

Final Report

National biosecurity plan for the summerfruit industry

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National biosecurity plan for the summerfruit industry (SF17005)

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Public summary

Australia's freedom from many of the exotic pests that affect production overseas provides the summerfruit industry with potential advantages in production yield, quality, and trade. Biosecurity planning provides a mechanism for the summerfruit industry, governments, and other stakeholders to assess current biosecurity practices and future biosecurity needs. The identification, prioritisation, and management of key biosecurity risks, through development and implementation of a biosecurity plan for the industry is a critical industry biosecurity preparedness activity. When coupled with Summerfruit Australia Limited (SAL) being a Plant Health Australia (PHA) member and a signatory to the Emergency Plant Pest Response Deed, biosecurity planning provides the summerfruit industry with the framework for risk mitigation and management of the impact of potential incursions.

Technical summary

For the review of the existing biosecurity plan and development of new Biosecurity Plan for the summerfruit industry:

- Summerfruit industry members and scientific experts met via teleconference to identify high priority pests (exotic and established) for the industry
- post border biosecurity capability assessments were undertaken for all high priority pests to inform the development of the biosecurity implementation table of activities to mitigate risk and prepare for response (undertaken by Plant Health Australia in consultation with industry and government)
- a shared approach to implementing the biosecurity plan was developed through a meeting of the Biosecurity Implementation Group (BIG) comprising industry representatives and technical experts and the relevant delegates of the State Plant Health Managers

The Biosecurity Plan for the Summerfruit industry (v2.0) was published in September 2019 following endorsement by industry (through Summerfruit Australia Limited and the Canned Fruits Industry Council of Australia) and Plant Health Committee (PHC).

This project also facilitated the Summerfruit Biosecurity Reference Panel (BRP) with regular meetings held during the life of the project. The purpose of the BRP meetings was to review the plans regularly to ensure information contained in the plans was current and amended when appropriate. The BRPs also monitored the progress of actions outlined in each of the BPs. The most recent version of the Biosecurity Plan for the Summerfruit industry is version 2.4.

Keywords

summerfruit, canned fruit, biosecurity plans, exotic pests, risks, preparedness

Introduction

The Australian summerfruit industry is free from a range of exotic pests and diseases, which have the potential to cause significant impact on production if they were present. The summerfruit industry is focused on building its export markets, and it is important the industry maintain its freedom from a range of exotic pests as well as being able to manage and monitor key established pests. Maintenance of their plant health status is important to ensure the sustainability of the industry. Biosecurity planning is a key risk mitigation strategy that gives the industry the best opportunity of future viability and sustainability. This project will review the biosecurity plan of the summerfruit industry and develop a new biosecurity plan.

The review and development of this new biosecurity plan provides the opportunity to bring the industry and government together in a collaborative framework where knowledge and ideas are freely shared. As a part of this project, exotic pests (invertebrates and pathogens) are regularly assessed by technical experts and prioritised to identify high priority exotic pests, as well as established pests and weeds of biosecurity significance. Having identified the pests that pose the greatest threat to the industry, an expert group was convened from government and industry to agree to mitigation measures to protect against them. The biosecurity plan has been reviewed regularly over the life of the project through the efforts of the Summerfruit Biosecurity Reference Panel (BRP).

Methodology

The Summerfruit Biosecurity Plan has been developed based on National Industry Biosecurity Guidelines developed by PHA and are consistent with other biosecurity plans developed or reviewed recently. Additions or modifications to the generic template were determined through the development process in consultation with industry and government.

The Summerfruit Biosecurity Plan cover the following topics:

- Threat Summary Tables - list of exotic pests (invertebrates and pathogens) and high priority pests
- Established pests of biosecurity significance
- Preparedness status – identification of documents prepared, and activities implemented to improve preparedness for exotic pests
- Biosecurity Implementation Plan - describes current and future preparedness and response activities

The process of reviewing and developing these BPs involved:

1. Identification of representatives from the summerfruit and canned fruit industries, governments, and scientific experts to form Technical Expert Groups (TEG) to consider risks associated with exotic and established pests of biosecurity significance.
2. Compilation and review of exotic pest threats to summerfruit (e.g., peaches, nectarines, apricots, plums) into Threat Summary Tables.
3. Development of High Priority Pest (HPP) lists from the Threat Summary Tables. The HPP lists are developed based on the assessment by the TEGs on the entry potential, establishment potential, spread potential and economic impact of each exotic pest. These ratings are then assessed to provide an overall risk rating. Generally, those pests with a high or extreme overall risk rating are included in the list of HPP's.
4. Analysis of biosecurity capacity for each high priority pest in terms of both preparedness and response.
5. Development and review of core components of the biosecurity plans by PHA, in association with the Biosecurity Implementation Groups (BIG). These components include the HPP lists, lists of established pests and weeds, Biosecurity Implementation Plan, and the Preparedness status, which identifies available resources and gaps in resources.
6. Development of a shared approach to implementing biosecurity through meetings of Biosecurity Implementation Group (BIG) for the summerfruit industry, comprising industry and state/territory government representatives.
7. Endorsement of the biosecurity plans by the industries (through Summerfruit Australia Limited and the Canned Fruits Industry Council of Australia), and government, through the Plant Health Committee (PHC).
8. Launch at an appropriate industry event, supported by media releases.
9. Review of implementation activities by industry and state government representatives through the biosecurity reference panel process. Biosecurity Reference Panel meetings will be held to review emerging pests, determine biosecurity priorities, and monitor activities recommended in both biosecurity plans.

The project will link into the Biosecurity Preparedness Portal which was developed by PHA. The Summerfruit industry will have a site within the portal which will act as a repository for the:

- Biosecurity plan
- High priority pest list
- Biosecurity implementation plan
- Preparedness status table
- Established pests of biosecurity significance
-

The Biosecurity Preparedness Portal is an on-line support tool that will assist in coordinating and monitoring the activities of each Biosecurity Reference Panel.

Consultation with each industry, government departments and scientific experts was sought throughout the development process to ensure that stakeholders have input into the document. Members of the Summerfruit Technical Expert Group, Biosecurity Implementation Group and Biosecurity Reference Panel are included in the tables below.

Table 1. TEG, BIG and BRP members for the review of the Summerfruit Biosecurity Plan.

NAME	ORGANISATION	AREA OF EXPERTISE	MEMBER OF		
			TEG	BIG	BRP*
Trevor Ranford	Summerfruit Australia	Industry			✓
John Moore	Summerfruit Australia	Industry	✓	✓	
Mark Wilkinson	Summerfruit Australia	Industry	✓	✓	✓
Chris Pollard	The Canned Fruits Industry Council of Australia	Industry		✓	✓
Russell Fox	Horticultural Agronomist	Production	✓	✓	
Elizabeth Minchinton	Agvic - DJPR	Pathologist	✓	✓	
Kyla Finlay	Agvic - DJPR	Entomologist	✓	✓	✓
David Williams	Agvic - DJPR	Entomologist	✓	✓	
Alexei Rowles	Agvic - DJPR	Policy			✓
Lana Russell	Agvic - DJPR	Policy			✓
Fiona Constable	Agvic - DJPR	Pathologist			✓
Solomon Balagawi	NSW DPI	Entomologist			✓
Mandy Christopher	QDAF	Risk analysis	✓	✓	
Siddique Abu-Baker	QDAF	Pathologist	✓	✓	
Christine Horlock	QDAF	Biosecurity			✓
Nichole Hammond	WA DPIRD	Pathologist	✓	✓	
Fucheng Shan	WA DPIRD	Pathologist			✓
Touhidur Rahman	WA DPIRD	Entomologist			✓
Rodney Turner	PHA	Biosecurity		✓	
Victoria Ludowici	PHA	Biosecurity	✓	✓	
Kathleen DeBoer	PHA	Biosecurity	✓	✓	✓
Stephen Dibley	PHA	Biosecurity			✓
Andrew Vossen	PHA	Biosecurity			✓
Luke McKee	PHA	Biosecurity			✓
Trevor Dunmall	PHA	Biosecurity			✓

*Membership of the BRP changed during the life of the project, subject to availability

The following scientists in table 2 also contributed to the process of pest identification and risk assessment.

Table 1 Scientists and others who contributed information for review of the BP

NAME	ORGANISATION	AREA OF EXPERTISE
Mike Hodda	CSIRO	Nematology
Stacey Anderson	DAFF	Entomology
Wee Tek Tay	CSIRO	Entomology

Results and discussion

This project has provided the summerfruit industry and government with a new Biosecurity Plan for the Summerfruit industry. The key components of the biosecurity plans are the Threat Summary Tables which form the basis for the development of the high priority pest list and the Biosecurity Implementation Plan which describes the current and planned preparedness activities and forms a core component of the biosecurity plan.

The processes used in the development of biosecurity plans is important and the foundation of each biosecurity plan is the Threat Summary Table (TST) which describes the known exotic pests of each industry. The information contained in the TST includes:

- the list of hosts – which has potential implications for the entry, establishment and spread of a pest
- the part of the plant affected – which has potential implications on yield, quality, and trade/market access
- means of movement and dispersal – implications for establishment and spread (distance and time)
- geographic distribution – implications for entry and spread
- vectors present - knowledge of known and potential vectors which may have implications for entry, establishment and spread of a pest, in particular pertinent to some pathogens

This information and the knowledge of technical experts informs the discussion on the appropriate ratings to be applied to the entry potential, establishment potential and spread potential. The ratings applied to the potential economic impact are based on both technical and industry knowledge of the crop and pest.

These four ratings are used to establish the overall risk each pest poses to the crop and industry and the pests which pose the highest risk are termed the high priority pests. These are the pests which are usually the focus for biosecurity.

The implementation plan describes the activities the industry and government plan to implement to strengthen biosecurity preparedness and response capacity and capability.

While the development of the biosecurity plan is a fundamental need for each industry, the strength of the biosecurity planning processes come from the shared approach by industry and government. Ideally the plan should be used to guide future biosecurity activities, ranging from communication and engagement to RD&E. The summerfruit industry has used the biosecurity plan to underpin industry and government biosecurity activities.

Outputs

Table 3. Output summary

Output	Description	Detail
Biosecurity Plan for the Summerfruit (versions 2.0, 2.1, 2.2, 2.3. 2.4)	Biosecurity Plans are developed for the use primarily by the industry organisation and governments	The Biosecurity Plan was developed in the first year of the project. Following this each year the Biosecurity Reference Panel would meet to review the plan. If there were amendments made, then a revised version of the plan was produced.

Outcomes

Table 4. Outcome summary

Outcome	Alignment to fund outcome, strategy and KPI	Description	Evidence
Identification of the range of exotic pests of summerfruit	OUTCOME 2: Industry supply, productivity and sustainability The Australian summerfruit industry has increased profitability, efficiency and sustainability through innovative R&D and sustainable BMPs. Strategy 1: Improve industry preparedness and resilience to biosecurity threats and support a national approach to fruit fly management, including improving access to existing and new markets KPI: Improved industry biosecurity preparedness for exotic plant pests, reducing their impacts in the event of an incursion (e.g., fire blight, Oriental fruit fly, Varroa mite). Reduced impacts of endemic fruit flies, improving productivity, reducing costs and supporting market access	The identification of the exotic pests of summerfruit was undertaken through a literature search, followed by input from a technical expert group with members experienced in summerfruit entomology and pathology.	Participation and informal feedback from industry and governments through the life of the project
Implementation of risk mitigation activities to	As above	The development of risk mitigation measures was	As above

increase the summerfruit industries preparedness and response capabilities		undertaken through a consultative process which focused on the development of biosecurity priorities and activities to improve preparedness and capacity/capability with input from a biosecurity implementation group comprising of members experienced in summerfruit production and biosecurity	
Regular reviews and updating of the summerfruit biosecurity plan	As above	The review of the biosecurity plan and its components was undertaken through a consultative process which focused on ensuring information of important pests was maintained and planned activities monitored. This was undertaken by a biosecurity reference panel comprising of members experienced in summerfruit production, biosecurity, entomology, and pathology	As above

Monitoring and evaluation

Table 5. Key Evaluation Questions

Key Evaluation Question	Project performance	Continuous improvement opportunities
To what extent has the project achieved its expected outcomes?	The project achieved its outcomes by developing a new Biosecurity Plans for the summerfruit industry which was reviewed annually and updated as necessary	As the threats posed by exotic pests change through movement across hosts and/or geographic distribution, the importance to regularly monitor and update biosecurity plans remains important
How relevant was the project to the needs of intended beneficiaries?	Biosecurity planning is important to provide industry and government with the information to plan preparedness and response activities pertinent to the priority exotic pests	As industry and government resources are under pressure it becomes more imperative to continue to review the processes used in developing biosecurity plans. PHA is regularly reviewing aspects of biosecurity planning to account for the changing dynamics of pest/host interactions while gaining industry and government input through efficient and effective methods
How well have intended beneficiaries been engaged in the project?	The intended beneficiaries (industry and government) have been engaged throughout the life of the project and play an important role in providing both technical and industry information to the project	The intended beneficiaries have been engaged through the life of the project. Travel restrictions due to Covid 19 have limited the number of face-to-face meetings, but the use of videoconferencing has been an effective method of engagement.
To what extent were engagement processes appropriate to the target audience/s of the project?	The engagement process is appropriate to the target audience (industry organisations and governments)	Engagement processes are appropriate, but the Covid 19 travel restrictions did impact on the quality of engagement. In the future (without travel restrictions), a blended approach of face to face and videoconference meetings should be planned.
What efforts did the project make to improve efficiency?	The development of biosecurity plans is undergoing a cycle of continuous improvement, both to the process used in developing and reviewing the plans and in ensuring the content of the plan is relevant.	Regular engagement with industry, government and research funders should be encouraged to gain their input into process improvement.

Recommendations

1. PHA continues to work with Hort Innovation and the summerfruit industry to monitor industry biosecurity preparedness and develop a long-term plan to deliver enhanced biosecurity preparedness to industry.
2. PHA to continue to review planning processes to enable agile adaptation of processes to industry and government needs and resource availability.

Intellectual property

No project IP or commercialisation to report.

Acknowledgements

The project team would like to acknowledge the contributions of members of the Technical Expert Group, the Biosecurity Implementation Group, and the Biosecurity Reference Panel. These people have contributed to improving the summerfruit industry's biosecurity preparedness and therefore are contributing to a sustainable future for Australian summerfruit growers.