Summerfruit
(Stone Fruit excluding Cherries)

Strategic Agrichemical Review Process
(SARP)

June 2025

Hort Innovation
Project – MT23001

Hort Innovation Project Number:
MT23001 – Strategic Agrichemical Review Process (SARP) - Updates

SARP Service Provider:
AGK Services

Purpose of the report:
This report was funded by Hort Innovation to investigate the pest problem, agrichemical usage and pest management alternatives for the summerfruit industry across Australia. The information in this report will assist the industry with its agrichemical selection and usage into the future.

Date of report:
June 2025

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Hort Innovation SUMMERFRUIT FUND

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1. Summary

The strategic levy investment project Strategic Agrichemical Review Process (SARP) - Updates (MT23001) is part of the Hort Innovation Summerfruit Fund. A Strategic Agrichemical Review Process (SARP), through the process of a desktop audit and industry liaison;
Assesses the importance of the diseases, insects and weeds (plant pests) that can affect a horticultural industry;

(i) Assesses the importance of the diseases, insects and weeds (plant pests) that can affect a horticultural industry;
(ii) Evaluates the availability and effectiveness of fungicides, insecticides and herbicides (pesticides) to control the plant pests;
(iii) Determines any gaps in the pest control strategy and
(iv) Identifies suitable new or alternatives pesticides to address the gaps.

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 Summerfruit Industry 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).

1.1 Diseases

The high priority diseases are:

Disease	Priority
Post-Harvest Brown Rot (*Monilinia* spp.)	H

1.2 Insects and other pests

The high priority insects and other pests are:

Insects and Other Pests	Priority
Dried Fruit Beetle (*Carpophilus* spp.)	H
Plague Thrips (*Thrips imaginis*)	H
Western Flower Thrips (*Frankliniella occidentalis*)	H
Queensland Fruit Fly (*Bactrocera tryoni*)	H
Two-Spotted Mite (*Tetranychus urticae*)	H
Green Peach Aphid (*Myzus persicae*)	H
Black Peach Aphid (*Brachycaudus persicae*)	H

1.3 Weeds

The high priority weeds are:

Weeds	Priority
Flaxleaf Fleabane (*Conyza bonariensis*)	H
Wireweed (*Polygonum aviculare*)	H
Marshmallow (*Malva parviflora*)	H

1.4 Plant Growth Regulators

The high priority plant growth regulator issues are:

PGR Issue	Priority
Increase fruit firmness and size	H
Improve fruit quality and storage potential	H
Promote crop evenness	H
Restriction of vegetative growth	H

2. The Australian Summerfruit Industry

The majority of summerfruit production occurs in the southern states. Key production regions are the Goulburn Valley, Sunraysia, Young/Orange and Swan Hill. There is a defined production window for summerfruit and 61 percent goes to fresh supply in the domestic market. Fresh exports account for 20 percent of production with processing accounting for an additional 19 percent.

Total production for the year ending June 2024 was 103,780 tonnes. The value of production was worth $373.8 million. Production and revenue are affected by seasonal variations from year to year.

Fresh Apricot Seasonality by State[1]

State	23/24 Tonnes	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Victoria	1,707												
South Australia	698												
Tasmania	430												
New South Wales	99												
Western Australia	81												
Queensland	46												
Availability Legend			High			Medium			Low			None	

Apricot production for the year ending June 2024 was 3,062 tonnes and was valued at $10.9 million. Domestic fresh consumption accounted for 75 percent of total production, with 8 percent going to fresh export and 18 percent to processing. The main export markets for apricots are Singapore (15.5%), Malaysia (14.6%), UAE (11.6%), Hong Kong (11.5%) and Kuwait (10.2%).

Fresh Nectarines/Peaches Seasonality by State[1]

State	23/24 Tonnes	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Victoria	55,455												
New South Wales	5,883												
South Australia	4,881												
Western Australia	3,391												
Queensland	3,022												
Tasmania	182												
Availability Legend			High			Medium			Low			None	

Nectarine/Peach production for the year ending June 2024 was 72,813 tonnes and was valued at $291.5 million. Domestic fresh consumption accounted for 66 percent of total production, with 18 percent going to fresh export and 16 percent to processing. The main export market for nectarines and peaches is China (60%), with other significant destinations being Singapore (9.9%), UAE (5.4%), Malaysia (5.3%) and Hong Kong (4.7%).

[1] Hort Innovation (2025). Australian Horticulture Statistics Handbook 2023/24. [online] Available at: https://www.horticulture.com.au/growers/help-your-business-grow/research-reports-publications-fact-sheets-and-more/australian-horticulture-statistics-handbook/

Fresh Plum Seasonality by State[1]

State	23/24 Tonnes	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Victoria	1,707												
Western Australia	698												
New South Wales	430												
South Australia	99												
Queensland	81												
Tasmania	46												
Availability Legend			High			Medium			Low			None	

Plum production for the year ending June 2024 was 27,905 tonnes and was valued at $71.4 million. Domestic fresh consumption accounted for 45 percent of total production, with 26 percent going to fresh export and 29 percent to processing. The main export market for plums is China (58.9%), with other significant destinations being Singapore (14.5%), Hong Kong (8.7%), Indonesia (6.6%) and Malaysia (4.2%).

3. Introduction

3.1 Background

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 summerfruit production and respective IPM programs. They control the various diseases, insects and weeds that affect the crop 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 summerfruit industry regarding pesticide access, Hort Innovation has undertaken the current project to update the Strategic Agrichemical Review Process (SARP) for summerfruit.

The SARP process identifies diseases, insect pests and weeds of major concern to the summerfruit 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 summerfruit 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 summerfruit but attempts to prioritise the major problems.

Exotic plant pests, not present in Australia, are not addressed in this document. Biosecurity plans have been developed for the Summerfruit 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. More information is available at this link[2].

[2] https://www.planthealthaustralia.com.au/industries/

3.2 Minor use permits and registration

From a pesticide access perspective, the APVMA classifies all types of summerfruit as major crops. They fit within the APVMA Crop Group 003: Stone Fruits. Access to minor use permits can be achieved as long as a reasonable justification is provided in accordance with the APVMA's minor use guidance[3]. Possible justification for future permit applications could be based on:

- New disease, insect or weed identified as a cropping issue
- No pesticide approved for the problem
- Insufficient options for resistance management
- Current pesticides ineffective due to resistance
- Trade risk - current pesticides unsuitable where crop commodities will be exported
- IPM, environment or OH&S issues
- Loss of pesticides due to removal from market or chemical review restrictions
- Opportunity to extrapolate a use pattern when a new, effective pesticide is registered in another crop
- Alternate pesticide has overseas registration or minor use permit
- Market failure – insufficient return on investment for registrant.

With each of these options, sound, scientific argument is required to justify any new permit applications. Another option for the summerfruit industry is for manufacturers to register new pesticides uses in the crop.

3.3 Methods

The current version of the Summerfruit Strategic Agrichemical Review Process (SARP) was conducted by desktop audit and included an online industry survey. The process included gathering, collating and confirming information. The steps in the process were:

Process of Review	Activity / Date
Industry survey	Preparation and circulation of online industry survey to update priority pests and identify priority control gaps. Survey released: 6 November 2023 Survey closed: 28 February 2025 Survey results were validated through consultation with key summerfruit industry people.
SARP data updated via a desktop audit	Updated registrations and permits Updated MRL tables Updated available and potential pesticides against low, moderate and high priority pests, including an assessment of their suitability Included information on regulatory risks from MT20007
Captured industry input	Collated and analysed survey results Consolidated and incorporated industry needs and insights

[3] https://apvma.gov.au/node/10931

3.4 Results and discussions

3.4.1 Detail

Results and discussions are presented in the body of this document.

3.4.2 Appendices

Refer to additional information in the appendices:

Appendix 1. Products available for disease control in summerfruit
Appendix 2. Products available for control of insects and other pests in summerfruit
Appendix 3. Products available for weed control in summerfruit
Appendix 4. Plant Growth Regulators available in summerfruit
Appendix 5. Current permits for use in summerfruit
Appendix 6. Summerfruit Maximum Residue Limits (MRLs)
Appendix 7. Summerfruit regulatory risk assessment

4. Diseases, pests and weeds of Summerfruit

Resistance management: To manage the risk of resistance development, integrated disease/pest/weed management (IDM/IPM/IWM) strategies should be adopted. The general principle is to integrate diverse chemical and non-chemical strategies; maximise efficacy; not rely on singular tools and rotate between different modes of action. It is always essential to follow all the label instructions. Specific resistance management strategies may apply. These can be found, along with other useful information, on the CropLife Australia website[4].

Information on regulatory risk derived from project MT20007 (Chapter 4) - Regulatory support and coordination (Appendix 7) has been incorporated. Some of the suggested options have no overseas MRLs (see Appendix 6). If treated fruit is to be exported nil residues at harvest would be needed for these options. While care has been taken to ensure the accuracy of the information provided in this document the APVMA registered label and where relevant the APVMA approved permit must always be followed.

[4] https://www.croplife.org.au/resources/programs/resistance-management/

4.1 Diseases of Summerfruit

4.1.1 Disease priorities

Disease	Priority
Post-Harvest Brown Rot (*Monilinia* spp.)	H
Leaf Curl (*Taphrina deformans*)	M
Bacterial Spot (*Xanthomonas arboracola*)	M
Bacterial Canker (*Pseudomonas syringae*)	M
Blossom Blight / Brown Rot (*Monilinia* spp.)	M
Shot-Hole (*Wilsonomyces carpophilus*)	M
Root Rot / Collar Rot (*Phytophthora* spp.)	M
Phytophthora Stem Rot (*Phytophthora* spp.)	M
Transit Rot (*Rhizopus stolonifer*)	L
Trunk & Stem Canker (*Phytophthora cinnamomi*)	L
Silver Leaf (*Chondrostereum purpureum*)	L
Rust (*Tranzschelia discolor*)	L
Armillaria Root Rot (*Armillaria mellea*)	L
Crown Gall (*Agrobacterium* spp.)	L
Fungal Gummosis (*Eutypa armeniacae*)	L
Freckle & Scab (*Cladosporium carpophilum*)	L

Post-Harvest Brown Rot was identified as a high priority disease of summerfruit. It is recommended that an Integrated Disease Management Strategy is implemented, including a range of cultural practices to support fungicides, and potentially reduce the reliance on fungicides for disease control.

Cultural controls include:

- Biosecurity measures to prevent importing infections from other farms.
- Promoting good drainage and avoid waterlogging through irrigation.
- Farm hygiene – remove dead plant material that could contain disease inoculum.
- Avoid crop stress through good nutrition and water management.

Regular use of protectant fungicides is usually required for control of in-crop diseases as well as preventing infections that can manifest post-harvest. In controlling fungal and bacterial diseases, the industry should be mindful of resistance management. In addition to cultural controls, it is important to include a range of fungicide groups in a foliar spray program, including the use of protectant fungicides. Fungicide programs should be planned at the start of the season to ensure that effective disease control is achieved in conjunction with appropriate product rotation.

CropLife Australia have resistance management strategies related to the control of diseases in various crops[5], and users should refer to this before using any product.

[5] https://www.croplife.org.au/resources/programs/resistance-management/

4.1.2 Available and potential products for priority diseases

TABLE KEY: Note that blank fields in the table indicate no information has been provided.

Availability		Regulatory risk (refer to Appendix 7)	
A	Available via either registration or permit approval	R1	Short-term: Critical concern over retaining access
P	Potential - a possible candidate to pursue for registration or permit	R2	Medium-term: Maintaining access of significant concern
P-A	Potential, already approved in the crop for another use	R3	Long-term: Potential issues associated with use - Monitoring required

Withholding Period (WHP) – Number of days from last treatment to harvest (H) or Grazing (G)			
Harvest	H	Not Required when used as directed	NR
Grazing	G	No Grazing Permitted	NG

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Post-Harvest Brown Rot (*Monilinia* spp.) **Priority: High**							
Rated as a high priority in peaches and nectarines, and as a moderate priority in apricots and plums. Brown Rot causes symptoms on the leaves, shoots, blossoms and fruit. Fruit can be infected close to harvest and remain symptomless but then rot in storage. Post-harvest measures fungicide options are available and should be used when it is likely that in-crop infections will manifest in storage.							
Bromo Chloro Dimethyl Hydatoin (BCDMH)	-	Sanitiser / Post-Harvest Treatment	NR	A	ALL	Registered in fruit for surface sterilisation in post-harvest wash systems. Apply as a spray or dip with a minimum contact time of 60 seconds.	-
Chlorine	-	Sanitiser	NR	A	ALL	Registered as a sanitiser for post-harvest control of bacteria and fungi. Spray prepared solution onto produce and equipment.	-
Fludioxonil (Scholar)	12	Post-Harvest	NR	A	ALL	Registered in stone fruit as a post-harvest treatment for control of **Brown Rot** (*Monilinia fructicola*), Grey Mould (*Botrytis cinerea*) and Rhizopus Rot (*Rhizopus stolonifer*). Apply as a post-harvest dip for 30 to 60 seconds or as a post-harvest drench for approximately 30 seconds.	R3
Iodine	-	Sanitiser / Stone Fruit	NR	A	ALL	Registered in stone fruit as a post-harvest treatment for control of bacteria and fungi. Dip the fruit for a minimum of 1 minute.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Triforine (Saprol)	3	Post-Harvest Dip	NR	A	ALL	Registered in peaches, nectarines, apricots and plums as a post-harvest dip for control of **Brown Rot** (*Monilinia fructicola*, *M.laxa*). Dip fruit in solution for 30 seconds.	R3
Florylpicoxamid (Verpixo Adavelt) Corteva	21	Protectant		P		Registered for control of Powdery Mildew in cucurbits and fruiting vegetables, control of Sclerotinia Rot in lettuce, and control of Grey Mould and Powdery Mildew in strawberries. Also has activity on Septoria, Anthracnose, Alternaria, Scab, ***Monilinia***, Rust and *Mycosphaerella* spp. Activity as a post-harvest treatment unknown.	-
Fludioxonil + Azoxystrobin (Graduate A+) Syngenta	12+11	Protectant / Post-harvest treatment		P		Registered for post-harvest control of Anthracnose and Stem End Rot in avocado.	R3
Leaf Curl (*Taphrina deformans*) **Priority: Moderate**							
Rated as a high priority in peaches and as a moderate priority in nectarines. Leaf Curl causes distortion and loss of foliage which can lead to reduced fruit production. Timing of fungicide applications is critical for achieving effective control.							
Chlorothalonil (Bravo)	M5	Protectant	7	A	ALL (excl. QLD)	Registered in peaches for control of Brown Rot - Fruit (*Monilinia fructicola*), Blossom Blight (*Monilinia laxa*), Shot-Hole (*Stigmina carpophila*), Stone Fruit Rust (*Tranzschelia discolor*) and **Leaf Curl** (*Taphrina deformans*). Apply as a foliar spray starting at bud-swell. Use a retreatment interval of 7-14 days. For apricot, nectarines and peaches, apply no later than 35 days pre-harvest as unacceptable skin damage may occur. Maximum number of treatments per season not specified.	R3
Copper	M1	Protectant	1	A	ALL	Registered in nectarines and peaches for control of Shothole and **Leaf Curl** (*Taphrina deformans*). Apply as a foliar spray when buds are swelling but before and within 1 week of bud opening. Retreatment interval and maximum number of applications per season not specified.	-
Dithianon (Delan)	M9	Protectant	21	A	ALL	Registered in nectarines and peaches for control of **Leaf Curl** (*Taphrina deformans*) and Rust (*Uromyces* spp.) Apply as a foliar spray at early budswell. Retreatment interval and maximum number of applications per season not specified.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Dodine (Syllit)	U12	Protectant & Curative	NR NG	A	ALL	Registered in peaches and nectarines for control of **Peach Leaf Curl** (*Taphrina deformans*) and Blossom Blight (*Monilinia* spp.) Apply as a foliar spray at bud swell, early bloom and petal fall. Do not apply after petal fall. Retreatment interval and maximum number of applications per season not specified.	-
Ziram	M3	Protectant	7	A	ALL	Registered in nectarines and peaches for control of Blossom Blight (*Monilinia laxa*), Brown Rot (*Monilinia fructicola*), Shot-Hole (*Stigmina carpophila*), **Leaf Curl** (*Taphrina deformans*) and Freckle (*Venturia carpophila*). Apply as a foliar spray at early bud swell. Retreatment interval and maximum number of applications per season not specified.	R2
Fluopyram + Tebuconazole (Luna Experience) Bayer	7+3	Protectant & Curative		P		Registered for control of various diseases in various fruit and vegetable crops, tree nuts and pyrethrum. US registration for control of **Peach Leaf Curl** in stonefruit.	R3
Bacterial Spot (*Xanthomonas arboracola*) **Bacterial Canker** (*Pseudomonas syringae*) **Priority: Moderate**							
Bacterial Spot is rated as a moderate priority in peaches, nectarines and apricot, and as a high priority in plums. Bacterial Canker is rated as a low priority in peaches and apricots, a high priority in apricots and as a moderate priority in plums. Losses from Bacterial Spot can occur directly from infection of fruit. Up to 50% of fruit on susceptible varieties may be unsaleable. Bacterial Canker can affect all tree parts. Economic losses result from reduction in fruit yield, and from branches or whole trees dying.							
Copper	M1	Protectant	1	P-A	ALL	Registered in nectarines and peaches for control of Shothole and Leaf Curl (*Taphrina deformans*). Registered for control of ***Pseudomonas* spp.** and ***Xanthomonas* spp.** in cherries, mangoes, walnuts, beans, brassicas, capsicums, cucurbits, lettuce, tomatoes and tobacco seed beds.	-
Bacillus amyloliquefaciens strain QST713 (Serenade Opti) Bayer	BM02	Biological	NR	P		Registered for control of Botrytis in grapevines and strawberries, Anthracnose and Stem End Rot in avocado and other tropical fruits (excluding banana), and suppression of **Bacterial Spot** in tomatoes, capsicums and chillies.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Bacillius amyloliquefaciens (Serifel) BASF	BM02	Biological	NR	P		Registered for control of Botrytis in grapevines and berries. US registration for control of **Bacterial Canker** and **Bacterial Spot** in stonefruit.	-
Blossom Blight / Brown Rot (*Monilinia* spp.) **Priority: Moderate**							
Rated as a moderate priority in peaches, nectarines and apricots, and as a low priority in plums. Blossom Blight reduces fruit set by infecting and killing blossom. Brown Rot attacks fruit either on the tree or after harvest. Good orchard sanitation should be used to reduce the incidence of Blossom Blight and Brown Rot. A protective fungicide program should be used if conditions are favourable for disease and if the orchard has a history of infections.							
BLAD (Problad Verde)	BM01	Biological	NR	A	ALL	Registered in stone fruit for control of **Brown Rot** (*Monilinia* spp.) and suppression of **Blossom Blight** (*Monilinia* spp.) For Blossom Blight, apply as a foliar application prior to disease development during flowering at pink, white or red bud. Make a second application at full bloom and if conditions remain favourable for disease, make another application at petal fall. For Brown Rot, make foliar applications during the month before harvest using a retreatment interval of 7-14 days. Maximum number of applications per season not specified.	-
Captan	M4	Protectant	7 G:7	A	ALL	Registered in stone fruit (except apricots) for control of **Blossom Blight** & **Brown Rot** (*Sclerotinia laxa*, *S. fructicola*). Apply as a foliar spray at any of the following stages: pink bud, 10% blossom, full bloom, petal fall, shuck fall and pre-harvest applications at 6, 3 and 1 week prior to harvest. Retreatment interval not specified. Maximum of 5 applications per season.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Chlorothalonil (Bravo)	M5	Protectant	7	A	ALL (except QLD)	Registered in apricots for control of **Brown Rot** - Fruit (*Monilinia fructicola*), **Blossom Blight** (*Monilinia laxa*), Shot-Hole (*Stigmina carpophila*), Stone Fruit Rust (*Tranzschelia discolor*) and Freckle (*Venturia carpophila*), in nectarines for control of Shot-Hole (*Stigmina carpophila*), **Brown Rot** - Fruit (*Monilinia fructicola*) and **Blossom Blight** (*Monilinia laxa*), in peaches for control of **Brown Rot** - Fruit (*Monilinia fructicola*), **Blossom Blight** (*Monilinia laxa*), Shot-Hole (*Stigmina carpophila*), Stone Fruit Rust (*Tranzschelia discolor*) and Leaf Curl (*Taphrina deformans*), and in plums for control of **Brown Rot** - Fruit (*Monilinia fructicola*), **Blossom Blight** (*Monilinia laxa*), Shot-Hole (*Stigmina carpophila*) and Stone Fruit Rust (*Tranzschelia discolor*). Apply as a foliar spray at bud-swell, bud burst, pink bud, early blossom and full bloom. For apricot, nectarines and peaches, apply no later than 35 days pre-harvest as unacceptable skin damage may occur. Retreatment interval and maximum number of applications per season not specified.	R3
Cyprodinil (Chorus)	9	Protectant & Curative	NR	A	ALL	Registered in apricots, nectarines, peaches and plums for control of **Blossom Blight** (*Monilinia laxa*) and **Brown Rot** (*Monilinia fructicola*). Apply as a foliar spray between early blossom and shuck fall. Retreatment interval not specified. Maximum of 3 applications per season.	R3
Dithianon (Delan)	M9	Protectant	1	A	ALL (excl. WA)	Registered in canning peaches for control of **Brown Rot** (*Monilinia fructicola*). Apply as a foliar spray according to local recommendations or at budswell, full bloom, petal fall, shuck fall and at 3 weeks and 1-7 days before harvest. Maximum number of applications per season not specified.	R3
			21			Registered in apricots, nectarines, peaches, plums and prunes for control of **Brown Rot** (*Monilinia fructicola*). Apply as a foliar spray according to local recommendations or at budswell, full bloom, petal fall, shuck fall and at 3 weeks before harvest. Maximum number of applications per season not specified.	
Dodine (Syllit)	U12	Protectant & Curative	NR NG	A	ALL	Registered in peaches and nectarines for control of Peach Leaf Curl (*Taphrina deformans*) and **Blossom Blight** (*Monilinia* spp.) Apply as a foliar spray at bud swell, early bloom and petal fall. Do not apply after petal fall. Retreatment interval and maximum number of applications per season not specified.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Protectant & Curative	1 NG	A	ALL	Registered in stone fruit for control of **Blossom Blight**, Shot-Hole and **Brown Rot**. Apply as a foliar spray, targeting early blossom, full bloom and petal / shuck fall for Blossom Blight and from fruit ripening onwards for Brown Rot. Use a retreatment interval of 7- 10 days. Maximum of 2 applications per season.	-
Iprodione (Rovral)	2	Protectant & Curative	NR	A	ALL	Registered in stone fruit for control of **Blossom Blight** (*Monilinia laxa*) and **Brown Rot** (*Monilinia fructicola*). Apply as a foliar spray, targeting 10% blossom, full bloom and petal / shuck fall for Blossom Blight, and at 3 and 1 weeks prior to harvest for Brown Rot. Retreatment interval not specified. Do not apply more than 2 consecutive applications.	R2
Mancozeb	M3	Protectant	14	A	ALL	Registered in stone fruit for control of **Brown Rot**, Rust, Shot Hole and Freckle. Apply as a foliar spray at early bloom, at mid-full bloom, at petal fall and at shuck fall. Continue with a protectant program using a retreatment interval of 14 days. Maximum number of applications per season not specified.	R2
Mandestrobin (Intuity) Sumitomo	11	Protectant & Curative	T G:7	A	ALL	Registered in stone fruit for control of **Blossom Blight** (*Monilinia laxa*) and **Brown Rot** (*Monilinia fructicola*). Apply as a foliar spray, targeting 20% and 90% flowering for Blossom Blight, and at 3 weeks and 1 week prior to harvest for Brown Rot. Retreatment interval not specified. Maximum of 2 applications per season.	-
Penthiopyrad (Fontelis) Corteva	7	Protectant	NR NG	A	ALL	Registered in stone fruits for control of **Brown Rot** / **Blossom Blight** (*Monilinia* spp.) and Scab / Freckle (*Cladosporium carpophilum*, *Venturia carpophila*). Apply as a foliar spray commencing prior to disease development. Use a retreatment interval of 7-14 days. Maximum of 3 applications per season, with no more than 2 sequential applications.	-
Potassium Bicarbonate (EcoCarb Plus)	M2	Protectant	NR	A	ALL	Registered in nectarines for control of **Brown Rot** (*Monilinia fructicola*, *M.laxa*). Apply as a foliar spray commencing at first sign of disease. Use a retreatment interval of 7 days. Maximum number of applications per season not specified.	-
Procymidone (Sumisclex)	2	Protectant & Curative	9	A	ALL	Registered in stone fruit for control of **Blossom Blight** (*Monilinia laxa*). Apply as a foliar spray at 10% blossom, full bloom, late petal and shuck fall. Retreatment interval and maximum number of applications per season not specified.	R2

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Propiconazole	3	Protectant & Curative	1	A	ALL	Registered in stone fruit for control of **Brown Rot** / **Blossom Blight** (*Monilinia laxa, Monilinia fructicola*). Apply as a foliar spray, targeting early blossom, full bloom and shuck fall for Blossom Blight, and at 3 weeks and 1 week before harvest for Brown Rot. Maximum of 2 consecutive applications, total number of applications per season not specified.	R3
Sulfur	M2	Protectant	NR	A	ALL	Registered in peaches, nectarines and plums for control of **Brown Rot** (*Monilinia fructicola*) and **Blossom Blight** (*Monilinia laxa*). Apply as a foliar spray commencing at petal fall. Use a retreatment interval of 21-28 days. Maximum number of applications not specified.	-
Thiram	M3	Protectant	7	A	ALL	Registered in stone fruits for control of **Brown Rot** – Fruit (*Monilinia fructicola*) and Shot-Hole (*Stigmina carpophila*). Apply as a foliar spray at early full bloom, after bud swell copper sprays, at petal fall, shuck fall and then as required depending on conditions using a retreatment interval of 21-28 days. Maximum number of applications per season not specified.	R2
Triforine (Saprol)	3	Protectant & Curative	NR	A	ALL	Registered in peaches, nectarines, apricots and plums for control of **Blossom Blight** (*Monilinia* spp.) and **Brown Rot** (*Monilinia* spp.) Apply as a foliar spray, targeting early blossom, early petal and shuck fall for Blossom Blight, and at 5, 3 and 1 week before harvest for Brown Rot. Maximum number of applications per season not specified.	R3
Ziram	M3	Protectant	7	A	ALL	Registered in nectarines and peaches for control of **Blossom Blight** (*Monilinia laxa*), **Brown Rot** (*Monilinia fructicola*), Shot-Hole (*Stigmina carpophila*), Leaf Curl (*Taphrina deformans*) and Freckle (*Venturia carpophila*). Apply as a foliar spray at mid full bloom, early petal fall and at shuck fall, and after fruit starts to ripen using a 14 day retreatment interval. Maximum number of applications per season not specified.	R2
Bacillus amyloliquefaciens strain QST713 (Serenade Opti) Bayer	BM02	Biological	NR	P		Registered for control of Botrytis in grapevines and strawberries, Anthracnose and Stem End Rot in avocado and other tropical fruits (excluding banana), and suppression of Bacterial Spot in tomatoes, capsicums and chillies. US registration for control of **Blossom Blight** / **Brown Rot** in stonefruit.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Bacillius amyloliquefaciens (Serifel) BASF	BM02	Biological	NR	P		Registered for control of Botrytis in grapevines and berries. US registration for control of **Blossom Blight** / **Brown Rot** in stonefruit.	-
Florylpicoxamid (Verpixo Adavelt) Corteva	21	Protectant		P		Registered for control of Powdery Mildew in cucurbits and fruiting vegetables, control of Sclerotinia Rot in lettuce, and control of Grey Mould and Powdery Mildew in strawberries. Also has activity on Septoria, Anthracnose, Alternaria, Scab, ***Monilinia***, Rust and *Mycosphaerella* spp.	-
Fluxapyroxad + Pyraclostrobin (Merivon) BASF	7+11	Protectant & Curative		P		Registered in almonds for control of Alternaria Leaf Spot, Black Spot, **Brown Rot**, Nut Scab, Shot-Hole and Stone Fruit Rust. US registration for control of **Blossom Blight / Brown Rot** in stone fruit.	-
Mefentrifluconazole (Belanty) BASF	3	Protectant & Curative		P		Registered for control of Black Spot in apples and Powdery Mildew in grapes. US registration for control of *Alternaria*, ***Monilinia***, *Tranzschelia* and *Wilsonomyces* in stone fruit.	-
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Protectant & Curative		P		Registered for control of various diseases in fruiting vegetables, cucurbits. Root vegetables, celery and peanuts. US registration for control of **Blossom Blight** / **Brown Rot** in stonefruit.	R3
Pydiflumetofen + Fludioxonil (Miravis Prime) Syngenta	7+12	Protectant & Curative		P		Registered for control of various diseases in grapes, berries, leafy vegetables, lettuce and potatoes. US registration for control of ***Monilinia* spp.** in bushberries.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Shot-Hole (*Wilsonomyces carpophilus*) **Priority: Moderate**							
Rated as a low priority in peaches and nectarines, and as a moderate priority in apricots and plums. Shot-Hole affects leaves, fruit and buds. It decreases the efficiency of the tree by decreasing its photosynthetic capacity. Fruit infections are superficial but can make it unsaleable.							
Chlorothalonil (Bravo)	M5	Protectant	7	A	ALL (except QLD)	Registered in apricots for control of Brown Rot - Fruit (*Monilinia fructicola*), Blossom Blight (*Monilinia laxa*), **Shot-Hole** (*Stigmina carpophila*), Stone Fruit Rust (*Tranzschelia discolor*) and Freckle (*Venturia carpophila*), in nectarines for control of **Shot-Hole** (*Stigmina carpophila*), Brown Rot - Fruit (*Monilinia fructicola*) and Blossom Blight (*Monilinia laxa*), in peaches for control of Brown Rot - Fruit (*Monilinia fructicola*), Blossom Blight (*Monilinia laxa*), **Shot-Hole** (*Stigmina carpophila*), Stone Fruit Rust (*Tranzschelia discolor*) and Leaf Curl (*Taphrina deformans*), and in plums for control of Brown Rot - Fruit (*Monilinia fructicola*), Blossom Blight (*Monilinia laxa*), **Shot-Hole** (*Stigmina carpophila*) and Stone Fruit Rust (*Tranzschelia discolor*). Apply as a foliar spray at bud-swell, bud burst, pink bud, shuck fall and cap fall, and then on a retreatment interval of 10-14 days. For apricot, nectarines and peaches, apply no later than 35 days pre-harvest as unacceptable skin damage may occur. Maximum number of applications per season not specified.	R3
Copper	M1	Protectant	1	A	ALL	Registered in apricots for control of **Shot-Hole** (*Stigmina carpophila*) and Freckle (*Venturia carpophila*), in nectarines and peaches for control of **Shothole** and **Leaf Curl** (*Taphrina deformans*), and in plums for control of **Shothole**. Apply as a foliar spray when buds are swelling but before and within 1 week of bud opening. Retreatment interval and maximum number of applications per season not specified.	-
Dithianon (Delan)	M9	Protectant	21	A	ALL	Registered in stone fruit for control of **Shot-Hole** (*Stigmina carpophila*) and Scab / Peach Blight. Apply as a foliar spray according to local recommendations at leaf fall and early to mid blossoming. Retreatment interval and maximum number of applications per season not specified.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Protectant & Curative	1 NG	A	ALL	Registered in stone fruit for control of Blossom Blight, **Shot-Hole** and Brown Rot. Apply as a foliar spray commencing at early pink bud. Use a retreatment interval of 10-14 days. Maximum of 2 applications per season.	-
Mancozeb	M3	Protectant	14	A	ALL	Registered in stone fruit for control of Brown Rot, Rust, **Shot Hole** and Freckle. Apply as a foliar spray at early bloom, at mid-full bloom, at petal fall and at shuck fall. Continue with a protectant program using a retreatment interval of 14 days. Maximum number of applications per season not specified.	R2
Metiram (Polyram)	M3	Protectant	14	A	ALL	Registered in stone fruit for control of Rust and **Shot-Hole**. Apply as a foliar spray commencing at petal fall, followed by 3 further applications using a retreatment interval of 10-14 days. In WA only, apply the first spray at pink bud, then petal fall, followed by 3 further applications using a retreatment interval of 10-14 days.	R2
Thiram	M3	Protectant	7	A	ALL	Registered in stone fruits for control of Brown Rot – Fruit (*Monilinia fructicola*) and **Shot-Hole** (*Stigmina carpophila*). Apply as a foliar spray at shuck fall, after early bud swell copper sprays, followed by a further 2 applications using a retreatment interval of 28 days. Maximum number of applications per season not specified.	R2
Ziram	M3	Protectant	7	A	ALL	Registered in nectarines and peaches for control of Blossom Blight (*Monilinia laxa*), Brown Rot (*Monilinia fructicola*), **Shot-Hole** (*Stigmina carpophila*), Leaf Curl (*Taphrina deformans*) and Freckle (*Venturia carpophila*). Apply as a foliar spray at mid full bloom, early petal fall and at shuck fall, and after fruit starts to ripen using a 14 day retreatment interval. Maximum number of applications per season not specified.	R2
Bacillus amyloliquefaciens strain QST713 (Serenade Opti) Bayer	BM02	Biological	NR	P		Registered for control of Botrytis in grapevines and strawberries, Anthracnose and Stem End Rot in avocado and other tropical fruits (excluding banana), and suppression of Bacterial Spot in tomatoes, capsicums and chillies. US registration for control of **Shot Hole** in stonefruit.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Bacillius amyloliquefaciens (Serifel) BASF	BM02	Biological	NR	P		Registered for control of Botrytis in grapevines and berries. US registration for control of **Shot Hole** in stonefruit.	-
Azoxystrobin + Tebuconazole (Custodia) Adama	11+3	Protectant & Curative		P		Registered in almonds for control of **Shot Hole**.	R3
Cyprodinil (Solaris) Adama	9	Protectant & Curative		P		Registered in almonds for control of **Shot Hole**.	-
Fluopyram + Tebuconazole (Luna Experience) Bayer	7+3	Protectant & Curative		P		Registered for control of various diseases in various fruit and vegetable crops, tree nuts and pyrethrum. US registration for control of **Shot Hole** in stonefruit.	R3
Fluxapyroxad + Pyraclostrobin (Merivon) BASF	7+11	Protectant & Curative		P		Registered in almonds for control of Alternaria Leaf Spot, Black Spot, Brown Rot, Nut Scab, **Shot-Hole** and Stone Fruit Rust. US registration for control of **Shot Hole** in stonefruit.	-
Mefentrifluconazole (Belanty) BASF	3	Protectant & Curative		P		Registered for control of Powdery Mildew in grapes, control of Black Spot and Powdery Mildew and suppression of Alternaria in apples, control of Blossom Blight and suppression of Leaf Rust, **Shot Hole** and Hull Rot in almonds, control of Husk Spot in macadamias, control of Powdery Mildew and Gummy Stem Blight in cucurbits, and control of Powdery Mildew and Target Spot in fruiting vegetables. US registration for control of **Shot Hole** in stonefruit.	-
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Protectant & Curative		P		Registered for control of various diseases in fruiting vegetables, cucurbits. Root vegetables, celery and peanuts. US registration for control of **Blossom Blight** / **Shot Hole** in stonefruit.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Root Rot / Collar Rot (*Phytophthora* spp.) **Phytophthora Stem Rot** (*Phytophthora* spp.) **Priority: Moderate**							
Root Rot / Collar Rot is rated as a moderate priority in peaches, nectarines and apricots, and as a low priority in plums. Phytophthora Stem Rot is rated as a low priority in peaches, nectarines, apricots and plums. Phytophthora is a widespread soil-borne pathogen that thrives in poorly drained soil and warm temperatures. Severe infections can lead to severe necrosis of roots and subsequent yellowing and wilting of above ground plant parts. Trees can eventually die. Management includes site selection to ensure good drainage, improving soil organic matter, careful irrigation management and fungicide treatments.							
Fosetyl-Aluminium	33	Protectant & Curative	NR	A	ALL (excl. QLD)	Registered in peaches for control of **Collar Rot** (*Phytophthora cactorum*). Apply either as a foliar spray, starting with the first spray in early spring when trees are in full leaf followed by a second spray 12 weeks later when the spring growth flush has matured, or as a soil drench for severely diseased trees that have inadequate leaf area for a foliar spray to be effective.	-
Fosetyl-Aluminium PER85273	33	Protectant & Curative	NR	A	ALL (excl. VIC)	Permitted in apricot, peach, nectarine and plum for control of **Phytophthora Trunk & Collar Rot** (*Phytophthora cactorum*, *P. cinnamomi* & *P.cambivora*). Apply either as a foliar spray, starting with the first spray in early spring when trees are in full leaf followed by a second spray 12 weeks later when the spring growth flush has matured, or as a soil drench for severely diseased trees that have inadequate leaf area for a foliar spray to be effective.	-
Metalaxyl-M (Ridomil Gold 25G) Syngenta	4	Protectant & Curative	42	A	VIC & SA	Registered in peaches (5 years or older) for control of **Phytophthora Trunk Rot** (*Phytophthora cactorum*). Apply granules in the autumn after harvest is complete and again in the spring when trees have good leaf cover, applying in a shallow gutter dug around the base of the tree trunk. Apply approximately 20 L of water per tree within 24 hours of application to ensure movement into the soil.	-
					QLD	Registered in peaches (5 years or older) for control of **Phytophthora Trunk Rot** (*Phytophthora cinnamomi*). Apply granules in the autumn after harvest is complete and again in the spring when trees have good leaf cover, applying in a shallow gutter dug around the base of the tree trunk. Apply approximately 20 L of water per tree within 24 hours of application to ensure movement into the soil.	

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Streptomyces lydicus WYEC108 (Actinovate) Novozymes Bioag	BM 02	Biological	NR	A	ALL	Registered in all crops as a biological soil amendment to supplement the activity of natural soil organisms by making nutrients more available for improved plant growth. Apply as a soil drench, transplant dip or through irrigation to the area immediately surrounding the roots or seeds. Use a retreatment interval of 14-90 days. Maximum number of applications per season not specified.	-
Bacillus amyloliquefaciens Strain QST 713 (Serenade Prime Soil Ameliorant and Biofungicide) Bayer	BM02	Biological	NR	P		Registered in tropical fruit (excluding banana) for control of Anthracnose (*Colletotrichum* spp.) and suppression of Stem End Rot. Registered for suppression of soil-borne diseases such as Black Scurf in potatoes and Pineapple Disease in sugarcane and it is also registered as a biofungicide for control of Yellow Sigatoka in bananas as a foliar spray.	-
Mandipropamid (Revus) Syngenta	40	Protectant & Curative		P		Registered for control of Downy Mildew in grapes, lettuce, leafy vegetables and oilseed poppies. US registration for control of **Phytophthora** in various crops, including as a foliar application for protection of citrus from Phytophthora Root Rot.	-
Oxathiopiprolin (Zorvec Enicade) Corteva	49	Protectant & Curative		P		Registered for control of Downy Mildew in bulb vegetables, brassicas, cucurbits, leafy vegetables and poppies. Permitted for control of **Phytophthora Root Rot** in raspberries and blackberries. US registration for control of **Phytophthora** Canker and Brown Rot in citrus.	-
Transit Rot (*Rhizopus stolonifer*) **Priority: Low**							
Rated as a low priority in peaches, nectarines, apricots and plums. Transit Rot appears after harvest and can cause sporadic losses of fruit under high humidity conditions. Good sanitation practices in the orchard and post-harvest will reduce the risk of infection.							
Fludioxonil (Scholar)	12	Post-Harvest	NR	A	ALL	Registered in stone fruit as a post-harvest treatment for control of Brown Rot (*Monilinia fructicola*), Grey Mould (*Botrytis cinerea*) and **Rhizopus Rot** (*Rhizopus stolonifer*). Apply as a post-harvest dip for 30 to 60 seconds or as a post-harvest drench for approximately 30 seconds.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fludioxonil + Azoxystrobin (Graduate A+) Syngenta	12+11	Protectant / Post-harvest treatment		P		Registered for post-harvest control of Anthracnose and Stem End Rot in avocado.	R3
Trunk & Stem Canker (*Phytophthora cinnamomi*) **Priority: Low**							
Rated as a low priority in peaches, nectarines, apricots and plums. Phytophthora Stem Rot is rated as a low priority in peaches, nectarines, apricots and plums. Phytophthora is a widespread soil-borne pathogen that thrives in poorly drained soil and warm temperatures. Severe infections can lead to severe necrosis of roots and subsequent yellowing and wilting of above ground plant parts. Trees can eventually die. Management includes site selection to ensure good drainage, improving soil organic matter, careful irrigation management and fungicide treatments.							
Copper	M1	Protectant	1	A	ALL	Registered in nectarines, plums and peaches for control of **Phytophthora Stem Canker**. Apply as a mixture to the stems of trees wherever cankers appear, after removing dead tissue. Maximum of 5 applications per season, until natural healing has commenced.	-
Silver Leaf (*Chondrostereum purpureum*) **Priority: Low**							
Rated as a low priority in peaches, nectarines, apricots and plums. The Silver Leaf pathogen causes symptoms on leaves and causes an aggressive wood-rotting disease. It can lead to tree death in severe cases. Correct pruning techniques are important to prevent initial infection and infected limbs should be removed and destroyed to limit further spread.							
Iodocarb + Cyproconazole (Rapid Pruning Wound Dressing)	28+3	Protectant & Curative	NR	A	ALL (excl. WA)	Registered in apricots, plums and peaches for control of **Silverleaf** (*Chondrostereum purpureum*). Apply undiluted product thickly to dry wound surface with paintbrush. Do not apply during the growing season. Apply on the same day as pruning cut is made or wind damage occurs. Large wounds on a main trunk would benefit from a second application.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Rust (*Tranzschelia discolor*) **Priority: Low**							
Rated as a low priority in peaches, nectarines, apricots and plums. Severe rust infections can lead to premature leaf fall and considerable reduction of yield. Fruit infected with rust is unsaleable.							
Azoxystrobin + Difenoconazole (Amistar Top) PER92785	11+3	Protectant & Curative	NR NG	A	NSW	Permitted in plums for control of **Prune Rust** (*Tranzschelia discolor*). Apply as a foliar spray from flowering until harvest. Use a minimum retreatment interval of 7 days. Maximum of 4 applications per season.	R3
Chlorothalonil (Bravo)	M5	Protectant	7	A	ALL (except QLD)	Registered in apricots for control of Brown Rot - Fruit (*Monilinia fructicola*), Blossom Blight (*Monilinia laxa*), Shot-Hole (*Stigmina carpophila*), **Stone Fruit Rust** (*Tranzschelia discolor*) and Freckle (*Venturia carpophila*), in peaches for control of Brown Rot - Fruit (*Monilinia fructicola*), Blossom Blight (*Monilinia laxa*), Shot-Hole (*Stigmina carpophila*), **Stone Fruit Rust** (*Tranzschelia discolor*) and Leaf Curl (*Taphrina deformans*), and in plums for control of Brown Rot - Fruit (*Monilinia fructicola*), Blossom Blight (*Monilinia laxa*), Shot-Hole (*Stigmina carpophila*) and **Stone Fruit Rust** (*Tranzschelia discolor*). Apply as a foliar spray at bud-swell, bud burst, pink bud, shuck fall and cap fall, and then on a retreatment interval of 10-14 days. For nectarines and apricots, apply no later than 35 days pre-harvest as unacceptable skin damage may occur. Maximum number of applications per season not specified.	R3
Dithianon (Delan)	M9	Protectant	21	A	ALL	Registered in nectarines and peaches for control of Leaf Curl (*Taphrina deformans*) and **Rust** (*Uromyces* spp.) and in plums for control of **Rust** (*Uromyces* spp.) Apply as a foliar spray according to local recommendations from shuck fall onwards. Use a retreatment interval of 28 days. Maximum number of applications per season not specified.	R3
Fluopyram + Tebuconazole (Luna Experience) Bayer PER92785	7+3	Protectant & Curative	NR NG	A	NSW	Permitted in plums for control of **Prune Rust** (*Tranzschelia discolor*). Apply as a foliar spray from flowering until harvest. Use a minimum retreatment interval of 7 days. Maximum of 2 applications per season.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Isopyrazam (Seguris Flexi) Syngenta PER92785	7	Protectant	14 NG	A	NSW	Permitted in plums for control of **Prune Rust** (*Tranzschelia discolor*). Apply as a foliar spray from flowering until harvest. Use a minimum retreatment interval of 10 days. Maximum of 2 applications per season.	-
Mancozeb	M3	Protectant	14	A	ALL	Registered in stone fruit for control of Brown Rot, **Rust**, Shot Hole and Freckle. Apply as a foliar spray at early bloom, at mid-full bloom, at petal fall and at shuck fall. Continue with a protectant program using a retreatment interval of 14 days. Maximum number of applications per season not specified.	R2
Metiram (Polyram)	M3	Protectant	14	A	ALL	Registered in stone fruit for control of **Rust** and Shot-Hole. Apply as a foliar spray commencing at petal fall, followed by 3 further applications using a retreatment interval of 10-14 days. In WA only, apply the first spray at pink bud, then petal fall, followed by 3 further applications using a retreatment interval of 10-14 days.	R2
Propiconazole	3	Protectant & Curative	1	A	SA	Registered in apricots for control of **Prune Rust** (*Tranzschelia discolor*). Apply as a foliar spray when the disease first occurs. Further applications should be made when the disease occurs on new growth. Maximum of 5 applications per season.	R3
					NSW, SA, VIC & WA	Registered in plums (prune production) for control of **Prune Rust** (*Tranzschelia discolor*). Apply as a foliar spray when the disease first occurs. Further applications should be made when the disease occurs on new growth. Maximum of 5 applications per season.	
Sulfur	M2	Protectant	NR	A	ALL	Registered in peaches, nectarines and plums for control of **Rust**. Apply as a foliar spray as required during November to January. Retreatment interval and maximum number of applications per season not specified.	-
Zineb	M3	Protectant	14	A	ALL	Registered in peaches, plums (not early varieties) and nectarines for control of **Rust**. Apply as a foliar spray from December to March, using a 28 day retreatment interval. Maximum number of applications per season not specified.	R2
Penthiopyrad (Fontelis) Corteva	7	Protectant	NR NG	P-A		Registered in stone fruits for control of Brown Rot / Blossom Blight (*Monilinia* spp.) and Scab / Freckle (*Cladosporium carpophilum*, *Venturia carpophila*). US Registration for control of **Rust** in stone fruit.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Mefentrifluconazole (Belanty) BASF	3	Protectant & Curative		P		Registered for control of Powdery Mildew in grapes, control of Black Spot and Powdery Mildew and suppression of Alternaria in apples, control of Blossom Blight and suppression of Leaf Rust, Shot Hole and Hull Rot in almonds, control of Husk Spot in macadamias, control of Powdery Mildew and Gummy Stem Blight in cucurbits, and control of Powdery Mildew and Target Spot in fruiting vegetables. US registration for control of **Rust** in stonefruit.	-
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Protectant & Curative		P		Registered for control of various diseases in fruiting vegetables, cucurbits. Root vegetables, celery and peanuts. US registration for control of **Blossom Blight** / **Leaf Rust** in stonefruit.	R3
Armillaria Root Rot (*Armillaria mellea*) **Priority: Low**							
Rated as a low priority in peaches, nectarines, apricots and plums. Armillaria is a soil-borne fungus that causes root rots. Management recommendations are similar to those for Phytophthora.							
Streptomyces lydicus (Actinovate) Novozymes BioAg	BM02	Biological	NR	P-A	ALL	Registered in all crops as a biological soil amendment to stimulate soil organisms to make nutrients more available for plant growth. Registered for control of Phytophthora in strawberries and tomato.	-
Bacillus amyloliquefaciens Strain QST 713 (Serenade Prime Soil Ameliorant and Biofungicide) Bayer	BM02	Biological	NR	P		Registered in tropical fruit (excluding banana) for control of Anthracnose (*Colletotrichum* spp.) and suppression of Stem End Rot. Registered for suppression of soil-borne diseases such as Black Scurf in potatoes and Pineapple Disease in sugarcane and it is also registered as a biofungicide for control of Yellow Sigatoka in bananas as a foliar spray.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Crown Gall (*Agrobacterium* spp.) **Priority: Low**							
Rated as a low priority in peaches, nectarines, apricots and plums. Crown Gall is widespread but is generally not a serious problem and is easily controlled.							
Rhizobium rhizogenes Strain K1026 (NoGall)	-	Protectant	NR	A	ALL	Registered in stone fruit for control of **Crown Gall**. Apply as a solution at planting to seeds, seedlings or cuttings.	-
Fungal Gummosis (*Eutypa armeniacae*) **Priority: Low**							
Rated as a low priority in peaches, nectarines, apricots and plums. This pathogen infects through wounds low in the tree, causing lesions that exude a gummy resin. Tree can remain productive if the infection is not severe and the trees are kept healthy.							
No control options available							
Freckle & Scab (*Cladosporium carpophilum*) **Priority: Low**							
Rated as a low priority in peaches, nectarines, and plums, and as a high priority in apricots. The main symptoms of Freckle occur on the fruit, but lesions also occur on leaves, twigs and young branches. Good orchard sanitation will reduce the risk of infection and regular protectant fungicide programs used for other diseases will provide incidental control of Freckle.							
Chlorothalonil (Bravo)	M5	Protectant	7	A	ALL (except QLD)	Registered in apricots for control of Brown Rot - Fruit (*Monilinia fructicola*), Blossom Blight (*Monilinia laxa*), Shot-Hole (*Stigmina carpophila*), Stone Fruit Rust (*Tranzschelia discolor*) and **Freckle** (*Venturia carpophila*). Apply as a foliar spray at bud-swell, bud burst, pink bud, shuck fall and cap fall, and then on a retreatment interval of 10-14 days. Apply no later than 35 days pre-harvest as unacceptable skin damage may occur. Maximum number of applications per season not specified.	R3
Copper	M1	Protectant	1	A	ALL	Registered in apricots for control of Shot-Hole (*Stigmina carpophila*) and **Freckle** (*Venturia carpophila*). Apply as a foliar spray when buds are swelling but before and within 1 week of bud opening. Retreatment interval and maximum number of applications per season not specified.	-

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Dithianon (Delan)	M9	Protectant	21	A	ALL	Registered in stone fruit for control of Shot-Hole (*Stigmina carpophila*) and **Scab** / Peach Blight. Apply as a foliar spray according to local recommendations at leaf fall and early to mid blossoming. Retreatment interval and maximum number of applications per season not specified.	R3
Mancozeb	M3	Protectant	14	A	ALL	Registered in stone fruit for control of Brown Rot, Rust, Shot Hole and **Freckle**. Apply as a foliar spray at early bloom, at mid-full bloom, at petal fall and at shuck fall. Continue with a protectant program using a retreatment interval of 14 days. Maximum number of applications per season not specified.	R2
Penthiopyrad (Fontelis) Corteva	7	Protectant	NR NG	A	ALL	Registered in stone fruits for control of Brown Rot / Blossom Blight (*Monilinia* spp.) and **Scab** / **Freckle** (*Cladosporium carpophilum*, *Venturia carpophila*). Apply as a foliar spray commencing prior to disease development. Use a retreatment interval of 7-14 days. Maximum of 3 applications per season, with no more than 2 sequential applications.	-
Thiram	M3	Protectant	7	A	ALL	Registered in apricots for control of **Freckle** (*Venturia carpophila*). Apply as a foliar spray at early full bloom, after bud swell copper sprays, followed by an additional 2 applications using a retreatment interval of 28 days. Maximum number of applications per season not specified.	R2
Ziram	M3	Protectant	7	A	ALL	Registered in nectarines and peaches for control of Blossom Blight (*Monilinia laxa*), Brown Rot (*Monilinia fructicola*), Shot-Hole (*Stigmina carpophila*), Leaf Curl (*Taphrina deformans*) and **Freckle** (*Venturia carpophila*). Apply as a foliar spray commencing at shuck fall, and continuing until 56 days before harvest using a 21 day retreatment interval. Maximum number of applications per season not specified.	R2
Florylpicoxamid (Verpixo Adavelt) Corteva	21	Protectant		P		Registered for control of Powdery Mildew in cucurbits and fruiting vegetables, control of Sclerotinia Rot in lettuce, and control of Grey Mould and Powdery Mildew in strawberries. Also has activity on Septoria, Anthracnose, Alternaria, Scab, *Monilinia*, Rust and *Mycosphaerella* spp.	-
Fluopyram + Tebuconazole (Luna Experience) Bayer	7+3	Protectant & Curative		P		Registered for control of various diseases in various fruit and vegetable crops, tree nuts and pyrethrum. US registration for control of **Scab** in stonefruit.	R3

Disease / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Regulatory risk
Fluxapyroxad + Pyraclostrobin (Merivon) BASF	7+11	Protectant & Curative		P		Registered in almonds for control of Alternaria Leaf Spot, Black Spot, Brown Rot, **Nut Scab**, Shot-Hole and Stone Fruit Rust. US registration for control of **Scab** in stonefruit.	-
Mefentrifluconazole (Belanty) BASF	3	Protectant & Curative		P		Registered for control of Powdery Mildew in grapes, control of Black Spot and Powdery Mildew and suppression of Alternaria in apples, control of Blossom Blight and suppression of Leaf Rust, Shot Hole and Hull Rot in almonds, control of Husk Spot in macadamias, control of Powdery Mildew and Gummy Stem Blight in cucurbits, and control of Powdery Mildew and Target Spot in fruiting vegetables. US registration for control of **Scab** in stonefruit.	-
Pydiflumetofen + Difenoconazole (Miravis Duo) Syngenta	7+3	Protectant & Curative		P		Registered for control of various diseases in fruiting vegetables, cucurbits. Root vegetables, celery and peanuts. US registration for control of **Blossom Blight** / **Scab** in stonefruit.	R3

4.2 Insect and other pests of Summerfruit

4.2.1 Insect and other pest priorities

Insects and Other Pests	Priority
Dried Fruit Beetle (*Carpophilus* spp.)	H
Plague Thrips (*Thrips imaginis*)	H
Western Flower Thrips (*Frankliniella occidentalis*)	H
Queensland Fruit Fly (*Bactrocera tryoni*)	H
Two-Spotted Mite (*Tetranychus urticae*)	H
Green Peach Aphid (*Myzus persicae*)	H
Black Peach Aphid (*Brachycaudus persicae*)	H
San Jose Scale (*Diaspidiotus perniciosus*)	M
European Earwig (*Forficula auricularia*)	M
Root Lesion Nematode (*Pratylenchus* spp.)	M
Light Brown Apple Moth (*Epiphyas postvittana*)	M
Oriental Fruit Moth (*Grapholita molesta*)	M
Silver Peach Mite (*Aculus cornutus*)	M
Mediterranean Fruit Fly (*Ceratitis capitata*)	L
Lesser Queensland Fruit Fly (*Bactrocera neohumeralis*)	L
Snails (Gastropoda)	L
Rutherglen Bug (*Nysius vinitor*)	L
Bryobia Mite (*Bryobia rubrioculus*)	L
European Red Mite (*Panonychus ulmi*)	L
Cherry Aphid (*Myzus cerasi*)	L
Fullers Rose Weevil (*Asynonychus cervinus*)	L
Fruit-Tree Borer (*Maroga melanostigma*)	L
Pear & Cherry Slug (*Caliroa cerasi*)	L

Summerfruit are impacted by a wide variety of insect and other pests, with Dried Fruit Beetle, Plague Thrips, Western Flower Thrips, Queensland Fruit Fly, Two-Spotted Mite, Green Peach Aphid and Black Peach Aphid rated as high priority pests. It is important to take an Integrated Pest Management (IPM) Approach to pest control in summerfuit. The diversity of insects that will attack crops mean that a planned, strategic approach is required. A range of control measures should be used, including cultural controls, biological controls and insecticides. Beneficial insects such as predators, parasitoids and pollinators should be encouraged and can be introduced artificially if required. Insecticide choice should be made with regard to preserving the beneficial insects that play an important role in the crop.

The diverse range of insect and mite pests in stonefruit necessitates careful planning with resistance management. Growers should refer to resistance management strategies listed on the CropLife website[6] when planning their pest management programs.

[6] https://www.croplife.org.au/resources/programs/resistance-management/

4.2.2 Available and potential products for priority insects and other pests

TABLE KEY: Note that blank fields in the table indicate no information has been provided.

Availability		Regulatory risk (refer to Appendix 7)	
A	Available via either registration or permit approval	R1	Short-term: Critical concern over retaining access
P	Potential - a possible candidate to pursue for registration or permit	R2	Medium-term: Maintaining access of significant concern
P-A	Potential, already approved in the crop for another use	R3	Long-term: Potential issues associated with use - Monitoring required
Withholding Period (WHP) – Number of days from last treatment to harvest (H) or Grazing (G)			
Harvest	H	Not Required when used as directed	NR
Grazing	G	No Grazing Permitted	NG
IPM – indicative overall impact on beneficials (based on the Cotton Pest Management Guide 2019-20 and cotton use patterns)			
VL – Very low; L – Low; M – Moderate; H – High; VH – Very High; - not specified			

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Dried Fruit Beetle (*Carpophilus* spp.) **Priority: High**								
Rated as a high priority in peaches, nectarines, apricots and plums. Carpophilus Beetles are serious pests of ripening summerfruit. They are attracted to and penetrate ripening fruit, causing substantial fruit losses. Insecticide options are limited and absence of MRLs in key markets further restricts the ability to control this pest. For example, China has no MRLs for bifenthrin and tetraniliprole, and Hong Kong and Taiwan have no MRL for tetraniliprole.								
Ethanol, Ethyl acetate, 2-methyl-1-propanol, 2-methyl-1-butanol + Ethanol, Acetaldehyde (Carpophilus Catcha Trapping System)	-	Attract & Kill	NR	A	ALL	Registered in stone fruit for monitoring and control of **Carpophilus Beetle**. Contains 2 feeding attractants and an aggregation pheromone lure, which are prepared and/or placed into a trap. To be used in conjunction with Pest Strips containing dichlorvos. For Monitoring: Prior to fruit ripening, place 2 traps per block where block is <10ha, or 4 traps per block where block is >10ha. Install at eye level in the orchard. Replace co-attractants every 2 weeks. Do not use aggregation pheromones. For population management: Prior to fruit ripening, place 3 traps per ha. Install traps external to the orchard along the perimeter and placed upwind. Replace co-attractants every 2 weeks. Use aggregation pheromone lure.	VL Bee:VL	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Bifenthrin (Talstar)	3A	Contact	1	A	ALL	Registered in peaches, nectarines, plums and apricots for control of **Carpophilus Beetles** (*Carpophilus* spp.) Apply to the foliage and fruit before beetle populations reach damaging levels, as fruit is approaching maturity. Use a minimum retreatment interval of 10 days. Maximum of 2 applications per season.	VH Bee:H	R3
Clothianidin (Samurai) Sumitomo	4A	Contact & Ingestion	7 NG	A	ALL	Registered in stone fruit for control of Queensland Fruit Fly, Mediterranean Fruit Fly and **Carpophilus Beetle**. Apply as a foliar spray as fruit is ripening. Use a retreatment interval of 7 days. Maximum number of applications per season not specified but it is suggested that 2-3 treatments will be required for controlling Dried Fruit Beetle.	M Bee:VH	R2
Tetraniliprole (Vayego 200SC) Bayer	28	Ingestion	3 NG	A	ALL	Registered in stone fruit for control of Apple Weevil (*Otiorhynchus cribricollis*), Fuller's Rose Weevil (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*), Oriental Fruit Moth (*Laspeyresia molesta syn Grapholita molesta*) and Mediterranean Fruit Fly (Cer*atitis capitata*) and suppression of **Dried Fruit Beetles** (*Carpophilus* spp.) Apply as a foliar spray as fruit approached maturity and before beetles reach damaging numbers. Use a retreatment interval of 10-14 days. Maximum of 3 applications per season.	L-M Bee:L	-
Indoxacarb (Avatar)	22A	Ingestion	7 NG	P-A	ALL	Registered in stone fruits for control of Budworms (*Helicoverpa* spp.), Oriental Fruit Moth (*Grapholita molesta*), Inland Katydid (*Caedicia simplex*), Lightbrown Apple Moth (*E. postvittana*), Pear and Cherry Slug (*Caliroa cerasai*), Apple Weevil (*Otiorhynchus cribricollis*), Fuller's Rose Weevil (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*) and Wingless Grasshopper (*Phaulacridium vittatum*) and suppression of European Earwig (*Forficula auricularі*). Registered for control of Monolepta Beetle in soybeans.	M Bee:H	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Plague Thrips (*Thrips imaginis*) **Western Flower Thrips** (*Frankliniella occidentalis*) **Priority: High**								
Plague Thrips are rated as a high priority in peaches, nectarines, apricots and plums. Western Flower Thrips are rated as a high priority in peaches and nectarines, and as a moderate priority in apricots and plums. Thrips cause damage to developing and ripening fruit. Tissue scarring and russetting occurs with larvae feeding on the developing fruit. This type of damage is usually caused by Plague Thrips. Western Flower Thrips usually cause fruit damage closer to harvest, leading to silver patches on the fruit surface or white patches around the stem end of the fruit.								
Methomyl (Lannate)	1A	Contact	1 NG	A	ALL	Registered in nectarines and peaches for control of Green Peach Aphid (*Myzus persicae*), *Helicoverpa* spp., Monolepta Beetle and **Thrips**. Apply as a foliar spray at petal fall. Retreatment interval and maximum number of applications per season not specified.	H Bee:H	R2
Potassium Salts of Fatty Acid (Natrasoap)	-	Contact	NR	A	ALL	Registered in fruit for control of Aphids, **Thrips**, Mealybug, Two-Spotted Mite, Spider Mite and Whitefly. Apply as a cover spray. Retreatment interval and maximum number of treatments not specified.	L Bee:L	-
Spinetoram (Delegate) Corteva	5	Ingestion	3 NG	A	ALL	Registered in stone fruit for control of Pear & Cherry Slug, Light Brown Apple Moth, Oriental Fruit Moth and **Western Flower Thrips**. Apply as a foliar spray, using 3 consecutive applications and using a retreatment interval of 3-5 days when temperatures are greater than 20°C, and 6-12 days when temperatures are less than 20°C. Maximum of 4 applications per season.	M Bee:H	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Spinosad (Entrust Organic) Corteva	5	Ingestion	3	A	ALL	Registered in stone fruit (excl. peaches) for control of Cherry Slug, Light Brown Apple Moth, **Western Flower Thrips** and Oriental Fruit Moth. Apply as a foliar spray, using 3 consecutive applications and using a retreatment interval of 3-5 days when temperatures are greater than 20°C, and 6-12 days when temperatures are less than 20°C. Maximum of 4 applications per season.	L Bee:L	-
			7			Registered in peaches for control of Cherry Slug, Light Brown Apple Moth, **Western Flower Thrips** and Oriental Fruit Moth. Apply as a foliar spray, using 3 consecutive applications and using a retreatment interval of 3-5 days when temperatures are greater than 20°C, and 6-12 days when temperatures are less than 20°C. Maximum of 4 applications per season.		
Spirotetramat (Movento) Bayer PER84804	23	Ingestion	21	A	ALL (excl. VIC)	Permitted in stone fruit for control of **Western Flower Thrips** (*Frankliniella occidentalis*). Apply as a foliar spray at first sign of pest infestation. Use a minimum retreatment interval of 14 days. Maximum of 2 applications per crop.	M Bee:L	-
Tau-Fluvalinate (Mavrik)	3A	Contact	NR	A	ALL (excl. TAS)	Registered in nectarines, peaches and plums for control of **Plague Thrips** (*Thrips imaginis*). Apply as a foliar spray just prior to or at the commencement of flowering when a significant population of thrips can be found. Retreatment interval not specified. Maximum of 2 non-consecutive applications per season.	VH Bee:H	-
Acetamiprid + Pyriproxyfen (Trivor) Adama	4A+7C	Ingestion / IGR		P		Registered for control of Kelly's Citrus Thrips in citrus.	M Bee:H	R2
Beauveria bassiana (Velifer) BASF	UN			P		Registered for suppression of Onion Thrips and **Western Flower Thrips** in protected vegetables and ornamentals and has activity on Thrips, Aphids, Whitefly and Mites.	L Bee:L	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Cyantraniliprole (Benevia) FMC	28	Ingestion		P		Registered for suppression of Onion Thrips in bulb vegetables, Tomato Thrips and **Western Flower Thrips** in fruiting vegetables, **Western Flower Thrips** in cucurbits, **Plague Thrips** in potatoes, and Onion Thrips, **Plague Thrips** and **Western Flower Thrips** in strawberries.	L Bee:L	-
Isocycloseram (Simodis) Syngenta	30	Ingestion		P		Registered for control of Diamond Back Moth, Cabbage White Butterfly and suppression of Heliothis in brassica vegetables and brassica leafy vegetables, suppression of Onion Thrips and **Plague Thrips** in bulb vegetables, control of Two Spotted Mite and Cucumber Moth and suppression of Broad Mite, Bean Red Spider Mite, **Western Flower Thrips**, Tomato Thrips, Melon Thrips, **Plague Thrips** and Heliothis in cucurbits, and control of Two Spotted Mite and Broad Mite and suppression of Tomato Russet Mite, **Western Flower Thrips**, Tomato Thrips, Melon Thrips, **Plague Thrips** and Heliothis in fruiting vegetables.	H Bee:VH	-
Queensland Fruit Fly (*Bactrocera tryoni*) **Priority: High**								
Rated as a high priority in peaches, nectarines, apricots and plums. Queensland Fruit Fly lay their eggs in maturing and ripe fruit. Larvae hatch from these eggs and the fruit is usually destroyed within days by their feeding and associated rotting.								
4-(P-Acetoxyphenyl)-2-Butanone + Malathion	1B	Fruit Fly Trap	NR	A	ALL	Registered as a fruit fly trap for Queensland Fruit Fly. Used to detect the presence of Fruit Fly in the orchard to assist with making decisions about control.	H Bee:H	R3
4-(P-Acetoxyphenyl) -2-Butanone + Fipronil	2B	Fruit Fly Trap	NR	A	ALL	Registered in fruit crops for population reduction and population monitoring of **Queensland Fruit Fly** and **Lesser Queensland Fruit Fly**. Single stations can be used for population monitoring. Control of fruit fly required placement of 16 stations per hectare and should be used in conjunction with regular insecticide cover sprays.	M Bee:VH	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Acetamiprid + Novaluron (Cormoran) Adama	4A+15	Contact & Ingestion	35 NG	A	ALL	Registered in stone fruit for control of Black Peach Aphid (*Brachycaudus persicae*), Green Peach Aphid (*Myzus persicae*), Light Brown Apple Moth (*Epiphyas postvittana*), Oriental Fruit Moth (*Grapholita molesta*) and San Jose Scale (*Quadraspidiotus perniciosus*) and suppression of Mediterranean Fruit Fly (*Ceratitis capitata*) and **Queensland Fruit Fly** (*Bactrocera tryoni*). Apply as a foliar spray when monitoring indicates fruit fly activity. Use a retreatment interval of 7-10 days and do not apply consecutive applications. Maximum of 2 applications per season.	M Bee:M	R2
Alpha-Cypermethrin PER91059	3A	Contact	7 NG	A	ALL	Permitted in stone fruit (except cherries) for control of **Fruit Flies**. Apply as a foliar spray when control is required. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per crop, with no more than 2 consecutive applications.	VH Bee:H	-
Clothianidin (Samurai) Sumitomo	4A	Contact & Ingestion	7 NG	A	ALL	Registered in stone fruit for control of **Queensland Fruit Fly**, Mediterranean Fruit Fly and Carpophilus Beetle. Apply as a foliar spray when monitoring indicates fruit fly activity. Apply 3 consecutive applications using a retreatment interval of 7 days. Maximum number of applications per season not specified.	M Bee:VH	R2
Dimethoate PER13859	1B	Contact	NR	A	ALL	Permitted in fruit fly host crops for orchard clean-up of **Fruit Fly** following harvest. Do not apply more than 2 applications per host crop. Apply as a foliar and/or ground spray to both fallen and retained fruit. Produce treated must not be harvested, collected or supplied for human or animal consumption.	H Bee:H	R2
Etofenprox (Trebon) Sipcam	3A	Contact	3 NG	A	ALL	Registered in stone fruit (except cherries) for control of **Queensland Fruit Fly** and Mediterranean Fruit Fly. Apply as a foliar spray commencing as maturity approaches (fruit turning colour) and pest numbers are at critical threshold. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per season.	VH Bee:H	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Malathion	1B	Bait / Contact	3	A	ALL	Registered in fruit trees as a bait for control of **Fruit Fly**. Apply as a foliar, strip or spot spray. Only apply to the leaves, trunk and lower limbs of trees. Do not apply directly to fruit. Apply weekly from 6 weeks before harvest to 2 weeks after harvest.	H Bee:H	R3
Pyrethrins (Pyganic)	3A	Contact	1	A	ALL	Registered in stone fruit as a clean up spray to control insects prior to harvest such as **Fruit Fly**, Rutherglen Bug and Spiders. Apply as a foliar spray.	VH Bee:H	-
Spinetoram (Delegate) Corteva PER12590	5	Ingestion	3	A	ACT, NSW, QLD & NT	Permitted in stone fruit for suppression of **Queensland Fruit Fly** (*Bactrocera tryoni*) and Lesser Queensland Fruit Fly (*Bactrocera neohumeralis*). Apply as a foliar spray commencing after stone set and when monitoring indicates pest pressure. Use a minimum retreatment interval of 14 days. Maximum of 4 applications per season.	M Bee:H	-
Spinosad (Naturalure) Corteva	5	Bait / Ingestion	NR	A	ALL	Registered in fruit for control of Fruit Flies including **Queensland Fruit Fly** and Mediterranean Fruit Fly. Apply as either a band or a spot spray to the lower canopy of fruiting plants. Begin applications as soon as monitoring traps indicate flies are present and fruit is at a susceptible stage. Repeat applications every 7 days, re-applying sooner if rain washes off the deposit. Avoid spraying the fruit as phytotoxicity may occur.	L Bee:H	-
Trichlorfon	1B	Contact	2 NG	A	QLD, NSW, VIC, WA & NT	Registered in stone fruit for control of **Queensland Fruit Fly**. Apply as a foliar spray commencing at the start of stinging. Use a retreatment interval of 7-10 days. Maximum number of applications not specified.	H Bee:H	R2
Trichlorfon PER14683	1B	Contact	7	A	ALL (excl. VIC)	Permitted in stone fruit for control of **Queensland Fruit Fly** (*Bactrocera tryoni*) and Mediterranean Fruit Fly (*Ceratitis capitata*). Apply as a foliar spray commencing at the start of stinging. Use a retreatment interval of 7-10 days. Maximum number of applications not specified.	H Bee:H	R2
Abamectin	6	Ingestion		P	ALL	Registered for control of **Queensland Fruit Fly** in citrus, blueberries, blackberries and raspberries.	M Bee:H	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Acetamiprid + Pyriproxyfen (Trivor) Adama	4A+7C	Ingestion / IGR		P		Registered for control of **Fruit Fly** in avocados, citrus and mangoes.	M Bee:H	R2
Two-Spotted Mite (*Tetranychus urticae*) **Priority: High**								
Rated as a high priority in peaches, nectarines and plums, and as a low priority in apricots. Two-Spotted Mite is a serious sucking pest that can cause severe defoliation of trees. An integrated management program should be used, including reduction of dust in the orchard, use of non-disruptive pesticides, avoidance of tree stress and biological agents.								
Acequinocyl (Kanemite) UPL	20B	Contact & Ingestion	14 NG	A	ALL	Registered in stone fruit for control of **Two-Spotted Mite** (*Tetranychus urticae*). Apply as a foliar spray when crop monitoring indicates mite activity. Maximum of 1 application per season.	L Bee:L	-
Bifenazate (Acramite)	20D	Contact & Ingestion	3 G:28	A	ALL	Registered in apricots, nectarines, peaches and plums for control of **Two-Spotted Mite** (*Tetranychus urticae*), European Red Mite (*Panonychus ulmi*) and Bryobia Mite (*Bryobia rubrioculus*). Apply as a foliar spray as soon as mites appear. Maximum of 1 application per season.	L Bee:H	-
Clofentezine (Apollo)	10A	IGR / Contact	21	A	ALL	Registered in stone fruit for control of **Two-Spotted Mite** (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*). Apply as a foliar spray when monitoring indicates that mite numbers require control. Maximum of 1 application per season.	L Bee:L	-
Etoxazole (Paramite) Sumitomo	10B	IGR / Contact	7 NG	A	ALL	Registered in stone fruit (except cherries) for control of **Two-Spotted Mite** (*Tetranychus urticae*), European Red Mite (*Panonychus ulmi*) and Bryobia Mite (*Bryobia rubrioculus*). Apply as a foliar spray at the first sign of mite crawlers. Maximum of 1 application per season.	L Bee:VL	R3
Etoxazole + Piperonyl Butoxide (Motto RMR) Imtrade	10B	IGR / Contact	7	A	ALL	Registered in nectarines for control of **Two-Spotted Mite** (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*). Apply as a foliar spray at the first sign of mite crawlers. Maximum of 1 application per season.	L Bee:VL	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Fenbutatin Oxide (Torque)	12B	Contact	14	A	ALL	Registered in peaches and nectarines for control of **Two-Spotted Mite** (*Tetranychus urticae*), European Red Mite (*Panonychus ulmi*) and Bryobia Mite (*Bryobia rubrioculus*). Apply as a foliar spray when mite numbers warrant control. Retreatment interval and maximum number of applications not specified.	L Bee:L	R2
Fenbutatin Oxide + Hexythiazox (Sabamite) Sabachem	12B+10A	Contact	14	A	ALL	Registered in peaches and nectarines for control of **Two-Spotted Mite** (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*). Apply as a foliar spray at first sign of mite activity. Maximum of 1 application per season.	L Bee:L	R2
Hexythiazox (Calibre)	10A	Contact	3	A	ALL	Registered in stone fruit for control of **Two-Spotted Mite** and European Red Mite. Apply as a foliar spray when mite numbers warrant control. Maximum of 1 application per season.	L Bee:L	-
Milbemectin (Milbeknock) Sipcam	6	Ingestion	14 NG	A	ALL	Registered in stone fruit for control of **Two Spotted Mite** (*Tetranychus urticae*). Apply as a foliar spray soon after mite numbers reach threshold. Use a minimum retreatment interval of 7 days and do not apply consecutive treatments. Maximum of 2 applications per season.	M Bee:VH	-
Petroleum Oil	-	Contact	1	A	NSW & QLD	Registered in stone fruit (except prunes) for control of **Two Spotted Mite**. Apply as a foliar spray during dormant period up to bud swell. Retreatment interval and maximum number of applications per season not specified.	L Bee:L	-
Potassium Salts of Fatty Acid (Natrasoap)	-	Contact	NR	A	ALL	Registered in fruit for control of Aphids, Thrips, Mealybug, **Two-Spotted Mite**, Spider Mite and Whitefly. Apply as a cover spray. Retreatment interval and maximum number of treatments not specified.	L Bee:L	-
Propargite	12C	Contact	7	A	ALL	Registered in stonefruit for control of **Two Spotted Mite** and European Red Mite. Apply as a foliar spray as soon as mites appear. Retreatment interval not specified. Maximum of 2 applications per season.	M Bee:L	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Pyridaben (Sanmite)	10A	IGR / Contact	1	A	ALL	Registered in stonefruit for control of **Two Spotted Mite** (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*). Apply as a foliar spray before the pest reaches damaging levels. Maximum of 1 application per season.	L Bee:L	-
Spiromesifen (Interrupt) Bayer	23	Ingestion	14 NG	A	ALL	Registered in stone fruit for control of **Two Spotted Mite** (*Tetranychus urticae*). Apply as a foliar spray once local thresholds are reached. Maximum of 1 application per season.	M Bee:VL	-
Tebufenpyrad (Pyranica) Sipcam	21A	Contact & Ingestion	14 NG	A	ALL	Registered in peaches for control of **Two Spotted Mite** (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*). Apply as a foliar spray before mite infestation reached 70% of leaves infested. Retreatment interval and maximum number of applications per season not specified.	M Bee:H	-
Cyflumetofen (Danisaraba) BASF	25A	Contact		P		Registered for control of **Two Spotted Mite** (*Tetranychus urticae*) in pome fruit, almond, citrus, grapes, strawberries, fruiting vegetables and ornamentals.	L Bee:L	-
Cyantraniliprole + Diafenthiuron (Minecto Forte) Syngenta	28+12A	Ingestion		P		Registered for control of **Two-Spotted Mite** (*Tetranychus urticae*) in cucurbits and fruiting vegetables.	M Bee:VH	-
Isocycloseram (Simodis) Syngenta	30	Ingestion		P		Registered for control of **Two-Spotted Mite** (*Tetranychus urticae*) in cucurbits and fruiting vegetables.	H Bee:VH	-
Magnesium Hydroxide (Magnera) UPL	-	Contact		P		Registered for suppression of **Two-Spotted Mite** in tomatoes and cucurbits.	L Bee:L	-
Orange Oil (Prev-Am) Oro Agri	-	Contact		P		Registered for control of **Two-Spotted Mite** (*Tetranychus urticae*) in tomato, eggplant, sugar snap peas, snow peas, raspberries, strawberries and cucurbits.	L Bee:L	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Green Peach Aphid (*Myzus persicae*) **Black Peach Aphid** (*Brachycaudus persicae*) **Priority: High**								
Rated as a high priority in peaches and nectarines, and as a low priority in apricots and plums. Aphids feed on leaves, extracting sap and causing leaves to yellow and drop. Honeydew produced by heavy aphid infestations can lead to development of sooty mould on the tree and fruit.								
Acetamiprid + Novaluron (Cormoran) Adama	4A+15	Contact & Ingestion	35 NG	A	ALL	Registered in stone fruit for control of **Black Peach Aphid** (*Brachycaudus persicae*), **Green Peach Aphid** (*Myzus persicae*), Light Brown Apple Moth (*Epiphyas postvittana*), Oriental Fruit Moth (*Grapholita molesta*) and San Jose Scale (*Quadraspidiotus perniciosus*) and suppression of Mediterranean Fruit Fly (*Ceratitis capitata*) and Queensland Fruit Fly (*Bactrocera tryoni*). Apply as a foliar spray when monitoring indicates pest numbers are above economic threshold. Retreatment interval not specified. Maximum of 2 applications per season.	M Bee:M	R2
Clothianidin (Samurai) Sumitomo	4A	Contact & Ingestion	7 NG	A	ALL	Registered in peaches and nectarines for control of Oriental Fruit Moth and **Green Peach Aphid**. Apply as a foliar spray when monitoring indicates control is necessary. Retreatment interval and maximum number of applications per season not specified.	M Bee:VH	R2
Imidacloprid	4A	Contact & Ingestion	21 NG	A	ALL	Registered in stone fruit for control of **Green Peach Aphid** and **Black Peach Aphid**. Apply as a foliar spray at first sign of pest infestation. Retreatment interval not specified. Maximum of 3 applications per year.	M Bee:VH	R2
Malathion	1B	Contact	3	A	ALL	Registered in stone fruit for control of **Black Peach Aphid**, **Green Peach Aphid**, European Red Mite and Oriental Fruit Moth. Apply as a foliar spray at first sign of pest infestation. Retreatment interval not specified. Maximum of 4 applications per season.	H Bee:H	R3
Methomyl (Lannate)	1A	Contact	1 NG	A	ALL	Registered in nectarines and peaches for control of **Green Peach Aphid** (*Myzus persicae*), *Helicoverpa* spp., Monolepta Beetle and Thrips. Apply as a foliar spray when pests first appear. Retreatment interval and maximum number of applications per season not specified.	H Bee:H	R2

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Pirimicarb (Pirimor)	1A	Contact	2	A	ALL	Registered in stone fruit for control of **Green Peach Aphid**, **Black Peach Aphid** and Cherry Aphid. Apply as a foliar spray at pink bud or when the pest appears. Retreatment interval not specified. Maximum of 2 applications per season. Do not apply consecutively.	VL Bee:VL	R3
Potassium Salts of Fatty Acid (Natrasoap)	-	Contact	NR	A	ALL	Registered in fruit for control of **Aphids**, Thrips, Mealybug, Two-Spotted Mite, Spider Mite and Whitefly. Apply as a cover spray. Retreatment interval and maximum number of treatments not specified.	L Bee:L	-
Pymetrozine (Chess) Syngenta	9B	Contact & Ingestion	28	A	ALL	Registered in stone fruit for control of **Black Peach Aphid** (*Brachycaudus persicae*), Black Cherry Aphid (*Myzus cerasi*) and **Green Peach Aphid** (*Myzus persicae*). Apply as a foliar spray when local pest thresholds are reached. Use a minimum retreatment interval of 7 days. Maximum of 2 applications per crop.	L Bee:VL	R3
Spirotetramat (Movento) Bayer	23	Ingestion	21	A	ALL	Registered in stone fruit for control of Tuber Mealybug (*Pseudococcus virburni*), Longtailed Mealybug (*Pseudococcus longispinus*), Black Cherry Aphid (*Myzus cerasi*), **Black Peach Aphid** (*Brachycaudus persicae*) and San Jose Scale (*Quadraspidiotus perniciosus*). Apply as a foliar spray when pest numbers reach economic threshold. Apply a second application using a retreatment interval of 14-21 days if required. Maximum of 3 applications per crop, and a maximum of 2 applications made later than 21 days after shuck fall.	M Bee:L	-
Sulfoxaflor (Transform) Corteva	4C	Contact & Ingestion	7	A	ALL	Registered in stone fruit for control of Apple Dimpling Bug, **Black Peach Aphid**, Cherry Aphid and **Green Peach Aphid**. Apply as a foliar spray when pest reaches threshold level. Use a retreatment interval of 14 days. Maximum of 4 applications per season. Do not apply consecutive applications.	M Bee:VH	-
Afidopyropen (Versys) BASF	9D	Ingestion		P		Registered for control of aphids, including **Green Peach Aphid** (*Myzus persicae*) in sweet corn, rhubarb, artichokes, brassica vegetables, celery, cucurbits, fruiting vegetables, strawberry, leafy vegetables and brassica leafy vegetables.	L Bee:L	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Beauveria bassiana (Velifer) BASF	UN	Biological		P		Registered for suppression of various Aphids in protected vegetables and ornamentals.	L Bee:L	-
Cyantraniliprole (Benevia) FMC	28	Ingestion		P		Registered for suppression/control of Green Peach Aphid in fruiting vegetables, potatoes and strawberries.	L Bee:L	-
Dimpropyridaz (Efficon) BASF	UN	Ingestion		P		Registered for control of Cotton/Melon Aphid (*Aphis gossypii*) in cucurbits, and **Green Peach Aphid** (Myzus persicae) and Cabbage Aphid (Brevicoryne brassicae) in brassica vegetables, leafy vegetables and brassica leafy vegetables.	M Bee:L	-
Flonicamid (Mainman) UPL	29	Ingestion		P		Registered for control of **Green Peach Aphid** (*Myzus persicae*) in cucurbits, potatoes and strawberries, and Melon Aphid (*Aphis gossypii*) in cucurbits and potatoes, and Potato Aphid in potatoes.	M Bee:VL	-
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion		P		Registered for control of Cotton Aphid (*Aphis gossypii*) and **Green Peach Aphid** (*Myzus persicae*) in cucurbits, eggplant, peppers and tomatoes, and **Green Peach Aphid** (*Myzus persicae*) in green beans, potatoes and sweet potatoes.	L Bee:L	-
San Jose Scale (*Diaspidiotus perniciosus*) **Priority: Moderate**								
Rated as a moderate priority in peaches, apricots and plums, and as a high priority in nectarines. San Jose Scale damages the tree by feeding on twigs, branches and fruit. In extreme cases entire trees can be killed. Good orchard sanitation and the use of cover sprays are required to manage this pest.								
Acetamiprid + Novaluron (Cormoran) Adama	4A+15	Contact & Ingestion	35 NG	A	ALL	Registered in stone fruit for control of Black Peach Aphid (*Brachycaudus persicae*), Green Peach Aphid (*Myzus persicae*), Light Brown Apple Moth (*Epiphyas postvittana*), Oriental Fruit Moth (*Grapholita molesta*) and **San Jose Scale** (*Quadraspidiotus perniciosus*) and suppression of Mediterranean Fruit Fly (*Ceratitis capitata*) and Queensland Fruit Fly (*Bactrocera tryoni*). Apply as a foliar spray from petal fall targeting crawlers when they become active in the canopy. Use a retreatment interval of 14 days. Maximum of 2 applications per season.	M Bee:M	R2

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Petroleum Oil	-	Contact	1	A	ALL	Registered in stone fruit (except prunes) for control of **San Jose Scale**, Oyster Shell Scale, Bryobia Mite Eggs and European Mite Eggs. Apply as a foliar spray during dormant period up to bud swell. Retreatment interval and maximum number of applications per season not specified.	L Bee:L	-
Petroleum Oil (Heavy Dormant Spray Oil)	-	Contact	1	A	ALL (excl. TAS)	Registered in stone fruit for control of **San Jose Scale**. Apply as a foliar spray during dormant season up until bud swell. Retreatment interval and maximum number of applications per season not specified.	L Bee:L	-
Spirotetramat (Movento) Bayer	23	Ingestion	21	A	ALL	Registered in stone fruit for control of Tuber Mealybug (*Pseudococcus virburni*), Longtailed Mealybug (*Pseudococcus longispinus*), Black Cherry Aphid (*Myzus cerasi*), Black Peach Aphid (*Brachycaudus persicae*) and **San Jose Scale** (*Quadraspidiotus perniciosus*). Apply as a foliar spray at the onset of crawler emergence. Use a minimum retreatment interval of 14 days. Maximum of 3 applications per crop, and a maximum of 2 applications made later than 21 days after shuck fall.	M Bee:L	-
Acetamiprid + Pyriproxyfen (Trivor) Adama	4A+7C	Ingestion / IGR		P		Registered for control of various species of Scale in avocados, citrus, grapevines, macadamias and mangoes.	M Bee:H	R2
Buprofezin (Applaud) Corteva	16	Ingestion		P		Registered for control of **Scale** in citrus, custard apples, grapes, mangoes, passionfruit and persimmons.	M Bee:L	-
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion		P		Registered for control of various insect pests in macadamias, avocados, mangoes, papaya and other tropical & sub-tropical fruits, inedible peel (excluding bananas, pineapple), olives, cucurbits, eggplant, peppers, tomatoes, green beans, potatoes and sweet potatoes. US registration for control of **Scale Insects** in citrus, pome fruit and stone fruit.	L Bee:L	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Fenoxycarb (Insegar) Syngenta	7B	Contact & Ingestion		P		Registered for control of **Scale** in apples, pears and olives.	M Bee:L	-
European Earwig (*Forficula auricularia*) **Priority: Moderate**								
Rated as a moderate priority in peaches, nectarines and plums, and as a low priority in apricots. Earwigs have chewing mouthparts and bite holes in young and ripening fruit and eat the flowers. The depressions on fruit caused by Earwig feeding can become infected by Brown Rot.								
Indoxacarb (Avatar)	22A	Ingestion	7 NG	A	ALL	Registered in stone fruits for control of Budworms (*Helicoverpa* spp.), Oriental Fruit Moth (*Grapholita molesta*), Inland Katydid (*Caedicia simplex*), Lightbrown Apple Moth (*E. postvittana*), Pear and Cherry Slug (*Caliroa cerasai*), Apple Weevil (*Otiorhynchus cribricollis*), Fuller's Rose Weevil (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*) and Wingless Grasshopper (*Phaulacridium vittatum*) and suppression of **European Earwig** (*Forficula auriculari*). Apply as a foliar spray when local thresholds have been reached. Use a minimum retreatment interval of 10 days. Maximum of 2 applications per season.	M Bee:H	R3
Broflanilide (Vedira) BASF	30	Contact & Ingestion		P		Pending registration as an ant bait. It also has potential uses as a seed treatment for the control of Wireworms and other soil pests, and a foliar treatment for the control of chewing pests in various crops.	-	-
Root Lesion Nematode (*Pratylenchus* spp.) **Priority: Moderate**								
Rated as a moderate priority in peaches, nectarines and apricots, and as a low priority in plums. Nematodes are soil dwelling organisms that penetrate roots and cause poor vigour, stunting and occasional tree death.								
1,3-Dichloropropene	-	Soil Fumigant	NR	A	ALL	Registered as a soil fumigant for control of plant parasitic nematodes. Restricted chemical. ***For use by professional and registered fumigators only.***	-	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Chloropicrin + 1,3-Dichloropropene (Telone C-35)	8B	Soil Fumigant	NR	A	ALL	Registered in fruit crops as a soil fumigant for control of plant parasitic Nematodes, Symphylans, Wireworms, soil borne diseases (including *Fusarium* and *Verticillium* wilts, *Rhizoctonia, Pythium*) and suppression of weeds. Restricted chemical. ***For use by professional and registered fumigators only.***	-	-
Abamectin (Tervigo) Syngenta	6	Contact		P		Registered for control of **Root Knot Nematode** in fruiting vegetables, cucurbits, potato and sweet potato.	M Bee:H	-
Cadusafos (Rugby)	1B	Contact		P		Registered for control of various nematodes in banana, citrus, ginger, sugarcane, tobacco and tomato.	H Bee:H	
Cyclobutrifluram (Tymirium)	N-3	Contact		P		Nematicide in development from Syngenta.	-	-
Fenamiphos (Nemacur)	1B	Contact		P		Registered for control of nematodes in aloe vera and banana.	H Bee:H	
Fluazaindolizine (Salibro Reklemel) Corteva	N-UN	Contact		P	ALL	Registered in for control of nematodes in cucurbits, fruiting vegetables, root & tuber vegetables and sweet potato.	-	-
Fluensulfone (Nimitz) Adama	N-UN	Contact		P	ALL	Registered for control of **Root Knot Nematode** in cucurbits, fruiting vegetables, carrots, potato, sweet potato and sugarcane.	-	-
Fluopyram (Velum Prime) Bayer	N-3	Contact		P		Hort Innovation is generating data to support registration for control of nematodes in strawberries. US registration for control of nematodes in brassica leafy vegetables, bulb vegetables, cucurbits, fruiting vegetables, hops, legume vegetables, pome fruit, potato, sweet potato, small berries, sorghum, stone fruit, strawberries and other low-growing berries, sunflower, tobacco and tree nuts.	-	-
Oxamyl (Vydate) Corteva	1A	Contact		P		Registered for control of nematodes in banana, capsicum / pepper, sweet potato and tomato.	H Bee:H	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Light Brown Apple Moth (*Epiphyas postvittana*) **Oriental Fruit Moth** (*Grapholita molesta*) **Priority: Moderate**								
Light Brown Apple Moth is rated as a moderate priority in peaches, nectarines, apricots and plums. Oriental Fruit Moth is rated as a moderate priority in peaches and apricots, and as a low priority in nectarines and plums. The larvae of Light Brown Apple Moth causes damage to leaves and fruit. Oriental Fruit Moth larvae bore into fruit as it ripens, making it unsaleable. An integrated management program is required to control these caterpillar pests.								
(E,E) 8,10 Dodecadien-1-OL + Tetradecanol (Isomate-C/OFM)	-	Mating Disruption	NR	A	ALL	Registered in peach, nectarine, plum and apricot for management of Codling Moth and **Oriental Fruit Moth**. Apply dispensers immediately prior to the first moth emergence in spring.	VL Bee:VL	-
Acetamiprid + Novaluron (Cormoran) Adama	4A+15	Contact & Ingestion	35 NG	A	ALL	Registered in stone fruit for control of Black Peach Aphid (*Brachycaudus persicae*), Green Peach Aphid (*Myzus persicae*), **Light Brown Apple Moth** (*Epiphyas postvittana*), **Oriental Fruit Moth** (*Grapholita molesta*) and San Jose Scale (*Quadraspidiotus perniciosus*) and suppression of Mediterranean Fruit Fly (*Ceratitis capitata*) and Queensland Fruit Fly (*Bactrocera tryoni*). Apply as a foliar spray targeting eggs and small larvae before they become entrenched. Use a retreatment interval of 14 days. Maximum of 2 applications per season.	M Bee:M	R2
Bacillus thuringiensis subsp Kurstaki Strain HD-1 (DiPel)	11	Biological / Ingestion	NR	A	ALL	Registered in fruit for control of Armyworm (*Spodoptera* spp.), Cotton Bollworm (*Helicoverpa armigera*), Native Budworm (*Helicoverpa punctigera*), Cabbage Moth (*Plutella xylostella*), Cabbage White Butterfly (*Pieris rapae*), Green Looper (*Chrysodeixis eriosoma*), **Light Brown Apple Moth** (*Epiphyas postvittana*), Pear Looper (*Ectropis excursaria*), Soybean Looper (*Thysanoplusia orichalcea*), Vine Moth (*Phalaenoides glycinae*, *Agarista agricola*) and Tobacco Looper (*Chrysodeixis argentifera*). Time spraying to coincide with egg hatch. Treatments per season not limited.	VL Bee:VL	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Carbaryl (Bugmaster)	1A	Contact	35	A	ALL	Registered in stone fruit (except cherries) for control of Budworms (*Heliothis* spp.), **Light Brown Apple Moth**, **Oriental Fruit Moth** and Fruit-Tree Borer. Apply as a foliar spray at first sign of pest activity and repeat as necessary. Retreatment interval and maximum number of treatments per season not specified.	H Bee:H	R2
Chlorantraniliprole (Altacor) FMC	28	Ingestion	14 NG	A	ALL	Registered in stone fruit for control of **Oriental Fruit Moth** (*Grapholita molesta*) and **Light Brown Apple Moth** (*Epiphyas postvittana*). Apply as a foliar spray either before 110 degree days after detection of Oriental Fruit Moths in traps, or at 140 degree days after Light Brown Apple Moths are detected in traps. Use a minimum retreatment interval of 14 days. Maximum of 2 applications per season.	L Bee:VL	-
Clothianidin (Samurai) Sumitomo	4A	Contact & Ingestion	7 NG	A	ALL	Registered in peaches and nectarines for control of **Oriental Fruit Moth** and Green Peach Aphid. Apply as a foliar spray when monitoring indicates that a generation egg hatch is taking place. Apply 2 consecutive sprays using a retreatment interval of 14 days.	M Bee:VH	R2
Clothianidin (Samurai) Sumitomo PER13527	4A	Contact & Ingestion	21 NG	A	ALL (excl. VIC)	Permitted in apricots for control of **Oriental Fruit Moth** (*Grapholita molesta*). Apply as a foliar spray when pest monitoring indicates that a generation egg hatch is taking place. Apply 2 consecutive sprays using a retreatment interval of 14 days.	M Bee:VH	R2
Cydia pomonella Granulosis Virus V22 (Grandex Biological Insecticide)	-	Biological	NR	A	ALL	Registered in stone fruit for control of **Oriental Fruit Moth** (*Grapholita molesta*). Apply as a cover spray when newly hatched larvae are present in the orchard. Apply at 7-14 day intervals while larvae are present. Treatments per season not limited.	VL Bee:VL	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Indoxacarb (Avatar)	22A	Ingestion	7 NG	A	ALL	Registered in stone fruits for control of Budworms (*Helicoverpa* spp.), **Oriental Fruit Moth** (*Grapholita molesta*), Inland Katydid (*Caedicia simplex*), **Lightbrown Apple Moth** (*E. postvittana*), Pear and Cherry Slug (*Caliroa cerasai*), Apple Weevil (*Otiorhynchus cribricollis*), Fuller's Rose Weevil (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*) and Wingless Grasshopper (*Phaulacridium vittatum*) and suppression of European Earwig (*Forficula auricularі*). Apply as a foliar spray either before 110 degree days after detection of Oriental Fruit Moths in traps, or at 140 degree days after Light Brown Apple Moths are detected in traps. Use a retreatment interval of 10-14 days. Maximum of 3 applications per season.	M Bee:H	R3
Malathion	1B	Contact	3	A	ALL	Registered in stone fruit for control of Black Peach Aphid, Green Peach Aphid, European Red Mite and **Oriental Fruit Moth**. Apply as a foliar spray at first sign of pest infestation. Retreatment interval not specified. Maximum of 4 applications per season.	H Bee:H	R3
Spinetoram (Delegate) Corteva	5	Ingestion	3 NG	A	ALL	Registered in stone fruit for control of Pear & Cherry Slug, **Light Brown Apple Moth**, **Oriental Fruit Moth** and Western Flower Thrips. Apply as a foliar spray targeted to mature eggs and newly hatched larvae. Use a retreatment interval of 14 days. Maximum of 4 applications per season.	M Bee:H	-
Spinosad (Entrust Organic) Corteva	5	Ingestion	3	A	ALL	Registered in stone fruit (excl. peaches) for control of Cherry Slug, **Light Brown Apple Moth**, Western Flower Thrips and **Oriental Fruit Moth**. Apply as a foliar spray targeted to mature eggs and newly hatched larvae. Use a retreatment interval of 14 days. Maximum of 4 applications per season.	L Bee:L	-
			7			Registered in peaches for control of Cherry Slug, **Light Brown Apple Moth**, Western Flower Thrips and **Oriental Fruit Moth**. Apply as a foliar spray targeted to mature eggs and newly hatched larvae. Use a retreatment interval of 7-14 days. Maximum of 4 applications per season.		

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Tetraniliprole (Vayego 200SC) Bayer	28	Ingestion	3 NG	A	ALL	Registered in stone fruit for control of Apple Weevil (*Otiorhynchus cribricollis*), Fuller's Rose Weevil (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*), **Oriental Fruit Moth** (*Laspeyresia molesta syn Grapholita molesta*) and Mediterranean Fruit Fly (Cer*atitis capitata*) and suppression of Dried Fruit Beetles (*Carpophilus* spp.) Apply as a foliar spray commencing post petal-fall and at egg hatch of a generational peak. Use a retreatment interval of 14-21 days. Maximum of 3 applications per season.	L-M Bee:L	-
Thiacloprid (Calypso)	4A	Contact & Ingestion	14 NG	A	ALL	Registered in stone fruit (excl. peaches) for control of **Oriental Fruit Moth**. Apply as a foliar spray commencing at egg hatch of generational peak. Use a retreatment interval of 14 days. Maximum of 3 applications per season.	M Bee:VH	R2
			21 NG			Registered in peaches for control of **Oriental Fruit Moth**. Apply as a foliar spray commencing at egg hatch of generational peak. Use a retreatment interval of 14 days. Maximum of 3 applications per season.		
Broflanilide (Vedira) BASF	30	Contact & Ingestion		P		Pending registration as an ant bait. It also has potential uses as a seed treatment for the control of Wireworms and other soil pests, and a foliar treatment for the control of chewing pests in various crops.	-	-
Emamectin (Proclaim) Syngenta	6	Ingestion		P		Registered for control of Diamondback Moth, Cabbage White Butterfly, Heliothis, Cluster Caterpillar & Loopers in brassica vegetables, root & tuber vegetables (except potato), leafy vegetables and brassica leafy vegetables, Heliothis & Fall Armyworm in sweet corn, Cluster Caterpillar, Heliothis, Light Brown Apple Moth & Loopers in strawberries, Heliothis & Cluster Caterpillar in lettuce & fruiting vegetables, Heliothis, Cluster Caterpillar & Cucumber Moth in cucurbits, Heliothis, Cluster Caterpillar & Loopers in legume vegetables, and **Light Brown Apple Moth** & Grapevine Moth in grapes.	M Bee:H	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Isocycloseram (Simodis) Syngenta	30	Ingestion		P		Registered for control of Diamond Back Moth, Cabbage White Butterfly and suppression of Heliothis in brassica vegetables and brassica leafy vegetables, suppression of Onion Thrips and Plague Thrips in bulb vegetables, control of Two Spotted Mite and Cucumber Moth and suppression of Broad Mite, Bean Red Spider Mite, Western Flower Thrips, Tomato Thrips, Melon Thrips, Plague Thrips and Heliothis in cucurbits, and control of Two Spotted Mite and Broad Mite and suppression of Tomato Russet Mite, Western Flower Thrips, Tomato Thrips, Melon Thrips, Plague Thrips and Heliothis in fruiting vegetables.	H Bee:VH	-
Methoxyfenozide (Prodigy) Corteva	18	Ingestion		P		Registered for control of **Light Brown Apple Moth** in apples, pears, blueberry, citrus, grapevines and kiwifruit.	VL Bee:VL	-
Silver Peach Mite (*Aculus cornutus*) **Priority: Moderate**								
Rated as a moderate priority in peaches and nectarines, and as a low priority in apricots and plums. Silver Peach Mite is rarely a problem in summerfruit. Control is seldom required, as the mite eating ladybird Stethorus often keeps populations at low levels.								
Acequinocyl (Kanemite) UPL	20B	Contact & Ingestion	14 NG	P-A	ALL	Registered in stone fruit for control of Two-Spotted Mite (*Tetranychus urticae*).	L Bee:L	-
Bifenazate (Acramite)	20D	Contact & Ingestion	3 G:28	P-A	ALL	Registered in apricots, nectarines, peaches and plums for control of Two-Spotted Mite (*Tetranychus urticae*), European Red Mite (*Panonychus ulmi*) and Bryobia Mite (*Bryobia rubrioculus*).	L Bee:H	-
Clofentezine (Apollo)	10A	IGR / Contact	21	P-A	ALL	Registered in stone fruit for control of Two-Spotted Mite (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*).	L Bee:L	-
Etoxazole (Paramite) Sumitomo	10B	IGR / Contact	7 NG	P-A	ALL	Registered in stone fruit (except cherries) for control of Two-Spotted Mite (*Tetranychus urticae*), European Red Mite (*Panonychus ulmi*) and Bryobia Mite (*Bryobia rubrioculus*).	L Bee:VL	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Etoxazole + Piperonyl Butoxide (Motto RMR) Imtrade	10B	IGR / Contact	7	P-A	ALL	Registered in nectarines for control of Two-Spotted Mite (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*).	L Bee:VL	R3
Fenbutatin Oxide (Torque)	12B	Contact	14	P-A	ALL	Registered in peaches and nectarines for control of Two-Spotted Mite (*Tetranychus urticae*), European Red Mite (*Panonychus ulmi*) and Bryobia Mite (*Bryobia rubrioculus*).	L Bee:L	R2
Fenbutatin Oxide + Hexythiazox (Sabamite) Sabachem	12B+10A	Contact	14	P-A	ALL	Registered in peaches and nectarines for control of Two-Spotted Mite (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*).	L Bee:L	R2
Hexythiazox (Calibre)	10A	Contact	3	P-A	ALL	Registered in stone fruit for control of Two-Spotted Mite and European Red Mite.	L Bee:L	-
Milbemectin (Milbeknock) Sipcam	6	Ingestion	14 NG	P-A	ALL	Registered in stone fruit for control of Two Spotted Mite (*Tetranychus urticae*).	M Bee:VH	-
Petroleum Oil	-	Contact	1	P-A	NSW & QLD	Registered in stone fruit (except prunes) for control of Two Spotted Mite.	L Bee:L	-
Potassium Salts of Fatty Acid (Natrasoap)	-	Contact	NR	P-A	ALL	Registered in fruit for control of Aphids, Thrips, Mealybug, Two-Spotted Mite, Spider Mite and Whitefly.	L Bee:L	-
Propargite	12C	Contact	7	P-A	ALL	Registered in stonefruit for control of Two Spotted Mite and European Red Mite.	M Bee:L	R3
Pyridaben (Sanmite)	10A	IGR / Contact	1	P-A	ALL	Registered in stonefruit for control of Two Spotted Mite (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*).	L Bee:L	-
Spiromesifen (Interrupt) Bayer	23	Ingestion	14 NG	P-A	ALL	Registered in stone fruit for control of Two Spotted Mite (*Tetranychus urticae*).	M Bee:VL	-
Tebufenpyrad (Pyranica) Sipcam	21A	Contact & Ingestion	14 NG	P-A	ALL	Registered in peaches for control of Two Spotted Mite (*Tetranychus urticae*) and European Red Mite (*Panonychus ulmi*).	M Bee:H	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Cyflumetofen (Danisaraba) BASF	25A	Contact		P		Registered for control of Two Spotted Mite (*Tetranychus urticae*) in pome fruit, almond, citrus, grapes, strawberries, fruiting vegetables and ornamentals.	L Bee:L	-
Cyantraniliprole + Diafenthiuron (Minecto Forte) Syngenta	28+12A	Ingestion		P		Registered for control of Two-Spotted Mite (*Tetranychus urticae*) in cucurbits and fruiting vegetables.	M Bee:VH	-
Isocycloseram (Simodis) Syngenta	30	Ingestion		P		Registered for control of Two-Spotted Mite (*Tetranychus urticae*) in cucurbits and fruiting vegetables.	H Bee:VH	-
Magnesium Hydroxide (Magnera) UPL	-	Contact		P		Registered for suppression of Two-Spotted Mite in tomatoes and cucurbits.	L Bee:L	-
Orange Oil (Prev-Am) Oro Agri	-	Contact		P		Registered for control of Two-Spotted Mite (*Tetranychus urticae*) in tomato, eggplant, sugar snap peas, snow peas, raspberries, strawberries and cucurbits.	L Bee:L	-
Mediterranean Fruit Fly (*Ceratitis capitata*) **Lesser Queensland Fruit Fly** (*Bactrocera neohumeralis*) **Priority: Low**								
Rated as a low priority in peaches, nectarines, apricots and plums. Mediterranean Fruit Fly lay their eggs in maturing and ripe fruit. Larvae hatch from these eggs and the fruit is usually destroyed within days by their feeding and associated rotting.								
4-(P-Acetoxyphenyl) -2-Butanone + Fipronil	2B	Fruit Fly Trap	NR	A	ALL	Registered in fruit crops for population reduction and population monitoring of Queensland Fruit Fly and **Lesser Queensland Fruit Fly**. Single stations can be used for population monitoring. Control of fruit fly required placement of 16 stations per hectare and should be used in conjunction with regular insecticide cover sprays.	M Bee:VH	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Acetamiprid + Novaluron (Cormoran) Adama	4A+15	Contact & Ingestion	35 NG	A	ALL	Registered in stone fruit for control of Black Peach Aphid (*Brachycaudus persicae*), Green Peach Aphid (*Myzus persicae*), Light Brown Apple Moth (*Epiphyas postvittana*), Oriental Fruit Moth (*Grapholita molesta*) and San Jose Scale (*Quadraspidiotus perniciosus*) and suppression of **Mediterranean Fruit Fly** (*Ceratitis capitata*) and Queensland Fruit Fly (*Bactrocera tryoni*). Apply as a foliar spray when monitoring indicates fruit fly activity. Use a retreatment interval of 7-10 days and do not apply consecutive applications. Maximum of 2 applications per season.	M Bee:M	R2
Clothianidin (Samurai) Sumitomo	4A	Contact & Ingestion	7 NG	A	ALL	Registered in stone fruit for control of Queensland Fruit Fly, **Mediterranean Fruit Fly** and Carpophilus Beetle. Apply as a foliar spray when monitoring indicates fruit fly activity. Apply 3 consecutive applications using a retreatment interval of 7 days. Maximum number of applications per season not specified.	M Bee:VH	R2
Deltamethrin (MagMed) PER92548	3A	Contact	NR	A	WA	Permitted in stonefruit as a fruit fly trap for attract and kill of **Mediterranean Fruit Fly** (*Ceratitis capitata*). Hang devices high and on the sunny side of trees prior to fruit becoming susceptible to attack.	VH Bee:H	-
Dimethoate PER13859	1B	Contact	NR	A	ALL	Permitted in fruit fly host crops for orchard clean-up of **Fruit Fly** following harvest. Do not apply more than 2 applications per host crop. Apply as a foliar and/or ground spray to both fallen and retained fruit. Produce treated must not be harvested, collected or supplied for human or animal consumption.	H Bee:H	R2
Etofenprox (Trebon) Sipcam	3A	Contact	3 NG	A	ALL	Registered in stone fruit (except cherries) for control of Queensland Fruit Fly and **Mediterranean Fruit Fly**. Apply as a foliar spray commencing as maturity approaches (fruit turning colour) and pest numbers are at critical threshold. Use a minimum retreatment interval of 7 days. Maximum of 3 applications per season.	VH Bee:H	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Malathion	1B	Bait / Contact	3	A	ALL	Registered in fruit trees as a bait for control of **Fruit Fly**. Apply as a foliar, strip or spot spray. Only apply to the leaves, trunk and lower limbs of trees. Do not apply directly to fruit. Apply weekly from 6 weeks before harvest to 2 weeks after harvest.	H Bee:H	R3
Pyrethrins (Pyganic)	3A	Contact	1	A	ALL	Registered in stone fruit as a clean up spray to control insects prior to harvest such as **Fruit Fly**, Rutherglen Bug and Spiders. Apply as a foliar spray.	VH Bee:H	-
Spinetoram (Delegate) Corteva PER12590	5	Ingestion	3	A	ACT, NSW, QLD & NT	Permitted in stone fruit for suppression of Queensland Fruit Fly (*Bactrocera tryoni*) and **Lesser Queensland Fruit Fly** (*Bactrocera neohumeralis*). Apply as a foliar spray commencing after stone set and when monitoring indicates pest pressure. Use a minimum retreatment interval of 14 days. Maximum of 4 applications per season.	M Bee:H	-
Spinosad (Naturalure) Corteva	5	Bait / Ingestion	NR	A	ALL	Registered in fruit for control of Fruit Flies including Queensland Fruit Fly and **Mediterranean Fruit Fly**. Apply as either a band or a spot spray to the lower canopy of fruiting plants. Begin applications as soon as monitoring traps indicate flies are present and fruit is at a susceptible stage. Repeat applications every 7 days, re-applying sooner if rain washes off the deposit. Avoid spraying the fruit as phytotoxicity may occur.	L Bee:H	-
Tetraniliprole (Vayego 200SC) Bayer	28	Ingestion	3 NG	A	ALL	Registered in stone fruit for control of Apple Weevil (*Otiorhynchus cribricollis*), Fuller's Rose Weevil (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*), Oriental Fruit Moth (*Laspeyresia molesta syn Grapholita molesta*) and **Mediterranean Fruit Fly** (Cer*atitis capitata*) and suppression of Dried Fruit Beetles (*Carpophilus* spp.) Apply as a foliar spray commencing when monitoring indicates fruit fly activity and fruit are vulnerable to damage. Use a retreatment interval of 10 days. Maximum of 3 applications per season.	L-M Bee:L	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Thiacloprid (Calypso) PER14562	4A	Contact & Ingestion	14 NG	A	ALL	Permitted in stone fruit (excl. peaches) for control of **Mediterranean Fruit Fly** (*Ceratitis capitata*). Apply as a foliar spray when monitoring indicates fruit fly activity. Use a minimum retreatment interval of 14 days. Maximum of 3 applications per season.	M Bee:VH	R2
			21 NG			Registered in peaches for control of **Mediterranean Fruit Fly** (*Ceratitis capitata*). Apply as a foliar spray when monitoring indicates fruit fly activity. Use a minimum retreatment interval of 14 days. Maximum of 3 applications per season.		
Trichlorfon PER14683	1B	Contact	7	A	ALL (excl. VIC)	Permitted in stone fruit for control of Queensland Fruit Fly (*Bactrocera tryoni*) and **Mediterranean Fruit Fly** (*Ceratitis capitata*). Apply as a foliar spray commencing at the start of stinging. Use a retreatment interval of 7-10 days. Maximum number of applications not specified.	H Bee:H	R2
Abamectin	6	Ingestion		P	ALL	Registered for control of Queensland Fruit Fly in citrus, blueberries, blackberries and raspberries.	M Bee:H	-
Acetamiprid + Pyriproxyfen (Trivor) Adama	4A+7C	Ingestion / IGR		P		Registered for control of **Fruit Fly** in avocados, citrus and mangoes.	M Bee:H	R2
Snails (Gastropoda) **Priority: Low**								
Rated as a low priority in peaches, nectarines, apricots and plums. Snails cause direct feeding damage to fruit leading to reduced yields or marketability. Molluscicides can be used as a broadcast across the orchard or applied to localised areas of infestation.								
Metaldehyde	-	Contact	7	A	ALL	Registered in horticultural crops for control of **Snails** and Slugs. Broadcast evenly over the ground where snails and slugs are active or incorporate with seed when direct drilling. Treatments per season not limited.	-	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Methiocarb	1A	Contact	7 G:28	A	ALL	Registered in stone fruit for control of Common Garden Snail, Slugs, White Italian Snail and White Snail. Keep away from domestic pets. Scatter baits evenly onto ground where snails and slugs occur. Treatments per season not limited.	-	-
Rutherglen Bug (*Nysius vinitor*) **Priority: Low**								
Rated as a low priority in peaches, nectarines, apricots and plums. Rutherglen Bug is a sporadic and minor pest of summerfruit. They are sap suckers and can cause direct feeding damage to fruit.								
Pyrethrins (Pyganic)	3A	Contact	1	A	ALL	Registered in stone fruit as a clean up spray to control insects prior to harvest such as Fruit Fly, **Rutherglen Bug** and Spiders. Apply as a foliar spray.	VH Bee:H	-
Trichlorfon	1B	Contact	2 NG	A	NSW, VIC, TAS, SA & WA	Registered in stone fruit for control of **Rutherglen Bug**. Apply as a foliar spray when pest outbreak occurs. Retreatment interval and maximum number of applications per season not specified.	H Bee:H	R2
Sulfoxaflor (Transform) Corteva	4C	Contact & Ingestion	7	P-A	ALL	Registered in stone fruit for control of Apple Dimpling Bug, Black Peach Aphid, Cherry Aphid and Green Peach Aphid. Registered for suppression of **Rutherglen Bug** in cucurbits, fruiting vegetables, leafy vegetables, root & tuber vegetables, brassica vegetables, cane berries and strawberries.	M Bee:VH	-
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion		P		Registered for control of various insect pests in macadamias, avocados, mangoes, papaya and other tropical & sub-tropical fruits, inedible peel (excluding bananas, pineapple), olives, cucurbits, eggplant, peppers, tomatoes, green beans, potatoes and sweet potatoes.	L Bee:L	-
Flonicamid (Mainman) UPL	29	Ingestion		P		Registered for control of mirids in strawberries and nursery stock.	M Bee:VL	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Bryobia Mite (*Bryobia rubrioculus*) **European Red Mite** (*Panonychus ulmi*) **Priority: Low**								
Rated as a low priority in peaches, nectarines and apricots. Bryobia Mite tends to cause occasional problems on apricots and plums. Heavy infestations cause mottling of foliage which may subsequently impact fruit size and colour. European Red Mite can become a pest when it causes stippling on leaves. An integrated management program should be used, including reduction of dust in the orchard, use of non-disruptive pesticides, avoidance of tree stress and biological agents.								
Bifenazate (Acramite)	20D	Contact & Ingestion	3 G:28	A	ALL	Registered in apricots, nectarines, peaches and plums for control of Two-Spotted Mite (*Tetranychus urticae*), **European Red Mite** (*Panonychus ulmi*) and **Bryobia Mite** (*Bryobia rubrioculus*). Apply as a foliar spray as soon as mites appear. Maximum of 1 application per season.	L Bee:H	-
Clofentezine (Apollo)	10A	IGR / Contact	21	A	ALL	Registered in stone fruit for control of Two-Spotted Mite (*Tetranychus urticae*) and **European Red Mite** (*Panonychus ulmi*). Apply as a foliar spray when monitoring indicates that mite numbers require control. Maximum of 1 application per season.	L Bee:L	-
Etoxazole (Paramite) Sumitomo	10B	IGR / Contact	7 NG	A	ALL	Registered in stone fruit (except cherries) for control of Two-Spotted Mite (*Tetranychus urticae*), **European Red Mite** (*Panonychus ulmi*) and **Bryobia Mite** (*Bryobia rubrioculus*). Apply as a foliar spray at the first sign of mite crawlers. Maximum of 1 application per season.	L Bee:VL	R3
Etoxazole + Piperonyl Butoxide (Motto RMR) Imtrade	10B	IGR / Contact	7	A	ALL	Registered in nectarines for control of Two-Spotted Mite (*Tetranychus urticae*) and **European Red Mite** (*Panonychus ulmi*). Apply as a foliar spray at the first sign of mite crawlers. Maximum of 1 application per season.	L Bee:VL	R3
Fenbutatin Oxide (Torque)	12B	Contact	14	A	ALL	Registered in peaches and nectarines for control of Two-Spotted Mite (*Tetranychus urticae*), **European Red Mite** (*Panonychus ulmi*) and **Bryobia Mite** (*Bryobia rubrioculus*). Apply as a foliar spray when mite numbers warrant control. Retreatment interval and maximum number of applications not specified.	L Bee:L	R2

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Fenbutatin Oxide + Hexythiazox (Sabamite) Sabachem	12B+10A	Contact	14	A	ALL	Registered in peaches and nectarines for control of Two-Spotted Mite (*Tetranychus urticae*) and **European Red Mite** (*Panonychus ulmi*). Apply as a foliar spray at first sign of mite activity. Maximum of 1 application per season.	L Bee:L	R2
Hexythiazox (Calibre)	10A	Contact	3	A	ALL	Registered in stone fruit for control of Two-Spotted Mite and **European Red Mite**. Apply as a foliar spray when mite numbers warrant control. Maximum of 1 application per season.	L Bee:L	-
Malathion	1B	Contact	3	A	ALL	Registered in stone fruit for control of Black Peach Aphid, Green Peach Aphid, **European Red Mite** and Oriental Fruit Moth. Apply as a foliar spray at first sign of pest infestation. Retreatment interval not specified. Maximum of 4 applications per season.	H Bee:H	R3
Petroleum Oil	-	Contact	1	A	ALL	Registered in stone fruit (except prunes) for control of San Jose Scale, Oyster Shell Scale, **Bryobia Mite Eggs** and **European Mite Eggs**. Apply as a foliar spray during dormant period up to bud swell. Retreatment interval and maximum number of applications per season not specified.	L Bee:L	-
Petroleum Oil (Heavy Dormant Spray Oil)	-	Contact	1	A	ALL	Registered in stone fruit for control of **Bryobia Mite** and **European Red Mite** (except WA). Apply as a foliar spray during dormant season up until bud swell. Retreatment interval and maximum number of applications per season not specified.	L Bee:L	-
Propargite	12C	Contact	7	A	ALL	Registered in stonefruit for control of Two Spotted Mite and **European Red Mite**. Apply as a foliar spray as soon as mites appear. Retreatment interval not specified. Maximum of 2 applications per season.	M Bee:L	R3
Pyridaben (Sanmite)	10A	IGR / Contact	1	A	ALL	Registered in stonefruit for control of Two Spotted Mite (*Tetranychus urticae*) and **European Red Mite** (*Panonychus ulmi*). Apply as a foliar spray before the pest reaches damaging levels. Maximum of 1 application per season.	L Bee:L	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Tebufenpyrad (Pyranica) Sipcam	21A	Contact & Ingestion	14 NG	A	ALL	Registered in peaches for control of Two Spotted Mite (*Tetranychus urticae*) and **European Red Mite** (*Panonychus ulmi*). Apply as a foliar spray before mite infestation reached 70% of leaves infested. Retreatment interval and maximum number of applications per season not specified.	M Bee:H	-
Cyflumetofen (Danisaraba) BASF	25A	Contact		P		Registered for control of Two Spotted Mite (*Tetranychus urticae*) in pome fruit, almond, citrus, grapes, strawberries, fruiting vegetables and ornamentals.	L Bee:L	-
Cyantraniliprole + Diafenthiuron (Minecto Forte) Syngenta	28+12A	Ingestion		P		Registered for control of Two-Spotted Mite (*Tetranychus urticae*) in cucurbits and fruiting vegetables.	M Bee:VH	-
Isocycloseram (Simodis) Syngenta	30	Ingestion		P		Registered for control of Two-Spotted Mite (*Tetranychus urticae*) in cucurbits and fruiting vegetables.	H Bee:VH	-
Magnesium Hydroxide (Magnera) UPL	-	Contact		P		Registered for suppression of Two-Spotted Mite in tomatoes and cucurbits.	L Bee:L	-
Orange Oil (Prev-Am) Oro Agri	-	Contact		P		Registered for control of Two-Spotted Mite (*Tetranychus urticae*) in tomato, eggplant, sugar snap peas, snow peas, raspberries, strawberries and cucurbits.	L Bee:L	-
Cherry Aphid (*Myzus cerasi*) **Priority: Low**								
Rated as a low priority in peaches, nectarines, apricots and plums. Cherry Aphid is not a serious pest of summerfruit.								
Pirimicarb (Pirimor)	1A	Contact	2	A	ALL	Registered in stone fruit for control of Green Peach Aphid, Black Peach Aphid and **Cherry Aphid**. Apply as a foliar spray at pink bud or when the pest appears. Retreatment interval not specified. Maximum of 2 applications per season. Do not apply consecutively.	VL Bee:VL	R3

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Potassium Salts of Fatty Acid (Natrasoap)	-	Contact	NR	A	ALL	Registered in fruit for control of **Aphids**, Thrips, Mealybug, Two-Spotted Mite, Spider Mite and Whitefly. Apply as a cover spray. Retreatment interval and maximum number of treatments not specified.	L Bee:L	-
Pymetrozine (Chess) Syngenta	9B	Contact & Ingestion	28	A	ALL	Registered in stone fruit for control of Black Peach Aphid (*Brachycaudus persicae*), **Black Cherry Aphid** (*Myzus cerasi*) and Green Peach Aphid (*Myzus persicae*). Apply as a foliar spray when local pest thresholds are reached. Use a minimum retreatment interval of 7 days. Maximum of 2 applications per crop.	L Bee:VL	R3
Spirotetramat (Movento) Bayer	23	Ingestion	21	A	ALL	Registered in stone fruit for control of Tuber Mealybug (*Pseudococcus virburni*), Longtailed Mealybug (*Pseudococcus longispinus*), **Black Cherry Aphid** (*Myzus cerasi*), Black Peach Aphid (*Brachycaudus persicae*) and San Jose Scale (*Quadraspidiotus perniciosus*). Apply as a foliar spray when pest numbers reach economic threshold. Apply a second application using a retreatment interval of 14-21 days if required. Maximum of 3 applications per crop, and a maximum of 2 applications made later than 21 days after shuck fall.	M Bee:L	-
Sulfoxaflor (Transform) Corteva	4C	Contact & Ingestion	7	A	ALL	Registered in stone fruit for control of Apple Dimpling Bug, Black Peach Aphid, **Cherry Aphid** and Green Peach Aphid. Apply as a foliar spray when pest reaches threshold level. Use a retreatment interval of 14 days. Maximum of 4 applications per season. Do not apply consecutive applications.	M Bee:VH	-
Acetamiprid + Novaluron (Cormoran) Adama	4A+15	Contact & Ingestion	35 NG	P-A	ALL	Registered in stone fruit for control of Black Peach Aphid (*Brachycaudus persicae*), Green Peach Aphid (*Myzus persicae*), Light Brown Apple Moth (*Epiphyas postvittana*), Oriental Fruit Moth (*Grapholita molesta*) and San Jose Scale (*Quadraspidiotus perniciosus*) and suppression of Mediterranean Fruit Fly (*Ceratitis capitata*) and Queensland Fruit Fly (*Bactrocera tryoni*).	M Bee:M	R2

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Afidopyropen (Versys) BASF	9D	Ingestion		P		Registered for control of aphids, including **Green Peach Aphid** (*Myzus persicae*) in sweet corn, rhubarb, artichokes, brassica vegetables, celery, cucurbits, fruiting vegetables, strawberry, leafy vegetables and brassica leafy vegetables.	L Bee:L	-
Beauveria bassiana (Velifer) BASF	UN	Biological		P		Registered for suppression of various Aphids in protected vegetables and ornamentals.	L Bee:L	-
Cyantraniliprole (Benevia) FMC	28	Ingestion		P		Registered for suppression/control of Green Peach Aphid in fruiting vegetables, potatoes and strawberries.	L Bee:L	-
Dimpropyridaz (Efficon) BASF	UN	Ingestion		P		Registered for control of Cotton/Melon Aphid (*Aphis gossypii*) in cucurbits, and **Green Peach Aphid** (Myzus persicae) and Cabbage Aphid (Brevicoryne brassicae) in brassica vegetables, leafy vegetables and brassica leafy vegetables.	M Bee:L	-
Flonicamid (Mainman) UPL	29	Ingestion		P		Registered for control of **Green Peach Aphid** (*Myzus persicae*) in cucurbits, potatoes and strawberries, and Melon Aphid (*Aphis gossypii*) in cucurbits and potatoes, and Potato Aphid in potatoes.	M Bee:VL	-
Flupyradifurone (Sivanto Prime) Bayer	4D	Contact & Ingestion		P		Registered for control of Cotton Aphid (*Aphis gossypii*) and **Green Peach Aphid** (*Myzus persicae*) in cucurbits, eggplant, peppers and tomatoes, and **Green Peach Aphid** (*Myzus persicae*) in green beans, potatoes and sweet potatoes.	L Bee:L	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Fullers Rose Weevil (*Asynonychus cervinus*) **Priority: Low**								
Rated as a low priority in peaches, nectarines, apricots and plums. Fullers Rose Weevil can cause leaf damage and fruit blemishes but specific control measures are rarely warranted.								
Indoxacarb (Avatar)	22A	Ingestion	7 NG	A	ALL	Registered in stone fruits for control of Budworms (*Helicoverpa* spp.), Oriental Fruit Moth (*Grapholita molesta*), Inland Katydid (*Caedicia simplex*), Lightbrown Apple Moth (*E. postvittana*), Pear and Cherry Slug (*Caliroa cerasai*), Apple Weevil (*Otiorhynchus cribricollis*), **Fuller's Rose Weevil** (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*) and Wingless Grasshopper (*Phaulacridium vittatum*) and suppression of European Earwig (*Forficula auriculari*). Apply as a foliar spray when local thresholds have been reached. Use a minimum retreatment interval of 10 days. Maximum of 2 applications per season.	M Bee:H	R3
Tetraniliprole (Vayego 200SC) Bayer	28	Ingestion	3 NG	A	ALL	Registered in stone fruit for control of Apple Weevil (*Otiorhynchus cribricollis*), **Fuller's Rose Weevil** (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*), Oriental Fruit Moth (*Laspeyresia molesta syn Grapholita molesta*) and Mediterranean Fruit Fly (Cer*atitis capitata*) and suppression of Dried Fruit Beetles (*Carpophilus* spp.) Apply as a foliar spray commencing post petal-fall when weevils begin to emerge. Use a retreatment interval of 14 days. Maximum of 3 applications per season.	L-M Bee:L	-
Fruit-Tree Borer (*Maroga melanostigma*) **Priority: Low**								
Rated as a low priority in peaches, nectarines, apricots and plums. Fruit Tree Borer is a minor and occasional pest. Larvae tunnel into main limbs, secondary limbs and the tree trunk. Infestation can lead to ringbarking and death of limbs. Control options are limited.								
Carbaryl (Bugmaster)	1A	Contact	35	A	ALL	Registered in stone fruit (except cherries) for control of Budworms (*Heliothis* spp.), Light Brown Apple Moth, Oriental Fruit Moth and **Fruit-Tree Borer**. Apply to areas of trunks and limbs showing damage. Apply twice during winter using a retreatment interval of 21 days.	H Bee:H	R2

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Pear & Cherry Slug (*Caliroa cerasi*) **Priority: Low**								
Rated as a low priority in nectarines and apricots. Pear and Cherry Slug is a minor pest that feeds on the upper surfaces of leaves and skeletonises them. They do not feed directly on fruit.								
Indoxacarb (Avatar)	22A	Ingestion	7 NG	A	ALL	Registered in stone fruits for control of Budworms (*Helicoverpa* spp.), Oriental Fruit Moth (*Grapholita molesta*), Inland Katydid (*Caedicia simplex*), Lightbrown Apple Moth (*E. postvittana*), **Pear and Cherry Slug** (*Caliroa cerasai*), Apple Weevil (*Otiorhynchus cribricollis*), Fuller's Rose Weevil (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*) and Wingless Grasshopper (*Phaulacridium vittatum*) and suppression of European Earwig (*Forficula auricularі*). Apply as a foliar spray when local thresholds have been reached. Use a minimum retreatment interval of 10 days. Maximum of 2 applications per season.	M Bee:H	R3
Spinetoram (Delegate) Corteva	5	Ingestion	3 NG	A	ALL	Registered in stone fruit for control of **Pear & Cherry Slug**, Light Brown Apple Moth, Oriental Fruit Moth and Western Flower Thrips. Apply as a foliar spray targeted to mature eggs and newly hatched larvae. Use a retreatment interval of 14 days. Maximum of 4 applications per season.	M Bee:H	-
Spinosad (Entrust Organic) Corteva	5	Ingestion	3	A	ALL	Registered in stone fruit (excl. peaches) for control of **Cherry Slug**, Light Brown Apple Moth, Western Flower Thrips and Oriental Fruit Moth. Apply as a foliar spray targeted to mature eggs and newly hatched larvae. Use a retreatment interval of 14 days. Maximum of 4 applications per season.	L Bee:L	-
			7			Registered in peaches for control of **Cherry Slug**, Light Brown Apple Moth, Western Flower Thrips and Oriental Fruit Moth. Apply as a foliar spray targeted to mature eggs and newly hatched larvae. Use a retreatment interval of 7-14 days. Maximum of 4 applications per season.		

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Acetamiprid + Novaluron (Cormoran) Adama	4A+15	Contact & Ingestion	35 NG	P-A	ALL	Registered in stone fruit for control of Black Peach Aphid (*Brachycaudus persicae*), Green Peach Aphid (*Myzus persicae*), Light Brown Apple Moth (*Epiphyas postvittana*), Oriental Fruit Moth (*Grapholita molesta*) and San Jose Scale (*Quadraspidiotus perniciosus*) and suppression of Mediterranean Fruit Fly (*Ceratitis capitata*) and Queensland Fruit Fly (*Bactrocera tryoni*).	M Bee:M	R2
Chlorantraniliprole (Altacor) FMC	28	Ingestion	14 NG	P-A	ALL	Registered in stone fruit for control of Oriental Fruit Moth (*Grapholita molesta*) and Light Brown Apple Moth (*Epiphyas postvittana*).	L Bee:VL	-
Tetraniliprole (Vayego 200SC) Bayer	28	Ingestion	3 NG	P-A	ALL	Registered in stone fruit for control of Apple Weevil (*Otiorhynchus cribricollis*), Fuller's Rose Weevil (*Asynonychus cervinus*), Garden Weevil (*Phlyctinus callosus*), Oriental Fruit Moth (*Laspeyresia molesta syn Grapholita molesta*) and Mediterranean Fruit Fly (Cer*atitis capitata*) and suppression of Dried Fruit Beetles (*Carpophilus* spp.)	L-M Bee:L	-
Broflanilide (Vedira) BASF	30	Contact & Ingestion		P		Pending registration as an ant bait. It also has potential uses as a seed treatment for the control of Wireworms and other soil pests, and a foliar treatment for the control of chewing pests in various crops.	-	-
Emamectin (Proclaim) Syngenta	6	Ingestion		P		Registered for control of Diamondback Moth, Cabbage White Butterfly, Heliothis, Cluster Caterpillar & Loopers in brassica vegetables, root & tuber vegetables (except potato), leafy vegetables and brassica leafy vegetables, Heliothis & Fall Armyworm in sweet corn, Cluster Caterpillar, Heliothis, Light Brown Apple Moth & Loopers in strawberries, Heliothis & Cluster Caterpillar in lettuce & fruiting vegetables, Heliothis, Cluster Caterpillar & Cucumber Moth in cucurbits, Heliothis, Cluster Caterpillar & Loopers in legume vegetables, and Light Brown Apple Moth & Grapevine Moth in grapes.	M Bee:H	-

Pest / Active Ingredient (Trade Name)	Chemical group	Activity	WHP, days	Availability	States	Comments	Impact on beneficials	Regulatory risk
Isocycloseram (Simodis) Syngenta	30	Ingestion		P		Registered for control of Diamond Back Moth, Cabbage White Butterfly and suppression of Heliothis in brassica vegetables and brassica leafy vegetables, suppression of Onion Thrips and Plague Thrips in bulb vegetables, control of Two Spotted Mite and Cucumber Moth and suppression of Broad Mite, Bean Red Spider Mite, Western Flower Thrips, Tomato Thrips, Melon Thrips, Plague Thrips and Heliothis in cucurbits, and control of Two Spotted Mite and Broad Mite and suppression of Tomato Russet Mite, Western Flower Thrips, Tomato Thrips, Melon Thrips, Plague Thrips and Heliothis in fruiting vegetables.	H Bee:VH	-
Methoxyfenozide (Prodigy) Corteva	18	Ingestion		P		Registered for control of Light Brown Apple Moth in apples, pears, blueberry, citrus, grapevines and kiwifruit.	VL Bee:VL	-

4.3 Weeds of Summerfruit

4.3.1 Weed priorities

Weeds	Priority
Flaxleaf Fleabane (*Conyza bonariensis*)	H
Wireweed (*Polygonum aviculare*)	H
Marshmallow (*Malva parviflora*)	H
Johnson Grass (*Sorghum halepense*)	M
Couch Grass (*Cynodon dactylon*)	M
Feathertop Rhodes Grass (*Chloris virgata*)	M
Caltrop (*Tribulus terrestris*)	M
Nutgrass (*Cyperus rotundus*)	M
Capeweed (*Arctotheca calendula*)	M
Fat Hen (*Chenopodium album*)	M
Paspalum (Pa*spalum dilatatum*)	M
Liverseed Grass (*Eurochloa* spp.)	L
Barnyard Grass (*Echinochloa colona*)	L
Annual Ryegrass (*Lolium rigidum*)	L
Barley Grass (*Hordeum* spp.)	L
Pigweed (*Portulaca* spp.)	L
Sowthistle (*Sonchus oleraceus*)	L
Blackberry Nightshade (*Solanum nigrum*)	L

Weed priorities can vary substantially between regions, and weed management generally is guided more by cultural methods than by specific problem weed species. An integrated weed management program should be used to reduce the need for herbicides in crops. Our industry consultation identified Flaxleaf Fleabane, Wireweed and Marshmallow as high priority weeds. These are invasive species which are difficult to kill and must be managed using a sustained management program incorporating multiple control measures.

The risk of herbicide resistance should also be considered in devising a weed management program. Specific resistance management strategies for high resistance risk (1 and 2) and moderate resistance risk (3, 4, 6, 9, 10, 12, 13, 14, 15, 18, 19, 22, 23, 27, 29, 30 and 31) herbicide modes of action are available on the CropLife Australia webpage[7].

[7] https://www.croplife.org.au/resources/programs/resistance-management/

4.3.2 Available and potential products for weed control

TABLE KEY: Note that blank fields in the table indicate no information has been provided.

Availability			
A	Available via either registration or permit approval		
P	Potential – a possible candidate to pursue for registration or permit		
P-A	Potential, already approved in the crop for another use		
Resistance risk		**Regulatory risk (refer to Appendix 7)**	
		R1	Short-term: Critical concern over retaining access
**	Moderate resistance risk	R2	Medium-term: Maintaining access of significant concern
***	High resistance risk	R3	Long-term: Potential issues associated with use - Monitoring required
Withholding Period (WHP) – Number of days from last treatment to harvest (H) or Grazing (G)			
Harvest	H	Not Required when used as directed	NR
Grazing	G	No Grazing Permitted	NG

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Flaxleaf Fleabane (*Conyza bonariensis*) **Priority: High**							
Rated as a high priority in summerfruit. Flaxleaf Fleabane is a widespread weed that is difficult to control with herbicides. It seeds prolifically and can germinate year-round. Weed control should be targeted at small, actively growing weeds and usually multiple applications will be required. A combination of residual and knockdown herbicides should form part of an integrated approach to managing Flaxleaf Fleabane.							
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Flaxleaf Fleabane**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Flumioxazin (Chateau)	14	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Flaxleaf Fleabane**. Apply to bare soil using a directed spray at the base of the bushes. At least 15mm of irrigation or rainfall is required to activate the herbicide. Best application is during the period following final harvest up to bud break. Avoid direct or indirect spray contact to foliage, fruit and green bark. Do not apply to trees established in the orchard for less than 1 year.	98	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds, including **Flaxleaf Fleabane**. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
Saflufenacil (Sharpen) BASF	14**		Registered for control of **Flaxleaf Fleabane** in citrus, pome fruit & almonds.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-
Wireweed (*Polygonum aviculare*) **Priority: High**							
Rated as a high priority in summerfruit. Wireweed grows rapidly in the warmer months and is difficult to control with herbicides. Application timing is critical to ensure small weeds are targeted.							
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Wireweed**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Isoxaben (Gallery)	29**	Tree Fruits / Non-Bearing / Residual Weed Control	Registered in tree fruits (non-bearing) for control of broadleaf weeds, including **Wireweed**. Apply to bare soil prior to weed emergence. Rainfall or irrigation is required within 21 days to activate the herbicide.	NR	A	ALL	-
Nonanoic Acid	-	Orchards / Directed Spray	Registered in orchards for control of broadleaf and grass weeds, including **Wireweed**. Apply as a directed spray at the early vegetative stage of the weeds.	NR	A	ALL	-
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Wireweed**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Oryzalin	3**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass & broadleaf weeds, including **Wireweed**. Apply to bare soil using a directed spray at the base of the trees. Requires at least 15mm of irrigation or rain to activate.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Wireweed**. If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Pendimethalin (Stomp)	3**	Deciduous Fruits / Directed Spray / Residual Weed Control	Registered in deciduous fruit for control of grass and broadleaf weeds, including **Wireweed**. Apply to soil surface that is free of weeds, surface litter and clods, and ensure incorporation by a minimum of 5mm of rainfall or spray irrigation within 10 days.	NR	A	ALL	-
Trifluralin	3**	Orchards & Vineyards / Pre-emergence Residual	Registered in orchards and vineyards for control of grass and broadleaf weeds, including **Wireweed**. Apply to new plantings during pre-plant cultivation or to established crops in spring after weeds and green manure crops have been ploughed in.	NR	A	ALL (excl. NSW)	R3
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-
Marshmallow (*Malva parviflora*) **Priority: High**							
Rated as a high priority in summerfruit. Marshmallow is adapted to a wide variety of environments and highly competitive weed. Control with knockdown herbicides can be unreliable.							
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone (Hammer)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of broadleaf weeds, including **Marshmallow** (*Malva parviflora*). If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR G:14	A	ALL	-
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Marshmallow**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Carfentrazone + Glyphosate (Broadway) FMC	14**+ 9**	Stone Fruit / Directed Spray	Registered in stone fruit for control of broadleaf weeds, including **Marshmallow** (*Malva parviflora*). Apply as a directed spray.	NR G:14	A	ALL	R3
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Flumioxazin (Chateau)	14	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Marshmallow**. Apply to bare soil using a directed spray at the base of the bushes. At least 15mm of irrigation or rainfall is required to activate the herbicide. Best application is during the period following final harvest up to bud break. Avoid direct or indirect spray contact to foliage, fruit and green bark. Do not apply to trees established in the orchard for less than 1 year.	98	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Small Flower Mallow**. If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-
Johnson Grass (*Sorghum halepense*) **Priority: Moderate**							
Rated as a moderate priority in summerfruit. Johnson Grass is a large, summer growing perennial that is difficult to eradicate with herbicides.							
2,2-DPA Dalapon	0**	Peaches / Apricots	Registered in peaches and apricots for control of annual and perennial grasses. Apply as a directed spray using a handgun in established orchards.	7	A	ALL	-
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Johnson Grass**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Clethodim	1***	Fruit Trees / Non-Bearing	Registered in non-bearing fruit trees for control of grass weeds, including **Johnson Grass** seedlings. Apply as a directed spray to young, actively growing weeds	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Fluazifop-P (Fusilade)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Johnson Grass**. Apply to young, actively growing weeds.	14	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Haloxyfop (Verdict)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Johnson Grass**. Apply as a directed spray.	NR	A	ALL	-
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Johnson Grass**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Registered in peaches (at least 3 years old) for control of grass and broadleaf weeds, including **Johnson Grass**. Apply as a pre-emergent to moist soil just before or during active weed growth.	NR	A	ALL (excl. WA)	R3
Trifluralin	3**	Orchards & Vineyards	Registered in orchards and vineyards for control of grass and broadleaf weeds, including **Johnson Grass**. Apple to new planting during pre-plant cultivation, or to established crops in spring after weeds and green manure crop have been incorporated into ground.	NR	A	ALL (excl. NSW)	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-
Couch Grass (*Cynodon dactylon*) **Priority: Moderate**							
Rated as a moderate priority in summerfruit. Couch Grass is a widespread, perennial weed that grows year-round in most areas. Herbicide control is effective provided it is targeted to young, actively growing weeds. Multiple applications are usually required.							
2,2-DPA Dalapon	0**	Peaches / Apricots	Registered in peaches and apricots for control of annual and perennial grasses. Apply as a directed spray using a handgun in established orchards.	7	A	ALL	-
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Couch Grass**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Fluazifop-P (Fusilade)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Couch Grass**. Apply to young, actively growing weeds.	14	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Haloxyfop (Verdict)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Couch Grass**. Apply as a directed spray.	NR	A	ALL	-
Nonanoic Acid	-	Orchards / Directed Spray	Registered in orchards for control of broadleaf and grass weeds, including **Couch Grass**. Apply as a directed spray at the early vegetative stage of the weeds.	NR	A	ALL	-
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Couch Grass**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Registered in peaches (at least 3 years old) for control of grass and broadleaf weeds, including **Couch Grass**. Apply as a pre-emergent to moist soil just before or during active weed growth.	NR	A	ALL (excl. WA)	R3
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-
Feathertop Rhodes Grass (*Chloris virgata*) **Priority: Moderate**							
Rated as a moderate priority in summerfruit. Feathertop Rhodes Grass is an aggressive grass weed that is difficult to control with herbicides. Multiple applications are required.							
2,2-DPA Dalapon	0**	Peaches / Apricots	Registered in peaches and apricots for control of annual and perennial grasses. Apply as a directed spray using a handgun in established orchards.	7	A	ALL	-
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Clethodim	1***	Fruit Trees / Non-Bearing	Registered in non-bearing fruit trees for control of grass weeds, including **Feather Top Grass** seedlings. Apply as a directed spray to young, actively growing weeds	NR	A	ALL	-
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Flumioxazin (Chateau)	14	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Feathertop Rhodes Grass**. Apply to bare soil using a directed spray at the base of the bushes. At least 15mm of irrigation or rainfall is required to activate the herbicide. Best application is during the period following final harvest up to bud break. Avoid direct or indirect spray contact to foliage, fruit and green bark. Do not apply to trees established in the orchard for less than 1 year.	98	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Caltrop (*Tribulus terrestris*) **Priority: Moderate**							
Rated as a moderate priority in summerfruit. Caltrop is an annual, summer-growing broadleaf that grows as a vine and has sharp spines on the fruiting structures. Established plants develop a strong taproot making herbicide control difficult.							
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Caltrop**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Isoxaben (Gallery)	29**	Tree Fruits / Non-Bearing / Residual Weed Control	Registered in tree fruits (non-bearing) for control of broadleaf weeds, including **Caltrop**. Apply to bare soil prior to weed emergence. Rainfall or irrigation is required within 21 days to activate the herbicide.	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Caltrop**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Oryzalin	3**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass & broadleaf weeds, including **Caltrop**. Apply to bare soil using a directed spray at the base of the trees. Requires at least 15mm of irrigation or rain to activate.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Caltrop**. If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Trifluralin	3**	Orchards & Vineyards	Registered in orchards and vineyards for control of grass and broadleaf weeds, including **Caltrop**. Apple to new planting during pre-plant cultivation, or to established crops in spring after weeds and green manure crop have been incorporated into ground.	NR	A	ALL (excl. NSW)	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-
Nutgrass (*Cyperus rotundus*) **Priority: Moderate**							
Rated as a moderate priority in summerfruit. Nutgrass prefers damp, water-logged soils but the nuts can survive for years underground during dry times. Herbicide options are limited and unreliable. Improve soil drainage if possible.							
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Registered in peaches (at least 3 years old) for control of grass and broadleaf weeds, as well as **Nutgrass**. Apply as a pre-emergent to moist soil just before or during active weed growth.	NR	A	ALL (excl. WA)	R3
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds. Registered for control of **Nutgrass** in asparagus.	NR	P-A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Capeweed (*Arctotheca calendula*) **Priority: Moderate**							
Rated as a moderate priority in summerfruit. Annual broadleaf weed that germinates in the cooler months and is widespread in temperate regions. Capeweed seeds and grows prolifically and is difficult to control with knockdown herbicides.							
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone (Hammer)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of broadleaf weeds, including **Capeweed** (*Arctotheca calendula*). If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR G:14	A	ALL	-
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Capeweed**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Carfentrazone + Glyphosate (Broadway) FMC	14**+ 9**	Stone Fruit / Directed Spray	Registered in stone fruit for control of broadleaf weeds, including **Capweed** (*Arctotheca calendula*). Apply as a directed spray.	NR G:14	A	ALL	R3
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Flumioxazin (Chateau)	14	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Capeweed**. Apply to bare soil using a directed spray at the base of the bushes. At least 15mm of irrigation or rainfall is required to activate the herbicide. Best application is during the period following final harvest up to bud break. Avoid direct or indirect spray contact to foliage, fruit and green bark. Do not apply to trees established in the orchard for less than 1 year.	98	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Isoxaben (Gallery)	29**	Tree Fruits / Non-Bearing / Residual Weed Control	Registered in tree fruits (non-bearing) for control of broadleaf weeds, including **Capeweed**. Apply to bare soil prior to weed emergence. Rainfall or irrigation is required within 21 days to activate the herbicide.	NR	A	ALL	-
Nonanoic Acid	-	Orchards / Directed Spray	Registered in orchards for control of broadleaf and grass weeds, including **Capeweed**. Apply as a directed spray at the early vegetative stage of the weeds.	NR	A	ALL	-
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Capeweed**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Capeweed**. If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Registered in peaches (at least 3 years old) for control of grass and broadleaf weeds, including **Capeweed**. Apply as a pre-emergent to moist soil just before or during active weed growth.	NR	A	ALL (excl. WA)	R3
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Fat Hen (*Chenopodium album*) **Priority: Moderate**							
Rated as a moderate priority in summerfruit. Fat Hen is a fast-growing, annual broadleaf weed that germinates from spring to autumn. Herbicide control can be difficult and targeting weeds at early growth stages is critical.							
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Fat Hen**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Flumioxazin (Chateau)	14	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Fat Hen**. Apply to bare soil using a directed spray at the base of the bushes. At least 15mm of irrigation or rainfall is required to activate the herbicide. Best application is during the period following final harvest up to bud break. Avoid direct or indirect spray contact to foliage, fruit and green bark. Do not apply to trees established in the orchard for less than 1 year.	98	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Isoxaben (Gallery)	29**	Tree Fruits / Non-Bearing / Residual Weed Control	Registered in tree fruits (non-bearing) for control of broadleaf weeds, including **Fat Hen**. Apply to bare soil prior to weed emergence. Rainfall or irrigation is required within 21 days to activate the herbicide.	NR	A	ALL	-
Nonanoic Acid	-	Orchards / Directed Spray	Registered in orchards for control of broadleaf and grass weeds, including **Fat Hen**. Apply as a directed spray at the early vegetative stage of the weeds.	NR	A	ALL	-
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Fat Hen**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Oryzalin	3**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass & broadleaf weeds, including **Fat Hen**. Apply to bare soil using a directed spray at the base of the trees. Requires at least 15mm of irrigation or rain to activate.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Fat Hen**. If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Pendimethalin (Stomp)	3**	Deciduous Fruits / Directed Spray / Residual Weed Control	Registered in deciduous fruit for control of grass and broadleaf weeds, including **Fat Hen**. Apply to soil surface that is free of weeds, surface litter and clods, and ensure incorporation by a minimum of 5mm of rainfall or spray irrigation within 10 days.	NR	A	ALL	-
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Registered in peaches (at least 3 years old) for control of grass and broadleaf weeds, including **Fat Hen**. Apply as a pre-emergent to moist soil just before or during active weed growth.	NR	A	ALL (excl. WA)	R3
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paspalum (Pa*spalum dilatatum*) **Priority: Moderate**							
Rated as a moderate priority in summerfruit. Paspalum is a perennial grass weeds that forms clumps that are tough to control. They are aggressive and fast-growing and ongoing control measures are required to keep them in check. Spot spraying can be effective, but it is important to target newly germinated weeds to achieve effective control.							
2,2-DPA Dalapon	0**	Peaches / Apricots	Registered in peaches and apricots for control of annual and perennial grasses. Apply as a directed spray using a handgun in established orchards.	7	A	ALL	-
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Paspalum**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Fluazifop-P (Fusilade)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Paspalum**. Apply to young, actively growing weeds.	14	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Haloxyfop (Verdict)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including ***Paspalum* spp**. Apply as a directed spray.	NR	A	ALL	-
Nonanoic Acid	-	Orchards / Directed Spray	Registered in orchards for control of broadleaf and grass weeds, including **Paspalum**. Apply as a directed spray at the early vegetative stage of the weeds.	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Paspalum**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-
Liverseed Grass (*Eurochloa* spp.) **Priority: Low**							
Rated as a low priority in summerfruit. Liverseed Grass is a common, summer-growing annual grass weed. It competes aggressively and is difficult to remove from inter-row grass swords.							
2,2-DPA Dalapon	0**	Peaches / Apricots	Registered in peaches and apricots for control of annual and perennial grasses. Apply as a directed spray using a handgun in established orchards.	7	A	ALL	-
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Liverseed Grass**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Clethodim	1***	Fruit Trees / Non-Bearing	Registered in non-bearing fruit trees for control of grass weeds, including **Liverseed Grass**. Apply as a directed spray to young, actively growing weeds	NR	A	ALL	-
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Fluazifop-P (Fusilade)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Liverseed Grass**. Apply to young, actively growing weeds.	14	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Haloxyfop (Verdict)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Liverseed Grass**. Apply as a directed spray.	NR	A	ALL	-
Napropamide (Devrinol)	0**	Stone Fruit / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Liverseed Grass**. Apply to bare soil prior to weed emergence. Do not apply when nuts are on the ground. Maximum of 1 treatment per season.	NR NG	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Liverseed Grass** (*Urochloa panicoides*). If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Trifluralin	3**	Orchards & Vineyards	Registered in orchards and vineyards for control of grass and broadleaf weeds, including **Liverseed Grass**. Apple to new planting during pre-plant cultivation, or to established crops in spring after weeds and green manure crop have been incorporated into ground.	NR	A	ALL (excl. NSW)	R3
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Barnyard Grass (*Echinochloa colona*) **Priority: Low**							
Rated as a low priority in summerfruit. Barnyard Grass is a summer annual grass weed that is a prolific seeder, is highly competitive and is difficult to control with herbicides. It is prone to development of herbicide resistance, with confirmed cases of resistance to Group 9 and Group 5 herbicides.							
2,2-DPA Dalapon	0**	Peaches / Apricots	Registered in peaches and apricots for control of annual and perennial grasses. Apply as a directed spray using a handgun in established orchards.	7	A	ALL	-
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Barnyard Grass**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Clethodim	1***	Fruit Trees / Non-Bearing	Registered in non-bearing fruit trees for control of grass weeds, including **Barnyard Grass**. Apply as a directed spray to young, actively growing weeds	NR	A	ALL	-
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Fluazifop-P (Fusilade)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Barnyard Grass**. Apply to young, actively growing weeds.	14	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Flumioxazin (Chateau)	14	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Barnyard Grass** (*Echinochloa colona*). Apply to bare soil using a directed spray at the base of the bushes. At least 15mm of irrigation or rainfall is required to activate the herbicide. Best application is during the period following final harvest up to bud break. Avoid direct or indirect spray contact to foliage, fruit and green bark. Do not apply to trees established in the orchard for less than 1 year.	98	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Haloxyfop (Verdict)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Barnyard Grass**. Apply as a directed spray.	NR	A	ALL	-
Napropamide (Devrinol)	0**	Stone Fruit / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Barnyard Grass**. Apply to bare soil prior to weed emergence. Do not apply when nuts are on the ground. Maximum of 1 treatment per season.	NR NG	A	ALL	-
Oryzalin	3**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass & broadleaf weeds, including **Barnyard Grass**. Apply to bare soil using a directed spray at the base of the trees. Requires at least 15mm of irrigation or rain to activate.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Barnyard Grass** (*Echinochloa* spp.). If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Pendimethalin (Stomp)	3**	Deciduous Fruits / Directed Spray / Residual Weed Control	Registered in deciduous fruit for control of grass and broadleaf weeds, including **Barnyard Grass**. Apply to soil surface that is free of weeds, surface litter and clods, and ensure incorporation by a minimum of 5mm of rainfall or spray irrigation within 10 days.	NR	A	ALL	-
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Registered in peaches (at least 3 years old) for control of grass and broadleaf weeds, including **Barnyard Grass**. Apply as a pre-emergent to moist soil just before or during active weed growth.	NR	A	ALL (excl. WA)	R3
Trifluralin	3**	Orchards & Vineyards	Registered in orchards and vineyards for control of grass and broadleaf weeds, including **Barnyard Grass**. Apple to new planting during pre-plant cultivation, or to established crops in spring after weeds and green manure crop have been incorporated into ground.	NR	A	ALL (excl. NSW)	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-
Annual Ryegrass (*Lolium rigidum*) **Priority: Low**							
Rated as a low priority in summerfruit. Annual Ryegrass is the most serious grass weed of southern Australia with distribution that is gradually extending north. Populations are prone to herbicide resistance so integrated weed management and rotation of herbicide modes of action are important aspects of a long-term control strategy.							
2,2-DPA Dalapon	0**	Peaches / Apricots	Registered in peaches and apricots for control of annual and perennial grasses. Apply as a directed spray using a handgun in established orchards.	7	A	ALL	-
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Annual Ryegrass**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Clethodim	1***	Fruit Trees / Non-Bearing	Registered in non-bearing fruit trees for control of grass weeds, including **Annual Ryegrass**. Apply as a directed spray to young, actively growing weeds	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Fluazifop-P (Fusilade)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Annual Ryegrass**. Apply to young, actively growing weeds.	14	A	ALL	-
Flumioxazin (Chateau)	14	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Annual Ryegrass** (*Lolium rigidum*). Apply to bare soil using a directed spray at the base of the bushes. At least 15mm of irrigation or rainfall is required to activate the herbicide. Best application is during the period following final harvest up to bud break. Avoid direct or indirect spray contact to foliage, fruit and green bark. Do not apply to trees established in the orchard for less than 1 year.	98	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Haloxyfop (Verdict)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Annual Ryegrass**. Apply as a directed spray.	NR	A	ALL	-
Napropamide (Devrinol)	0**	Stone Fruit / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Annual Ryegrass**. Apply to bare soil prior to weed emergence. Do not apply when nuts are on the ground. Maximum of 1 treatment per season.	NR NG	A	ALL	-
Nonanoic Acid	-	Orchards / Directed Spray	Registered in orchards for control of broadleaf and grass weeds, including **Annual Ryegrass**. Apply as a directed spray at the early vegetative stage of the weeds.	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Annual Ryegrass**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Ryegrass** (*Lolium* spp.). If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Pendimethalin (Stomp)	3**	Deciduous Fruits / Directed Spray / Residual Weed Control	Registered in deciduous fruit for control of grass and broadleaf weeds, including **Annual Ryegrass**. Apply to soil surface that is free of weeds, surface litter and clods, and ensure incorporation by a minimum of 5mm of rainfall or spray irrigation within 10 days.	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Trifluralin	3**	Orchards & Vineyards	Registered in orchards and vineyards for control of grass and broadleaf weeds, including **Annual Ryegrass**. Apple to new planting during pre-plant cultivation, or to established crops in spring after weeds and green manure crop have been incorporated into ground.	NR	A	ALL (excl. NSW)	R3
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-
Barley Grass (*Hordeum* spp.) **Priority: Low**							
Rated as a low priority in summerfruit. Barley Grass is an annual species that is renowned for rapidly germinating after rain. Herbicide control needs to be targeted at young, actively growing weeds.							
2,2-DPA Dalapon	0**	Peaches / Apricots	Registered in peaches and apricots for control of annual and perennial grasses. Apply as a directed spray using a handgun in established orchards.	7	A	ALL	-
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Barley Grass**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Clethodim	1***	Fruit Trees / Non-Bearing	Registered in non-bearing fruit trees for control of grass weeds, including **Barley Grass**. Apply as a directed spray to young, actively growing weeds	NR	A	ALL	-
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Fluazifop-P (Fusilade)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Barley Grass**. Apply to young, actively growing weeds.	14	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Haloxyfop (Verdict)	1***	Stone Fruit	Registered in stone fruit for control of grass weeds, including **Barley Grass**. Apply as a directed spray.	NR	A	ALL	-
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Barley Grass**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Barley Grass** (*Hordeum leporinum*). If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Registered in peaches (at least 3 years old) for control of grass and broadleaf weeds, including **Barley Grass**. Apply as a pre-emergent to moist soil just before or during active weed growth.	NR	A	ALL (excl. WA)	R3
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Pigweed (*Portulaca* spp.) **Priority: Low**							
Rated as a low priority in summerfruit. Pigweed is a summer growing broadleaf weed that competes aggressively and can be difficult to control with herbicides.							
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Pigweed**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3
Isoxaben (Gallery)	29**	Tree Fruits / Non-Bearing / Residual Weed Control	Registered in tree fruits (non-bearing) for control of broadleaf weeds, including **Pigweed**. Apply to bare soil prior to weed emergence. Rainfall or irrigation is required within 21 days to activate the herbicide.	NR	A	ALL	-
Napropamide (Devrinol)	0**	Stone Fruit / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Pigweed**. Apply to bare soil prior to weed emergence. Do not apply when nuts are on the ground. Maximum of 1 treatment per season.	NR NG	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Nonanoic Acid	-	Orchards / Directed Spray	Registered in orchards for control of broadleaf and grass weeds, including **Pigweed**. Apply as a directed spray at the early vegetative stage of the weeds.	NR	A	ALL	-
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Pigweed**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Oryzalin	3**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass & broadleaf weeds, including **Pigweed**. Apply to bare soil using a directed spray at the base of the trees. Requires at least 15mm of irrigation or rain to activate.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Pigweed**. If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Pendimethalin (Stomp)	3**	Deciduous Fruits / Directed Spray / Residual Weed Control	Registered in deciduous fruit for control of grass and broadleaf weeds, including **Pigweed**. Apply to soil surface that is free of weeds, surface litter and clods, and ensure incorporation by a minimum of 5mm of rainfall or spray irrigation within 10 days.	NR	A	ALL	-
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Registered in peaches (at least 3 years old) for control of grass and broadleaf weeds, including **Pigweed**. Apply as a pre-emergent to moist soil just before or during active weed growth.	NR	A	ALL (excl. WA)	R3
Trifluralin	3**	Orchards & Vineyards	Registered in orchards and vineyards for control of grass and broadleaf weeds, including **Pigweed**. Apple to new planting during pre-plant cultivation, or to established crops in spring after weeds and green manure crop have been incorporated into ground.	NR	A	ALL (excl. NSW)	R3
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Sowthistle (*Sonchus oleraceus*) **Priority: Low**							
Rated as a low priority in summerfruit. Sowthistle is prolific and widespread in all regions and it is also prone to development of herbicide resistance.							
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+ 10**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Milk Thistle (Sowthistle)**. Apply as a directed spray when weeds are young and actively growing.	21 G:56	A	ALL	R3
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Flumioxazin (Chateau)	14	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Milk Thistle** (*Sonchus oleraceus*). Apply to bare soil using a directed spray at the base of the bushes. At least 15mm of irrigation or rainfall is required to activate the herbicide. Best application is during the period following final harvest up to bud break. Avoid direct or indirect spray contact to foliage, fruit and green bark. Do not apply to trees established in the orchard for less than 1 year.	98	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Isoxaben (Gallery)	29**	Tree Fruits / Non-Bearing / Residual Weed Control	Registered in tree fruits (non-bearing) for control of broadleaf weeds, including **Milk Thistle**. Apply to bare soil prior to weed emergence. Rainfall or irrigation is required within 21 days to activate the herbicide.	NR	A	ALL	-
Napropamide (Devrinol)	0**	Stone Fruit / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Sowthistle**. Apply to bare soil prior to weed emergence. Do not apply when nuts are on the ground. Maximum of 1 treatment per season.	NR NG	A	ALL	-
Nonanoic Acid	-	Orchards / Directed Spray	Registered in orchards for control of broadleaf and grass weeds, including **Milk Thistle**. Apply as a directed spray at the early vegetative stage of the weeds.	NR	A	ALL	-
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Common Sowthistle**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Oryzalin	3**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass & broadleaf weeds, including **Sowthistle**. Apply to bare soil using a directed spray at the base of the trees. Requires at least 15mm of irrigation or rain to activate.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Sowthistle**. If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Pendimethalin (Stomp)	3**	Deciduous Fruits / Directed Spray / Residual Weed Control	Registered in deciduous fruit for control of grass and broadleaf weeds, including **Sowthistle**. Apply to soil surface that is free of weeds, surface litter and clods, and ensure incorporation by a minimum of 5mm of rainfall or spray irrigation within 10 days.	NR	A	ALL	-
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Registered in peaches (at least 3 years old) for control of grass and broadleaf weeds, including **Milk Thistle**. Apply as a pre-emergent to moist soil just before or during active weed growth.	NR	A	ALL (excl. WA)	R3
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Blackberry Nightshade (*Solanum nigrum*) **Priority: Low**							
Rated as a low priority in summerfruit. Blackberry Nightshade is a competitive weed that is widespread in all regions. Herbicide control is effective but requires timely application and avoidance of seed set over several years to bring the soil seed bank down.							
Amitrole	34**	Vineyards & Orchards / Directed Spray	Registered in vineyards and orchards for control of broadleaf weeds and grasses. Apply as a directed spray to small, actively growing weeds.	56	A	ALL	R3
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards / Pre-Emergent Weed Control	Registered in orchards for control of annual grass and broadleaf weeds. Spread granules evenly over bare soil to be treated.	NR	A	ALL	-
Flumioxazin (Chateau)	14	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Blackberry Nightshade** (*Solanum nigrum*). Apply to bare soil using a directed spray at the base of the bushes. At least 15mm of irrigation or rainfall is required to activate the herbicide. Best application is during the period following final harvest up to bud break. Avoid direct or indirect spray contact to foliage, fruit and green bark. Do not apply to trees established in the orchard for less than 1 year.	98	A	ALL	-
Glufosinate (Basta)	10**	Stone Fruit Orchards / directed or shielded spray	Registered in stone fruit orchards for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk.	NR G:56	A	ALL	R3
Glyphosate (Roundup)	9**	Stone Fruit / directed spray, shielded spray or wick wiper	Registered in stone fruit for control of various grass and broadleaf weeds. Do not allow spray to contact any part of the tree, including the trunk. Time application to flowering nutgrass. Multiple applications will be required.	NR	A	ALL	R3

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Isoxaben (Gallery)	29**	Tree Fruits / Non-Bearing / Residual Weed Control	Registered in tree fruits (non-bearing) for control of broadleaf weeds, including **Blackberry Nightshade**. Apply to bare soil prior to weed emergence. Rainfall or irrigation is required within 21 days to activate the herbicide.	NR	A	ALL	-
Nonanoic Acid	-	Orchards / Directed Spray	Registered in orchards for control of broadleaf and grass weeds, including **Blackberry Nightshade**. Apply as a directed spray at the early vegetative stage of the weeds.	NR	A	ALL	-
Norflurazon (Zoliar)	12**	Stone Fruit / Directed Spray / Residual Weed Control	Registered in stone fruit for control of grass and broadleaf weeds, including **Blackberry Nightshade**. Apply as a directed spray to bare ground prior to emergence. Avoid contact with foliage or fruit. Do not apply to trees that have been established for less than 18 months.	NR	A	ALL	-
Oryzalin	3**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass & broadleaf weeds, including **Blackberry Nightshade**. Apply to bare soil using a directed spray at the base of the trees. Requires at least 15mm of irrigation or rain to activate.	NR	A	ALL	-
Oxyfluorfen (Goal)	14**	Stone Fruit / Directed Spray	Registered in stone fruit for control of grass and broadleaf weeds, including **Blackberry Nightshade**. If weeds are already present, use as a spike in a mixture with glyphosate or paraquat.	NR NG	A	ALL	-
Paraquat (Gramoxone)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	1 G:7	A	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray and avoid contact with crop foliage. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:1	A	ALL	R1

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use / Weed	WHP (days)	Availability	States	Regulatory risk
Paraquat + Diquat (SpraySeed)	22**	Orchards / Directed Spray or Spot Spray	Registered in orchards for control of annual grass and broadleaf weeds. Apply as a directed spray or spot spray. Do not allow spray to contact any part of the tree, including the trunk. NOTE: This use pattern is not supported under the current draft APVMA review.	NR G:7	A	ALL	R1
Aclonifen (Emerger) Bayer	32**		Bayer is expected to seek registration for pre-emergent control of grass and broadleaf weeds in various crops. Registered in Europe for use in potatoes, legume vegetables and cereals.		P		-
Dimethenamid-P (Outlook)	15**		Registered for pre-emergent control of grass and broadleaf weeds in sweet corn, beans, peas, pumpkins and kabocha.		P		-
S-Metolachlor (Dual Gold) Syngenta	15**		Registered for control of grass and broadleaf weeds in Brassica vegetables, Brassica leafy vegetables, sweet potatoes, spring onions, shallots, spinach, silverbeet, rhubarb, culinary herbs and beans.		P		-

4.4 Plant Growth Regulators in Summerfruit

4.4.1 Plant Growth Regulator Priorities

PGR Issue	Priority
Increase fruit firmness and size	H
Improve fruit quality and storage potential	H
Promote crop evenness	H
Restriction of vegetative growth	H
Advance and concentration of maturity	M
Desiccation of blossoms at flowering and reduction in fruit set	M
Break dormancy	M

A large number of Plant Growth Regulators (PGR) are available for use in stonefruit production. Increase fruit firmness and size, improve fruit quality and storage potential, promote crop evenness and restriction of vegetative growth were identified as high priority PGR issues.

4.4.2 Available and Potential Plant Growth Regulators

TABLE KEY: Note that blank fields in the table indicate no information has been provided.

Availability		Regulatory risk (refer to Appendix 7)	
A	Available via either registration or permit approval	R1	Short-term: Critical concern over retaining access
P	Potential - a possible candidate to pursue for registration or permit	R2	Medium-term: Maintaining access of significant concern
P-A	Potential, already approved in the crop for another use	R3	Long-term: Potential issues associated with use - Monitoring required

Withholding Period (WHP) – Number of days from last treatment to harvest (H) or Grazing (G)			
Harvest	H	Not Required when used as directed	NR
Grazing	G	No Grazing Permitted	NG

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use	WHP (days)	Availability	States	Regulatory risk
Increase fruit firmness and size **Priority: High**							
Rated as a high priority in summerfruit.							
Aminoethoxyvinylglycine (Retain)	PGR	Stonefruit / Except Cherries	Registered in stonefruit (except cherries) to increase fruit firmness and size and increase fruit quality and storage potential. Apply as a cover spray at 7-14 days prior to harvest.	7 G:14	A	ALL	-
Improve fruit quality and storage potential **Priority: High**							
Rated as a high priority in summerfruit.							
1-Methylcyclopropene (SmartFresh)	PGR	Plums / Apricot / Nectarine	Registered as a post-harvest treatment for improved quality after shipping, storage and handling. Add to the treatment area containing fruit immediately after harvest, upon entering storage or in transit.	NR	A	ALL	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use	WHP (days)	Availability	States	Regulatory risk
Aminoethoxyvinylglycine (Retain)	PGR	Stonefruit / Except Cherries	Registered in stonefruit (except cherries) to increase fruit firmness and size and increase fruit quality and storage potential. Apply as a cover spray at 7-14 days prior to harvest.	7 G:14	A	ALL	-
Promote crop evenness **Priority: High**							
Rated as a high priority in summerfruit.							
Ethephon	PGR	Peaches	Registered in peaches for advancement and concentration of maturity. Apply once as a foliar spray after commencement of the final fast growth stage.	42 NG	A	VIC	-
Restriction of vegetative growth **Priority: High**							
Rated as a high priority in summerfruit.							
Paclobutrazol	PGR	Peaches / Nectarines / Apricots / Plums	Registered in peaches, nectarines, apricots and plums to reduce vegetative growth. Apply as a foliar spray in early autumn or in spring between 14 days prior to bud burst and full bloom.	NR	A	ALL	-
Uniconazole-P	PGR		Registered for reduction of vegetative growth in avocados.		P		-
Advance and concentration of maturity **Priority: Moderate**							
Rated as a moderate priority in summerfruit.							
Ethephon	PGR	Peaches	Registered in peaches for advancement and concentration of maturity. Apply once as a foliar spray after commencement of the final fast growth stage.	42 NG	A	VIC	-

Active ingredient (Trade Name)	Chemical Group	Crop/ Situation	Comment / Use	WHP (days)	Availability	States	Regulatory risk
Desiccation of blossoms at flowering and reduction in fruit set **Priority: Moderate**							
Rated as a moderate priority in summerfruit.							
Ammonium Thiosulphate	PGR	Plums (including prunes) / Peaches (nominated varieties only)	Registered in plums (including prunes) and peaches (nominated varieties only) for desiccation of blossoms at flowering and reduction in fruit set. Apply 1-2 foliar applications once sufficient bloom has set on target wood.	NR	A	ALL	-
Break dormancy **Priority: Moderate**							
Rated as a moderate priority in summerfruit.							
Cyanamide (Dormex)	PGR	Plums & Prunes	Registered in plums and prunes for regulation of bud dormancy. Apply between 35 and 45 days before expected bud break.	NR	A	ALL	-

5. References

5.1 Information:

AgChem Access Priority Access Forum	https://www.agrifutures.com.au/national-rural-issues/agvet-chemicals/
Australian Pesticide and Veterinary Medicines Authority	www.apvma.gov.au
APVMA Chemical review	https://apvma.gov.au/chemicals-and-products/chemical-review/listing
APVMA MRLs	www.legislation.gov.au/F2023L01350/latest/text
APVMA Permit search	Agricultural And Veterinary Permits Search - portal.apvma.gov.au
APVMA Product search	Public Chemical Registration Information System Search - portal.apvma.gov.au
Codex MRL database	http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/
Cotton Pest Management Guide 2023-24	https://www.cottoninfo.com.au/publications/cotton-pest-management-guide
CropLife Australia	https://www.croplife.org.au/
Hort Innovation	www.horticulture.com.au

5.2 Abbreviations and Definitions:

APVMA	Australian Pesticides and Veterinary Medicines Authority
IPM	Integrated pest management
LOQ	Limit of quantification
MRL	Maximum residue limit (mg/kg or ppm)
Pesticides	Plant protection products (fungicide, insecticide, herbicide, nematicides, rodenticides, etc.).
Plant pests	Diseases, insects, nematodes, rodents, viruses, weeds, etc.
SARP	Strategic Agrichemical Review Process
TBC	To be confirmed
WHP	Withholding Period

5.3 Acknowledgements:

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

6. Appendices

Appendix 1. Products available for disease control in summerfruit
Appendix 2. Products available for control of insects and other pests in summerfruit
Appendix 3. Products available for weed control in summerfruit
Appendix 4. Plant Growth Regulators available in summerfruit
Appendix 5. Current permits for use in summerfruit
Appendix 6. Summerfruit Maximum Residue Limits (MRLs)
Appendix 7. Summerfruit regulatory risk assessment

Appendix 1. Products available for disease control in summerfruit

Active Ingredient (Trade Name)	Chemical Group	Situation	Diseases / Comments	States	WHP Days	Regulatory Risk
Azoxystrobin + Difenoconazole (Amistar Top) PER92785	11+3	Plums	Prune Rust (*Tranzschelia discolor*)	NSW	NR NG	R3
BLAD (Problad Verde)	BM01	Stone Fruit	Brown Rot (*Monilinia* spp.) Suppression of: Blossom Blight (*Monilinia* spp.)	ALL	NR	-
Bromo Chloro Dimethyl Hydatoin (BCDMH)	-	Sanitiser / Post-Harvest Treatment	External Rot Causing Organisms	ALL	NR	-
Captan	M4	Stone Fruit / Except Apricots	Blossom Blight & Brown Rot (*Sclerotinia laxa*, *S. fructicola*)	ALL	7 G:7	R3
Chlorine	-	Sanitiser / Post-Harvest Treatment	Bacteria and Fungi	ALL	NR	-
Chloropicrin + 1,3-Dichloropropene (Telone C-35)	8B	Soil Fumigant	Soil-borne diseases (including *Fusarium* & *Verticillium* Wilts, *Rhizoctonia*, *Pythium*)	ALL	NR	-

Active Ingredient (Trade Name)	Chemical Group	Situation	Diseases / Comments	States	WHP Days	Regulatory Risk
Chlorothalonil (Bravo)	M5	Apricots	Brown Rot - Fruit (*Monilinia fructicola*) Blossom Blight (*Monilinia laxa*) Shot-Hole (*Stigmina carpophila*) Stone Fruit Rust (*Tranzschelia discolor*) Freckle (*Venturia carpophila*)	ALL (excl. QLD)	7	R3
		Nectarines	Shot-Hole (*Stigmina carpophila*) Brown Rot - Fruit (*Monilinia fructicola*) Blossom Blight (*Monilinia laxa*)			
		Peaches	Brown Rot - Fruit (*Monilinia fructicola*) Blossom Blight (*Monilinia laxa*) Shot-Hole (*Stigmina carpophila*) Stone Fruit Rust (*Tranzschelia discolor*) Leaf Curl (*Taphrina deformans*)	ALL		
		Plums	Brown Rot - Fruit (*Monilinia fructicola*) Blossom Blight (*Monilinia laxa*) Shot-Hole (*Stigmina carpophila*) Stone Fruit Rust (*Tranzschelia discolor*)		1	
Copper	M1	Apricots	Shot-Hole (*Stigmina carpophila*) Freckle (*Venturia carpophila*)	ALL	1	-
			Bacterial Gummosis (*Pseudomonas syringae*)	ALL (excl. QLD)		
		Nectarines & Peaches	Shothole Leaf Curl (*Taphrina deformans*)	ALL		
		Plums	Shothole			
		Nectarines / Plums / Peaches	Phytophthora Stem Canker	ALL		
Cyprodinil (Chorus)	9	Apricots / Nectarines / Peaches / Plums	Blossom Blight (*Monilinia laxa*) Brown Rot (*Monilinia fructicola*)	ALL	NR	R3

Active Ingredient (Trade Name)	Chemical Group	Situation	Diseases / Comments	States	WHP Days	Regulatory Risk
Dithianon (Delan)	M9	Canning Peaches	Brown Rot (*Monilinia fructicola*)	ALL (excl. WA)	1	R3
		Apricots / Nectarines / Peaches / Plums			21	
		Nectarines / Peaches	Leaf Curl (*Taphrina deformans*) Rust (*Uromyces* spp.)	ALL		
		Plums	Rust (*Uromyces* spp.)			
		Stone Fruit	Shot-Hole (*Stigmina carpophila*) Scab / Peach Blight			
Dodine (Syllit)	U12	Peaches / Nectarines	Peach Leaf Curl (*Taphrina deformans*) Blossom Blight (*Monilinia* spp.)	ALL	NR NG	-
Fludioxonil (Scholar)	12	Stone Fruit / Post-Harvest	Brown Rot (*Monilinia fructicola*) Grey Mould (*Botrytis cinerea*) Rhizopus Rot (*Rhizopus stolonifer*)	ALL	NR	R3
Fluopyram + Tebuconazole (Luna Experience) Bayer PER92785	7+3	Plums	Prune Rust (*Tranzschelia discolor*)	NSW	NR NG	R3
Fluopyram + Trifloxystrobin (Luna Sensation) Bayer	7+11	Stone Fruit	Blossom Blight Shot-Hole Brown Rot	ALL	1 NG	-
Fosetyl-Aluminium	33	Peaches	Collar Rot (*Phytophthora cactorum*)	ALL (excl. QLD)	NR	-
Fosetyl-Aluminium PER85273	33	Apricot / Peach / Nectarine / Plum	Phytophthora Trunk & Collar Rot (*Phytophthora cactorum*, *P. cinnamomi* & *P.cambivora*)	ALL (excl. VIC)	NR	-
Iodine	-	Sanitiser / Stone Fruit	Bacteria & Fungi	ALL	NR	-
Iodocarb + Cyproconazole (Rapid Pruning Wound Dressing)	28+3	Apricots / Plums / Peaches	Silverleaf (*Chondrostereum purpureum*)	ALL (excl. WA)	NR	R3

Active Ingredient (Trade Name)	Chemical Group	Situation	Diseases / Comments	States	WHP Days	Regulatory Risk
Iprodione (Rovral)	2	Stone Fruit	Blossom Blight (*Monilinia laxa*) Brown Rot (*Monilinia fructicola*)	ALL	NR	R2
Isopyrazam (Seguris Flexi) Syngenta PER92785	7	Plums	Prune Rust (*Tranzschelia discolor*)	NSW	14 NG	-
Mancozeb	M3	Stone Fruit	Brown Rot Rust Shot Hole Freckle	ALL	14	R2
Mandestrobin (Intuity) Sumitomo	11	Stone Fruit	Blossom Blight (*Monilinia laxa*) Brown Rot (*Monilinia fructicola*)	ALL	7 G:7	-
Metalaxyl-M (Ridomil Gold 25G) Syngenta	4	Peaches / 5 Years or Older	Phytophthora Trunk Rot (*Phytophthora cactorum*)	VIC & SA	42	-
			Phytophthora Trunk Rot (*Phytophthora cinnamomi*)	QLD		
Metiram (Polyram)	M3	Stone Fruit	Rust Shot-Hole	ALL	14	
Penthiopyrad (Fontelis) Corteva	7	Stone Fruits	Brown Rot / Blossom Blight (*Monilinia* spp.) Scab / Freckle (*Cladosporium carpophilum*, *Venturia carpophila*)	ALL	NR NG	-
Potassium Bicarbonate (EcoCarb Plus)	M2	Nectarines	Brown Rot (*Monilinia fructicola*, *M.laxa*)	ALL	NR	-
Procymidone (Sumisclex)	2	Stone Fruit	Blossom Blight (*Monilinia laxa*)	ALL	9	R2

Active Ingredient (Trade Name)	Chemical Group	Situation	Diseases / Comments	States	WHP Days	Regulatory Risk
Propiconazole	3	Apricots	Prune Rust (*Tranzschelia discolor*)	SA	1	R3
		Plums / Prune Production		NSW, SA, VIC & WA		
		Stone Fruit / Blossom Phase	Brown Rot / Blossom Blight (*Monilinia laxa, Monilinia fructicola*)	ALL		
Rhizobium rhizogenes Strain K1026 (NoGall)	-	Stone Fruit	Crown Gall	ALL	NR	-
Streptomyces lydicus (Actinovate) Novozymes BioAg	BM02	All Crops	Biological soil amendment to stimulate soil organisms to make nutrients more available for plant growth	ALL	NR	-
Sulfur	M2	Peaches / Nectarines / Plums	Rust	ALL (excl. WA)	NR	-
			Brown Rot (*Monilinia fructicola*) Blossom Blight (*Monilinia laxa*)	ALL		
Thiram	M3	Stone Fruits	Brown Rot – Fruit (*Monilinia fructicola*) Shot-Hole (*Stigmina carpophila*)	ALL	7	R2
		Apricot	Freckle (*Venturia carpophila*)			
Triforine (Saprol)	3	Peaches / Nectarines / Apricots / Plums	Blossom Blight (*Monilinia* spp.) Brown Rot (*Monilinia* spp.)	ALL	NR	R3
		Peaches / Nectarines / Apricots / Plums /Post-Harvest Dip	Brown Rot (*Monilinia fructicola*, *M.laxa*)			
Zineb	M3	Peaches / Plums (not early varieties) / Nectarines	Rust	ALL	14	R2

Active Ingredient (Trade Name)	Chemical Group	Situation	Diseases / Comments	States	WHP Days	Regulatory Risk
Ziram	M3	Nectarines / Peaches	Blossom Blight (*Monilinia laxa*) Brown Rot (*Monilinia fructicola*) Shot-Hole (*Stigmina carpophila*) Leaf Curl (*Taphrina deformans*) Freckle (*Venturia carpophila*)	ALL	7	R2

Appendix 2. Products available for control of insects and other pests in summerfruit

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory Risk
4-(P-Acetoxyphenyl)-2-Butanone + Malathion	1B	Fruit Fly Trap	Queensland Fruit Fly	ALL	NR	R3
4-(P-Acetoxyphenyl) -2-Butanone + Fipronil	2B	Fruit Trees / Fruit Fly Trap	Queensland Fruit Fly (*Bactrocera tryoni*) Lesser Queensland Fruit Fly (*Bactrocera neohumeralis*)	ALL	NR	R3
(E,E) 8,10 Dodecadien-1-OL (Isomate-C)	-	Stone Fruits	Codling Moth	ALL (excl. WA)	NR	-
(E,E) 8,10 Dodecadien-1-OL + Tetradecanol (Isomate-C/OFM)	-	Peach / Nectarine / Plum / Apricot	Codling Moth Oriental Fruit Moth	ALL (excl. WA)	NR	-
Ethanol, Ethyl acetate, 2-methyl-1-propanol, 2-methyl-1-butanol + Ethanol, Acetaldehyde (Carpophilus Catcha Trapping System)	-	Peaches / Nectarines / Plums / Apricots	Carpophilus Beetles (*Carpophilus davidsoni*, *C. hemiptera*, *C. mutalis*)	ALL	NR	-
1,3-Dichloropropene	-	Soil Fumigant	Plant parasitic nematodes	ALL	NR	-
Acequinocyl (Kanemite) UPL	20B	Stone Fruit	Two-Spotted Mite (*Tetranychus urticae*)	ALL	14 NG	-
Acetamiprid + Novaluron (Cormoran) Adama	4A+15	Stone Fruit	Black Peach Aphid (*Brachycaudus persicae*) Green Peach Aphid (*Myzus persicae*) Light Brown Apple Moth (*Epiphyas postvittana*) Oriental Fruit Moth (*Grapholita molesta*) San Jose Scale (*Quadraspidiotus perniciosus*) Suppression of: Mediterranean Fruit Fly (*Ceratitis capitata*) Queensland Fruit Fly (*Bactrocera tryoni*)	ALL	35 NG	R2

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory Risk
Alpha-Cypermethrin	3A	Apricots / Nectarine / Peach / Plums	Garden Weevil (*Phlyctinus callosus*) Apple Weevil (*Ortiorhynchus cribicollis*)	WA	14	-
Alpha-Cypermethrin PER91059	3A	Stone Fruit / Except Cherries	Fruit Flies	ALL	7 NG	-
Bacillus thuringiensis subsp Kurstaki Strain HD-1 (DiPel)	11	Fruit	Armyworm (*Spodoptera* spp.) Cotton Bollworm (*Helicoverpa armigera*) Native Budworm (*Helicoverpa punctigera*) Cabbage Moth (*Plutella xylostella*) Cabbage White Butterfly (*Pieris rapae*) Green Looper (*Chrysodeixis eriosoma*) Light Brown Apple Moth (*Epiphyas postvittana*) Pear Looper (*Ectropis excursaria*) Soybean Looper (*Thysanoplusia orichalcea*) Vine Moth (*Phalaenoides glycinae*, *Agarista agricola*) Tobacco Looper (*Chrysodeixis argentifera*)	ALL	NR	-
Bifenazate (Acramite)	20D	Apricots / Nectarines / Peaches / Plums	Two-Spotted Mite (*Tetranychus urticae*) European Red Mite (*Panonychus ulmi*) Bryobia Mite (*Bryobia rubrioculus*)	ALL	3 G:28	
Bifenthrin (Talstar)	3A	Peaches / Nectarines / Plums / Apricots	Carpophilus Beetles (*Carpophilus* spp.)	ALL	1	R3
Carbaryl (Bugmaster)	1A	Stone Fruit / Except Cherries	Budworms (*Heliothis* spp.) Light Brown Apple Moth Oriental Fruit Moth Fruit-Tree Borer	ALL	35	R2
Chlorantraniliprole (Altacor) FMC	28	Stone Fruit	Oriental Fruit Moth (*Grapholita molesta*) Light Brown Apple Moth (*Epiphyas postvittana*)	ALL	14 NG	-
Chloropicrin + 1,3-Dichloropropene (Telone C-35)	8B	Soil Fumigant	Plant Parasitic Nematodes Symphylans Wireworms	ALL	NR	-

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory Risk
Clofentezine (Apollo)	10A	Stone Fruit	Two-Spotted Mite (*Tetranychus urticae*) European Red Mite (*Panonychus ulmi*)	ALL	21	-
Clothianidin (Samurai) Sumitomo	4A	Peaches / Nectarines	Oriental Fruit Moth Green Peach Aphid	ALL	7 NG	R2
		Stone Fruit	Queensland Fruit Fly Mediterranean Fruit Fly Carpophilus Beetle			
Clothianidin (Samurai) Sumitomo PER13527	4A	Apricots	Oriental Fruit Moth (*Grapholita molesta*)	ALL (excl. VIC)	21 NG	R2
Cydia pomonella Granulosis Virus V22 (Grandex Biological Insecticide)	-	Stone Fruit	Oriental Fruit Moth (*Grapholita molesta*)	ALL	NR	-
Deltamethrin (MagMed) PER92548	3A	Stonefruit	Mediterranean Fruit Fly (*Ceratitis capitata*)	WA	NR	-
Dimethoate PER13859	1B	Orchard Cleanup – Fruit Fly host crops following harvest	Fruit Fly	ALL	NR	R2
Etofenprox (Trebon) Sipcam	3A	Stone Fruit / Except Cherries	Queensland Fruit Fly Mediterranean Fruit Fly	ALL	3 NG	-
Etoxazole (Paramite) Sumitomo	10B	Stone Fruit / Except Cherries	Two-Spotted Mite (*Tetranychus urticae*) European Red Mite (*Panonychus ulmi*) Bryobia Mite (*Bryobia rubrioculus*)	ALL	7 NG	R3
Etoxazole + Piperonyl Butoxide (Motto RMR) Imtrade	10B	Nectarines	Two-Spotted Mite (*Tetranychus urticae*) European Red Mite (*Panonychus ulmi*)	ALL	7	R3

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory Risk
Fenbutatin Oxide (Torque)	12B	Peaches / Nectarines	Two-Spotted Mite (*Tetranychus urticae*) European Red Mite (*Panonychus ulmi*) Bryobia Mite (*Bryobia rubrioculus*)	ALL	14	R2
Fenbutatin Oxide + Hexythiazox (Sabamite) Sabachem	12B+10A	Peaches / Nectarines	Two-Spotted Mite (*Tetranychus urticae*) European Red Mite (*Panonychus ulmi*)	ALL	14	R2
Hexythiazox (Calibre)	10A	Stone Fruit	Two-Spotted Mite European Red Mite	ALL	3	-
Imidacloprid	4A	Stone Fruit	Green Peach Aphid Black Peach Aphid	ALL	21 NG	R2
Indoxacarb (Avatar)	22A	Stone Fruits	Budworms (*Helicoverpa* spp.) Oriental Fruit Moth (*Grapholita molesta*) Inland Katydid (*Caedicia simplex*) Lightbrown Apple Moth (*E. postvittana*) Pear and Cherry Slug (*Caliroa cerasai*) Apple Weevil (*Otiorhynchus cribricollis*) Fuller's Rose Weevil (*Asynonychus cervinus*) Garden Weevil (*Phlyctinus callosus*) Wingless Grasshopper (*Phaulacridium vittatum*) Suppression of: European Earwig (*Forficula auricularі*)	ALL	7 NG	R3
Malathion	1B	Stone Fruit	Black Peach Aphid Green Peach Aphid European Red Mite Oriental Fruit Moth	ALL	3	R3
		Fruit Trees / Bait	Fruit Fly			
Metaldehyde	-	Horticultural Crops	Snails & Slugs	ALL	7	-

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory Risk
Methiocarb	1A	Stone Fruit	Common Garden Snail Slugs White Italian Snail White Snail	ALL	7 G:28	
Methomyl (Lannate)	1A	Nectarines / Peaches	Green Peach Aphid (*Myzus persicae*) *Helicoverpa* spp. Monolepta Beetle Thrips	ALL	1 NG	R2
Milbemectin (Milbeknock) Sipcam	6	Stone Fruit	Two Spotted Mite (*Tetranychus urticae*)	ALL	14 NG	-
Petroleum Oil	-	Stone Fruit / Except Prunes	San Jose Scale Oyster Shell Scale Bryobia Mite Eggs European Mite Eggs	ALL	1	-
			Two Spotted Mite	NSW & QLD		
Petroleum Oil (Heavy Dormant Spray Oil)	-	Stone Fruit	San Jose Scale	ALL (excl. TAS)	1	-
			Bryobia Mites	ALL		
			European Red Mites	ALL (excl. WA)		
			Oystershell Scale Prune Scale	TAS		
Pirimicarb (Pirimor)	1A	Stone Fruit	Green Peach Aphid Black Peach Aphid Cherry Aphid	ALL	2	R3

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory Risk
Potassium Salts of Fatty Acid (Natrasoap)	-	Fruit	Aphids Thrips Mealybug Two-Spotted Mite Spider Mite Whitefly	ALL	NR	-
Propargite	12C	Stonefruit	Two Spotted Mite European Red Mite	ALL	7	
Pymetrozine (Chess) Syngenta	9B	Stone Fruit	Black Peach Aphid (*Brachycaudus persicae*) Black Cherry Aphid (*Myzus cerasi*) Green Peach Aphid (*Myzus persicae*)	ALL	28	R3
Pyrethrins (Pyganic)	3A	Stone Fruit	Clean up spray to control insects just prior to harvest such as: Fruit Fly Rutherglen Bug Spiders	ALL	NR	-
Pyridaben (Sanmite)	10A	Stonefruit	Two Spotted Mite (*Tetranychus urticae*) European Red Mite (*Panonychus ulmi*)	ALL	1	-
Pyriproxyfen (Distance Ant Bait) Sumitomo	7C	Tropical Fruit	Invasive & Nuisance Ants	ALL	NR	-
Spinetoram (Delegate) Corteva	5	Stone Fruit	Pear & Cherry Slug Light Brown Apple Moth Oriental Fruit Moth Western Flower Thrips	ALL	3 NG	-

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory Risk
Spinetoram (Delegate) Corteva PER12590	5	Stone Fruit	Suppression of: Queensland Fruit Fly (*Bactrocera tryoni*) Lesser Queensland Fruit Fly (*Bactrocera neohumeralis*)	ACT, NSW, QLD & NT	3	-
			Suppression of: Mediterranean Fruit Fly (*Ceratitis capitata*)	WA		
			Suppression of: Fruit Fly	ALL (excl. VIC)		
Spinosad (Entrust Organic) Corteva	5	Stone Fruit / Excl. Peaches	Cherry Slug Light Brown Apple Moth Western Flower Thrips Oriental Fruit Moth	ALL	3	-
		Peaches			7	
Spinosad (Naturalure) Corteva	5	Tree, Fruit, Nut, Vine & Vegetable Crops / Fruit Fly Bait	Queensland Fruit Fly (*Bactrocera tryoni*) Mediterranean Fruit Fly (*Ceratitis capitata*)	ALL	NR	-
Spiromesifen (Interrupt) Bayer	23	Stone Fruit	Two Spotted Mite (*Tetranychus urticae*)	ALL	14 NG	-
Spirotetramat (Movento) Bayer	23	Stone Fruit	Tuber Mealybug (*Pseudococcus virburni*) Longtailed Mealybug (*Pseudococcus longispinus*) Black Cherry Aphid (*Myzus cerasi*) Black Peach Aphid (*Brachycaudus persicae*) San Jose Scale (*Quadraspidiotus perniciosus*)	ALL	21	-

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory Risk
Spirotetramat (Movento) Bayer PER84804	23	Stone Fruit	Western Flower Thrips (*Frankliniella occidentalis*)	ALL (excl. VIC)	21	-
Sulfoxaflor (Transform) Corteva	4C	Stone Fruit	Apple Dimpling Bug Black Peach Aphid Cherry Aphid Green Peach Aphid	ALL	7	-
Tau-Fluvalinate (Mavrik)	3A	Nectarines / Peaches / Plums	Plague Thrips (*Thrips imaginis*)	ALL (excl. TAS)	NR	-
Tebufenpyrad (Pyranica) Sipcam	21A	Peaches	Two Spotted Mite (*Tetranychus urticae*) European Red Mite (*Panonychus ulmi*)	ALL	14 NG	-
Tetraniliprole (Vayego 200SC) Bayer	28	Stone Fruit	Apple Weevil (*Otiorhynchus cribricollis*) Fuller's Rose Weevil (*Asynonychus cervinus*) Garden Weevil (*Phlyctinus callosus*) Oriental Fruit Moth (*Laspeyresia molesta syn Grapholita molesta*) Mediterranean Fruit Fly (Cer*atitis capitata*) Suppression of: Dried Fruit Beetles (*Carpophilus* spp.)	ALL	3 NG	-
Thiacloprid (Calypso)	4A	Stone Fruit (excl. peaches)	Oriental Fruit Moth	ALL	14 NG	R2
		Peaches			21 NG	
Thiacloprid (Calypso) PER14562	4A	Stone Fruit (excl. peaches)	Mediterranean Fruit Fly (*Ceratitis capitata*)	WA	14 NG	R2
		Peaches			21 NG	

Active Ingredient (Trade Name)	Chemical group	Situation	Pests / Comments	States	WHP Days	Regulatory Risk
Trichlorfon	1B	Stone Fruit	Queensland Fruit Fly	QLD, NSW, VIC, WA & NT	2 NG	R2
			Rutherglen Bug	NSW, VIC, TAS, SA & WA		
Trichlorfon PER14683	1B	Stone Fruit	Queensland Fruit Fly (*Bactrocera tryoni*) Mediterranean Fruit Fly (*Ceratitis capitata*)	ALL (excl. VIC)	7	R2

Appendix 3. Products available for weed control in summerfruit

Active ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory Risk
2,2-DPA Dalapon	0**	Cherries / Peaches / Apricots	Annual & Perennial Grasses	7	ALL	-
Amitrole	34**	Vineyards & Orchards	Broadleaf Weeds & Grasses	56	ALL	R3
Carfentrazone (Hammer)	14**	Stone Fruit	Australian Crassula / Stonecrop (*Crassula* sp.), Bifora (*Bifora testiculata*), Capeweed (*Arctotheca calendula*), Chickweed (*Stellaria media*), Common Storksbill (*Erodium cicutarium*), Spiny Emex (*Emex australis*), Marshmallow (*Malva parviflora*), Paterson's Curse (*Echium plantagineum*), Sub Clover (*Trifolium subterraneum*), Wild Radish (*Raphanus raphanistrum*)	NR G:14	ALL	-
Carfentrazone + Glufosinate (Hellcat) AgNova	14**+10**	Stone Fruit	Grass & Broadleaf Weeds	21 G:56	ALL	R3
Carfentrazone + Glyphosate (Broadway) FMC	14**+9**	Stone Fruit	Australian Crassula / Stonecrop (*Crassula* spp.), Capeweed (*Arctotheca calendula*), Chickweed (*Stellaria media*), Common Storksbill (*Erodium cicutarium*), Spiny Emex (*Emex australis*), Marshmallow (*Malva parviflora*), Paterson's Curse (*Echium plantagineum*), Sub Clover (*Trifolium subterraneum*), Wild Radish (*Raphanus raphanistrum*)	NR G:14	ALL	R3

Active ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory Risk
Clethodim	1***	Fruit Trees / Non-Bearing	Annual Ryegrass (Lolium rigidum), Annual Phalaris (Phalaris minor), Barley Grass (Hordeum leporinum), Barnyard Grass (Echinochloa spp.), Blown Grass (Agrostis aveacea), Brome Grass (Bromus diandrus), Crowsfoot Grass (Eleusine indica), Feathertop Rhodes Grass (Chloris virgata), Liverseed Grass (Urochloa panicoides), Paradoxa Grass (Phalaris paradoxa), Red Sprangletop Grass (Leptochloa filiformis), Seedling Johnson Grass (Sorghum halepense), Silver Grass (Vulpia bromoides) – suppression only (not QLD, WA), Summer Grass (Digitaria spp.), Volunteer Sorghum (Sorghum spp.), Volunteer Wheat (Triticum aestivum), Volunteer Oats (Avena sativa), Volunteer Barley (Hordeum vulgare), Winter Grass (Poa annua)	NR	ALL	-
Dichlobenil (Casoron)	29**	Orchards, including apples, apricots, citrus, peaches, plums & vineyards	Annual Grass & Broadleaf Weeds	NR	ALL	-
Fluazifop-P (Fusilade)	1***	Stone Fruit	Annual Ryegrass, Barley Grass, Barnyard Grass, Brome Grasses, Crowsfoot Grass, Johnson Grass, Liverseed Grass, Prairie Grass, Summer Grass (Crabgrass), Wild Oats, Innocent Weed, Stinkgrass, Foxtail Seedlings, Pigeon Grass, Bent Grass, Couch Grass, English Couch (Rope Twitch), Water Couch, Johnson Grass, Kikuyu Grass, Paspalum	14	ALL	-

Active ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory Risk
Flumioxazin (Chateau)	14	Stone Fruit	Annual Ryegrass (*Lolium rigidum*), Barnyard Grass (*Echinochloa colona*), Blackberry Nightshade (*Solanum nigrum*), Bluetop (*Ageratum houstonianum*), Capeweed (*Arctotheca calendula*), Crassula (*Crassula colorata*), Creeping Speedwell (*Veronica persica*), Crowsfoot (*Eleusine indica*), Dwarf Nettle / Stinging Nettle (*Urtica urens*), Fat Hen (*Chenopodium album*), Feathertop Rhodes Grass (*Chloris virgata*), Fleabane (*Conyza bonariensis*), Green Summer Grass (*Brachiaria subquadripara*), Hog Weed (*Polygonum aviculare*), Marshmallow (*Malva parviflora*), Milk Thistle (*Sonchus oleraceus*), Small-Flowered Mallow (*Modiola caroliniana*), Squirreltail Fescue (*Vulpia bromoides*), Summer Grass (*Digitaria ciliaris*), Toadrush (*Juncus bufonius*), Wild Mustard (*Sinapsis arvensis*), Wild Radish (*Raphanus raphanistrum*), Wild Rose (*Cleome aculeate*), Wild Turnip (*Brassica tournefortii*)	98	ALL	-
Glufosinate	10**	Stone Fruit Orchards	Grass and Broadleaf Weeds	21 G:56	ALL	R3
Glyphosate	9**	Stone Fruits	Grass and Broadleaf Weeds	NR	ALL	R3

Active ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory Risk
Haloxyfop (Verdict)	1***	Stone Fruit	Couch Grass, Rhodes Grass, Slender Rats Tail Grass, Buffel Grass, Green Panic, Johnson Grass, Kikuyu, *Paspalum* spp., *Setaria* spp., Annual Ryegrass, Barley Grass, Barnyard Grass, Brome Grass, Crowsfoot Grass, Lesser Canary Grass, Liverseed Grass, Mossman River Grass, Paradoxa Grass, Summer Grass, Volunteer Cereals, Wild Oats	NR	ALL	-
Isoxaben (Gallery)	29**	Tree Fruits / Non-Bearing	Broadleaf Weeds	NR	ALL	-
Napropamide (Devrinol)	0**	Stone Fruit	Annual Ryegrass, Barnyard Grass, Crowsfoot Grass, Innocent Weed, Liverseed Grass, Pigweed, Potato Weed, Redshank, Sowthistle, Stinkgrass, Summer Grass, Winter Grass	NR NG	ALL	-
Nonanoic Acid	-	Orchards	Blackberry Nightshade, Capeweed, Burr Medic, Annual Ryegrass, Creeping Oxalis, Milk Thistle, Spear Thistle, Wireweed, Pigweed, Fat Hen, Shepherd's Purse, Flatweed, Hair Hawkbit, Lamb's Tongue, Dandelion, Evening Primrose, Bell Vine, White Clover, Couch Grass, Lovegrass, Paspalum, Volunteer Wheat, Perennial Ryegrass	NR	ALL	-

Active ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory Risk
Norflurazon (Zoliar)	12**	Stone Fruit	Annual Ryegrass, Barley Grass, Blackberry Nightshade, Brachiaria (Green Summer Grass), Caltrop, Capeweed, Chickweed, Common Sowthistle (Milk Thistle), Dandelion seedlings, Curled Dock seedlings, False Caper seedlings, Fat Hen, Indian Hedge Mustard, Innocent Weed (Spiny Burgrass), Medic, Hedge Mustards, Paspalum, Plantain seedlings, Pigweed (Portulaca), Prairie Grass, Prickly Lettuce, Great Brome (Ripgut Brome), Salvation Jane, Scarlet Pimpernel, Shepherd's Purse, Silver Grass, Skeleton Weed seedlings, Sorrel seedlings, Soursob, Stinkgrass, Stinking Roger, Subterranean Clover, Summer Grass (Crabgrass), Threecornered Jack (Doublegee, Spiny Emex), Variegated Thistle, Wild Oats, Wild Radish, Wild Turnip, Winter Grass, Wireweed, Witch Grass, Yellow Weed, Yorkshire Fog Grass, Couch Grass, Dandelion, Curled Dock, False Caper, Johnson Grass, Skeleton Weed, Sorrel, Soursob	NR	ALL	-
Oryzalin	3**	Stone Fruit	Barnyard Grass, Guinea Grass, Love Grass, Paradoxa Grass, Pigeon Grass, Spiny Burr (Gentle Annie, Innocent Weed), Summer Grass, Crab Grass, Deadnettle, Fat Hen, Fumitory, Portulaca (Pigweed), Sowthistle, Wireweed (Hogweed), Brassica species, Blackberry Nightshade, Caltrop, Paddymelon, Silverleaf Nightshade	NR	ALL	-

Active ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory Risk
Oxyfluorfen (Goal)	14**	Stone Fruit / directed spray	Amsinckia (*Amsinckia* spp.), Prickly Lettuce (*Lactuca* spp.), Barley Grass (*Hordeum leporinum*), Red Natal Grass (*Rhynchelytrum repens*), Barnyard Grass (*Echinochloa* spp.), Redshank (*Amaranthus cruentus*), Blackberry Nightshade (*Solanum nigrum*), Ryegrass (*Lolium* spp.), Bladder Ketmia (*Hibiscus trionum*), Sesbania Pea (*Sesbania cannabina*), Burrgrass (*Cenchrus australis*), Shepherd's Purse (*Capsella bursa-pastoris*), Caltrop (*Tribulus terrestris*), Small Flower Mallow (*Malva parviflora*), Capeweed (*Arctotheca calendula*), Soursob (*Oxalis pes-caprae*), Chickweed (*Stellaria media*), Sowthistle (*Sonchus oleraceus*), Crowsfoot Grass (*Eleusine indica*), Starburr (*Acanthospermum hispidum*), Deadnettle (*Lamium amplexicaule*), Stinkgrass (*Eragrostis cilianensis*), Fat Hen (*Chenopodium album*) Summer Grass (*Digitaria* spp.), Giant Pigweed (*Trianthema portulacastrum*), Thornapple (*Datura stramonium*), Liverseed Grass (*Urochloa panicoides*), White Eye (*Richardia brasiliensis*), Lovegrass (*Eragrostis* spp.), Wild Mustard (*Sisymbrium* spp.), Pigeon Grass (*Setaria* spp.), Wild Radish (*Raphanus raphanistrum*), Pigweed (*Portulaca oleracea*), Wireweed (*Polygonum aviculare*), Bellvine (*Ipomoea* spp.), Common Cotula (*Cotula australis*), Groundsel (*Senecio vulgaris*), Potato Weed (*Galinsoga parviflora*), Stinging Nettle (*Urtica urens*)	NR NG	ALL	-

Active ingredient (Trade Name)	Chemical Group	Situation	Comment / Use / Weed	WHP (days)	States	Regulatory Risk
Paraquat (Gramoxone)	22**	Orchards / directed spray or spot spray	Annual Grass & Broadleaf Weeds	NR G:1	ALL	R1
Paraquat + Amitrole (Guerilla) Imtrade	22** + 34**	Orchards / Directed Spray	Annual grass and broadleaf weeds Flaxleaf Fleabane	NR G:1	ALL	R1
Paraquat + Diquat (SpraySeed)	22**	Orchards / directed spray or spot spray	Annual Grass and Broadleaf Weeds	NR G:1	ALL	R1
Pendimethalin (Stomp)	3**	Deciduous Fruits / Directed Spray / Residual Weed Control	Dwarf Amaranth, Green Amaranth, Annual Ryegrass, Asthma Plant (*Euphorbia hirta*), Barnyard Grass, Chickweed (*Stellaria media*), Crowsfoot Grass, Deadnettle (*Lamium amplexicaule*), Fat Hen (*Chenopodium album*), Pigeon Grass, Pigweed (*Portulaca oleracea*), Prickly Lettuce (*Lactuca serriola*), Sowthistle, Summer Grass, Winter Grass, Wireweed	NR	ALL	-
Terbacil (Sinbar)	5**	Peaches / At Least 3 Years Old	Amaranthus, Barley Grass, Barnyard Grass, Bathurst Burr, Brome Grasses, Capeweed, Fat Hen, Innocent Weed, Milk Thistle, Paterson's Curse, Pigweed, Shepherd's Purse, Spiny Emex, Whorled Pigeon Grass, Wild Lettuce, Wild Oats, Wild Radish, Wild Turnip, Couch Grass, Kikuyu, Johnson Grass, Nutgrass	NR	ALL (excl. WA)	R3
Trifluralin	3**	Orchards & Vineyards	Annual Ryegrass, Barnyard Grass, Canary Grass, Caltrop, Crab Grass, Mossman River Grass, Pigweed, Redroot (Amaranthus), Redshank, Summer Grass, Wild Oats, Winter Grass, Wireweed, Columbus Grass, Guinea Grass, Johnson Grass, Liverseed Grass	NR	ALL (excl. NSW)	R3

Chemical Group Resistance Risk: ** Moderate, *** High

Appendix 4. Plant Growth Regulators available in summerfruit

Active ingredient (Trade Name)	Chemical Group	Situation	Comment / Use	WHP (days)	States	Regulatory risk
1-Methylcyclopropene (SmartFresh)	PGR	Plums / Apricot / Nectarine	Post-Harvest treatment for improved quality after shipping, storage and handling	NR	ALL	-
Aminoethoxyvinylglycine (Retain)	PGR	Stonefruit / Except Cherries	To increase fruit firmness and size, and increase fruit quality and storage potential	7 G:14	ALL	-
Ammonium Thiosulphate	PGR	Plums (including prunes) / Peaches (nominated varieties only)	Desiccation of blossoms at flowering and reduction in fruit set	NR	ALL	-
Cyanamide (Dormex)	PGR	Plums & Prunes	Regulation of bud dormancy	NR	ALL	-
Ethephon	PGR	Peaches	Advancement and concentration of maturity	42 NG	VIC	-
Gibberellic Acid	PGR	Stonefruit	Reduction of flowering and fruiting (thinning)	NR	ALL	-
Paclobutrazol	PGR	Peaches / Nectarines / Apricots / Plums	To reduce vegetative growth	NR	ALL	-

Appendix 5. Current permits for use in summerfruit

Permit ID	Description	Date Issued	Expiry Date	Permit holder
PER13527 Version 3	Clothianidin (Samurai) / Apricots / Oriental Fruit Moth	28-Jun-13	30-Jun-25	Hort Innovation
PER13859 Version 3	Dimethoate / Orchard Cleanup Fruit Fly Host Crops / Fruit Fly	09-Feb-15	30-Jun-25	Hort Innovation
PER14562 Version 3	Thiacloprid (Calypso) / Stone Fruit / Mediterranean Fruit Fly	13-Dec-13	30-Jul-25	Hort Innovation
PER92548	Deltamethrin (MagMed) / Stonefruit / Mediterranean Fruit Fly	07-Sep-22	30-Sep-25	Sustainable Ventures
PER93053	Zinc Phosphide (RatOff) / Stone Fruits / Rats & Mice	06-Dec-23	30-Nov-25	Animal Control Technologies
PER92785	Azoxystrobin + Difenoconazole (Amistar Top), Isopyrazam (Seguris Flexi), Fluopyram + Tebuconazole (Luna Experience) / Plums / Prune Rust	22-Dec-23	31-Dec-25	Yenda Producers Co-op
PER14683 Version 3	Trichlorfon / Stone Fruit / Fruit Fly	24-Feb-15	31-Mar-27	Hort Innovation
PER91059 Version 2	Alpha-Cypermethrin / Stone Fruit except Cherries / Fruit Fly	30-Jun-21	30-Jun-27	Hort Innovation
PER85273 Version 2	Fosetyl-Aluminium / Apricot, Peach, Nectarine & Plum / Phytophthora Trunk & Collar Rot	23-Apr-18	31-Jan-28	Hort Innovation
PER84804 Version 3	Spirotetramat (Movento) / Stone Fruit / Western Flower Thrips	21-Jul-17	31-Dec-28	Hort Innovation
PER12590 Version 5	Spinetoram (Delegate) / Stone Fruit / Fruit Fly (suppression only)	06-Oct-11	31-May-29	Hort Innovation

Appendix 6. Summerfruit Maximum Residue Limits (MRLs)

CODEX commodity groupings of stone fruits and subgroups:

	Fruit
FS 0012	Stone Fruits
FS 0014	Plum subgroup
FS 2234	Plum
FS 2001	Peaches subgroup
FS 0240	Apricot
FS 0245	Nectarine
FS 0247	Peach

Note: Summerfruit production predominantly goes to the domestic fresh market but significant volumes are exported as well. Major export destinations are China, Singapore, Malaysia, Hong Kong and UAE. Available information indicates that in the absence of specific limits in legislation, that some countries defer to Codex, followed by EU MRL standards, or apply a 0.01ppm default value. Food exported to New Zealand from Australia may be legally sold if it complies with Australian requirements. MRLs and legislation are subject to change; the values presented should not be relied on.

Chemical	Codex Code	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Abamectin	FS 0012	Stone Fruits {except cherries}	T0.03	-
	FS 0014	Plums (including prunes)	-	0.005
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.03
Acequinocyl	FS 0012	Stone Fruits	0.7	-
Acetamiprid	FS 0012	Stone Fruits {except cherries}	0.5	-
	FS 0014	Plums (except prunes)	-	0.2
	FS 0245	Nectarine	-	0.7
	FS 0247	Peach	-	0.7
Acibenzolar-S-Methyl	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.2
Afidopyropen	FS 0014	Plums (including prunes)	-	*0.01
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.01
Aldrin & Dieldrin		Fruits	E0.05	-
Aminoethoxyvinylglycine	FS 0012	Stone Fruits {except cherries}	0.2	-
Amitraz	FS 0247	Peach	-	0.5
Amitrole	FS 0012	Stone Fruits	*0.02	*0.05
Azoxystrobin	FS 0014	Plums (including prunes)	T0.8	-
	FS 0012	Stone Fruits	-	2
Bifenazate	FS 0014	Plums (including prunes)	0.5	-
	FS 0240	Apricot	0.5	-
	FS 0245	Nectarine	0.5	-
	FS 0247	Peach	2	-
	FS 0012	Stone Fruits	-	2
Bifenthrin	FS 0012	Stone Fruits {except cherries}	1	-

Chemical	Codex Code	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Bitertanol	FS 0014	Plums (including prunes)	-	2
	FS 0240	Apricot	-	1
	FS 0245	Nectarine	-	1
	FS 0247	Peach	-	1
Boscalid	FS 0014	Plums (including prunes)	-	1.5
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	4
Buprofezin	FS 0014	Plums (including prunes)	-	2
	FS 0245	Nectarine	-	9
	FS 0247	Peach	-	9
Cadusafos	FS 0012	Stone Fruits	15	-
Captan	FS 0014	Plums (including prunes)	-	10
	FS 0245	Nectarine	-	3
	FS 0247	Peach	-	20
Carbaryl	FS 0012	Stone Fruits {except cherries}	0.5	-
Carbendazim	FS 0014	Plums (including prunes)	-	0.5
	FS 0240	Apricot	-	2
	FS 0245	Nectarine	-	2
	FS 0247	Peach	-	2
Carfentrazone-ethyl	FS 0012	Stone Fruits	*0.05	-
Chlorantraniliprole	FS 0012	Stone Fruits	1	1
Chlordane	FS 0012	Stone Fruits	E0.02	-
Chlorfenapyr	FS 0247	Peach	1	-
Chlorothalonil	FS 0014	Plums (including prunes)	10	-
	FS 0240	Apricot	7	-
	FS 0245	Nectarine	7	-
	FS 0247	Peach	30	-
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	1.5
Chlorpyrifos	FS 0012	Stone Fruits	T1	0.5
Clofentezine	FS 0012	Stone Fruits	0.1	0.5
Clothianidin	FS 0012	Stone Fruits	3	0.2
Cyanamide	FS 0014	Plums (including prunes)	*0.02	-
Cyantraniliprole	FS 0014	Plums (including prunes)	-	0.5
	FS 0247	Peach	-	1.5
Cyclaniliprole	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.3
Cycloxydim	FS 0012	Stone Fruits	-	*0.09
Cyhalothrin	FS 0014	Plums (except prunes)	-	0.2
	FS 0240	Apricot	-	0.5
	FS 0245	Nectarine	-	0.5
	FS 0247	Peach	-	0.5
Cypermethrin	FS 0012	Stone Fruits {except cherries}	1	-
	FS 0012	Stone Fruits	-	2

Chemical	Codex Code	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Cyprodinil	FS 0012	Stone Fruits	*0.01	2
	FS 0012	Stone Fruits (dried)	0.05	-
DDT		Fruits	E1	-
Deltamethrin	FS 0014	Plums (including prunes)	-	0.05
	FS 0245	Nectarine	-	0.05
	FS 0247	Peach	-	0.05
Diazinon		Fruits {except Citrus fruits, Grapes, Olives, Peach}	0.5	-
	FS 0247	Peach	0.7	-
Dichlobenil	FS 0012	Stone Fruits	0.1	-
Dicofol		Fruits {except strawberry}	5	-
Difenoconazole	FS 0014	Plums (including prunes)	T0.5	0.2
	FS 0245	Nectarine	-	0.5
	FS 0247	Peach	-	0.5
Diflubenzuron	FS 0014	Plums (including prunes)	-	0.5
	FS 0245	Nectarine	-	0.5
	FS 0247	Peach	-	0.5
Dinocap	FS 0247	Peach	-	0.1
Dinotefuran	FS 0245	Nectarine	-	0.8
	FS 0247	Peach	-	0.8
Diquat		Fruits	*0.05	-
	FS 0012	Stone Fruits	-	*0.02
Dithianon		Fruits {except blueberries}	2	-
	FS 0012	Stone Fruits	-	2
Dithiocarbamates	FS 0012	Stone Fruits	3	7
Diuron	FS 0012	Stone Fruits	*0.05	-
Dodine	FS 0245	Nectarine	-	5
	FS 0247	Peach	-	5
2,2-DPA	FS 0012	Stone Fruits	1	-
2,4-D	FS 0012	Stone Fruits	-	*0.05
Emamectin Benzoate	FS 0245	Nectarine	-	0.03
	FS 0247	Peach	-	0.03
Ethephon	FS 0245	Nectarine	0.01	-
	FS 0247	Peach	0.5	-
Ethion	FS 0012	Stone Fruits	1	-
Etofenprox	FS 0012	Stone Fruits {except cherries}	5	-
	FS 0245	Nectarine	-	0.6
	FS 0247	Peach	-	0.6
Etoxazole	FS 0012	Stone Fruits {except cherries}	0.3	-
Fenazaquin	FS 0014	Plums (including prunes)	-	0.5
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	1.5
Fenbuconazole	FS 0245	Nectarine	0.5	-
	FS 0014	Plums (including prunes)	-	0.3
	FS 0240	Apricot	-	0.5
	FS 0247	Peach	-	0.5

Chemical	Codex Code	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Fenbutatin oxide	FS 0245	Nectarine	3	-
	FS 0247	Peach	3	-
	FS 0014	Plums (including prunes)	-	3
	FS 0247	Peach	-	7
Fenhexamid	FS 0014	Plums (including prunes)	-	1
	FS 0240	Apricot	-	10
	FS 0245	Nectarine	-	10
	FS 0247	Peach	-	10
Fenpropathrin	FS 0014	Plums (including prunes)	-	1
Fenpyrazamine	FS 0014	Plums (including prunes)	-	2
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	4
Fenpyroximate	FS 0012	Stone Fruits {except cherries}	-	0.4
	FS 0014	Plums (including prunes)	-	0.05
Fipronil	FS 0012	Stone Fruits	0.01	-
Flonicamid	FS 0014	Plums (including prunes)	-	0.1
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.7
Fluazifop-p-butyl	FS 0012	Stone Fruits	0.05	*0.01
Flubendiamide	FS 0012	Stone Fruits	-	2
Fludioxonil	FS 0012	Stone Fruits {except apricot, peach}	5	-
	FS 0240	Apricot	10	-
	FS 0247	Peach	10	-
	FS 0012	Stone Fruits	-	Po5
Fluensulfone	FS 0012	Stone Fruits	-	0.09
Flumioxazin	FS 0012	Stone Fruits	*0.02	*0.02
Fluopyram	FS 0012	Stone Fruits {except cherries}	2	-
	FS 0014	Plums (including prunes)	-	0.5
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	1
Flupyradifurone	FS 0014	Plums (including prunes)	-	0.4
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	1.5
Flusilazole	FS 0240	Apricot	-	0.2
	FS 0245	Nectarine	-	0.2
	FS 0247	Peach	-	0.2
Flutriafol	FS 0014	Plums (including prunes)	-	0.4
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.6
Fluvalinate	FS 0012	Stone Fruits	0.05	-
Fluxapyroxad	FS 0014	Plums (including prunes)	-	1.5
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	1.5
Fosetyl	FS 0012	Stone Fruits {except cherries, peach}	T11	-
	FS 0247	Peach	1	-
Glufosinate-ammonium	FS 0012	Stone Fruits	*0.05	0.15

Chemical	Codex Code	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Glyphosate	FS 0012	Stone Fruits	0.2	-
Haloxyfop	FS 0012	Stone Fruits	*0.05	*0.02
Hexythiazox	FS 0012	Stone Fruits	1	0.3
Imidacloprid	FS 0012	Stone Fruits	0.5	-
	FS 0014	Plums (including prunes)	-	1.5
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	1.5
Indoxacarb	FS 0012	Stone Fruits {except cherries}	2	-
	FS 0012	Stone Fruits	-	1
Iprodione	FS 0012	Stone Fruits	10	-
	FS 0247	Peach	-	10
Isofetamid	FS 0014	Plums (including prunes)	-	0.8
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	3
Isopyrazam	FS 0014	Plums	T0.7	-
Isoxaben	FS 0012	Stone Fruits	*0.01	-
Kresoxim-Methyl	FS 0247	Peach	-	1.5
Lindane		Fruits {except Apple, Cherries, Cranberry, Grapes, Peach, Pineapple, Plums, Strawberry}	E0.5	-
	FS 0014	Plums (including prunes)	E0.5	-
	FS 0247	Peach	E2	-
Maldison	FS 0012	Stone Fruits	5	-
Mandestrobin	FS 0012	Stone Fruits	3	-
Mefentrifluconazole	FS 0014	Plums (including prunes)	-	1.5
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	2
Mesotrione	FS 0012	Stone Fruits	-	*0.01
Metalaxyl	FS 0012	Stone Fruits	0.2	-
Metaldehyde		Fruits	1	-
Metconazole	FS 0014	Plums (including prunes)	-	0.1
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.2
Methiocarb	FS 0012	Stone Fruits	*0.06	-
Methomyl	FS 0012	Stone Fruits {except cherries}	1	-
	FS 0014	Plums (including prunes)	-	1
	FS 0245	Nectarine	-	0.2
	FS 0247	Peach	-	0.2
Methoxyfenozide	FS 0012	Stone Fruits	-	2
Methyl bromide		Fruits {except Jackfruit, Litchi, Mango, Papaya [pawpaw]}	T*0.05	-
Metrafenone	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.7
Milbemectin	FS 0012	Stone Fruits	0.1	-
Myclobutanil	FS 0014	Plums (including prunes)	-	2
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	3

Chemical	Codex Code	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Napropamide	FS 0012	Stone Fruits	*0.1	-
Norflurazon	FS 0012	Stone Fruits	*0.2	-
Novaluron	FS 0012	Stone Fruits {except cherries}	0.5	-
	FS 0012	Stone Fruits	-	7
Oryzalin		Fruits	0.1	-
Oxyfluorfen	FS 0012	Stone Fruits	0.05	-
Paclobutrazol	FS 0012	Stone Fruits	*0.01	-
Paraquat		Fruits {except olives}	*0.05	-
	FS 0012	Stone Fruits	-	*0.01
Parathion-Methyl	FS 0245	Nectarine	-	0.3
	FS 0247	Peach	-	0.3
Penconazole	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.08
Pendimethalin	FS 0012	Stone Fruits	*0.05	-
Penthiopyrad	FS 0012	Stone Fruits	4	4
Permethrin	FS 0012	Stone Fruits	-	2
Phosmet	FS 0240	Apricot	-	10
	FS 0245	Nectarine	-	10
	FS 0247	Peach	-	10
Phosphorous Acid	FS 0012	Stone Fruits {except cherries, peach}	T100	-
	FS 0247	Peach	100	-
Piperonyl butoxide		Fruits	8	-
Pirimicarb		Fruits {except blackberries}	0.5	-
	FS 0012	Stone Fruits	-	3
Procymidone	FS 0012	Stone Fruits {except cherries}	2	-
Propargite	FS 0012	Stone Fruits	3	4
Propiconazole	FS 0012	Stone Fruits	2	-
	FS 0014	Plums (including prunes)	-	Po0.4
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	Po4
Pydiflumetofen	FS 0014	Plums (including prunes)	-	0.6
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	1
Pymetrozine	FS 0012	Stone Fruits	*0.05	-
Pyraclostrobin	FS 0014	Plums (including prunes)	-	0.8
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.3
Pyrethrins		Fruits	1	-
Pyridaben	FS 0012	Stone Fruits	0.5	-
Pyrimethanil	FS 0014	Plums (including prunes)	-	2
	FS 0240	Apricot	-	3
	FS 0245	Nectarine	-	4
	FS 0247	Peach	-	4
Saflufenacil	FS 0012	Stone Fruits	-	0.01
Simazine		Fruits	*0.1	-

Chemical	Codex Code	Description	APVMA MRL mg/kg	Codex MRL mg/kg
Spinetoram	FS 0012	Stone Fruits	0.2	-
	FS 0014	Plums (including prunes)	-	0.09
	FS 0240	Apricot	-	0.15
	FS 0245	Nectarine	-	0.3
	FS 0247	Peach	-	0.3
Spinosad	FS 0012	Stone Fruits	1	0.2
			-	-
Spirodiclofen	FS 0012	Stone Fruits	-	2
Spiromesifen	FS 0012	Stone Fruits	0.6	-
Spirotetramat	FS 0012	Stone Fruits	1	3
Sulfoxaflor	FS 0012	Stone Fruits {except cherries}	1	-
	FS 0014	Plums (including prunes)	-	0.5
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.4
Tebuconazole	FS 0012	Stone Fruits {except plums}	*0.01	-
	FS 0014	Plums	T0.3	-
	FS 0014	Plums (except prunes)	-	1
	FS 0240	Apricot	-	2
	FS 0245	Nectarine	-	2
	FS 0247	Peach	-	2
Tebufenozide	FS 0245	Nectarine	-	0.5
	FS 0247	Peach	-	0.5
Tebufenpyrad	FS 0247	Peach	1	-
Terbacil	FS 0247	Peach	*0.04	-
Tetraniliprole	FS 0012	Stone Fruits {except cherries}	0.7	-
	FS 0014	Plums (including prunes)	-	0.3
	FS 2001	Peaches Subgroup (includes apricots and nectarine)	-	0.7
Thiacloprid	FS 0012	Stone Fruits	2	0.5
Thiamethoxam	FS 0012	Stone Fruits	-	1
Trichlorfon	FS 0012	Stone Fruits	T3	-
Trifloxystrobin	FS 0012	Stone Fruits {except cherries}	5	-
	FS 0012	Stone Fruits	-	3
Trifluralin		Fruits	*0.05	-
Triforine	FS 0012	Stone Fruits	10	-

NOTE: MRLs are constantly under review and subject to change. Check for current MRLs and do not rely on the values stated above.
Note: Available information indicates that in the absence of specific limits in legislation, some countries defer to Codex, followed by EU MRL standards or apply a 0.01ppm default value. Food exported to New Zealand from Australia may be legally sold if it complies with Australian requirements. MRLs and legislation are subject to change; the values presented should not be relied on.

* Indicates that an MRL is at the Limit of Quantitation (LOQ)
T = Temporary MRL
E = The MRL is based on extraneous residues
Po = The MRL accommodates post-harvest treatment of the commodity

Sources:

APVMA MRLs: Agricultural and Veterinary Chemicals Code (MRL Standard) Instrument 2023. Compilation 8. Prepared 14 February 2025.
CODEX MRLs: CODEX Alimentarius International Food Standards database (August 2024), http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/

Appendix 7. Stonefruit (except Cherry) regulatory risk assessment

Stone fruit (except Cherry) Agrichemical Regulatory Risk Assessment

March 2024

Regulatory pressures on agrichemicals are increasing globally, with many being either restricted or withdrawn from use. For older agrichemicals these pressures are often the result of reconsiderations involving new or refined risk assessment methodologies that requiring the generation of new data. A consequence of which can be that many of these agrichemicals are not meeting contemporary risk assessment standards as the necessary data is unavailable, or where data is available, the risk posed is considered unacceptable.

The use of agrichemicals can also be impacted through differences in standards between trading partners. The lack of an appropriate pesticide maximum residue limit (MRL) in an importing country can, for practical purposes, effectively prohibit use in the exporting country so as to ensure compliance, as a MRL breach would adversely affect market access.

The effects of the above are greater regulatory pressure placed on the use of individual agrichemicals or chemical groups. As a consequence it is possible that the number of approved agrichemical options could be adversely impacted.

To assist strategic planning, with respect to future pest management options, the following tables have been developed to highlight the regulatory threats to agrichemicals currently approved for the management of the pests and diseases in almonds as well as current initiatives aimed at addressing identified pest management deficiencies.

Stone fruit (except Cherry) Agrichemical Regulatory Risk Assessment

R1	Short-term: Critical concern over retaining access
R2	Medium-term: Maintaining access of significant concern
R3	Long-term: Potential issues associated with use - Monitoring required

Active Constituents	Chemical Group	Problem	Comment
INSECT AND OTHER PESTS			
Acequinocyl	**20B**	Two-spotted (Red spider) mite	
Acetamiprid + novaluron	**4A + 15**	Black peach aphid	Acetamiprid APVMA: Under review Novaluron EU/UK: No authorisation in place
		Fruit flies	
		Green peach aphid	
		Lightbrown apple moth	
		Oriental fruit moth	
		San Jose scale	
Alpha-cypermethrin	**3A**	Apple weevil	EU: Not renewed, grace period expired December 2022
		Garden weevil	
		Fruit flies (PER91059)	
Bifenazate	**20D**	Bryobia mite	Canada: Under review EU: Use restricted to non-edible crops in permanent greenhouses.
		European red mite	
		Two-spotted (Red spider) mite	
Bifenthrin	**3A**	Dried fruit beetles	Canada: Not authorised EU/UK: Not authorised

Stone fruit (except Cherry) Agrichemical Regulatory Risk Assessment

Active Constituents	Chemical Group	Problem	Comment
Carbaryl	**1A**	European earwig	Canada: Reviewed, large number of uses deleted Codex: Review scheduled, support uncertain EU/UK: No authorisation USA: Under review
		Fruit-tree borer	
		Green treehopper	
		Helicoverpa species	
		Lightbrown apple moth	
		Orange fruit borer	
		Oriental fruit moth	
		Redshouldered leaf beetle	
		Wingless grasshopper	
Chlorantraniliprole	**28**	Black cutworm	
		Lightbrown apple moth	
		Oriental fruit moth	
Clofentezine	**10A**	Bryobia mite	EU: Proposed restriction of use non-edible crops in permanent greenhouses
		European red mite	
		Two-spotted (Red spider) mite	
Clothianidin	**4A**	Fruit flies	APVMA: Under review Canada: Field uses cancelled or amended EU/UK: Not authorised USA: Re-registration with new risk mitigation measures
		Green peach aphid(Nectarine & peach)	
		Oriental fruit moth(Nectarine & peach)	
		Oriental fruit moth(PER13527 Apricots)	
Cydia pomonella granulosis virus	**31**	Oriental fruit moth	

Stone fruit (except Cherry) Agrichemical Regulatory Risk Assessment

Active Constituents	Chemical Group	Problem	Comment
Dimethoate	**1B**	Fruit flies(PER13859) (Post-harvest orchard clean-up treatment)	Codex: No MRL. EU/UK: Not authorised
Etofenprox	**3A**	Fruit flies	EU: Candidate for substitution
Etoxazole	**10B**	Bryobia mite	EU: Uses on greenhouse ornamentals only & Candidate for substitution
		European red mite	
		Two-spotted (Red spider) mite	
Fenbutatin oxide	**12B**	Bryobia mite(Nectarine & peaches)	APVMA: nominated for review Codex: To be reviewed by JMPR. EU/UK: No authorisation in place USA: Under review
		European red mite(Nectarine & peaches)	
		Two-spotted (Red spider) mite (Nectarine & peaches)	
Fipronil	**2B**	Queensland fruit fly Trap toxicant	APVMA: Under review Codex: Re-evaluation underway EU/UK: No authorisation in place USA: Under review
Hexythiazox	**10A**	European red mite	
		Two-spotted (Red spider) mite	
Imidacloprid	**4A**	Black peach aphid	APVMA: Under review Canada: Field uses cancelled or amended EU/UK: No authorisation USA: Re-registration with new risk mitigation measures
		Green peach aphid	
Indoxacarb	**22A**	Apple weevil	Canada: No authorisation EU/UK: No authorisation
		Fuller's rose weevil	
		Garden weevil	
		Helicoverpa species	
		Lightbrown apple moth	
		Oriental fruit moth	
		Wingless grasshopper	

Stone fruit (except Cherry) Agrichemical Regulatory Risk Assessment

Active Constituents	Chemical Group	Problem	Comment
Lambda-cyhalothrin	**3A**	Fruit flies(PER12961 – SA Biosecurity) (Soil drench)	EU: Candidate for substitution
Malathion/maldison	**1B**	Black peach aphid	APVMA: Under review Codex: Re-evaluation scheduled for 2023/24 EU: Restricted use to permanent greenhouses
		Cherry aphid	
		European red mite	
		Fruit flies	
		Green peach aphid	
		Locusts (PER11843)	
		Oriental fruit moth	
		Rutherglen bug	
		Wingless grasshopper	
Methomyl	**1A**	Green peach aphid	APVMA: nominated for review Canada: Re-evaluation completed. Majority of uses removed EU/UK: No authorisations in place USA: Under review
		Helicoverpa species	
		Redshouldered leaf beetle	
		Thrips	
Milbemectin	**6**	Two-spotted (Red spider) mite	
Paraffinic oil/petroleum oil	**UNM**	European red mite	
		Bryobia mite	
		Frosted scale	
		Mites	
		Oystershell scale	
		Pear scale	
		San Jose scale	
		Scale insects	
		Spider mites (Red spider)	
		Two-spotted (Red spider) mite	
Pirimicarb	**1A**	Black peach aphid	Codex: JMPR re-evaluation scheduled EU: Candidate for substitution
		Cherry aphid	
		Green peach aphid	

Stone fruit (except Cherry) Agrichemical Regulatory Risk Assessment

Active Constituents	Chemical Group	Problem	Comment
Propargite	**12C**	European red mite	APVMA: nominated for review EU/UK: No authorisations
		Mites	
		Two-spotted (Red spider) mite	
Pymetrozine	**9B**	Black peach aphid	Canada: Restricted use to glasshouses only Codex: No registrant support EU/UK: Not authorised
		Green peach aphid	
Pyrethrins	**3A**	Cabbage white butterfly	Canada: Under review
		Caterpillars	
		Fruit flies	
		Grapevine moth	
		Green peach aphid	
		Helicoverpa species	
		Lightbrown apple moth	
		Plague thrips	
		Rutherglen bug	
Pyridaben	**21A**	European red mite	
		Two-spotted (Red spider) mite	
Spinetoram	**5**	Caterpillars	
		Lightbrown apple moth	
		Oriental fruit moth	
		Pear and cherry slug	
		Western flower thrips	
		Fruit flies(PER12590)	
Spinosad	**5**	Lightbrown apple moth	
		Oriental fruit moth	
		Pear and cherry slug	
		Western flower thrips	

Stone fruit (except Cherry) Agrichemical Regulatory Risk Assessment

Active Constituents	Chemical Group	Problem	Comment
Spirotetramat	**23**	Black peach aphid	
		Cherry aphid	
		Longtailed mealybug	
		San Jose scale	
		Tuber mealybug	
		Western flower thrips(PER84804)	
Sulfoxaflor	**4C**	Apple dimpling bug(Yellow mirid)	USA: Pollinator concerns EU: Use restricted to permanent glasshouses only
		Black peach aphid	
		Cherry aphid	
		Green peach aphid	
Sulfur	**UN**	Bryobia mite	
		Frosted scale	
		San Jose scale	
Tau-fluvalinate	**3A**	Plague thrips (Nectarine, peach & plum)	
Tebufenpyrad	**21A**	European red mite	EU: Candidate for substitution
		Two-spotted (Red spider) mite	
Tetraniliprole	**28**	Apple weevil	EU/UK: Not authorised
		Dried fruit beetles	
		Fuller's rose weevil	
		Garden weevil	
		Mediterranean fruit fly	
		Oriental fruit moth	
Thiacloprid	**4A**	Green peach aphid	APVMA: Under review EU: No authorisation in place France: Suspended imports of fresh fruits treated with thiacloprid USA: No authorisation
		Oriental fruit moth	
		Mediterranean fruit fly(PER14562)	
Trichlorfon	**1B**	Queensland fruit fly	APVMA: nominated for review Codex: No MRLs EU/UK: No authorisations USA: No MRLs
		Rutherglen bug	
		Fruit flies(PER14683)	

Active Constituents	Chemical Group	Problem	Comment
DISEASES			
Agrobacterium radiobacter	**NC**	Crown gall	
BLAD	**BM01**	Blossom blight	
		Brown rot	
Captan	**M4**	Brown rot	Codex: Review scheduled 2025 EU: Under review proposed restriction to use in permanent greenhouses only USA: Under review
		Blossom blight	
Chlorothalonil	**M5**	Blossom blight	APVMA: nominated for review Canada: Proposed cancellation of uses EU/UK: No authorisation in place USA: Under review
		Brown rot	
		Leaf curl	
		Rust	
		Shot hole	
Copper	**M1**	Bacterial canker/blast	EU: Candidates for substitution
		Bacterial spot	
		Blossom blight	
		Brown rot	
		Freckle or scab	
		Leaf curl	
		Phytophthora stem rot	
		Rust	
		Shot hole	
		Trunk and stem canker	
Cyproconazole +iodocarb	**3 + 28**	Silver leaf	Cyproconazole APVMA: nominated for review EU/UK: No authorisation in place Iodocarb EU/UK: No authorisation in place
Cyprodinil	**9**	Blossom blight	Canada: Under review EU: Candidate for substitution
		Brown rot	

Stone fruit (except Cherry) Agrichemical Regulatory Risk Assessment

Active Constituents	Chemical Group	Problem	Comment
Dithianon	**M9**	Brown rot	EU: Use restricted to non-edible crops
		Freckle or scab (Apricot, nectarine & peach)	
		Leaf curl (Nectarines and & peaches)	
		Peach blight	
		Rust (Nectarine, peaches &plums)	
		Shot hole	
Dodine	**U12**	Leaf curl	
		Blossom blight (Nectarine & peach)	
Fludioxonil (Po)	**12**	Brown rot	EU: Under review & candidate for substitution
		Grey mould	
		Transit rot (Rhizopus soft rot)	
Fluopyram +trifloxystrobin	**7 + 11**	Blossom blight	Trifloxystrobin Canada: Under review
		Shot hole	
Fosetyl-Al	**33**	Collar rot(PER85273)	
		Phytophthora trunk rot(PER85273)	
Iodine	**M**	Bactericide	
		Fungi	
Iprodione	**2**	Blossom blight	Canada: Majority of food crop uses deleted Codex: Review scheduled EU/UK: No authorisation in place USA: Proposed deletion or restriction of uses
		Brown rot	
		Stem end rot(Po)	
		Transit rot (Rhizopus soft rot) (Po)	
Mancozeb	**M3**	Bacterial canker/blast	APVMA: nominated for review Canada: Many uses cancelled Codex: To be reviewed EU/UK: No authorisation
		Brown rot	
		Freckle or scab	
		Rust	
		Shot hole	
		Blossom blight	

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Active Constituents	Chemical Group	Problem	Comment
Mandestrobin	**11**	Blossom blight Brown rot	
Metalaxyl/metalaxyl-M	**4**	Leather rot (Peaches) Phytophthora trunk rot (Peaches) Trunk and stem canker (Peaches)	Metalaxyl EU: Candidate for substitution Metalaxyl-M EU: Restricted use approval
Metiram	**M3**	Rust Shot hole	APVMA: nominated for review Canada: All foliar uses, except potato, cancelled Codex: To be reviewed EU/UK: No authorisation
Penthiopyrad	**7**	Blossom blight Brown rot Freckle or scab	
Potassium salts	**M2**	Brown rot (Nectarines)	
Procymidone	**2**	Blossom blight	APVMA: Review in progress Codex: No MRLs EU/UK: No authorisations
Propiconazole	**3**	Brown rot	APVMA: nominated for review EU/UK: No authorisations USA: Under review
Sulfur	**M2**	Blossom blight Brown rot Freckle or scab Leaf curl Rust Shot hole	
Thiram	**M3**	Brown rot Freckle or scab Shot hole	APVMA: nominated for review Canada: All foliar uses cancelled (2021) Codex: To be reviewed EU/UK: No authorisation in place

Stone fruit (except Cherry) Agrichemical Regulatory Risk Assessment

Active Constituents	Chemical Group	Problem	Comment
Triforine	**3**	Brown rot	APVMA: nominated for review EU/UK: No authorisation
Zineb	**M3**	Rust	APVMA: nominated for review Codex: To be reviewed EU/UK: No authorisation in place
Ziram	**M3**	Blossom blight	APVMA: nominated for review Canada: Cancelling of all uses Codex: To be reviewed EU: Candidate for substitution
		Brown rot	
		Freckle or scab	
		Leaf curl	
		Shot hole	

Active Constituents	Chemical Group	Comment
WEEDS		
Amitrole	**34**	APVMA: nominated for review EU/UK: No authorisation in place
Carfentrazone-ethyl	**14**	
Dichlobenil	**29**	EU/UK: No authorisation in place
Diquat	**22**	APVMA: Currently under review EU/UK: No authorisation in place
Fluazifop-P	**1**	
Flumioxazin	**14**	
Glufosinate-ammonium	**10**	Canada: Review proposed EU/UK: No authorisation in place
Glyphosate	**9**	Ongoing issues internationally
Haloxyfop-P	**1**	EU/UK: No authorisation in place
Nonanoic acid	**0**	
Napropamide	**0**	
Norflurazon	**12**	EU/UK: No authorisation in place
Oryzalin	**3**	E/UKU: No authorisation in place
Oxyfluorfen	**14**	EU: Candidate for substitution USA: Interim review decision Label amendments proposed
Paraquat	**22**	APVMA: Currently under review Canada: Review initiated EU/UK: No authorisation in place Rotterdam Convention - nomination
Pendimethalin	**3**	EU: Candidate for substitution
Terbacil (Peach)	**5**	EU/UK: No authorisation in place
Trifluralin	**3**	EU/UK: No authorisation in place

Active Constituents	Chemical Group	Comment
PLANT GROWTH REGULATORS		
1-methylcyclopropene		
Aminoethoxyvinylglycine (AVG)		EU/UK: No authorisation
Ammonium thiosulfate (Peaches & plums)		EU/UK: No authorisation
Cyanamide (Plums)		EU/UK: No authorisation
Ethephon (Peaches)		
Gibberellic acid		
Paclobutrazol		EU: Candidate for substitution

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