

A vibrant display of fresh fruits including peaches, grapes, avocados, strawberries, and plums. The fruits are arranged in baskets and are the background for the text.

# NATIONAL FRUIT FLY STRATEGY 2021-22 IMPLEMENTATION PLAN

## Acknowledgements

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## Overview

The National Fruit Fly Strategy 2020–25 provides a framework for stakeholders to coordinate fruit fly activities across Australia. While no new funding has been provided for the strategy, annual implementation plans are developed to identify and monitor key activities that have been prioritised by stakeholders and resourced.

Each implementation plan acknowledges the considerable and ongoing contribution by many different stakeholders to fruit fly management in Australia. Importantly it provides an opportunity to collectively consider potential gaps to be addressed in this system during a financial year as guided by the SWOT analysis, the Intergovernmental Agreement on Strengthening Australia's Fruit Fly Management System, and the 2015 National Fruit Fly Research, Development and Extension Plan.

The National Fruit Fly Council oversees the implementation plans for the strategy. The Council brings together governments, growers and research funders to provide advice and strategically contribute to issues through forums such as the National Biosecurity Committee, Plant Health Committee, Hort Innovation, and peak industry bodies and grower groups. The Council prepares a formal report against each implementation plan annually to assist in reviewing progress against the strategy's Strategic Framework and to identify priorities for the financial year ahead.

Groups contributing to implementation plan activities	
<b>DAWE</b>	Australian Government Department of Agriculture, Water and the Environment
<b>States &amp; Territories</b>	State and territory governments and their respective agricultural departments
<b>NFFC</b>	National Fruit Fly Council – representatives from the federal, state and territory governments, Hort Innovation, industry and Plant Health Australia ( <b>PHA</b> )
<b>PHC</b>	Plant Health Committee - Plant Health Managers (federal, state and territory governments)  <b>SDQMA</b> – Sub-Committee on Domestic Quarantine and Market Access  <b>SPHD</b> – Sub-Committee on Plant Health Diagnostics  <b>SNPHS</b> – Sub-Committee on Plant Health Surveillance
<b>ATGA</b>	Australian Table Grapes Association
<b>AMIA</b>	Australian Mango Industry Association
<b>Berries Australia</b>	A joint venture between Australian Blueberry Growers' Association (ABGA), Strawberries Australia Inc (SAI) and Raspberries and Blackberries Australia Incorporated (RABA)
<b>Citrus Australia Ltd</b>	The recognised peak industry body representing the nation's commercial citrus growers
<b>SA Horticulture Coalition</b>	The peak industry organisation for horticulture in South Australia
<b>Steritech</b>	Irradiation treatment provider for industries that require sterilisation and decontamination
<b>Regions</b>	Regional grower groups, local governments and communities supporting fruit fly management
<b>Agriculture Victoria</b>	Victorian Government Department of Jobs, Precincts, and Regions
<b>NSW DPI</b>	New South Wales Government Department of Primary Industries
<b>DPIPWE</b>	Tasmanian Government Department of Primary Industries, Parks, Water and Environment
<b>DPIRD</b>	Western Australian Government Department of Primary Industries and Regional Development
<b>PIRSA</b>	South Australian Government Department of Primary Industries and Regions
<b>QDAF</b>	Queensland Government Department of Agriculture and Fisheries
<b>Hort Innovation</b>	Research and development corporation for Australia's horticulture industry
<b>CSIRO</b>	Commonwealth Scientific and Industrial Research Organisation



# Implementation Plan Progress Report Highlights (June 2020–June 2021)

## 1 - Market access



- Achieved access of cherries to Korea under fumigation protocol from mainland states (except WA) and approval from India for in-transit cold treatment of summerfruit.
- Developed new data packages for fruit flies for table grapes, mandarins, nectarines, apples, plums, and strawberries.
- Released a national Fruit Fly Sterile Insect Technique policy in relation to trade for public consultation.
- Delivered a review of the Interstate Certification Assurance scheme to Plant Health Committee and reviewed several ICA arrangements including Pre-harvest field control and inspection of strawberries (ICA-34), Fumigating with methyl bromide (ICA-04) and the use of systems approaches (e.g. ICA-21).
- Gained Food Standards Australia New Zealand approval for the use of irradiation as a phytosanitary measure for all fruits and vegetables.

## 2 - Management of established fruit fly



- Progressed multiple research projects supporting best-practice of fruit fly management including for smart traps, SIT releases, trapping efficacy, and parasitoids.
- Conducted a beneficiary analysis for eradication of Medfly from Australia and for the SIT Medfly facility in WA.
- Investigated future scenarios for the Qfly SITPlus program and associated benefit-costs.
- \$6.4 million secured for fruit fly area wide management activities under Victoria's Fruit Fly Strategy 2021–2025.

## 3 - Prevention, preparedness and response



- Endorsement of a new Exotic Fruit Flies in the Torres Strait Response Program for a five-year period 2021–2026.
- Maintenance of thousands of fruit fly traps and reporting across Australia for early detection of exotic species and spread of established species.
- Production of a Medfly preparedness plan by Victoria, and state/territory governments worked to align their procedures with the new National Fruit Fly Management Protocols.
- Eradication of Qfly fruit fly outbreaks in Western Australia.
- Coordination of large-scale response to Qfly and Medfly outbreaks in South Australia.

## 4 - Research



- Commissioned six projects under the \$13M Strengthening Australia's Fruit Fly Management System Research Program.
- Commissioned a project on Preparedness for oriental fruit fly and exotic flies.
- Hosted a "Fruit Fly Chemical Ecology Online Workshop" by the ARC Centre for Fruit Fly Biosecurity Innovation.
- Identified fruit fly research needs from growers during a series of online workshops.

## 5 - Surveillance



- Completed a review of the exotic fruit fly surveillance design and methodology in collaboration with the Subcommittee on National Plant Health Surveillance.
- Commenced review of trapping networks in several jurisdictions and proceeded with a Lure and Bait Technology working group.
- Progressed the collection of state and territory government fruit fly trapping data into a single system (AUSPestCheck™).

## 6 - Diagnostics



- National Plant Biosecurity Diagnostics Network has 547 members from 40 different organisations across Australia and South East Asia - its website hosted several thousand member sessions in 2021–22.
- Achieved NATA accreditation for Biosecurity Queensland Fruit Fly Laboratory for the diagnosis of exotic fruit fly.

## 7 - Communication and engagement



- Finalised the internal communication and stakeholder engagement framework for the delivery of the Australian government's Smart Fruit Fly Management measure.
- Implemented regional specific fruit fly communication strategies, including for metropolitan and regional areas of Victoria and South Australia, outbreak areas in Western Australia, and communities in Tasmania.
- Delivered SITPlus webinar and media release (34 pieces of coverage and 15 radio and TV broadcasts- reaching more than 1 million people).

## 8 - Cooperation



- Shared information with affected industries and governments on the Exotic Fruit Flies in Torres Strait Eradication program.
- Held regular national government forums to consider fruit fly and other plant health issues via the National Biosecurity Committee and Plant Health Committee.



# Council Key Achievements (June 2020-June 2021)

## Webinar Series



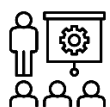
Six webinars held, "Research program for strengthening Australia's Fruit fly system", "Sterile Insect Technique for Mediterranean Fruit Fly and Qfly", "Phyosanitary irradiation", "Interstate Certification Assurance Scheme", "Webinar on biocontrol program", and the "National Fruit Fly Strategy 2020-25".

## Regional workshops



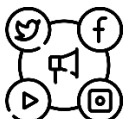
Conducted 12 online regional grower workshops with over 100 growers and grower representatives to gather information about on-farm fruit fly issues and priorities.

## East-West distribution workshops



Nine online workshops conducted to discuss the East-West fruit fly distribution profile in international trade negotiations and consider preparedness for a Medfly outbreak in an eastern state.

## Communication and Media engagement



Posted 13 e-newsletters and achieved a 24% increase in subscribers. Shared 80 tweets on the Prevent Fruit Fly Twitter account and increased followed by 8%. Distributed two industry-specific fruit fly articles that were developed by Council.

## Revised National Fruit Fly Strategy and Action Plan



Launch of a new National Fruit Fly Strategy 2020-2025 and associated Implementation Plan 2020-21 in November 2020.

## Prevent Fruit Fly Website



Updated the Prevent Fruit Fly website to better fit with the themes of the National Fruit Fly Strategy including a separate page for each priority area. The website had 54,406 page views and 30,213 users, an increase from last year of 351% and 393% respectively.

## National Fruit Fly Symposium



Delivered the 2021 National Fruit Fly symposium online on 4-6 May 2021 – involving over 420 registrants, 38 speakers, and nine hours of content.

## Membership



Council expanded its industry membership to include Brett Kennedy (SA Riverland Fruit Fly Coordinator), Brett Squibb (Tasmania apple grower) and David Daniels (General Manager of Market Development for Citrus Australia).

## Council Meetings



The Council met six times in the last reporting period, both virtually and through hybrid meetings with virtual and face-to-face attendance, including two extraordinary out-of-session meetings for high-priority fruit fly issues.



# The strategic framework

## 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



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

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

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



### 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.*



### IMPLEMENT NATIONAL SYSTEMS THAT SUPPORT MARKET ACCESS

Being able to provide 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:** *No critical non-conformance in the national fruit fly assurance system.*



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

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

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



# Priority areas

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

## 1. Market access



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

## 3. Prevention, preparedness and response



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

## 2. Management of established fruit fly



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

## 4. Research



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

## 5. Surveillance



Ensure a nationally consistent surveillance framework that provides clarity around fruit fly distribution, prevalence and control.

## 6. Diagnostics



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

## 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.

## 8. Cooperation



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



## SWOT analysis 2021-22

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• <b>National focus:</b> Renewed national commitment to fruit fly cooperation, including funding to strengthen the national fruit fly system.</li> <li>• <b>Reputation:</b> Recognition of East-West pest distribution profile and workable treatment protocols for international market access.</li> <li>• <b>Expertise:</b> A network of experienced and knowledgeable people in managing fruit fly and/or maintaining freedom from unwanted pest fruit flies.</li> <li>• <b>Strategic:</b> Revised National Fruit Fly Strategy and engaged National Fruit Fly Council to monitor and provide advice on Strategy implementation.</li> <li>• <b>Research:</b> Strong national R&amp;D programs.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Funding:</b> Limited ongoing funding for national projects/programs.</li> <li>• <b>Complex system:</b> Managing the varied interests across the range of differing fruit fly status and host vulnerabilities.</li> <li>• <b>Inter-dependence:</b> System success relies on cooperation across governments, industry, communities and research funders.</li> <li>• <b>Competition:</b> Fruit flies are one of many pests to be resourced and cost-benefits are often poorly understood.</li> <li>• <b>Pest management:</b> Inadequate strategies to equip for and manage a changing fruit fly landscape.</li> <li>• <b>Reactivity and inflexibility:</b> Difficult to gain agreement and momentum for strategic change.</li> <li>• <b>Lack of clarity:</b> On common national outcomes and goals as well as roles and responsibilities.</li> <li>• <b>Complacency:</b> Ongoing competition for attention from industries and governments.</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• <b>Coordinated research:</b> levy funded research through Hort Innovation and \$13M government funded research program to June 2022.</li> <li>• <b>National system improvements:</b> \$10.4M Commonwealth government funding for policy and system capability developments.</li> <li>• <b>SIT:</b> Maturity of the Qfly SIT program and finalising the SIT policy.</li> <li>• <b>Medfly eradication:</b> ABARES Analysis of technical feasibility and cost-benefit of eradication of Medfly.</li> <li>• <b>Sustainable funding:</b> Consideration of options to fund national activities.</li> <li>• <b>Improved communication:</b> Better coordination of communication and engagement amongst governments, industry, research, and communities.</li> <li>• <b>Area wide management:</b> Increase support for programs to address urban/peri-urban risks.</li> <li>• <b>Improved market access:</b> Negotiation of international protocols, review of the domestic ICA system, consolidate audit requirements.</li> <li>• <b>General surveillance:</b> Recognition and use of non-government surveillance data and build assurance on existing national trapping systems.</li> <li>• <b>Build on existing successes:</b> E.g. exotic fruit fly system/Torres Strait program</li> <li>• <b>Consolidate preparedness work:</b> Connect and complete activities for highest risk areas.</li> <li>• <b>On-farm management tools:</b> Identify gaps and partner with R&amp;D companies and regulators to resolve these.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Exotic incursion:</b> Lack of preparedness for an exotic fruit fly incursion outside of the Torres Strait; not prepared for impacts on growers, markets, supply chains, etc</li> <li>• <b>Inadequate response:</b> Loss of ongoing industry support for the Exotic Fruit Fly in Torres Strait Eradication Program (concludes June 2021).</li> <li>• <b>Loss of market access:</b> Unworkable protocols or loss of market confidence in current protocols.</li> <li>• <b>Pest free areas:</b> Loss of market confidence in existing pest free areas.</li> <li>• <b>SIT:</b> Lack of strategic planning for, and/or loss of ongoing funding for, Medfly and/or Qfly SIT programs.</li> <li>• <b>Minor species:</b> Risk of minor native species impacting market access.</li> <li>• <b>Domestic:</b> Poor stakeholder cooperation on domestic fruit fly issues.</li> <li>• <b>Climate change:</b> Potential increase to the geographic range for fruit fly and corresponding expansion of horticultural production areas.</li> <li>• <b>Agrichemical loss and MRL limitations:</b> Unprepared for domestic impacts by continued chemical changes.</li> <li>• <b>Misinformation:</b> Via media or through industry/regulatory channels.</li> <li>• <b>Lack of engagement:</b> With communities in peri-urban areas about off-farm fruit fly issues which create "on" farm impacts for producers.</li> </ul>



# 1. Market access



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

Australia has strong domestic and international biosecurity systems that are vital for supporting market access for fruit fly affected industries. These systems need to reflect internationally accepted standards and protocols, uphold risk management principles, and be transparent and scientifically robust in order to maintain confidence among domestic and international trading partners. To achieve this, it is important that fruit fly policy, legislation and operations meet market access needs and are continuously improved.

Key stakeholder activities		
Activity	Lead/Support	Delivery
Create awareness for generic insect and fruit fly treatment schedule for irradiation while supporting the inclusion of new non insect pests with relevant research.	Steritech	Ongoing
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	Ongoing
Explore the strategic and technical application of irradiation as a fresh produce fruit fly treatment at national irradiation forum.	Steritech	Late 2022
Continue to maintain and fully implement heightened border inspections through to 2021/2022 as one of Tasmanian governments highest biosecurity priorities to maintain Tasmania's pest free status with respect to fruit fly.	DPIPWE Tasmania	2021/22
Continue to work with the Australian Government as well as other governments and industry contributing to the national progression of the fruit fly management system.	DPIPWE Tasmania	Ongoing
Develop new and amend existing Interstate Certification Assurance (ICA) and CA to meet market access needs for NSW growers.	NSW DPI	Ongoing
Undertake Risk analysis to support proposed market access tools proposed by other jurisdictions.	NSW DPI	Ongoing
Continue to explore and develop systems approaches to fill the void left by chemical losses.	NSW DPI	Ongoing
Provide support in market access protocol development where warranted.	NSW DPI	Ongoing
Review of several domestic ICA arrangements which do not include a recognised end-point treatment to validate their use within Pest Free Area's (PFAs) for fruit flies.	PHC Working Group	Ongoing
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.	PIRSA/Agriculture Victoria	Ongoing
Develop an improved set of domestic trade arrangements for Medfly based on the existing ICA arrangements that are accepted for Queensland fruit fly.	PIRSA	Ongoing



Key stakeholder activities	Key stakeholder activities	Key stakeholder activities
Activity	Activity	Activity
<i>Hort Innovation AM19002</i> Building capacity in irradiation pathways for export – Aims to build confidence in, acceptance, and capacity in the use of phytosanitary irradiation for market access.	Agriculture Victoria / Hort Innovation	Ongoing
<i>Hort Innovation AM17001</i> Developing a national systems approach for meeting biosecurity requirements to access key Asian Markets.	CSIRO / Hort Innovation	Ongoing
<i>Hort Innovation MT14052</i> Essential market access data packages.	QDAF / Hort Innovation	Ongoing
<i>Hort Innovation ST15030</i> National Medfly R&D Centre.	Murdoch University / Hort Innovation	Ongoing
Negotiate international market access protocols for fruit fly that maintain, improve or open market access.	DAWE	Ongoing
Communicate international market access requirements for fruit fly and associated issues to industry and state/territory governments.	DAWE	Ongoing
Strengthen current market access data packages and address any perceived gaps to support market access negotiation of international market access.	DAWE	Ongoing
Finalise the stabilisation phase of Australia's National Fruit Fly Management Protocols.	DAWE/States & territories	Ongoing
Seek acceptance of Australia's National Fruit Fly Management Protocols from trading partners.	DAWE	Ongoing
Monitor national fruit fly system assurance activities that underpin international market access, including obligations to demonstrate pest status.	DAWE/States & territories	Ongoing
Investigate and rectify areas of non-compliance identified in the national and domestic system that underpin market access.	DAWE & PHC/ States & Territories	Ongoing
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.	DAWE/PHC & Industry	Ongoing
Monitor and report against the domestic phytosanitary system for fruit fly through the National ICA Audit Program (NIAP).	PHC/ States & Territories	Ongoing
<i>Hort Innovation AM17001</i> Developing a national systems approach for meeting biosecurity requirements to access key Asian Markets.	CSIRO / Hort Innovation	Ongoing



## 2. Management of established fruit fly



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

Better understanding of established fruit flies helps to improve the effectiveness of control methods and tools. It is important that growers have a range of management and disinfestation options to control fruit fly and maintain or gain access to markets. These options must be economical and underpinned by evidence and confidence in supporting assurance systems.

Key stakeholder activities		
Activity	Lead/Support	Delivery
Assist national retailers in utilising ICA-55 as a highly reliable EPT alternative for current crops and pathways that have been subject to biosecurity recalls due to failed treatments.	Steritech	Ongoing
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 investigation of sustainable funding mechanisms for industries to secure funding for biosecurity activities.	Agriculture Victoria	September 2021
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	Ongoing
In collaboration with Local Land Services (LLS) and Growers DPI run weekend information stalls targeting backyard growers in the MIA and Sunraysia areas.	NSW DPI	Spring 2021
Continue to provide Management information from DPI and LLS website.	NSW DPI	Ongoing
Advise industry of any relevant advancements in management practices.	NSW DPI	Ongoing
<i>Hort Innovation TG19001</i> 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 / Hort Innovation	Ongoing
<i>Hort Innovation FF17001</i> Post factory pilot SITplus fly production.	Macquarie University / Hort Innovation	Ongoing
<i>Hort Innovation FF18003</i> SITplus production facility – proof of concept.	Two contracts PIRSA Western Sydney University	Ongoing
<i>Hort Innovation MT19003</i> Parasitoids for the management of fruit flies (Diptera: Tephritidae) in Australia.	Agriculture Victoria / Hort Innovation	Ongoing



Key stakeholder activities		
Activity	Lead/Support	Delivery
Identify and promote best-practice in-field control based on current and emerging research and consistent with protocol requirements.	Industry/Researchers & Hort Innovation	Ongoing
Connect Agriculture Victoria researchers with Pest Scouts to provide input and feedback into short term research project into trapping strategy for table grapes.	Australian Table Grape Association (ATGA)	June-July 2021
Connect Agriculture Victoria researchers with local agronomists to provide input and feedback into short term research project into trapping strategy for table grapes.	Australian Table Grape Association (ATGA)	June-July 2021
Grower workshop with updates from Agriculture Victoria researchers re: mass releases and trapping strategy plus updates from the Greater Sunraysia Pest Free Area (GSPFA).	Citrus Australia, Australian Table Grape Association (ATGA), AgVic & GSPFA	10 August 2021



### 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 to 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		
Activity	Lead/Support	Delivery
Support foreign trading partner governments and industry to understand and develop irradiation treatment capabilities as a highly reliable and effective control for exotic insect pests including fruit fly.	Steritech	Ongoing
Advocate the establishment of a secure pathway for out of state fruit production to access the Melbourne X-Ray facility for emergency preparedness.	Steritech	Ongoing
Agriculture Victoria is working with New South Wales Department of Primary Industries on a Mediterranean fruit fly preparedness and response simulation activity which is anticipated to occur in August/September 2021.	NSW DPI/ Agriculture Victoria	August/ September 2021
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.	DPIPWE Tasmania	DPIPWE Tasmania
Convert existing trapping in the Sydney basin, MIA and Sunraysia to trap base.	NSW DPI	July/Sept 2021
Implement reviewed trapping grid in the Sydney basin.	NSW DPI	July/Sept 2021
Implement revised trapping grid in Sunraysia.	NSW DPI	December 2021
Replace Pestmon with MAXX for efficiencies in diagnostic and reporting.	NSW DPI	December 2021
Update incursion response in line with national protocols.	NSW DPI	June 2021
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	Ongoing
Continue to maintain trapping grid for exotic fruit flies in metro Adelaide and in the SA Riverland.	PIRSA	Ongoing
Continue to invest significantly to eradicate 11 outbreaks of Medfly and six outbreaks of Queensland fruit fly in South Australia.	PIRSA	Ongoing
Implement incursion and eradication procedures for exotic incursions on an as needs basis.	States & Territories/ PHA, DAWE, Industry	As needs basis



Key stakeholder activities		
Activity	Lead/Support	Delivery
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 (NAQS) surveillance.	QDAF/DAWE, PHA	June 2022 (annually until June 2026)
<i>Hort Innovation FF18001</i> Biosecurity preparedness for oriental fruit fly and exotic fruit flies	NSW DPI / Hort Innovation	Ongoing
<i>Hort Innovation ST19017</i> 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 / Hort Innovation	Ongoing
Engage with stakeholders on pest prioritisation of exotic fruit flies	PHA/DAWE	As needs basis
Communicate potential or identified areas of risk of exotic fruit fly incursion	DAWE/QLD	Ongoing
Implement incursion and eradication procedures in pest free areas in accordance with Australia's National Fruit Fly Management Protocols	States and territories/DAWE, Industry	As needs basis
Administer the Exotic Fruit Fly in Torres Strait Response Plan to eradicate incursions of exotic fruit fly species from the Torres Strait in response to detections from NAQS surveillance	QDAF/DAWE, PHA	June 2024
Formalise a national Sterile Insect Technique (SIT) policy for consistent application of this technology	DAWE/PHC	End of 2021
Deliver fruit fly control responsibilities in the areas of Victoria adjacent to Riverland Pest Free Area	Agriculture Victoria/ PIRSA	Ongoing
Monitor and address non-compliance and/or failures associated with domestic trade regulations.	PHC, SDQMA	Ongoing
<p>Stage 1: Infestation Proofing of the SA Produce market site to ensure continuity of trade during outbreak conditions - now complete.</p> <p>Stage 2: Investigate the viability of establishing an end-point treatment precinct at the South Australian Produce Market (SAPML) as a risk mitigation strategy to support continuity of trade and export market access from SA during fruit fly incursions. SAPML is working with Horticultural Coalition of SA, government, growers, suppliers, and industry stakeholders to implement best practice in fumigation processes and technology.</p> <p>Stage 3: (around 2023) will involve investigating other end to end point treatment technologies for local SA Growers to enable increased access to export markets</p>	Horticulture Coalition of SA / SA Produce Market	June 2022
Map all commercial and abandoned mango orchards in Australia (including Cape York Peninsula) to assist with managing biosecurity threats	Australian Mango Industry Association /Uni of New England (UNE)/Central Queensland University (CQU)	Dec 2022



## 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. It is essential that capability and capacity is maintained, and that research, development and extension is prioritised, coordinated and strengthened through national and international research linkages.

Key stakeholder activities		
Activity	Lead/Support	Delivery
<p>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:</p> <p>A national biocontrol program to manage pest fruit flies in Australia.</p> <p>Parasitoids for the management of fruit flies in Australia.</p> <p>Trapping efficacy in table grape vineyards for area wide management of Queensland fruit fly.</p> <p>Phenology, demography, and distribution of fruit flies (Metabarcoding and LAMP).</p> <p>A post factory pilot for SITPlus.</p> <p>Mortality of Queensland fruit fly in cherries following hydrocooling and packhouse surveillance.</p> <p>Host suitability of strawberry and Rubus for Queensland fruit fly.</p>	Agriculture Victoria	2022
Contribute to Post factory pilot of SIT.	NSW DPI	Ongoing
Support to phenology, demography and distribution of fruit flies project.	NSW DPI	Ongoing
Assist in development of an irradiation diagnostic tool.	NSW DPI	Ongoing
Undertake research into the use of fruit fly baits and lures to better inform the use of these tools during outbreak response.	PIRSA	TBA
<i>Hort Innovation MT14052</i> Essential Market Access Data Packages.	QDAF / Hort Innovation	2016-2022
<i>Hort Innovation BB19001</i> Additional cold treatment schedule for Queensland Fruit Fly in blueberries for market access to China.	QDAF / Hort Innovation	2020-2022
Phenology, demography and distribution of Australia's fruit flies.	QDAF	2020-2022
Efficacy data to support methyl bromide disinfestation treatments against fruit flies.	QDAF	2020-2022
<i>Hort Innovation FF1900</i> Sex determination of fruit fly pupa using Near Infrared Spectroscopy.	QDAF/ Hort Innovation	2019-2021
Australian Centre for International Agricultural Research (ACIAR) Development of area wide management approached for fruit flies in mango for Indonesia, Philippines, Australia and the Asia Pacific Region.	QDAF	2019-2023



Key stakeholder activities		
Activity	Lead/Support	Delivery
International Atomic Energy Agency (IAEA) Technical Cooperation Project in the Asia and Pacific promoting Food Irradiation by Electron Beam and X-Ray Technology to Enhance Food Safety, Security and Trade.	QDAF	2019-2022
IAEA Coordinated Research Project (CRP): Irradiation Technology for Phytosanitary Treatment of Food Commodities and Promotion of Trade.	QDAF	2020-2024
Coordinate the Research Program under the Intergovernmental Agreement on Strengthening Australia's Fruit Fly Management System	DAWE	June 2022
Host a fruit fly research exchange forum ( <i>8<sup>th</sup> Australian Biology of Tephritid Fruit Flies Conference</i> ) in 2022.	Researchers/ Queensland University of Technology. Queensland Department of Agriculture and Fisheries.	2022
IAEA Coordinated Research Project (CRP): Irradiation Technology for Phytosanitary Treatment of Food Commodities and Promotion of Trade.	QDAF	2020-2024



## 5. Surveillance



Ensure a nationally consistent surveillance framework that provides clarity around 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 access to markets. 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		
Activity	Lead/Support	Delivery
Undertake a review of the fruit fly trapping network to ensure that the network is fit for purpose and provides the best outcomes for Victoria. The re-design of the network will continue to be primarily focussed on early detection of exotic flies but may also provide data to assist in the management of established fruit fly species.	Agriculture Victoria	Ongoing
Maintain Tasmania's permanent fruit fly trapping grid with associated maintenance as required.	DPIPWE Tasmania	DPIPWE Tasmania
Continue surveillance through trapping with more effective support programs.	NSW DPI	Ongoing
Streamlining of diagnostics and reporting.	NSW DPI	Ongoing
Providing timely reporting of any incursions.	NSW DPI	Ongoing
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 (All jurisdictions)	Ongoing
Ensure surveillance meets national standards by updating Operating procedures.	NSW DPI	Ongoing
Continue to maintain a trapping grid of over 7,500 fruit fly traps state-wide.	PIRSA	Ongoing
Continue to maintain trapping grid for exotic fruit flies in metro Adelaide and in the SA Riverland.	PIRSA	Ongoing
Facilitate and support integrated fruit fly surveillance programs for government and industry stakeholders using AUSPestCheck™.	All jurisdictions	Ongoing
Undertake surveillance of high-risk pathways for exotic fruit flies, including ports of entry surveillance conducted by States and Territories and the Torres Strait surveillance conducted by NAQS.	DAWE/States and territories	Ongoing
Implement domestic trapping consistent with Australia's National Fruit Fly Management Protocols/pest freedom requirements.	PHC/DAWE	Ongoing
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	Ongoing



## 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		
Activity	Lead/Support	Delivery
Maintain diagnostic capacity for rapid diagnosis of fruit fly. This includes dedicated specialist diagnostic expertise.	DPIPWE Tasmania	DPIPWE Tasmania
Increase efficiencies in diagnostics and reporting through support programs.	NSW DPI	Ongoing
Ensure diagnostic and reporting is in line with national protocols.	NSW DPI	Ongoing
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	2021
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	2022
Continue to provide maintenance and support the Fruit Fly identification website.	PHA	Ongoing
Incorporate a national diagnostic standard for Sterile Insect Technique fruit flies in the National Fruit Fly Management Protocols.	DAWE/PHC	Ongoing
<i>Across all disciplines:</i> Expand the National Plant Biosecurity Diagnostic Network (NPBDN) to be the central point for all activities within the national plant biosecurity diagnostics system.	PHC/SPHD	Ongoing
<i>Across all disciplines:</i> Provide a career pathway for diagnosticians, including through the National Professional Development Program.	PHC/SPHD	Ongoing
<i>Across all disciplines:</i> Establish an expert group to develop and maintain a record of emerging plant pests that pose a potential threat to plant health in Australia.	PHC/SPHD	Ongoing
<i>Across all disciplines:</i> Identify, monitor and improve the scope and role of individual collections to support trade, biosecurity, and the national plant diagnostic system.	PHC/SPHD	Ongoing
<i>Across all disciplines:</i> Develop mechanisms to improve the capture of data from various sources including diagnostics, surveillance, collections, research and area freedom activities.	PHC/SPHD	Ongoing
<i>Across all disciplines:</i> Continue to verify the performance of diagnostic laboratories for identification of species of interest through appropriate quality management systems.	PHC/ ANQAP	Ongoing



## 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 the uptake of innovation and creation of shared outcomes. It is also important that information reaches all those who contribute to or benefit from fruit fly management systems including consumers, wholesalers, retailers, exporters, importers, transport operators and treatment providers.

Key stakeholder activities		
Activity	Lead/Support	Delivery
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	Ongoing
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 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	Ongoing
<p>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.</p> <p>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 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>	PIRSA	Campaign to be in market July-Dec 2021



Key stakeholder activities		
Activity	Lead/Support	Delivery
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.	DPIPWE Tasmania	Ongoing
Provide DPI representatives to the Sunraysia industry meetings.	NSW DPI	Ongoing
Undertake community engagement through events including stalls to target backyard growers and at research centres.	NSW DPI	Ongoing
Provide information through media and personally through Industry development Officers, LLS biosecurity and Compliance staff.	NSW DPI	Ongoing
Provide support to Grower groups in managing hot spots and increasing public awareness of fruit fly and its control.	NSW DPI	Ongoing
Continue to provide maintenance and support the <a href="#">Prevent Fruit Fly website</a>	PHA	Ongoing
Keep stakeholders informed and engaged on Smart Fruit Fly Management measure activities and progress.	DAWE	June 2022
Undertake national engagement and extension activities to strengthen fruit fly management in Australia.	NFFC/DAWE	June 2022
Ongoing communication of Fruit Fly related research outcomes, news etc thru the industry's fortnightly email newsletter, website and quarterly magazine, where and when appropriate.	ATGA	Ongoing
Distribution of 2020 GFSPFA poster and flyer reintegrating QFF bait spraying into table grape pest management programs.	ATGA	Ongoing



Key stakeholder activities		
Activity	Lead/Support	Delivery
Where and when appropriate, inclusion of Fruit Fly information into workshops for table grape growers nationally.	ATGA	Ongoing
Respond to industry enquiries re inconsistencies between: Queensland fruit fly phytosanitary requirements for export and the expectations of Area Wide Management and feedback to GSPFA.	ATGA	Ongoing
Respond to industry enquiries re incompatibility between: Queensland fruit fly spray requirements to comply with ICA's and export MRL's and feedback to GSPFA.	ATGA	Ongoing
Berries Australia communicates outcomes of fruit fly related research, news and other relevant information through the quarterly Australian Berry Journal, <a href="#">Berries Australia website</a> and monthly e-newsletters. Regional specific information is also shared with growers and industry through the industry development officer network.	Berries Australia	Ongoing
Berries Australia is represented on the Yarra Valley Regional Governance Group by the Victorian Industry Development Officer.	Agriculture/ Industry	Ongoing
Relevant industry Biosecurity Plan.	Industry	Ongoing
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 (AMIA)	Ongoing
Where and when appropriate, inclusion of Fruit Fly information into workshops for table grape growers nationally.	ATGA	Ongoing
Respond to industry enquiries re inconsistencies between: Queensland fruit fly phytosanitary requirements for export and the expectations of Area Wide Management and feedback to GSPFA.	ATGA	Ongoing
Respond to industry enquiries re incompatibility between: Queensland fruit fly spray requirements to comply with ICA's and export MRL's and feedback to GSPFA.	ATGA	Ongoing



## 8. Cooperation



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

A coordinated national system requires cooperation across disciplines and geographic boundaries towards achieving agreed common goals. Industry, government, researcher and community forums all play a role in raising awareness of fruit fly issues, determining priorities, directing and providing resources and monitoring progress. Collectively these forums represent the national system and are fundamental sources of information and influence which must be connected to one another and be able to serve the national interest.

Key stakeholder activities		
Activity	Lead/Support	Delivery
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
Victoria is working with New South Wales on a cross border Medfly preparedness exercise.	NSW DPI/ Agriculture Victoria	Ongoing
Contribute to national discussion on fruit fly management through forums such as National Fruit fly Council activities.	NSW DPI	Ongoing
Develop and amend market access protocols in collaboration with other states and territories.	NSW DPI	Ongoing
Provide expert advice on AFFTAC and research projects.	NSW DPI	Ongoing
Continue to support regional consultative mechanisms in South Australia to engage with industry and other stakeholders.	PIRSA	Ongoing
Coordinate fruit fly management within each state, including provision of information to stakeholders.	States & Territories/ PHC	Ongoing
<i>Hort Innovation FF20000</i> National Fruit Fly Council – Phase 4 [note: not yet contracted – expected in October].	PHA / Hort Innovation	To be contracted (October 2021)
<i>Hort Innovation HA18000</i> National Fruit Fly Council – Phase 3 (runs until October 2021).	PHA / Hort Innovation	End October 2021
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.	DAWE	Ongoing
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
Victoria is working with New South Wales on a cross border Medfly preparedness exercise.	NSW DPI/ Agriculture Victoria	Ongoing
Contribute to national discussion on fruit fly management through forums such as National Fruit fly Council activities.	NSW DPI	Ongoing







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