

## **Final Report**

# **Strategic Agrichemical Review Process (SARP) - Updates**

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MT19008

**Project:**

Strategic Agrichemical Review Process (SARP) – Updates (MT19008)

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## Summary

This project has generated 1 new and 12 updated Strategic Agrichemical Review Process (SARP) reports (as per Table 1) in conjunction with Hort Innovation. This process has:

- Assessed the importance of disease, insects and weeds that can affect the horticultural industry
- Evaluated the availability and effectiveness of fungicides, insecticides and herbicides to control plant pests
- Determined any gaps in the pest control strategy
- Identified new or alternative pesticides to address the gaps.

**Table 1. SARP Reports – 12 Updates, 1 New Report**

Crop	SARP Last Update
Summerfruit	2009
Almond	2012
Avocado	2014
Olives	2014
Onions	2014
Papaya	2014
Lychee	2014
Banana	2014
Macadamia	2015
Passionfruit	2016
Strawberry	2016
Blackberry & Raspberry	2016
Blueberry	NEW

Alternative pesticides should ideally be selected for benefits of:

- Integrated Pest Management (IPM) compatibility
- Improved scope for resistance management
- Sound biological profile
- Residue and trade acceptance domestically and for export

The results of this process will provide the relevant industries with sound pesticide usage for the future that the industry can pursue for registration with the manufacturer, or minor-use permits with the Australian Pesticide and Veterinary Medicines Authority (APVMA).

## Keywords

SARP, pesticides, pests, diseases, weeds, crop protection

## Introduction

Growers of some horticultural crops suffer from a lack of legal access to crop protection products (pesticides). The problem may be that whilst a relatively small crop area is valuable in an agricultural sense, it may not be of sufficient size for Agrichemical companies to justify the expense of registering a product use on that crop. Alternately, the disease, pest, or weed problem may be regional or spasmodic, making Agrichemical companies unwilling to bear the initial high cost of registering suitable pesticides.

Growers may face severe losses from diseases, pests and weeds due to a lack of registered or approved (via a permit) chemical control tools.

Environmental concerns, consumer demands, and public opinion are also significant influences in the marketplace related to pest management practices. Industry IPM practitioners must strive to implement best management practices and tools to incorporate a pest management regime where strategies work in harmony with each other to achieve the desired effects while posing the least risks.

In combination with cultural practices, pesticides are important tools in horticultural production and respective IPM programs. They control the various diseases, insects and weeds that affect crops and can cause severe economic loss in modern high intensity growing operations. Pesticides are utilised during establishment and development, and to maximise quality and customer appeal.

As a consequence of the issues facing the horticultural industry regarding pesticide access, Hort Innovation undertakes regular reviews of the pesticide requirements for various crops via a Strategic Agrichemical Review Process (SARP).

The SARP process identifies diseases, insect pests and weeds of major concern to the horticulture industry. Against these threats, available registered or permitted pesticides are evaluated for overall suitability in terms of IPM, resistance, efficacy, trade, human safety and environmental issues. Where tools are unavailable or unsuitable the process aims to identify potential future solutions. Potential new risks to the industry are also identified.

The results will provide the horticulture industry with a clear outlook of gaps in existing pest control options. This report is not a comprehensive assessment of ALL pests and control methods used in each crop but attempts to prioritise the major problems.

Exotic plant pests, not present in Australia, are not addressed in this document. A biosecurity plan has been developed for the papaya industry in consultation with industry, government and scientists. The Biosecurity Plan outlines key threats to the industry, risk mitigation plans, identification and categorisation of exotic pests and contingency plans. High priority exotic pests have been assessed based on their potential to enter, establish, and spread in Australia (e.g. environmental factors, host range, vectors) and the cost to industry of control measures.

## Methodology

The major objectives of this project for each crop type were:

- Update the current pest and disease priorities
- Update current pesticide options available
- Update Regulatory Risks, MRLs
- Identify potential new solutions to address gaps identified

These objectives were achieved through the following steps for each of the 13 crop types:

1. Industry survey: An internet survey was designed and conducted using Survey Monkey to gather feedback from the industries about their current priorities for diseases, insects, weeds and plant growth regulators.
2. Survey Reports: The results of the online surveys were collated into reports relating to each crop type.
3. Industry Priorities: Survey results were used to update the list of priorities (high, moderate, low). In some cases the survey information was augmented through direct consultation with key industry personnel.
4. Current Solutions: Available pesticides (registrations, minor use permits) were updated using online resources of the APVMA. Pesticides at risk were identified through consultation with Kevin Bodnaruk using the resources of MT17019 (Regulatory Support & Co-ordination) and various MRL databases were used to update MRLs for each crop.
5. Potential New Solutions: Feedback from AgChem forums and other market intelligence was used to identify potential new solutions, while factoring in their overall suitability (IPM compatibility, mode of action, risk profile, MRL's, efficacy, OH&S, environmental safety and sustainability). Known pesticide solutions that are currently under development with registrants or in current Hort Innovation projects were also included.
6. SARP Reports: Reports were produced to bring all information together, incorporating industry needs and insights along with the solutions to address the pest and disease priorities identified.

## Outputs

The project identified and prioritised the major insect, disease and weed pests of each of the 13 crop types. It identified the current chemical control options, indicating whether there are any risks associated with the existing options eg regulatory, IPM issues, etc as well as any gaps where there are either no options currently available or there are insufficient options to provide for sustainable pest management in the short to medium term.

The project has produced:

- 13 Survey Reports, detailing the results from the online surveys
- 12 Updated SARP reports (summerfruit, almond, avocado, olives, onions, papaya, lychee, banana, macadamia, passionfruit, strawberries, blackberries & raspberries)
- 1 new SARP report (blueberries)



## Outcomes

The outcomes of this project are:

- A comprehensive list of the current pesticide control options for each crop type, which will assist the industry to reference what products are registered for those uses
- A clear indication of where the horticultural industry should pursue additional pest control options to address priority pest issues in each crop type, either through new registrations in conjunction with registrants or by obtaining minor use or emergency use permits through the APVMA.
- The reports have been presented in a format that will enable easy updating of the data as new information becomes available in the future.

The project provides the various industries with a strategic outlook that directs ongoing efforts to ensure the availability of effective chemical pest control tools that contribute to a productive, profitable and competitive industry.

## Monitoring and evaluation

A monitoring and evaluation program was not required for this project.

## Recommendations

All recommendations are contained within the SARP Reports produced by the project.

## Refereed scientific publications

Not Applicable

## References

AgChem Access Priority Access Forum	<a href="https://www.agrifutures.com.au/national-rural-issues/agvet-chemicals/">https://www.agrifutures.com.au/national-rural-issues/agvet-chemicals/</a>
Australian Pesticide and Veterinary Medicines Authority	<a href="http://www.apvma.gov.au">www.apvma.gov.au</a>
APVMA Chemical review	<a href="https://apvma.gov.au/chemicals-and-products/chemical-review/listing">https://apvma.gov.au/chemicals-and-products/chemical-review/listing</a>
APVMA MRLs	<a href="http://www.legislation.gov.au/Details/F2020C00713">www.legislation.gov.au/Details/F2020C00713</a>
APVMA Permit search	<a href="https://productsearch.apvma.gov.au/permits">https://productsearch.apvma.gov.au/permits</a>
APVMA Product search	<a href="https://productsearch.apvma.gov.au/products">https://productsearch.apvma.gov.au/products</a>
Codex MRL database	<a href="http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/">http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/</a>
Cotton Pest Management Guide 2020-21	<a href="https://www.cottoninfo.com.au/publications/cotton-pest-management-guide">https://www.cottoninfo.com.au/publications/cotton-pest-management-guide</a>
Croplife Australia	<a href="https://www.croplife.org.au/">https://www.croplife.org.au/</a>
Growcom – Infopest Database	<a href="http://www.infopest.com.au">www.infopest.com.au</a>
Hort Innovation	<a href="http://www.horticulture.com.au">www.horticulture.com.au</a>
Ausveg	<a href="https://ausveg.com.au/">https://ausveg.com.au/</a>
Agriculture and Food - WA	<a href="https://www.agric.wa.gov.au">https://www.agric.wa.gov.au</a>

## **Intellectual property, commercialisation and confidentiality**

There has been no intellectual property generated that requires management by Hort Innovation. All general information and knowledge is freely available and the SARP reports are published on the Hort Innovation website.

## Acknowledgements

Thanks go to the many industry people who contributed information and collaborated on the review of this report.

## Appendices

Published SARP Reports:

Avocado

Banana

Blackberries & Raspberries

Blueberries

Lychee

Macadamia

Onions

Papaya

Strawberries

Almond

Olives

Passionfruit

Summerfruit