new technologies and practices. Research activities that will continue into the 2021/22 FY include: <ul style="list-style-type: none"> <li>A national biocontrol program to manage pest fruit flies in Australia.</li> <li>Parasitoids for the management of fruit flies in Australia.</li> </ul>		Agriculture Victoria	Research delivering well against project milestones.  In the biocontrol project, the parasitoid release is progressing well, with overwintering studies and parasitosis being made available in regional Victoria and metro Melbourne.  The biopesticide project is yielding promising early results, with investigation of entomopathogenic fungi isolates in laboratory trials

	<ul style="list-style-type: none"> <li>• Trapping efficacy in table grape vineyards for area wide management of Queensland fruit fly.</li> <li>• Phenology, demography, and distribution of fruit flies (Metabarcoding and LAMP).</li> <li>• A post factory pilot for SITPlus.</li> <li>• Mortality of Queensland fruit fly in cherries following hydrocooling and packhouse surveillance.</li> <li>• Host suitability of strawberry and Rubus for Queensland fruit fly</li> </ul>			
2	Contribute to Post factory pilot of SIT (FF17001)		NSW DPI	Final releases of sterile flies completed in April 2022 with data analysis is in progress
2	Undertake research into the use of fruit fly baits and lures to better inform the use of these tools during outbreak response		PIRSA	The research is on track with results pending
3	Hort Innovation MT14052 Essential market access data packages		QDAF	Covid restrictions, flood damage and problems sourcing equipment have resulted in delays
3	Efficacy data to support methyl bromide disinfestation treatments against fruit flies		QDAF	Covid restrictions, flood damage and problems sourcing equipment have resulted in delays
3	Hort Innovation BB19001 Additional cold treatment schedule for Queensland Fruit Fly in blueberries for market access to China		QDAF	Covid restrictions and problems sourcing insecticide-free fruit has led to minor delays
3	Coordinate the Research Program under the Intergovernmental Agreement on Strengthening Australia's Fruit Fly Management System		DAFF / PHA	The research program projects are progressing well, with some projects running to June 2023 due to covid related delays and natural disasters
2	Host a fruit fly research exchange forum (8th Australian Biology of Tephritid Fruit Flies Conference) in 2022		QUT / QDAF	Due to covid and other circumstances it has been decided to not proceed with this at this stage

## 5. Surveillance



Ensure a nationally consistent surveillance framework that clarifies fruit fly distribution, prevalence and control.

Surveillance systems provide early detection of fruit flies, deliver information for risk analyses and demonstrate the fruit fly status of an area. They are an integral part of fruit fly management and essential for rapid response and market access.

While surveillance must be done in accordance with agreed standards and protocols, it is also increasingly important that it is efficient, effective and able to harness information from both specific (programs to formally demonstrate pest presence or absence) and general (drawn from various government or non-government) sources.

Key stakeholder activities				
Strategic objective	Activity	Status	Delivery Lead	Update
2	Maintain Tasmania's permanent fruit fly trapping grid with associated maintenance as required		NRE Tasmania	This has been maintained and fully updated to ensure optimal placement of traps and all traps functioning. Tasmania would like to see shifts towards an electronic trapping system subject to trade acceptance
4	Conduct fruit fly surveillance in mango orchards and packing sheds Collate and provide the data to PHA for inclusion into AUSPestCheck™		Australian Mango Industry Association	AMIA Industry Biosecurity Officers have conducted orchards and packing sheds surveillance as planned. AMIA staff will receive training from PHA to upload the data ourselves directly into AusPestCheck. Please note that Mango Malformation Disease surveillance was not undertaken in Kununurra due to WA border restrictions
4	Facilitate and support integrated fruit fly surveillance programs for government and industry stakeholders using AUSPestCheck™		All jurisdictions	QLD: A specific data report has been developed to allow Queensland fruit fly surveillance data to be manually uploaded into AUSPestCheck™ (APC) every two months as required under the NPHSP. An API may be used in the future as part of a fully integrated system. NSW: Monitoring data from Citrus and Cherry Seasonal Pest Absence trials uploaded VIC: NPHS fruit fly surveillance data is loaded into APC. PFA fruit fly data is provided to DAWE on request pending creation of an appropriate APC program. NRE Tasmania: Fully utilising and lodging data with Commonwealth through APC.

				DPIRD: The Department is utilising AUSPestCheck™ for surveillance programs PIRSA: Full support and utilisation of AUSPestCheck™.
4	Provide a regional and national overview of the fruit fly surveillance and pest status for government and industry stakeholders by collating integrating and presenting trapping data in AUSPestCheck™		NSW DPI (cooperating with all jurisdictions)	Progressed nationally via SNPHS
1	Continue to maintain trapping grid for exotic fruit flies in metro Adelaide and in the SA Riverland		PIRSA	This additional trapping work has been undertaken as required.
4	Ensure surveillance meets national standards by updating Operating procedures		NSW DPI	Updated operating procedures delivered
2	Continue to maintain a trapping grid of over 7,500 fruit fly traps statewide		PIRSA	Achieved as agreed
2	Undertake a review of the fruit fly trapping network to ensure that the network is fit for its purpose and provides the best outcomes for Victoria. The re-design of the network will continue to be primarily focused on the early detection of exotic flies but may also provide data to assist in the management of established fruit fly species		Agriculture Victoria	The fruit fly trapping network is currently being redesigned with a focus on early detection of exotics based on the latest research


## 6. Diagnostics



Maintain and enhance rapid diagnostic capability and capacity to support responses to incursions or outbreaks and to confirm area freedom.

Accurate and rapid fruit fly identification underpins responsiveness to potential incursions or outbreaks and increases the chance of successful eradication. Tools and materials that enhance the ease and throughput of identification of species complexes are of particular value. Confidence in diagnostic capability across a range of established and exotic fruit fly species is fundamental to providing national assurance of area freedom.

Key stakeholder activities				
Strategic objective	Activity	Status	Delivery Lead	Update
2	Maintain diagnostic capacity for rapid diagnosis of fruit flies. This includes dedicated specialist diagnostic expertise		NRE Tasmania	Dr Guy Westmore is Tasmania's primary expert on fruit fly. During the high risk season additional diagnostic support (Dr John Ireson) was appointed also with fruit fly expertise
4	Redevelopment of the Australian Plant Pest Database (APPD). This database compiles information on vouchered specimens from the 18 major Australian reference collections of relevance to plant biosecurity		PHA	The new APPD was developed and launched in November 2021. DAFF have submitted a paper to NBC for potential cost sharing arrangements for both APPD and Pest and Disease Image Library (PaDIL) beyond June 2023. An APPD training workshop was recently delivered as part of the Annual Diagnostics and Surveillance workshop in Melbourne on 1 <sup>st</sup> September with more online workshops planned in the next 6 months. The workshops and subsequent feedback will continually improve the system as well as train users on the new redesigned database
4	Redevelopment of the Pest and Disease Image Library (PaDIL). This database is a repository of high-quality diagnostic images and tools used to assist in taxonomic identification of pests and diseases of biosecurity importance to Australia		PHA	PaDIL was redeveloped in the last 12 months and was officially launched at the ADSW (see above) on 30 <sup>th</sup> August in Melbourne. Future funding beyond June 2023 is being investigated.
4	Continue to provide maintenance and support for the fruit fly identification website		PHA	A workplan has been developed for updating the fruit fly identification website. Funding mechanism has yet to be confirmed
4	Continue to verify the performance of diagnostic laboratories for identification of species of interest through appropriate quality management systems		PHC/ ANQAP	There is an annual national plant health proficiency testing program that is run through ANQAP. PHA help deliver the proficiency testing program in collaboration with the proficiency testing coordinator and the Diagnostic Protocols Working Group. There are fruit fly samples

				that are included in the sample list from time to time, I don't recall fruit flies being in the 2021/22 period
4	Expand the National Plant Biosecurity Diagnostic Network (NPBDN) to be the central point for all activities within the national plant biosecurity diagnostics system		PHA with funding from DAFF	Renewed funding from DAFF. Increased member numbers for NPBDN
4	Provide a career pathway for diagnosticians, including through the National Professional Development Program		PHA with funding from DAFF	Part of NPBDN project deliverables is professional development for diagnosticians via skills based workshops plus diagnostic residentials
4	Establish an expert group to develop and maintain a record of emerging plant pests that pose a potential threat to plant health in Australia		PHA with funding from DAFF	Expert group convened on an as needs basis with representation from across jurisdictions (i.e. Preparedness Working Working)
4	Identify, monitor and improve the scope and role of individual collections to support trade, biosecurity, and the national plant diagnostic system		PHA with funding from DAFF	The re-build of the Australian Plant Pest database and Pest and Disease Image Library (PaDIL)
4	Develop mechanisms to improve the capture of data from various sources including diagnostics, surveillance, collections, research and area freedom activities		PHA with funding from DAFF	The mechanisms to improve the capture of data includes re-build of new systems including new data standards ( ) and also feeding in to Working Groups within (SPHD and SNPHS – sub-committees for Plant Health Diagnostics and Surveillance
2	Incorporate a national diagnostic standard for Sterile Insect Technique fruit flies in the National Fruit Fly Management Protocols		DAFF / PHC	Awaiting draft national diagnostic standard for SIT flies to be submitted to AFFTAC for agreement. Advice from SDQMA is that a formalised national diagnostic protocol for fruit flies is not a priority. AFFTAC's forward workplan is full and no resources are available within DAWE to progress this item

## 7. Communication and engagement



Adopt systems and mechanisms for the efficient and effective communication, training, extension and uptake of fruit fly information by a broad range of audiences.

A cohesive fruit fly management system relies on effective sharing and adoption of relevant information. It improves the quality of decision-making and ensures stakeholders at all levels are better equipped to manage fruit fly challenges. Reliable and up-to-date information is also instrumental in maintaining or enhancing industry competitiveness. Improved communication and engagement across fruit fly management systems will help increase innovation uptake and create shared outcomes. It is also essential that information reaches those who benefit from fruit fly management systems, including consumers, wholesalers, retailers, exporters, importers, transport operators and treatment providers.

Key stakeholder activities				
Strategic objective	Activity	Status	Delivery Lead	
2	Distribution of 2020 GFSPFA poster and flyer reintegrating Qfly bait spraying into table grape pest management programs		ATGA	Posters and flyers distributed to Growers at the Euston & Mildura Roadshows in December
2	Where and when appropriate, inclusion of Fruit Fly information into workshops for table grape growers nationally		ATGA	QFF information (trapping) at 2 Queensland workshops (Emerald & Mundubbera)
2	Respond to industry enquiries regarding inconsistencies between Queensland fruit fly phytosanitary requirements for export and the expectations of Area Wide Management and feedback to GSPFA		ATGA	ATGA is providing the chair of the GSPFA which underpins this activity
4	Berries Australia is represented on the Yarra Valley Regional Governance Group by the Victorian Industry Development Officer		Agriculture Victoria / Industry	Delivered with current funding for 3 Victorian regions to carry out Area Wide Management activities
2	Fruit fly features as a high-profile pest of concern in all of Biosecurity Tasmania's communications. Activities will include timely reminders to the public regarding import requirements and the importance of not introducing fruit flies to Tasmania		NRE Tasmania	A fruit fly-based communications program has been maintained with a focus on awareness and alertness. Appropriately timed communications e.g. e-advisories, Facebook posts, media stories provided ahead of covid border openings in mid-December

2	Ongoing communication of fruit fly related research outcomes, news etc through the industry's email newsletter, website, quarterly magazine, and roadshows where and when appropriate		Australian Mango Industry Association & ATGA	<p>Articles were published in AMIA's communication channels:</p> <ul style="list-style-type: none"> <li>• National Fruit Fly symposium calls for national strategy commitment, p19, Mango Matters Winter edition, July 2021</li> <li>• Practical biosecurity surveillance resource for tropical plant industries, p16-17, Mango Matters Spring edition, October 2021</li> <li>• National Fruit Fly Council Webinar, My Mango, March 2022</li> <li>• NFFC presented at our pre-season roadshow in Bowen, Qld</li> </ul>
2	Undertake community engagement through events including stalls to target backyard growers and at research centres.		NSW DPI	The national engagement and extension project is progressing well, with the project extended to June 2023 to incorporate additional activities.
2	Provide support to Grower groups in managing hot spots and increasing public awareness of fruit flies and their control		NSW DPI	This activity has predominantly been delivered through the Local Land Services network and website
4	Provide DPI representatives to the Sunraysia industry meetings		NSW DPI	Meeting was held with NSW Sunraysia growers in March
4	Provide information through media and personally through Industry development Officers, Local Land Services biosecurity and Compliance staff		NSW DPI	Information exchange mainly through attendance of monthly meetings
2	Regional Governance Groups to develop implementation plans through the area-wide management grants program. These plans will include region-specific awareness and communications plans focusing on local messaging consistent with state and national campaigns and an annual calendar of communications		Agriculture Victoria / Industry	Implementation plans have been developed and each of the regional groups have been developed regionally specific communication and plans. The communications plans focus on delivering a range of communication outputs but are not in the form of a calendar

2	Agriculture Victoria to review and implement the 'State-wide communication and media plan' and implement the 'Queensland fruit fly: Melbourne Metro and fringe communication and engagement plan 2021-2025' to provide consistent key messaging across the state via a seasonal calendar of media, social media and direct contact with relevant organisations. Continue to support the local government by providing fruit fly management information suitable for their use and dissemination and include communications about fruit fly research projects undertaken by Agriculture Victoria Research to assist growers and communities recognise the potential long-term benefits of the research program		Agriculture Victoria	The statewide communication plan has been developed and the statewide social media/media calendar has been implemented this season including media releases and monthly/fortnightly during the season social media posts on twitter and facebook. Media packages have been provided to local governments in Metro Melbourne, More languages are available through our website. Updates to the Agriculture Victoria website will be happening soon
4	Continue to provide maintenance and support to the Prevent Fruit Fly website		PHA	The Prevent Fruit Fly website is currently being upgraded with changes uploaded in September. Improvements and new initiatives have been included ensuring ongoing communication mechanism across all key stakeholder groups. A member portal is one such improvement
4	Keep stakeholders informed and engaged on Smart Fruit Fly Management measure activities and progress		DAFF	DAFF website content has been updated on the status and progress of the research program projects, bimonthly status reports on the measure activities and progress have been provided to key stakeholders and research program reports have been provided to PHA
4	Undertake national engagement and extension activities to strengthen fruit fly management in Australia.		DAFF / NFFC	This has been undertaken through the Engagement and Extension project delivered by PHA through the NFFC. The project has successfully delivered key initiatives across four key themes including running 15 engagement sessions re National Fruit Fly System, delivery of 2 fruit fly hypothetical exercises with learnings across the system, and development of a Fruit Fly Extension Framework for ongoing extension program
2	Commenced Phase 2 of the "Restrictions are in place" fruit fly community awareness campaign and will undertake market research for effectiveness to inform future campaigns. Website will continue to be refined.  Continue to provide the public with information on activities for the fruit fly outbreaks across metropolitan Adelaide and in the Riverland. This includes sharing information with key		PIRSA	All the activities outlined have been delivered successfully as agreed with stakeholders

	<p>stakeholders such as local councils, multicultural community organisations, the Nursery and Gardening Association of SA, the SA Produce Market, horticulture and other retail industry bodies and representatives, sending information to residents within outbreak areas to help with the response, and be proactive in their gardens to help protect SA from fruit fly. An industry bulletin (emailed) and a regular column in the Riverland newspaper will continue to provide updates to targeted stakeholders.</p> <p>A school's engagement program and community speaking program are being developed for the July-Dec period.</p> <p>Engagement with targeted stakeholders in industry and media will promote key messaging to be shared on garden maintenance to reduce fruit fly risks</p>			
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## 8. Cooperation



Maintain and enhance engagement processes that coordinate, progress and improve fruit fly management systems.

A coordinated national system requires cooperation across disciplines and geographic boundaries toward achieving agreed common goals. Industry, government, research, and community forums all raise awareness of fruit fly issues, determine priorities, direct and provide resources, and monitor progress. Collectively, these forums represent the national system and are fundamental sources of information and influence that must be connected and serve the national interest.

Key stakeholder activities				
Strategic objective	Activity	Status	Delivery Lead	Update
2	Victoria is working with New South Wales on a cross border Medfly preparedness exercise		NSW DPI / Agriculture Victoria	NSW and Victoria delivered the exercise on 8-9 March 2022
2	The Victorian Government is providing funding for four years under Victoria's Fruit Fly Strategy 2021-2025 for Regional Coordinators and area-wide management programs in the three key horticultural areas of the Goulburn Murray Valley, the Yarra Valley and the Greater Sunraysia region (see also Priority Area 2)		Agriculture Victoria	Ongoing work is continuing with the Regional Fruit Fly Coordinators with tailored workplans for each area
4	Hort Innovation HA18000 National Fruit Fly Council – Phase 3		PHA	The project HA18000 National Fruit Fly Council – Phase 3 concluded in December 2021 with a final report submitted and accepted by Hort Innovation
2	Coordinate fruit fly management within each state, including the provision of information to stakeholders		States and Territories	Qld continues to engage with and assist key stakeholders to manage fruit fly related issues including research, market access, surveillance, diagnostics, agvet chemical availability and use, risk analysis, and incident response and preparedness.  State and Regional Coordinators in Victoria meet monthly and have met with the new Manager National Fruit Fly Council to discuss links and future plans
2	Provide expert advice on AFFTAC and research projects		NSW DPI	Review of protocols and standard operating procedures
3	Develop and amend market access protocols in collaboration with other states and territories.		NSW DPI	The cherry seasonal pest absence protocol, ICA17, has been updated

4	Hort Innovation FF20000 National Fruit Fly Council – Phase 4		PHA	The project FF20000 National Fruit Fly Council – Phase 4 was contracted in December 2021 for a 5 year period. The review of the Council has recently been concluded with a new structure endorsed at the June NFFC meeting with the inclusion of an Executive Committee as well as Terms of Reference covering the formation of Council Working Groups
4	Uphold governance structures that serve to support fruit fly management, including the Plant Health Committee, Australian Fruit Fly Technical Advisory Sub-Committee and the National Fruit Fly Council		DAFF	DAFF: The department continue to engage with PHC, AFFTAC and NFFC. The department participated and provided papers for these committee meetings
2	Continue to support regional consultative mechanisms in South Australia to engage with industry and other stakeholders		PIRSA	Work has been ongoing meeting with regional consultative groups including the Riverland Fruit Fly Committee

